Lists 04/2005 Edition

sinumerik

SINUMERIK 840D sl/840D/840Di/810D
System Variables

SIEMENS

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SINUMERIK 840D sl /840D/840Di/810D

System Variables

Lists

Gültig für

Control	*Software Version*
SINUMERIK 840D sl/840DE sl	1.3
SINUMERIK 840D powerline	7.3
SINUMERIK 840DE powerline (Exportvariante)	7.3
SINUMERIK 840Di	2.3
SINUMERIK 840DiE (Exportvariante)	2.3
SINUMERIK 810D powerline	7.3
SINUMERIK 810DE powerline (Exportvariante)	7.3
SINAMIC"	2.3

04.05 Edition

Printing history

Brief details of this edition and previous editions are listed below.

The status of each edition is shown by the code in the "Remarks" column.

Status code in the "Remarks" column:

A .... New documentation.

B .... Unrevised reprint with new order no.

C .... Revised edition with new status.

Edition	Order No.	Remarks
03.04	6FC5 298 7AE10-0BP0	A
10.04	6FC5 298 7AE10-0BP1	**C**
04.05	**6FC5 298-7AE10-0BP2**	**C**

Further information is available on the Internet under:
http://www.siemens.com/motioncontrol

This publication was produced with FrameMaker V7.0.

Other functions not described in this documentation might be executable in the control. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

We have checked that the contents of this document correspond to the hardware and software described. Nonetheless, differences cannot be ruled out and we cannot therefore guarantee that they are completely identical. The information contained in this manual is reviewed regularly and any necessary changes will be included in the next edition. Suggestions for improvement are welcome at all times.

Order No. 6FC5 298-7AE10-0BP2
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Siemens Aktiengesellschaft

Preface

Structure of the documentation

The SINUMERIK documentation is organized in three parts:

- General Documentation
- User Documentation
- Manufacturer/Service Documentation

Please contact your local Siemens office for more detailed information about other SINUMERIK 840D sl/840D/840Di/810D publications and publications that apply to all SINUMERIK controls (e.g. universal interface, measuring cycles etc.).

An overview of publications which is updated each month and shows the languages available is provided on the Internet at:

http://www.siemens.com/motioncontrol.

Click the menu items in the following order: "Support" à "Technical Documentation" à "Overview of Publications".

The Internet edition of DOConCD - DOConWEB - can be found at:

http://www.automation.siemens.com/doconweb

Audience

This documentation is intended for manufacturers of machine tools with SINUMERIK 840D or SINUMERIK 810D with SIMODRIVE 611D or SINAMICS.

Standard Scope

This Programming Guide describes the functionality afforded by standard functions. Extensions or changes made by the machine tool manufacturer are documented by the machine tool manufacturer.

Other functions not described in this documentation might be executable in the control. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

Hotline

If you have any questions, please get in touch with our hotline:

A&D Technical Support

Tel.:	+49 (0) 180 5050 - 222
Fax:	+49 (0) 180 5050 - 223
Internet:	http://www.siemens.de/automation/support-request
E-Mail:	mailto:adsupport@siemens.com

If you have any questions about the documentation (suggestions, corrections), please fax or e-mail us at the following addresses:

Fax:	+49 (0) 9131 98 - 63315
E-Mail:	mailto:motioncontrol.docu@erlf.siemens.de

Fax form: See the reply form at the end of the document.

Internet address

http://www.siemens.com/motioncontrol

Objective

The List of System Variables manual is intended for programmers of part programs and synchronious actions.

This manual uses the same data source as the relevant software version. A new List of System Variables manual is delivered with the new software versions.

Retrieval aids

A table of contents as well as the annex Index have been established.

Safety Guidelines

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring to property damage only have no safety alert symbol. These notices shown below are graded according to the degree of danger.

Danger
indicates that death or severe personal injury **will** result if proper precautions are not taken.

Warning
indicates that death or severe personal injury **may** result if proper precautions are not taken.

Caution
with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

Caution
without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

Notice
indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by qualified personnel. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

Prescribed Usage

Note the following:

Warning
This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

Note
This symbol appears in the documentation whenever the manufacturer can modify the desribed function. Please note the information provided by the manufacturer.

Ordering data supplement
This symbol appears in this documentation whenever a described function is not contained in the standard scope of supply and has to be ordered as an option.

Trade marks

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Contents

System Variables Manual 1

1.1 List of system variables

Properties of system variables

The following data are entered in the system variables tables:

1st line: Data type, identifier possibly with array limit 1, array limit 2, short name, References

2nd line: Description

3rd line: Description of the array limits [Index 1, Index 2]

4th line: Axes, NCK version number of the introduction of system variables

5th line: Unit, minimum value, maximum value

6th line: Headers of properties including the following:

- Prep: being updated during preprocessing
- Main run: being updated during main run
- PR-Stop: Stop of preprocessing
- MR-Sync: Main run synchronization
- PP: can be used in the part program
- SA: can be used in synchronized actions
- OPI: can be accessed via operator panel interface
- OEM: can be accessed by OEM compile cycles
- Level: Access rights required to write system variables

7th line: read: Properties for reading; possible if X is set

8th line: write: Properties for writing; possible if X is set

9th line: Headers of properties including the following:

- Attributes
- Global (multi-channel)
- Block search
- Link

10th line: Attribute values

Note: The maximum length for system variables of Type STRING is 400.

1.1.1 Template of system variables

Type	**Identifier[array limit 1,array limit 2]**				Short name			Cross. R.:	Referenc es
Description: Description lines ...									
Description of array limits: Description of array limit 1 Description of array limit 2									
Axes:	Axis type 1 Axis type 2, ...				NCK Version:		Version		
Unit:	Unit	min:	Minimum value			max:	Maximum value		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X	X	X	X	X	X	Access level
Attributes:	Global	Search run			Link				
	X	Block search condition			Link condition				

1.1.2 R-Parameter

DOUBLE	**R[n]**				Arithmetic variable of type Real			Cross. R.:	
Description: Array variable Rn or R[n] is an arithmetic variable of type Real and is user-definable. Rn or R[n] is used to program the variable in the part program. $Rn or $R[n] is used to program the variable in a synchronized action. The arithmetic variables are stored in SRAM and can be read in and out using the data backup feature.									
Description of array limits: The maximum number of R variables is defined in $MC_MM_NUM_R_PARAM.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X	X	
write:	X				X		X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

1.1.3 Channel-specific synchronized action variables

INT	**$AC_MARKER[n]**	User array variable of type Integer	Cross. R.:	

Description:
Array variable $AC_MARKER[n] is used to store application-related integer arithmetic results.
The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_MARKER. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.

Description of array limits:
The dimension is defined in MD $MC_MM_NUM_AC_MARKER.

Axes:						NCK Version:		43.02.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AC_SYSTEM_MARKER[n]**	System array variable of type Integer	Cross. R.:	

Description:
Array variable $AC_SYSTEM_MARKER[n] is used to store application-related integer arithmetic results.
The variable is reserved for SIEMENS applications.
The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_MARKER. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.

Description of array limits:
The dimension is defined in MD $MC_MM_NUM_AC_SYSTEM_MARKER.

Axes:						NCK Version:		46.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_PARAM[n]**	User array variable of type Real	Cross. R.:	

Description:
Array variable $AC_PARAM[n] is used to store application-related Real arithmetic results.
The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_PARAM. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.

Description of array limits:
The dimension is defined in MD $MC_MM_NUM_AC_PARAM.

Axes:						NCK Version:		43.02.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_SYSTEM_PARAM[n]**	System array variable of type Real	Cross. R.:	

Description:
Array variable $AC_SYSTEM_PARAM[n] is used to store application-related Real arithmetic results. The variable is reserved for SIEMENS applications.
The variable is stored in DRAM or in SRAM depending on $MC_MM_BUFFERED_AC_PARAM. The array elements of the variable in volatile memory (DRAM) are set to 0 on a Reset.

Description of array limits:
The dimension is defined in MD $MC_MM_NUM_AC_SYSTEM_PARAM.

Axes:						NCK Version:		46.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.4 Frames

FRAME	**$P_UIFR[n]**	Settable data management frames	Cross. R.:	

Description:
Array variable $P_UIFR[n] is used to program settable data management frames. G500, G54 .. G599 can be used to activate the corresponding data management frame. The data management frames are stored in SRAM and can be read in and out using the data backup feature.

Description of array limits:
$MC_MM_NUM_USER_FRAMES is used to program the number of settable frames.
0: G500
1: G54
2: G55
3: G56
4: G57
5: G505
6: G506
..
99: G599

Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR[n]**				Channel-specific basic frames in the data management system			Cross. R.:	
Description:									
Array variable $P_CHBFR[n] is used to program channel-specific basic frames in the data management system. G500, G54 .. G599 can be used to activate the data management frames. All active basic frames are chained together to produce the overall basic frame $P_ACTBFRAME. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
Description of array limits:									
$MC_MM_NUM_BASE_FRAMES is used to program the number of channel basic frames.									
Axes:						NCK Version:		16.00.00	
Unit:	-	min:					max:		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_SETFR**				Data management frame for preset actual value memory			Cross. R.:	
Description:									
Variable $P_SETFR is used to program the system frame in the data management system for preset actual value memory and scratching. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 0 in $MC_CHSFRAME_RESET_CLEAR_MASK.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_EXTFR**				Data management frame for external frame			Cross. R.:	
Description:									
Variable $P_EXTFR is used to program the system frame in the data management system for the external work offset. This frame is activated by the PLC. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 1 in $MC_CHSFRAME_RESET_CLEAR_MASK.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_PARTFR**				Data management frame for TCARR and PAROT			Cross. R.:	
Description:									
Variable $P_PARTFR is used to program the system frame in the data management system for TCARR and PAROT. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_TOOLFR**				Data management frame for TOROT and TOFRAME			Cross. R.:	
Description:									
Variable $P_TOOLFR is used to program the system frame in the data management system for TOROT and TOFRAME. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_WPFR**				Data management frame for workpiece			Cross. R.:	
Description:									
Variable $P_WPFR is used to program the system frame in the data management system for workpiece reference points. The data management frames are stored in SRAM and can be read in and out using the data backup feature. On a Reset, the system frame can be cleared by configuring Bit 4 in $MC_CHSFRAME_RESET_CLEAR_MASK.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		44.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CYCFR**	Data management frame for cycles	Cross. R.:	

Description:
Variable $P_CYCFR is used to program the system frame in the data management system for cycles. This frame should only be manipulated and activated by cycles. The data management frames are stored in SRAM and can be read in and out using the data backup feature.
On a Reset, the system frame can be cleared by configuring Bit 5 in $MC_CHSFRAME_RESET_CLEAR_MASK.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	44.00.00

Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7

Attributes:	Global	Search run	Link	
		not classified	No restriction	

FRAME	**$P_TRAFR**	Data management frame for transformations	Cross. R.:	

Description:
Variable $P_TRAFR is used to program the system frame in the data management system for transformations. This frame should only be manipulated and activated by the system function. The data management frames are stored in SRAM and can be read in and out using the data backup feature.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	50.00.00

Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7

Attributes:	Global	Search run	Link	
		not classified	No restriction	

FRAME	**$P_NCBFR[n]**		Global basic frames in the data management system					Cross. R.:	
Description:									
Array variable $P_NCBFR[n] is used to program global basic frames in the data management system. G500, G54 .. G599 can be used to activate the data management frames. All active basic frames are chained together to produce the overall basic frame $P_ACTBFRAME. The data management frames are stored in SRAM and can be read in and out using the data backup feature.									
Description of array limits:									
$MN_MM_NUM_GLOBAL_BASE_FRAMES is used to program the number of NCU basic frames.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		16.00.00	
Unit:	-	min:					max:		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_UBFR**		1st basic frame in the data management system					Cross. R.:	
Description:									
Variable $P_UBFR is used to program the 1st basic frame in the data management system. G500, G54 .. G599 can be used to activate the corresponding data management frame. The data management frames are stored in SRAM and can be read in and out using the data backup feature. $P_UBFR is equivalent to $P_CHBFR[0]. Application: $P_UBFR = ctrans(x,10) : crot(z,45) $P_UBFR[y,tr] = 5									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_SETFRAME**				Active system frame for preset actual value memory			Cross. R.:	
Description:									
Variable $P_SETFRAME is used to program the active system frame for preset actual value memory and scratching. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit0 in $MC_CHSFRAME_RESET_MASK									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_EXTFRAME**				Active system frame for external frame			Cross. R.:	
Description:									
Variable $P_EXTFRAME is used to program the active system frame for the external work offset. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit1 in $MC_CHSFRAME_RESET_MASK									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_PARTFRAME**		Active system frame for toolholder			Cross. R.:			
Description:									
Variable $P_PARTFRAME determines the active system frame for TCARR and PAROT. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[51] $MC_GCODE_RESET_VALUES[51]									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN			max:		DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_TOOLFRAME**		Active system frame for TOROT			Cross. R.:			
Description:									
Variable $P_TOOLFRAME determines the active system frame for TOROT and TOFRAME. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[52] $MC_GCODE_RESET_VALUES[52]									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		41.00.00	
Unit:	-	min:	DBL_MIN			max:		DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_WPFRAME**		Active system frame for the workpiece			Cross. R.:				
Description:										
Variable $P_WPFRAME is used to program the active system frame for workpiece reference points. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit4 in $MC_CHSFRAME_RESET_MASK										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		44.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CYCFRAME**		Active system frame for cycles			Cross. R.:				
Description:										
Variable $P_CYCFRAME is used to program the active system frame for cycles. On a Reset, the activation of the system frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK Bit5 in $MC_CHSFRAME_RESET_MASK										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		44.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_TRAFRAME**		Active system frame for transformations			Cross. R.:				
Description:										
Variable $P_TRAFRAME is used to program the active system frame for transformations. This system frame is configured as follows when a transformation is selected with TRANSMIT or TRACYL: $MN_FRAME_GEOAX_CHANGE_MODE = 1 oder 2 $MC_TRANSMIT_ROT_AX_FRAME_1 = 2 $MC_TRANSMIT_ROT_AX_FRAME_2 = 2 $MC_TRACYL_ROT_AX_FRAME_1 = 2 $MC_TRACYL_ROT_AX_FRAME_2 = 2										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		50.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME[n]**		Active basic frame in channel			Cross. R.:				
Description:										
Array variable $P_CHBFRAME[n] is used to program the nth active basic frame in the channel. On a Reset, the activation of the basic frame depends on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MC_CHBFRAME_RESET_MASK										
Description of array limits:										
The dimension is defined in $MC_MM_NUM_BASE_FRAMES.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		16.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFRAME[n]**				Active global basic frame			Cross. R.:	
Description:									
Array variable $P_NCBFRAME[n] is used to program the nth active global basic frame. On a Reset, the activation of the basic frame depends on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MN_NCBFRAME_RESET_MASK									
Description of array limits:									
The dimension is defined in $MN_MM_NUM_GLOBAL_BASE_FRAMES.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		16.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_ACTBFRAME**				Active overall basic frame			Cross. R.:	
Description:									
Variable $P_ACTBFRAME determines the active chained overall basic frame. This frame is produced by chaining together all valid (see $P_NCBFRMASK) global basic frames and all valid (see $P_CHBFRMASK) basic frames in the channel. The overall basic frame is always recalculated when a basic frame is activated. On a Reset, the activation of the basic frames depend on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MN_NCBFRAME_RESET_MASK $MC_CHBFRAME_RESET_MASK									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		16.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_BFRAME**	1. active basic frame in channel				Cross. R.:				
Description:										
Variable $P_BFRAME is used to program the 1st active basic frame in the channel. The variable is equivalent to $P_CHBFRAME[0]. On a Reset, the activation of the basic frame depends on the following machine data: Bit0 and Bit14 in $MC_RESET_MODE_MASK $MC_CHBFRAME_RESET_MASK										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_IFRAME**	Active settable frame				Cross. R.:				
Description:										
Variable $P_IFRAME is used to program the active settable frame. A settable data management frame $P_UIFR[n] becomes the active settable frame on execution of G500, G54 to G599. On a Reset, the activation of the settable frame depends on the following machine data: Bit0 in $MC_RESET_MODE_MASK $MC_GCODE_RESET_MODE[7] $MC_GCODE_RESET_VALUES[7]										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_PFRAME**		Programmable frame				Cross. R.:		
Description:									
Variable $P_PFRAME is used to program the active programmable frame. The programmable frame is retained on a Reset when the following setting is configured: $MC_PFRAME_RESET_MODE = 1									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	13.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_ACTFRAME**		Active overall frame				Cross. R.:		
Description:									
Variable $P_ACTFRAME determines the active chained overall frame. The active overall frame is calculated using the following formula: $P_ACTFRAME = $P_PARTFRAME : $P_SETFRAME : $P_EXTFRAME : $P_ACTBFRAME : $P_IFRAME : $P_TOOLFRAME : $P_WPFRAME : $P_TRAFRAME : $P_PFRAME : $P_CYCFRAME The overall frame is recalculated each time a frame belonging to the frame chain is activated and on a Reset.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_UIFRNUM**	Number of active settable frames	Cross. R.:	

Description:
Variable $P_UIFRNUM is used to determine the number of the active settable frame. A settable data management frame $P_UIFR[n] becomes the active settable frame on execution of G500, G54 to G599.
G500: $P_UIFRNUM = 0
G54: $P_UIFRNUM = 1
G599: $P_UIFRNUM = 99
On a Reset, the activation of the settable frame depends on the following machine data:
Bit0 in $MC_RESET_MODE_MASK
$MC_GCODE_RESET_MODE[7]
$MC_GCODE_RESET_VALUES[7]

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	99		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_NCBFRMASK**	Global basic frame mask	Cross. R.:	

Description:
Variable $P_NCBFRMASK is used to define the NCU-global basic frame included in the calculation of the overall basic frame $P_ACTBFRAME. The variable is implemented in the form of a bit mask in which the global basic frames can be selected. On a Reset, the mask is initialized by $MN_NCBFRAME_RESET_MASK.

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	0				max:	0xFFFF		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_CHBFRMASK**	Basic frame mask in the channel	Cross. R.:	

Description:
Variable $P_CHBFRMASK is used to define the channel-specific basic frame included in the calculation of the overall basic frame $P_ACTBFRAME. The variable is implemented in the form of a bit mask in which the basic frames can be selected. On a Reset, the mask is initialized by $MC_CHBFRAME_RESET_MASK.

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	0				max:	0xFFFF		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_CHSFRMASK**		System frame mask			Cross. R.:	
Description:							
Variable $P_CHSFRMASK is used to define the channel-specific system frame included in the calculation of the overall frame $P_ACTFRAME. The variable is implemented in the form of a bit mask in which the system frames can be selected. On a Reset, the mask is initialized by $MC_CHSFRAME_RESET_MASK.							
Axes:				NCK Version:		51.03.00	
Unit:	-	min:	0		max:	0x7F	
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$P_AD[34]**		Still to be defined			Cross. R.:	
Description:							
$P_AD[n] Active tool offsets n: Parameter numbers 1 - 31 n = 1-25 $TC_DP1 to $TC_DP25 n = 26 $TC_DPCE n = 27 $TC_DPH n = 28 $TC_DPV n = 29 $TC_DPV3 n = 30 $TC_DPV4 n = 31 $TC_DPV5							
Description of array limits:							
n: Parameter numbers 1 - 31 n = 1-25 $TC_DP1 to $TC_DP25 n = 26 $TC_DPCE n = 27 $TC_DPH n = 28 $TC_DPV n = 29 $TC_DPV3 n = 30 $TC_DPV4 n = 31 $TC_DPV5							
Axes:				NCK Version:		06.00.00	
Unit:	-	min:	DBL_MIN		max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

DOUBLE	**$P_ADT[34]**	Still to be defined	Cross. R.:	

Description:
$P_AD[n]
Active tool offsets transformed
n: Parameter numbers 1 - 31
n = 1-25 $TC_DP1 to $TC_DP25
n = 26 $TC_DPCE
n = 27 $TC_DPH
n = 28 $TC_DPV
n = 29 $TC_DPV3
n = 30 $TC_DPV4
n = 31 $TC_DPV5

Description of array limits:
n: Parameter numbers 1 - 31
n = 1-25 $TC_DP1 to $TC_DP25
n = 26 $TC_DPCE
n = 27 $TC_DPH
n = 28 $TC_DPV
n = 29 $TC_DPV3
n = 30 $TC_DPV4
n = 31 $TC_DPV5

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**$P_DLNO**	Still to be defined	Cross. R.:	

Description:
$P_DLNO
Active additive offset number DL=0 - DL='max.'; 'max'= value of $MN_MM_MAX_SUMCORR_PER_CUTTEDGE

Axes:						NCK Version:		20.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TOOL**		Still to be defined				Cross. R.:		
Description:									
$P_TOOL									
Active tool cutting edge D0 - D'max.'; 'max'= value of $MN_MM_MAX_CUTTING_EDGE_NO									
Axes:				NCK Version:	06.00.00				
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TOOLNO**		Still to be defined				Cross. R.:		
Description:									
$P_TOOLNO									
Active tool number T0 - T32000; T can be an 8-digit number when 'flat D number' function is active									
This command should not generally be used when magazine management is active.									
When magazine management is active, GETEXET should be used instead.									
(T number programming always works reliably when $MC_CUTTING_EDGE_DEFAULT=-1, or> 0.									
In cases where $MC_CUTTING_EDGE_DEFAULT=0, or =-2, T number read errors can occur.									
The T number mechanism is also reliable if it is programmed after D> 0.									
Notice: Particularly with a setting of $MC_CUTTING_EDGE_DEFAULT=-2, $P_TOOLNO (the T no. of the active tool with which the currently									
active D offset has been calculated) and GETEXET (the changed tool) can return different T numbers.									
->see also $P_MTHSDC and the documentation relating to the subject of multiple toolholders/spindles.									
Axes:				NCK Version:	06.00.00				
Unit:	-	min:			max:	32000			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TOOLP**		Still to be defined				Cross. R.:		
Description:									
$P_TOOLP									
Last programmed tool number T0 - T32000 (in operation without magazine management).									
This command cannot be used when magazine management is active.									
When magazine management is active, GETSELT must be used instead.									
If the function 'T alarm delay after M06' is active, the result T number = -1 if the									
preceding T address has been programmed incorrectly.									
Axes:				NCK Version:	20.00.00				
Unit:	-	min:			max:	32000			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

DOUBLE	**$P_TOOLL[3]**		Still to be defined					Cross. R.:		
Description: $P_TOOLL[n] Active tool total length										
Description of array limits: n: Length 1 - 3										
Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$P_TOOLO[3]**		Still to be defined					Cross. R.:		
Description: $P_TOOLO[n] Active tool orientation										
Description of array limits: n: Components 1 - 3										
Axes:						NCK Version:		44.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOOLO_ACT[3]**		Still to be defined					Cross. R.:		
Description: $AC_TOOLO_ACT[n] Active command orientation										
Description of array limits: n: Components 1 - 3										
Axes:						NCK Version:		51.00.00		
Unit:	-	min:	-1.0				max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOOLO_END[3]**		Still to be defined					Cross. R.:	
Description: $AC_TOOLO_END[n] End orientation of active block									
Description of array limits: n: Components 1 - 3									
Axes:						NCK Version:	51.00.00		
Unit:	-	min:	-1.0			max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOOLO_DIFF**		Still to be defined					Cross. R.:	
Description: $AC_TOOLO_DIFF Remaining angle of tool orientation in active block									
Axes:						NCK Version:	51.00.00		
Unit:	Degrees	min:	0.0			max:	360.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$VC_TOOLO[3]**		Still to be defined					Cross. R.:	
Description: $VC_TOOLO[n] Actual orientation									
Description of array limits: n: Components 1 - 3									
Axes:						NCK Version:	51.00.00		
Unit:	-	min:	-1.0			max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$VC_TOOLO_DIFF**				Still to be defined				Cross. R.:	
Description: $VC_TOOLO_DIFF Angle between command and actual orientation										
Axes:						NCK Version:		51.00.00		
Unit:	Degrees	min:	0.0				max:	180.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$VC_TOOLO_STAT**				Still to be defined				Cross. R.:	
Description: $VC_TOOLO_STAT Status of calculation of actual orientation										
Axes:						NCK Version:		51.00.00		
Unit:	-	min:	-1				max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TC**				Active toolholder				Cross. R.:	
Description: $P_TC Active toolholder										
Axes:						NCK Version:		20.00.00		
Unit:	-	min:					max:	99999999		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AC_TC**				Still to be defined				Cross. R.:	
Description: $AC_TC Active toolholder										
Axes:						NCK Version:		49.00.00		
Unit:	-	min:					max:	99999999		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TCNUM**			Still to be defined			Cross. R.:		
Description: $P_TCNUM Number of available toolholders in the channel									
Axes:					NCK Version:	52.00.00			
Unit:	-	min:			max:	99999999			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$P_TCANG[2]**			Still to be defined			Cross. R.:		
Description: $P_TCANG[n] Active angle of a toolholder axis									
Description of array limits: n: Angle 1 - 2									
Axes:					NCK Version:	16.00.00			
Unit:	-	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$P_TCDIFF[2]**			Still to be defined			Cross. R.:		
Description: $P_TCDIFF[n] Difference between calculated and used angle of a toolholder axis with angle incrementation (Hirth tooth system)									
Description of array limits: n: Angle 1 - 2									
Axes:					NCK Version:	20.00.00			
Unit:	-	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TCSOL**	Still to be defined	Cross. R.:	

Description:
$P_TCSOL
Number of solutions when angle of axis of rotation
of an orientatable toolholder is defined from a frame
In the case of 0 to 2 solutions, the relevant value
is returned.
The return value is 3 when the number of solutions is infinite.
If the angles are specified (TCOABS), the number of solutions
is always 1.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:					max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TCSTAT**	Still to be defined	Cross. R.:	

Description:
$P_TCSTAT
Specifies the status of an orientatable toolholder.
The variable is bit-coded with the following bit meanings:
0x1 The first axis of rotation exists
0x2 The second axis of rotation exists
0x4 The angles used in the calculation are acquired from an orientation in the frame direction
0x8 The angles used in the calculation have been specified absolutely
0x10 The polar axis angle is uncertain with the toolholder orientated in the frame direction
0x1000 Only the tool is rotatable (kinematic type T)
0x2000 Only the workpiece is rotatable (kinetmatic type P)
0x4000 Tool and workpiece are rotatable (kinematic type M)
The bits specified here are not currently assigned.

Axes:						NCK Version:		49.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$P_TOOLR**				Still to be defined			Cross. R.:	
Description: $P_TOOLR Active tool radius (total)									
Axes:				NCK Version:	06.00.00				
Unit:	inch	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TOOLND[32000]**				Still to be defined			Cross. R.:	
Description: $P_TOOLND[t] Number of tool edges of tool t									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:	13.00.00				
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

BOOL	**$P_TOOLEXIST[32000]**				Still to be defined			Cross. R.:	
Description: $P_TOOLEXIST[t] Does the tool with T no. t exist									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:	13.00.00				
Unit:	-	min:	FALSE		max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

INT	**$P_D**				Programmed D number (ISO2 mode)			Cross. R.:	
Description:									
$P_D Programmed D number in ISO_2 language mode The D number is the tool offset number in ISO mode 2 (millling). If no tool offset is active, the value 0 is output. The tool offset can be selected with D or H. However, this variable only ever contains the D value.									
Axes:					NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

INT	**$P_H**				Programmed H number (ISO2 milling)			Cross. R.:	
Description:									
$P_H Programmed H number in ISO_2 language mode The H number is the tool offset number in ISO mode 2 (millling). If no tool offset is active, the value 0 is output. The tool offset can be selected with D or H. However, this variable only ever contains the H value.									
Axes:					NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

INT	**$A_TOOLMN[32000]**				Still to be defined			Cross. R.:	
Description:									
$A_TOOLMN[t] Magazine number of tool t									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$A_TOOLMLN[32000]**		Still to be defined				Cross. R.:		
Description:									
$A_TOOLMLN[t]									
Magazine location number of tool t									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:		13.00.00			
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$A_MYMN[32000]**		Still to be defined				Cross. R.:		
Description:									
$A_MYMN[t]									
Number of home magazine of tool with T no. t.									
(A magazine becomes the home magazine of the tool if the tool is being loaded onto a magazine location of kind 1 ($TC_MPP1=1).)									
Resulting value = 0 = tool is not loaded (if $A_TOOLMN> 0, then manual tool).									
Resulting value = -1 = tool management is not active									
Resulting value = -2 = tool with T no. t does not exist.									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:		41.00.00			
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$A_MYMLN[32000]**	Still to be defined	Cross. R.:	

Description:
$A_MYMLN[t]
Number of the home magazine location of the tool with T no. t.
(A magazine location becomes the home magazine location of a tool if the tool is being loaded onto a magazine location of kind 1 ($TC_MPP1=1).)
Resulting value = 0 = tool is not loaded (if $A_TOOLMLN> 0, then manual tool).
Resulting value = -1 = tool management is not active
Resulting value = -2 = tool with T no. t does not exist.

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER

Axes:						NCK Version:		41.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$A_MONIFACT**	Still to be defined	Cross. R.:	

Description:
$A_MONIFACT
Factor for tool life monitoring

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TOOLNG**	Still to be defined	Cross. R.:	

Description:
$P_TOOLNG
Number of defined tool groups assigned to the channel
OPI block type= TM

Axes:						NCK Version:		42.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX]		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TOOLNT**		Still to be defined				Cross. R.:		
Description: $P_TOOLNT Number of defined tools assigned to the channel OPI block type= TV									
Axes:					NCK Version:		42.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX]		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TOOLT[600]**		Still to be defined				Cross. R.:		
Description: $P_TOOLT[i] ith tool number T OPI block type= TV									
Description of array limits: i= 1,..., $P_TOOLNT									
Axes:					NCK Version:		42.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX]		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TOOLD[32000,12]**		Still to be defined				Cross. R.:		
Description: $P_TOOLD[t,i] ith D no. of tool with T no. t; i=1,2... If t is the value of an undefined tool, -2 is returned If i is a value outside the permissible range, 0 is returned OPI block type= TO									
Description of array limits: t = 1, ..., SLMAXTOOLNUMBER i = 1,....., $P_TOOLND									
Axes:					NCK Version:		42.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX]		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_USEKT**	Still to be defined					Cross. R.:		
Description:									
$P_USEKT (= USE Kind of Tool) Is a bit-coded value All tools whose parameter $TC_TP11 has set one of the bits of $P_USEKT are available for the following tool changes. The value 'zero' has the equivalent content of 'all bits are set' OPI block= C/S									
Axes:					NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_TOOLNDL[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
$P_TOOLNDL[t,d] Number of DL offsets of D offset specified by T no. t and D no. d >0 Number of DL offsets 0No DL offset for this D offset -1Additive offset function not active -2t is the value of an undefined tool -3 d is the value of an undefined D offset OPI block type= TOS; TOE									
Description of array limits:									
t = 1, ..., SLMAXTOOLNUMBER d = 1,....., SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX]		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_MAGN**	Still to be defined				Cross. R.:	
Description: $P_MAGN Number of defined magazines assigned to the channel. > 0Successful read access 0No magazine defined -1WZMG is not active OPI block= TM							
Axes:				NCK Version:	43.00.00		
Unit:	-	min:	INT_MIN	max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAG[32]**	Still to be defined				Cross. R.:	
Description: $P_MAG[i] ith magazine number > 0Successful read access 0i is outside the permissible range -1WZMG is not active OPI block= TM							
Description of array limits: i= 1,..., $P_MAGN							
Axes:				NCK Version:	43.00.00		
Unit:	-	min:	INT_MIN	max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGNDIS[32000,32000]**	Still to be defined	Cross. R.:	

Description:
P_MAGNDIS[n, m]
Number of magazines connected to location m of internal magazine n.
> 0Successful read access
0No magazine is connected to the buffer location
-1WZMG is not active
-2n is not the number of an internal magazine
-3m is not the number of an internal magazine location
OPI block TPM

Description of array limits:
n= must be the number of the buffer magazine or load magazine
m= 1,..., max. number of a location in the specified internal magazine

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGDISS[32000,32]**	Still to be defined	Cross. R.:	

Description:
P_MAGDISS[l, i]
Number of ith magazine connected to location l of the buffer magazine.
> 0Successful read access
0i is outside the permissible range
-1WZMG is not active
-2m is not the number of a buffer magazine location
-3 no buffer magazine defined
OPI block TPM

Description of array limits:
l= 1,..., max. number of a location in the buffer magazine
i= 1,..., $P_MAGNDIS[no. of buffer magazine, refLoc]

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGDISL[32000,32]**	Still to be defined	Cross. R.:	

Description:
P_MAGDISL[l, i]
Number of ith magazine connected to location l of the load magazine.
> 0Successful read access
0i is outside the permissible range
-1WZMG is not active
-2m is not the number of a load magazine location
-3 no load magazine defined
OPI block TPM

Description of array limits:
l= 1,..., max. number of a location in the load magazine
i= 1,..., $P_MAGNDIS[no. of load magazine, refLoc]

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGNS**	Still to be defined	Cross. R.:	

Description:
$P_MAGNS
Number of spindle locations / toolholder locations in the buffer assigned to the channel.
> 0Successful read access
0No spindle locations defined
-1WZMG is not active
-3No buffer magazine defined

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGS[20]**	Still to be defined	Cross. R.:	

Description:
$P_MAGS[n]
nth number of spindle / of toolholder in buffer
> 0Successful read access
0n is outside the permissible range
-1WZMG is not active
-3No buffer magazine defined

Description of array limits:
n= 1,..., max. toolholder number

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGNREL[20]**	Still to be defined	Cross. R.:	

Description:
$P_MAGNREL[n]
Number of buffers assigned to the spindle number / toolholder number n
> 0Successful read access
0No buffer location assigned to spindle location
-1WZMG is not active
-2n is not the number of a spindle location
-3No buffer magazine defined

Description of array limits:
n= 1,..., max. toolholder number

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGREL[20,600]**	Still to be defined	Cross. R.:	

Description:
P_MAGREL[n, m]
mth buffer number of nth spindle number / toolholder number
> 0Successful read access
0m is outside the permissible range
-1WZMG is not active
-2n is not the number of a spindle location
-3No buffer magazine defined

Description of array limits:
n= 1,..., max. toolholder number
m= 1,..., $P_MAGNREL

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGNH**	Still to be defined	Cross. R.:	

Description:
$P_MAGNH
Number of defined magazine location type hierarchies assigned to the channel.
> 0Successful read access
0No location type hierarchies are defined
-1WZMG is not active
OPI block= TT

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGNHLT[8]**	Still to be defined	Cross. R.:	

Description:
$P_MAGNHLT[n]
Number of defined location types in the nth defined hierarchy
> 0Successful read access
0n is outside the defined range
-1WZMG is not active
OPI block= TT

Description of array limits:
n= 1,..., $P_MAGNH

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGHLT[8,8]**	Still to be defined	Cross. R.:	

Description:
P_MAGHLT[n, m]
mth location type of hierarchy n; n= 1,..., $P_MAGNH; m= 1,..., $P_MAGNHLT
> 0Successful read access
0m is outside the defined range
-1WZMG is not active
-2Hierarchy n has no defined location types
OPI block= TT

Description of array limits:
n= 1,..., $P_MAGNH
m= 1,..., $P_MAGNHLT

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_MAGNA**		Still to be defined				Cross. R.:		
Description: $P_MAGNA Number of defined adapters assigned to the channel. > 0Successful read access 0No adapters defined -1'Adapter' function or TMMG is not active OPI block= AD									
Axes:					NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_MAGA[600]**		Still to be defined				Cross. R.:		
Description: $P_MAGA[i] ith adapter number > 0Successful read access 0i is outside the permissible range -1'Adapter' function or TMMG is not active OPI block= AD									
Description of array limits: i= 1,..., $P_MAGNA									
Axes:					NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$P_MTHSDC**	Master spindle/toolholder for tool offset	Cross. R.:	

Description:
$P_MTHSDC
Master toolholder no. or master spindle no. with reference to which the active tool is determined for the next D offset selection.
>0Successful read access
0No master toolholder or master spindle available.
The next D offset works with T0.
-1TMMG not available.

If read as an OPI variable, this is valid for the status in the current main run block

Axes:						NCK Version:		48.00.00		
Unit:	-	min:	-1				max:	20		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_MONMIN**	Still to be defined	Cross. R.:	

Description:
$AC_MONMIN
Relation between tool monitoring actual value and setpoint.
Threshold for tool search strategy "Load only tools with
an actual value higher than threshold"

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_VDITCP[3]**	Still to be defined	Cross. R.:	

Description:
$P_VDITCP[n]
Free parameters for tool management in VDI interface

Description of array limits:
n: Index 1 - 3

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$P_ATPG[9]**			Still to be defined				Cross. R.:		
Description: $P_ATPG[n] Current tool-related grinding data										
Description of array limits: n: Parameter numbers 1 -9										
Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$P_TOOLENV**			Still to be defined				Cross. R.:		
Description: $P_TOOLENV[i] Supplies the name of the tool environment stored under the (internal) index i. If i does not refer to a defined data block, a zero string is returned. If index i is invalid, i.e. less than 1 or greater than the maximum number of data blocks for tool environments ($MN_MM_NUM_TOOLENV), an alarm is generated.										
Description of array limits: A maximum number of tool environments can be configured via MD $MN_MM_NUM_TOOLENV. max. string length										
Axes:						NCK Version:		45.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TOOLENVN**			Still to be defined				Cross. R.:		
Description: $P_TOOLENVN Specifies the number of defined data blocks for defining tool environments.										
Axes:						NCK Version:		45.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$P_AP**				Angle with polar coordinates			Cross. R.:	
Description:									
$P_AP									
Programmed angle with polar coordinates in degrees									
Axes:					NCK Version:	43.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

AXIS	**$P_AXN1**				Axis identifier for the abscissa			Cross. R.:	
Description:									
Variable $P_AXN1 supplies the current address of the geometry axis for the abscissa.									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

AXIS	**$P_AXN2**				Axis identifier for the ordinate			Cross. R.:	
Description:									
Variable $P_AXN2 supplies the current address of the geometry axis for the ordinate.									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

AXIS	**$P_AXN3**				Axis identifier for the applicate			Cross. R.:	
Description:									
Variable $P_AXN3 supplies the current address of the geometry axis for the applicate.									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

AXIS	**$P_ACTGEOAX[3]**	Current geometry axis identifier	Cross. R.:	

Description:
Variable $P_ACTGEOAX[n] supplies the current geometry axis identifier depending on the plane.
The geometry axis assignment corresponds to the programmed GEOAX(1,X,2,Y,3,Z) values. The assignment can also change on a Reset and on selection and deselection of transformations.

Description of array limits:
Array index 1-3 for 1st - 3rd geometry axis

Axes:						NCK Version:		13.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_GG[MAX_GGROUP]**	Active G function	Cross. R.:	

Description:
$P_GG[n]
Read active G function of G function group n The index of the G function is supplied as described in the Programming Guide Fundamentals, Section "List of G functions/preparatory functions".
(This also matches the index output at the PLC interface when configured accordingly)

Example:
;Check for G55
IF $P_GG[8] == 3 GOTOF LABEL_G55

Description of array limits:
n: Number of G function group

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_EXTGG[MAX_EXT_GGROUP]**	Active G function with external language	Cross. R.:	

Description:
$P_EXTGG[n]
Read active G function of G function group n of external language. The index of the G function is supplied as described in the Function Description "ISO Dialects" Section "G commands".
(This also matches the index output at the PLC interface when configured accordingly)

Example:
;Check for G55 in ISO Dialect T
IF $P_EXTGG[14] == 2 GOTOF LABEL_G55

Description of array limits:
n: Number of G function group

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_GG[MAX_GGROUP]**	Active G function in synchronized action	Cross. R.:	

Description:
$A_GG[n]
Read active G function of G function group n in synchronized action The index of the G function is supplied as described in the Programming Guide Fundamentals, Section "List of G functions/preparatory functions".
(This also matches the index output at the PLC interface when configured accordingly)

Example:
;Check for G55 in synchronized action
WHEN $A_GG[8] == 3 DO ...

Description of array limits:
n: Number of G function group

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_SEARCH**				Search run active			Cross. R.:	
Description:									
$P_SEARCH									
Returns TRUE (1) if block search is active									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_SEARCH1**				Search with calculation active			Cross. R.:	
Description:									
$P_SEARCH1									
Returns TRUE (1) if block search with calculation is active.									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_SEARCH2**				Block search without calculation was active			Cross. R.:	
Description:									
$P_SEARCH2									
Returns TRUE (1) if last selected search type was "block search without calculation".									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SEARCHL**	Last active search type	Cross. R.:	

Description:
$P_SEARCHL
supplies the last selected search type:
(coding analogous to PI service _N_FINDBL)
0 : No search
1 : Search without calculation
2 : Search with calculation on contour
3 : Reserved
4 : Search with calculation at end of block
5 : Search in extended program test

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	0				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_SUBPAR[n]**	Parameter programmed	Cross. R.:	

Description:
$P_SUBPAR[n]
Interrogate whether parameter n was actually programmed (TRUE) on subroutine call with parameter transfer, or whether the system has applied a default parameter (FALSE).

Description of array limits:
n: Parameter numbers 1 to n according to definition in PROC instruction

Axes:						NCK Version:		14.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_CTABDEF**	Curve table is defined	Cross. R.:	

Description:
Variable $P_CTABDEF determines whether a curve table definition is active.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_IPTRLOCK**	Still to be defined	Cross. R.:	

Description:
$P_IPTRLOCK
Status of disable for updating the interruption pointer (OPI block InterruptionSearch)
due to part program command IPTRLOCK/IPTRUNLOCK or machine data $MC_AUTO_IPTR_LOCK:
FALSE (0) -> interruption pointer is updated when interruption occurs
TRUE (1) -> the halt block is stored in the interruption pointer

Axes:						NCK Version:		52.00.00		
Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_DELAYFST**	Still to be defined	Cross. R.:	

Description:
$P_DELAYFST
Interrogation whether delay stop area is active or not depending on part program command
DELAYFSTON/DELAYFSTOF.
Note:
Delay stop areas defined by G331/G332 can be interrogated only by a synchronized action
due to the restriction to motion blocks and dwell times
(see $AC_DELAYFST).
FALSE (0) -> Delay stop area is not active
TRUE (1) -> Delay stop area is active

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AC_DELAYFST**	Still to be defined	Cross. R.:	

Description:
$AC_DELAYFST
Interrogation in synchronized actions whether delay stop area is active or not due to part program command DELAYFSTON/DELAYFSTOF or G331/G332.
Note:
If $AC_DELAYFST is used outside synchronized actions in the part program, then, analogous to $P_DELAYFST, the delay stop areas defined with G331/G332 cannot be interrogated owing to the restriction to motion blocks and dwell times (see $P_DELAYFST).
FALSE (0) -> Delay stop area is not active
TRUE (1) -> Delay stop area is active

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_MC**	Modal subroutine call active	Cross. R.:	

Description:
$P_MC
Status of modal subroutine call
FALSE (0) -> no modal subroutine call
TRUE (1) -> modal subroutine call active

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_REPINF**	Repositioning possible	Cross. R.:	

Description:
$P_REPINF
Status info for repositioning with REPOS command
FALSE (0) -> Axis cannot be repositioned with REPOS command for following reasons
- Call is not issued in an Asub
- Call is issued by an Asub that has been started in the Reset state
- Call is issued by an Asub that has been started in JOG mode
TRUE (1) -> Axis can be repositioned with REPOS

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_SIM**				HMI simulation active			Cross. R.:	
Description:									
$P_SIM									
Returns TRUE (1) if HMI simulation is running									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

BOOL	**$P_DRYRUN**				Dry run feed selected			Cross. R.:	
Description:									
$P_DRYRUN									
Returns TRUE (1) if dry run feed is selected, or else FALSE (0).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$P_OFFN**				Still to be defined			Cross. R.:	
Description:									
$P_OFFN									
Programmed offset contour normal:									
Axes:					NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$PI**				Circle constant			Cross. R.:	
Description:									
Variable $PI determines the circle constant PI = 3.1415927.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	3.1415927			max:	3.1415927		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		Indipendent			No restriction				

INT	**$P_PROG_EVENT**	Event-driven program call active	Cross. R.:	

Description:
System variable $P_PROG_EVENT can be used to query whether the program has been activated implicitly by an event configured with $MC_PROG_EVENT_MASK or $MN_SEARCH_RUN_MODE.
$P_PROG_EVENT supplies an integer value between 0 and 5 with the following meaning:
0:Explicit activation by NC Start or Asub Start via VDI or Asub interface
1: Implicit activation by "Part program start" event
2:Implicit activation by "Part program end" event
3:Implicit activation by "Operator panel reset" event
4:Implicit activation by "Boot" event
5:Implicit activation after output of last action block after a block search

Axes:						NCK Version:		42.00.00		
Unit:	-	min:	0				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

STRING	**$P_PROGPATH**	Path of the current program	Cross. R.:	

Description:
$P_PROGPATH
Supplies the path where the program currently being processed is stored in the file system.

Example:
Subprogram "/_N_WKS_DIR/_N_SHAFT_DIR/_N_MYSUB_SPF" is running.
$P_PROGPATH returns the string "/_N_WKS_DIR/_N_SHAFT_DIR/".

Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

STRING	**$P_PROG**	Program name of a program level	Cross. R.:	

Description:
$P_PROG[n]
Supplies the name of the program on program level n.

Example:
$P_PROG[0]
Supplies the name of the program on program level 0 = main program name.

Description of array limits:
n: Defines the program level from which the program name is to be read.
Numerical value: 0 to 11
max. string length

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_STACK**	Current program level	Cross. R.:	

Description:
$P_STACK
Supplies the program level on which the current part program is running.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:	0				max:	11		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_ISO_STACK**	Current program level in ISO mode	Cross. R.:	

Description:
$P_ISO_STACK
The variable supplies the current program level in ISO mode. Unlike Siemens mode, not every subprogram or macro call changes the program level in ISO mode.
Subprogram/macro calls and their effect on $P_ISO_STACK:
M98 Pxx ,subprogram call$P_ISO_STACK remains the same
G65 Pxx ,non-modal macro$P_ISO_STACK is incremented
G66 Pxx ,modal macro$P_ISO_STACK is incremented
M macro substitution$P_ISO_STACK is incremented
M subprogram substitution$P_ISO_STACK remains the same
T substitution$P_ISO_STACK remains the same
G substitution$P_ISO_STACK is incremented

802S/C:Value range = [0,5]

Axes:						NCK Version:		52.00.00		
Unit:	-	min:					max:	11		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

STRING	**$P_PATH**	Path of a program level	Cross. R.:	

Description:
$P_PATH[n]
Supplies the path where the program being processed on program level n is stored in the file system.

Examples:
$P_PATH[0] supplies the directory of the main program, e.g. "/_N_WKS_DIR/_N_SHAFT_WPD/".

$P_PATH[$P_STACK - 1] supplies the path of the calling program.

Description of array limits:
n: Defines the program level from which the program path is to be read.
Numerical value: 0 to 11
max. string length

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_ACTID[16]**				Modal synchronized action is programmed			Cross. R.:	
Description:									
Variable $P_ACTID[n] determines whether the first 16 modal synchronized actions with ID n are programmed.									
Description of array limits:									
Index 1 - 16 corresponds to the nth modal synchronized action.									
Axes:						NCK Version:	06.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_STAT**				Still to be defined			Cross. R.:	
Description:									
$AC_STAT -1: Invalid 0: Channel in Reset state 1: Channel interrupted 2: Channel active									
Axes:						NCK Version:	13.00.00		
Unit:	-	min:	-1			max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_PROG**				Still to be defined			Cross. R.:	
Description:									
$AC_PROG -1: Invalid 0: Program in Reset state 1: Program stopped 2: Program active 3: Program waiting 4: Program interrupted									
Axes:						NCK Version:	13.00.00		
Unit:	-	min:	-1			max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_SYNA_MEM**			Free synchronized action elements			Cross. R.:		
Description:									
Variable $AC_SYNA_MEM determines the number of free synchronized action elements. The maximum number of elements is configured by $MC_MM_NUM_SYNC_ELEMENTS. The value is read from the part program without a preprocessing stop.									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	0			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_IPO_BUF**			Fill level Ipo buffer			Cross. R.:		
Description:									
Variable $AC_IPO_BUF determines the current fill level of the interpolator buffer. The value is read from the part program without a preprocessing stop.									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	0			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_BLOCKTYPE**			Block type			Cross. R.:		
Description:									
Variable $AC_BLOCKTYPE determines the type of the current main run block. The following values are possible: 0: Block is programmed block (main block). 1: Block was generated by the system as an intermediate block. 2: Block was generated by chamfers/rounding 3: Smooth approach and retraction (SAR) 4: Block was generated by tool offset 5: Block was generated by smoothing 6: Block was generated by TLIFT (tangential follow-up) 7: Block was generated by path segmentation 8: Block was generated by compile cycles 9: Block was generated due to orientation changes on path-relative interpolation of tool orientation (ORIPATH/ORIROTC) 10: Block was generated by pole treatment of orientation transformations which is activated by the the machine data $MC_POLE_ORI_MODE									
Axes:					NCK Version:		51.00.00		
Unit:	-	min:	0			max:	9		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X			
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_BLOCKTYPEINFO**	Block type info	Cross. R.:	

Description:

System variable $AC_BLOCKTYPEINFO can be used to interrogate more
detailed information about variable $AC_BLOCKTYPE.
Depending on the value of system variable $AC_BLOCKTYPE, various values can be
returned:
1. General, internally generated block: $AC_BLOCKTYPE = 1
$AC_BLOCKTYPEINFO = 1000 and contains no further information.
2. Chamfer/rounding: $AC_BLOCKTYPE = 2
2001: Straight
2002: Circle
3. SAR: $AC_BLOCKTYPE = 3
3001: Approach with straight line
3002: Approach with quadrant
3003: Approach with semicircle
4. Tool compensation: $AC_BLOCKTYPE = 4
4001: Approach block after STOPRE
4002: Connection blocks if intersection point not found
4003: Point-type circle on inner corners (with TRACYL only)
4004: Bypass circle (or conical cut) at outer corners
4005: Approach blocks with offset suppression
4006: Approach blocks on repeated WRC activation
4007: Block split due to excessive curvature
4008: Compensation blocks with 3D face milling (tool vector || area vector)
5. Smoothing: $AC_BLOCKTYPE = 5
5001: Smoothing contour by means of G641
5002: Smoothing contour by means of G642
5003: Smoothing contour by means of G643
5004: Smoothing contour by means of G644
6. TLIFT: $AC_BLOCKTYPE = 6
6001: TLIFT block with linear movement of tangential axis and without lift motion.
6002: TLIFT block with nonlinear movement of tangential axis (polynomial)
and without lift movement.
6003: TLIFT block with lift motion, tangential axis motion and lift motion
start simultaneously.
6004: TLIFT block with lift motion, tangential axis starts first if specific lift
position is reached.
7. Path segmentation: $AC_BLOCKTYPE = 7
7001: Programmed path segmentation without active punching/nibbling
7002: Programmed path segmentation with active punching/nibbling
7003: Automatic, internally generated path segmentation
8. Compile cycles: $AC_BLOCKTYPE = 8
In this case, system variable $AC_BLOCKTYPEINFO contains the ID of the compile cycles
Application which created the block
9. Path-relative interpolation of tool orientation (ORIPATH/ORIROTC)
9000: interpolation of tool orientation (ORIPATH)
9001: interpolation of rotation of tool (ORIROTC)
10: Pole treatment for orientstion transformations
10000: Look ahead of position of pole axis for orientation transformations
10001 Inserted block for traversing the pole cone at orientation transformations:

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X		
write:										
Attributes:	Global	Search run				Link				

		not classified	not classified	

INT	**$AC_SPLITBLOCK**	Still to be defined	Cross. R.:	

Description:
System variable $AC_SPLITBLOCK is capable of detecting all blocks generated internally and programmed blocks which were truncated as a result.
It can return the following values:
= 0 : It is an unchanged programmed block (a block generated by the compressor is viewed here as a programmed block).
<> 0: Block has been truncated or is an internally generated block, the variable can assume the following values (variable is bit-coded):
= 1: It is an internally generated block or a truncated original block
= 3: It is the last block in a chain of internally generated blocks or truncated original blocks

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_TANEB**	Tangent angle at block end point	Cross. R.:	

Description:
$AC_TANEB determines the angle between the path tangent at the end of the current block and the path tangent at the start of the next block. This variable should only be applied to programmed main blocks. $AC_BLOCKTYPE can be used to determine whether the current block is a main block.

Axes:						NCK Version:		51.00.00		
Unit:	-	min:	-180.0				max:	180.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_SYNC_ACT_LOAD**	Current runtime for synchronized actions	Cross. R.:	

Description:
Variable $AC_SYNC_ACT_LOAD supplies the current runtime for synchronized actions of the last interpolator cycle in the channel.

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_SYNC_MAX_LOAD**				Longest runtime for synchronized actions			Cross. R.:	
Description:									
Variable $AC_SYNC_MAX_LOAD supplies the longest runtime for synchronized actions of an interpolator cycle in the channel.									
Axes:						NCK Version:		54.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_SYNC_AVERAGE_LOAD**				Average runtime for synchronized actions			Cross. R.:	
Description:									
Variable $AC_SYNC_AVERAGE_LOAD supplies the average runtime per interpolator cycle for synchronized actions in the channel.									
Axes:						NCK Version:		54.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_IW_STAT**				Position information for PTP			Cross. R.:	
Description:									
Variable $AC_IW_STAT describes the position information of the articulated joints (transformation-specific) for cartesian PTP travel. The variable is relevant only for transformations which support PTP.									
Axes:						NCK Version:		19.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_IW_TU**				Position information of axes for PTP			Cross. R.:	
Description:									
Variable $AC_IW_TU describes the position information of the axes (MCS) for cartesian PTP travel. The variable is relevant only for transformations which support PTP.									
Axes:					NCK Version:		19.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TRANS_SYS**				Reference system for cart. manual trav. (trans.)			Cross. R.:	
Description:									
$AC_TRANS_SYS Reference system for translation with cartesian manual travel 0: Axis-spec. manual trav. active 1: Cart. manual trav. in BCS 2: Cart. manual trav. in WCS 3: Cart. manual trav. in TCS Only appropriate in connection with transformations which support cart. manual travel.									
Axes:					NCK Version:		46.00.00		
Unit:	-	min:	0			max:	3		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_JOG_COORD**				Coordinate system for manual travel			Cross. R.:	
Description:									
Variable $AC_JOG_COORD is used to set the coordinate system frame for manual travel. The following values are possible: 0: Manual travel in WCS 1: Manual travel in SZS									
Axes:					NCK Version:		50.00.00		
Unit:	-	min:	0			max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:	X				X		X		7
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_ROT_SYS**	Reference system for cart. manual trav. (ori.)	Cross. R.:	

Description:
$AC_ROT_SYS
Reference system for orientation with cartesian manual travel
0: Axis-spec. manual trav. active
1: Cart. manual trav. in BCS
2: Cart. manual trav. in PCS
3: Cart. manual trav. in TCS

Only appropriate in connection with transformations which support cart. manual travel.

Axes:						NCK Version:		47.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEA[2]**	Probe has switched	Cross. R.:	

Description:
$AC_MEA[n]
Probe with number [n] has switched if TRUE (1)

Description of array limits:
n: Number of probe
1 - MAXNUM_PROBE

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TRAFO**	Active transformation	Cross. R.:	

Description:
$AC_TRAFO
Code number of active transformation
according to machine data $MC_TRAFO_TYPE_n
.
Note special meaning in the case of parameterized persistent transformation (bit 1 of $MC_TRAFO_MODE_MASK set to 1):
The parameters of the first chained transformation are returned in the case of TRACON. 0 is returned if only the persistent transformation is active.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_TRAFO**	Programmed transformation	Cross. R.:	

Description:
$P_TRAFO
Code number of programmed transformation
according to machine data $MC_TRAFO_TYPE_n
.
Note special meaning in the case of parameterized persistent transformation (bit 1 of $MC_TRAFO_MODE_MASK set to 1):
The first chained transformation is returned in the case of TRACON. 0 is returned if only the persistent transformation is active.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_TRAFO_PAR[n]**	Transformation selection parameters	Cross. R.:	

Description:
$AC_TRAFO_PAR[n]
Selection parameters of active transformation
.
Please note special meaning when persistent transformation is configured
(Bit 1 of $MC_TRAFO_MODE_MASK is set to 1):
The parameters of the first chained transformation are returned in the case of TRACON.
0 is returned if only the persistent transformation is active.

Description of array limits:
n: Number of parameter

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DOUBLE_MIN				max:	DOUBLE_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_TRAFO_PAR[n]**	Progr. transformation selection parameters	Cross. R.:	

Description:
$P_TRAFO_PAR[n]
Selection parameters of programmed transformation
.
Please note special meaning when persistent transformation is configured
(Bit 1 of $MC_TRAFO_MODE_MASK is set to 1):
The parameters of the first chained transformation are returned in the case of TRACON.
0 is returned if only the persistent transformation is active.

Description of array limits:
n: Number of parameter

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DOUBLE_MIN				max:	DOUBLE_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TRAFO_PARSET**	Transformation data set number	Cross. R.:	

Description:
$AC_TRAFO_PARSET
Number of active transformation data block
Variable is '0' is no transformation is active
.
Please note special meaning when persistent transformation is configured
(Bit 1 of $MC_TRAFO_MODE_MASK is set to 1):
The number of the data set of the first chained transformation is returned in the case of TRACON.
is returned.
0 is returned if only the persistent transformation is active.

Axes:						NCK Version:		44.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_TRAFO_PARSET**	Transformation data set number	Cross. R.:	

Description:
$P_TRAFO_PARSET
Number of programmed transformation data block
Variable is '0' is no transformation is active
.
Please note special meaning when persistent transformation is configured
(Bit 1 of $MC_TRAFO_MODE_MASK is set to 1):
The number of the data set of the first chained transformation is returned in the case of TRACON.
is returned.
0 is returned if only the persistent transformation is active.

Axes:						NCK Version:		44.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_LIFTFAST**	Still to be defined						Cross. R.:	
Description:									
$AC_LIFTFAST Information about execution of rapid lift. 0: Initial state. 1: Rapid lift has been executed. The variable is set internally to "1" by the NC at the beginning of the rapid lift process. The variable must be reset to its initial state ($AC_LIFTFAST=0) by the evaluating program (if one is configured) so that any subsequent rapid lift process can be detected again.									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:				max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$P_LIFTFAST**	Still to be defined						Cross. R.:	
Description:									
$P_LIFTFAST Information about execution of rapid lift. 0: Initial state. 1: Rapid lift has been executed. The variable is set internally to "1" by the NC at the beginning of the rapid lift process. The variable must be reset to its initial state ($AC_LIFTFAST=0) by the evaluating program (if one is configured) so that any subsequent rapid lift process can be detected again. The variable is reset by writing $AC_LIFTFAST!									
Axes:					NCK Version:		44.00.00		
Unit:	-	min:				max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_ASUP**	Still to be defined	Cross. R.:	

Description:
$AC_ASUP
Code number for the reason for activating an Asub. The reasons are bit-coded
and have the following meaning:
BIT0: Activation due to: user interrupt "ASUB with Blsync"
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable Reorg or Ret
BIT1: Activation due to: User interrupt "ASUB"
To continue the program with Repos, the position immediately prior
to the interrupt is stored.
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT2: Activation due to: user interrupt "ASUB from channel state Ready"
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT3: Activation due to: user interrupt "ASUB in a manual mode
and channel state not READY"
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT4: Activation due to: Activation due to: User interrupt "ASUB".
To continue the program with Repos, the current position at the moment
of interrupt is stored.
Activation by: VDI signal, digital-analog interface
Continued by: Freely selectable
BIT5: Activation due to: Cancelation of subroutine repeat
Activation by: VDI signal
Continued by: Execution of system Asub REPOS
BIT6: Activation due to: Activation of decoding single block
Activation by: VDI signal (+OPI)
Continued by: Execution of system Asub REPOS
BIT7: Activation due to: Activation of delete distance to go
Activation by: VDI signal
Continued by: Execution of system Asub Ret
BIT8: Activation due to: Activation of axis synchronization
Activation by: VDI signal
Continued by: Execution of system Asub REPOS
BIT9: Activation due to: Mode change
Activation by: VDI signal
Continued by: Execution of system Asub REPOS or RET (see MD.)
BIT10: Activation due to: Program continuation under TeachIn or after TeachIn deactivation
Activation by: VDI signal
Continued by: Execution of system Asub Ret
BIT11: Activation due to: Overstore selection
Activation by: Pi selection
Continued by: Execution of system Asub REPOS
BIT12: Activation due to: Alarm with reaction 'offset block with Repos' (COMPBLOCKWITHREORG)
Activation by: Internal
Continued by: Execution of system Asub REPOS
BIT13: Activation due to: Retraction with G33 and Stop
Activation by: Internal
Continued by: Execution of system Asub Ret
BIT14: Activation due to: Activation of dry run feedrate
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT15: Activation due to: Deactivation of dry run feedrate
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT16: Activation due to: Activation of block suppression
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT17: Activation due to: Deactivation of block suppression
Activation by: Vdi
Continued by: Execution of system Asub REPOS
BIT18: Activation due to: Activate machine data
Activation by: Pi
Continued by: Execution of system Asub REPOS
BIT19: Activation due to: Activate tool offset
Activation by: Pi "_N_SETUDT"
Continued by: Execution of system Asub REPOS

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$P_ISTEST**		Program test active				Cross. R.:		
Description:									
$P_ISTEST Returns TRUE (1) if program test is active.									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

STRING	**$P_MMCA**		Task acknowledgement for MMC command				Cross. R.:		
Description:									
$P_MMCA Task acknowledgement for MMC command									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			not classified				

BOOL	**$A_PROTO**		Activate logging function for 1st user				Cross. R.:		
Description:									
$A_PROTO Activate / deactivate logging function for the first user. Corresponds to $A_PROTOC[0].									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
	X	not classified			not classified				

BOOL	**$A_PROTOC[10]**		Activate logging function for user			Cross. R.:				
Description:										
$A_PROTOC Activate / deactivate logging function for a user. Corresponds to OPI variable protocUserActive.										
Description of array limits:										
Index of the user of the logging function.										
Axes:						NCK Version:		42.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
	X	not classified				not classified				

BOOL	**$A_PROT_LOCK[10]**		Still to be defined			Cross. R.:				
Description:										
$A_PROT_LOCK Disable / enable logging function temporarily for a user										
Description of array limits:										
0 - EX_MAX_NUM_PROT_USER-1, USER										
Axes:						NCK Version:		51.04.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO1[n]**	1st FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO1[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO2[n]**	2. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO2[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO3[n]**	3. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO3[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO4[n]**	4. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO4[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO5[n]**	5. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO5[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO6[n]**	6. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO6[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO7[n]**	7. FIFO stack	Cross. R.:	

Description:
Variable $AC_FIFO7[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:
The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO8[n]**	8. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO8[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO9[n]**	9. FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO9[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FIFO10[n]**	10. FIFO stack	Cross. R.:	

Description:
Variable $AC_FIFO10[n] is a stack with first in first out characteristics. This stack memory can be used for cyclic measuring operations.
$MC_NUM_AC_FIFO is used to define the number of FIFO variables $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO variables is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be accommodated:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
n = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
n=1: Access to the first element read
n=2: Access to the second element read
n=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
n=4: Number of elements available in the FIFO
n=5: Current write index relative to the start of the FIFO
n=6: Oldest element
n=7: Second oldest etc.

Description of array limits:
The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_IN[n]**	Digital input	Cross. R.:	

Description:
Variable $A_IN[n] is used to interrogate digital inputs.

Description of array limits:
The dimension is defined in $MN_FASTIO_DIG_NUM_INPUTS.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_OUT[n]**		Digital output				Cross. R.:		
Description:									
Variable $A_OUT[n] is used to interrogate digital outputs.									
Description of array limits:									
The dimension is defined in $MN_FASTIO_DIG_NUM_OUTPUTS.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_INA[n]**		Analog input				Cross. R.:		
Description:									
Variable $A_INA[n] is used to access the analog inputs.									
Description of array limits:									
The dimension is defined in $MN_FASTIO_ANA_NUM_INPUTS.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_OUTA[n]**		Analog output				Cross. R.:		
Description:									
Variable $A_OUTA[n] is used to access the analog outputs. When written the value does not become operative until the next interpolator cycle and can then be read back.									
Description of array limits:									
The dimension is defined in $MN_FASTIO_ANA_NUM_OUTPUTS.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_INCO[2]**		Comparator input				Cross. R.:		
Description:									
Variable $A_INCO[n] is used to access the comparator inputs.									
Description of array limits:									
nth comparator input.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DBB[1024]**		PLC data byte (unsigned)				Cross. R.:		
Description:									
Array variable $A_DBB[n] is used to read and write a data byte (8 bits) from PLC. The byte is unsigned and can be read in the range from 0 to 255 and written in the range from -128 to 255. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBSB[n].									
Description of array limits:									
n: Position offset within I/O area 0 - ...									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	-128			max:	255		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DBW[1024]**		PLC data word (unsigned)				Cross. R.:		
Description:									
Array variable $A_DBW[n] is used to read and write a data word (16 bits) from PLC. The byte is unsigned and can be read in the range from 0 to 65535 and written in the range from -32768 to 65535. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBSW[n].									
Description of array limits:									
n: Position offset within I/O area 0 - ...									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	-32768			max:	65535		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DBD[1024]**	PLC data doubleword	Cross. R.:	

Description:
Array variable $A_DBD[n] is used to read and write a data doubleword (32 bits) from PLC.
A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory.

Description of array limits:
n: Position offset within I/O area 0 - ...

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_DBR[1024]**	PLC Real data (32 bits)	Cross. R.:	

Description:
Array variable $A_DBR[n] is used to read and write Real data (32 bits) from PLC.
A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory.

Description of array limits:
n: Position offset within I/O area 0 - ...

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DLB[n]**	Link variable byte	Cross. R.:	

Description:
Variable $A_DLB[n] enables reading and writing of a data byte (8 bits) which can be transmitted to other channels or NCUs across the NCU link.
$MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx).
The negative value range of this variable applies to write operations only. The variable can thus store negative values. Only the corresponding positive value can be read back.

Description of array limits:
The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.

Axes:						NCK Version:		14.00.00		
Unit:	-	min:	-128				max:	255		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DLW[n]**	Link variable	Cross. R.:	

Description:
Variable $A_DLW[n] enables reading and writing of a data word (16 bits) which can be transmitted to other channels or NCUs across the NCU link.
$MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx).
The negative value range of this variable applies to write operations only. The variable can thus store negative values. Only the corresponding positive value can be read back.

Description of array limits:
The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.

Axes:						NCK Version:		14.00.00		
Unit:	-	min:	-32768				max:	65535		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DLD[n]**	Integer link variable	Cross. R.:	

Description:
Variable $A_DLD[n] enables reading and writing of a data doubleword (32 bits) which can be transmitted to other channels or NCUs across the NCU link.
$MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx).

Description of array limits:
The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.

Axes:						NCK Version:		14.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_DLR[n]**	Real link variable	Cross. R.:	

Description:
Variable $A_DLR[n] enables reading and writing of a Real value which can be transmitted to other channels or NCUs across the NCU link.
$MC_MM_NUM_LINKVAR_ELEMENTS is used to define the number of elements available to the user for programming link variables ($A_DLx).

Description of array limits:
The dimension is defined in $MC_MM_SIZEOF_LINKVAR_DATA.

Axes:						NCK Version:		14.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_LINK_TRANS_RATE**			Link data transfer rate			Cross. R.:		
Description: Variable $A_LINK_TRANS_RATE determines the number of bytes which can still be transferred by NCU link in the current interpolation cycle.									
Axes:					NCK Version:	15.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_PBB_IN[16]**			PLC input byte			Cross. R.:		
Description: Array variable $A_PBB_IN[n] is used to read and write a data byte (8 bits) from the PLC I/O.									
Description of array limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
Axes:					NCK Version:	16.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_PBW_IN[16]**			PLC input word			Cross. R.:		
Description: Array variable $A_PBW_IN[n] is used to read and write a data word (16 bits) from the PLC I/O.									
Description of array limits: The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
Axes:					NCK Version:	16.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_PBD_IN[16]**			PLC input doubleword			Cross. R.:		
Description:									
Array variable $A_PBD_IN[n] is used to read a data doubleword (32 bits) from the PLC I/O.									
Description of array limits:									
The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_PBR_IN[16]**			Real PLC input			Cross. R.:		
Description:									
Array variable $A_PBR_IN[n] is used to read Real data (32 bits) from the PLC I/O.									
Description of array limits:									
The dimension is defined in $MN_PLCIO_NUM_BYTES_IN.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_PBB_OUT[16]**			PLC output byte			Cross. R.:		
Description:									
Array variable $A_PBB_OUT[n] is used to write a data byte (8 bits) to the PLC I/O.									
Description of array limits:									
The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_PBW_OUT[16]**		PLC output word				Cross. R.:		
Description:									
Array variable $A_PBW_OUT[n] is used to write a data word (16 bits) to the PLC I/O.									
Description of array limits:									
The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_PBD_OUT[16]**		PLC output doubleword				Cross. R.:		
Description:									
Array variable $A_PBD_OUT[n] is used to write a data doubleword (32 bits) to the PLC I/O.									
Description of array limits:									
The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_PBR_OUT[16]**		Real PLC output				Cross. R.:		
Description:									
Array variable $A_PBR_OUT[n] is used to write Real data (32 bits) to the PLC I/O.									
Description of array limits:									
The dimension is defined in $MN_PLCIO_NUM_BYTES_OUT.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$C_IN[16]**		Signal from PLC to cycle			Cross. R.:				
Description:										
$C_IN[n] Signal from the PLC to cycle Reserved for SIEMENS applications! 16 input signals (i.e. 2 bytes) are available. Data transfer is cyclic.										
Description of array limits:										
n: Number of input 1 - ...										
Axes:						NCK Version:		41.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$C_OUT[16]**		Signal from cycle to the PLC			Cross. R.:				
Description:										
$C_OUT[n] Signal from cycle to the PLC Reserved for SIEMENS applications! 16 output signals (i.e. 2 bytes) are available. Data transfer is cyclic.										
Description of array limits:										
n: Number of output 1 - ...										
Axes:						NCK Version:		41.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TC_CMDT**		Still to be defined			Cross. R.:				
Description:										
$AC_TC_CMDT Trigger variable: $AC_TC_CMDT (CoMmadTrigger) assumes the value '1' for an interpolation cycle whenever a new command from the magazine management is output to the PLC.										
Axes:						NCK Version:		44.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TC_ACKT**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_ACKT Trigger variable: $AC_TC_ACKT (ACKnowledgeTrigger) assumes the value '1' for an interpolation cycle whenever the PLC acknowledges a TM command.									
Axes:					NCK Version:		44.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_CMDC**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_CMDC Counter variable: $AC_TC_CMDC (CoMmandCounter) is incremented by 1 every time the TM sends a command to the PLC.									
Axes:					NCK Version:		44.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X	X	X	X	X	X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_ACKC**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_ACKC Counter variable: $AC_TC_CMDC (ACKnowledgeCounter) is incremented by 1 every time the PLC acknowledges a command from the TM.									
Axes:					NCK Version:		44.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X	X	X	X	X	X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_FCT**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_FCT Command number. This specifies the requested operation. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_STATUS**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_STATUS Current status of the command - to be read via $AC_TC_FCT. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_THNO**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_THNO Number of the toolholder (specifically the spindle no.) to which the new tool is to be loaded. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_TNO**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_TNO NCK internal T number of the new (to be loaded) tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_MMYN**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_MMYN Home magazine number of the new (to be loaded) tool. 0: There is no new tool, or the new tool (if $AC_TC_TNO> 0) is not loaded (manual tool). -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		49.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_LMYN**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_LMYN Home location number of the new (to be loaded) tool. 0: There is no new tool, or the new tool (if $AC_TC_TNO> 0) is not loaded (manual tool). -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		49.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_MFN**		Still to be defined					Cross. R.:		
Description:										
$AC_TC_MFN Source magazine number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.										
Axes:						NCK Version:		16.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TC_LFN**		Still to be defined					Cross. R.:		
Description:										
$AC_TC_LFN Source location number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.										
Axes:						NCK Version:		16.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TC_MTN**		Still to be defined					Cross. R.:		
Description:										
$AC_TC_MTN Target magazine number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.										
Axes:						NCK Version:		16.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TC_LTN**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_LTN Target location number of the new tool. 0: There is no new tool. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_MFO**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_MFO Source magazine number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_LFO**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_LFO Source location number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_MTO**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_MTO Target magazine number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_TC_LTO**		Still to be defined				Cross. R.:		
Description:									
$AC_TC_LTO Target location number of the old (to be replaced) tool. 0: There is no old tool. -1: No TM command is active at the instant the variable is read.									
Axes:					NCK Version:		16.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_YEAR**		System time: year				Cross. R.:		
Description:									
$A_YEAR System time year									
Axes:					NCK Version:		00.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_MONTH**				System time: month				Cross. R.:	
Description:										
$A_MONTH System time month										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DAY**				System time: day				Cross. R.:	
Description:										
$A_DAY System time day										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_HOUR**				System time: hour				Cross. R.:	
Description:										
$A_HOUR System time hour										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_MINUTE**				System time: minute				Cross. R.:	
Description:										
$A_MINUTE System time minute										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_SECOND**				System time: second			Cross. R.:	
Description:									
$A_SECOND System time second									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_MSECOND**				System time: millisec.			Cross. R.:	
Description:									
$A_MSECOND System time millisecond									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_TIME**				Time from block start			Cross. R.:	
Description:									
Variable $AC_TIME determines the time from the block start in seconds.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_TIMES**	Still to be defined	Cross. R.:	

Description:
$AC_TIMES
Time from block start (REAL) in seconds (excluding times for internally generated intermediate blocks). Each programmed block can be divided into a sequence of sub-blocks for sequential processing. $AC_TIMES is set to zero o_n_l_y during the 1st cycle of the 1st block in the sequence. It is then incremented in seconds. The variable therefore allows time measurements to be taken over the whole block sequence.
The variable can be accessed only from synchronized actions.

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	0				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_TIMEC**	Interpolation cycles since block start	Cross. R.:	

Description:
Variable $AC_TIMEC determines the number of interpolation cycles which have elapsed since the block start.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_TIMESC**	Still to be defined	Cross. R.:	

Description:
$AC_TIMESC
Time from block start (Real) in IPO cycles (excluding cycles for internally generated intermediate blocks). Each programmed block can be divided into a sequence of sub-blocks for sequential processing. $AC_TIMESC is set to zero o_n_l_y during the 1st cycle of the 1st block in the sequence. It is then incremented in IPO cycles. The variable therefore allows time measurements to be taken over the whole block sequence.
The variable can be accessed only from synchronized actions

Axes:						NCK Version:		54.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_TIMER[1]**	User timer	Cross. R.:	

Description:
Array variable $AC_TIMER[n] is an application-related timer. The time in seconds is counted in multiples of an interpolation cycle.
The timer is started by assigning a value:
$AC_TIMER[n]=<start value>
The timers can be stopped by assigning a negative value:
$AC_TIMER[n]=-1
The current timer count can be read while the time variable is running or stopped. When the time variable is stopped by assigning -1, the last count value remains stored in the variable and can continue to be read.

Description of array limits:
The dimension is defined in $MC_MM_NUM_AC_TIMER.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PRTIME_M**	Set ProgramRunTIME-Main	Cross. R.:	

Description:
$AC_PRTIME_M "ProgramRunTIME-Main"
Setting (initialization) of the calculated program run time (main time)
During a block search, the anticipated processing time of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeM'. This value is cleared by writing a value to the variable.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:										
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PRTIME_A**	Set ProgramRunTIME-Auxiliary	Cross. R.:	

Description:
$AC_PRTIME_A "ProgramRunTIME-Auxilary"
Setting (initialization) of the calculated program run time (auxiliary time)
During a block search, the anticipated processing time (auxiliary time) of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeA'. This value is cleared by writing a value to the variable.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:										
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PRTIME_M_INC**				Increment ProgramRunTIME-Main			Cross. R.:	
Description:									
$AC_PRTIME_M_INC "ProgramRunTIME-Main-INCrement"									
Incrementation of the calculated program run time (main time)									
During a block search, the anticipated processing time of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeM'. Since certain times (e.g. PLC times) are not considered, the calculated program runtime can be corrected by setting this variable explicitly.									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:									
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_PRTIME_A_INC**				Increment ProgramRunTIME-Aux.			Cross. R.:	
Description:									
$AC_PRTIME_A_INC "ProgramRunTIME-Auxilary-INCrement"									
Incrementation of accumulated program run time (auxiliary time)									
During a block search, the anticipated processing time of the skipped blocks in the part program can be calculated by the NCK and stored in OPI variable 'acPRTimeM'. Since certain times (e.g. PLC times) are not considered, the calculated program runtime can be corrected by setting this variable explicitly.									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:									
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_PATHN**				Normalized path parameter			Cross. R.:	
Description:									
Variable $AC_PATHN is a normalized path parameter whose value varies between 0 at the block start and 1 at the block end.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	0			max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_DTBW**	Distance from block start in WCS	Cross. R.:	

Description:
Variable $AC_DTBW determines the geometric distance from the block start in the workpiece coordinate system.
The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_REPOS_PATH_MODE**	Still to be defined	Cross. R.:	

Description:
$AC_REPOS_PATH_MODE
Type of Repos mode
0 not defined.
1 == RMB Repos approach to start of interrupted block
2 == RMI Repos approach to interruption point in interrupted block
3 == RME Repos approach to end of interrupted block
4 == RMN Repos approach to next geometric point in interrupted block
The variable is defined if a REPOS command is currently being executed, or if
a new REPOS mode has been specified via the VDI.

Axes:						NCK Version:		51.00.00		
Unit:	-	min:					max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		According to part program				not classified				

DOUBLE	**$AC_DTBB**	Distance from block start in BCS	Cross. R.:	

Description:
Variable $AC_DTBB determines the geometric distance from the block start in the basic coordinate system.
The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_DTEW**		Distance from block end in WCS			Cross. R.:				
Description: Variable $AC_DTEW determines the geometric distance from the block end in the workpiece coordinate system. The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.										
Axes:						NCK Version:	06.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_DTEB**		Distance from block end in BCS			Cross. R.:				
Description: Variable $AC_DTEB determines the geometric distance from the block end in the basic coordinate system. The programmed position is used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.										
Axes:						NCK Version:	06.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PLTBB**		Path from block start in BCS			Cross. R.:				
Description: Variable $AC_PLTBB determines the path from the block start in the basic coordinate system.										
Axes:						NCK Version:	06.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PLTEB**		Path to block end in BCS			Cross. R.:				
Description: Variable $AC_PLTEB determines the path to the block end in the basic coordinate system.										
Axes:						NCK Version:	06.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_DELT**				Path distance to go in WCS			Cross. R.:	
Description: Variable $AC_DELT is used to read the stored path distance to go in the workpiece coordinate system after delete distance to go in motion-synchronous actions.									
Axes:					NCK Version:	06.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

BOOL	**$P_APDV**				Still to be defined			Cross. R.:	
Description: $P_APDV Returns True if the position values which can be read with $P_APR[X] or $P_AEP[X] (respectively starting point or contour point in the case of smooth approach and retraction) are valid.									
Axes:					NCK Version:	13.00.00			
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$P_F**				Programmed path feed			Cross. R.:	
Description: Variable $P_F is used to read the last programmed path feed F.									
Axes:					NCK Version:	06.00.00			
Unit:	inch/min	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_F**				Active programmed path feed			Cross. R.:	
Description: Variable $AC_F is used to read the active programmed path feed F.									
Axes:					NCK Version:	20.10.00			
Unit:	inch/min	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_F_G0**			Max. rapid traverse in block				Cross. R.:	
Description:									
Variable $AC_F_G0 returns the maximum rapid traverse velocity in the block.									
Axes:					NCK Version:		53.00.00		
Unit:	inch/min	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_OVR**			Active path override				Cross. R.:	
Description:									
Variable $AC_OVR determines the active path override. The path override is calculated by multiplying the operator override, the programmed override and the override defined via synchronized actions. The overall factor is limited to the maximum value defined by machine data $MN_OVR_FACTOR_LIMIT_BIN or $MN_OVR_FACTOR_FEEDRATE[31]. A programmed value is included in the calculation in absolute terms. If a value less than 0.0 is programmed, alarm 14756 is output. The value of the variable must be rewritten in every interpolation cycle or else a value of 100% is applied.									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X	X	X	
write:		X				X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_PLC_OVR**			PLC override				Cross. R.:	
Description:									
$AC_PLC_OVR supplies the override defined by the PLC.									
Axes:					NCK Version:		54.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_TOTAL_OVR**				Overall path override			Cross. R.:	
Description:									
$AC_TOTAL_OVR supplies the overall path override (PLC_OVR * NC_OVR).									
Axes:						NCK Version:		54.00.00	
Unit:	-	min:					max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_VC**				Additive path feed override			Cross. R.:	
Description:									
$AC_VC Additive path feed override for synchronized actions The override value must be rewritten in every Ipo cycle or else a value of 0 is applied. The override value is ignored with an override of 0. Otherwise, the override value is applied independent of the override. The total feedrate cannot be made negative by an override value. An upper limit is applied to ensure that the maximum axis velocities and acceleration rates cannot be exceeded. The maximum feedrate is limited by $MN_OVR_FACTOR_LIMIT_BIN, $MN_OVR_FACTOR_FEEDRATE[30] (see machine data). The override value is not included in the calculation in the case of G0, G33, G331, G332 and G63. The variable can be accessed only from synchronized actions.									
Axes:						NCK Version:		06.00.00	
Unit:	Lin.-/angle speed.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:		X					X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PATHACC**				Path acceleration for real-time events			Cross. R.:	
Description:									
$AC_PATHACC Defines an increased path acceleration for override changes and stop/start events. $AC_PATHACC is taken into account only if the value is higher than the prepared acceleration limit. A value of 0 deselects the function. Values which cause machine axis acceleration rates twice the rate configured in $MA_MAX_AX_ACCEL[..] are limited internally.									
Axes:						NCK Version:		45.00.00	
Unit:	inch/s²	min:	0.				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_PATHJERK**		Path jerk for real-time events				Cross. R.:		
Description:									
$AC_PATHJERK Defines an increased path jerk for override changes and stop/start events. $AC_PATHJERK is taken into account only if the value is higher than the prepared jerk limit. A value of 0 deselects the function.									
Axes:					NCK Version:		45.00.00		
Unit:	inch/s³	min:	0.			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_VACTB**		Path velocity of geometry axes				Cross. R.:		
Description:									
$AC_VACTB Path velocity in the basic coordinate system. The velocity is calculated from the velocities of the geometry axes - independent of FGROUP. The variable can be accessed only from synchronized actions									
Axes:					NCK Version:		06.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_VACTW**		WCS path velocity of geometry axes				Cross. R.:		
Description:									
$AC_VACTW Path velocity in the workpiece coordinate system The velocity is calculated from the velocities of the geometry axes - independent of FGROUP. The variable can be accessed only from synchronized actions									
Axes:					NCK Version:		06.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$P_S[n]**	Programmed spindle speed	Cross. R.:	

Description:
$P_S[n]
n: Number of spindle
Last programmed spindle speed

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:	Spindle					NCK Version:		06.00.00		
Unit:	Rot/min	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_S[1]**	Current spindle speed	Cross. R.:	

Description:
$AA_S[n]
n: Number of spindle
Actual spindle speed. The sign corresponds to the direction of rotation.

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		06.00.00		
Unit:	Rot/min	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_CONSTCUT_S[n]**	Programmed cutting rate	Cross. R.:	

Description:
$P_CONSTCUT_S[n]
n: Number of spindle
Last programmed constant cutting rate

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		42.00.00		
Unit:	ft/min	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_CONSTCUT_S[n]**	Current constant cutting rate	Cross. R.:	

Description:
$AC_CONSTCUT_S[n]
n: Number of spindle
Current constant cutting rate.

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:	Spindle					NCK Version:		42.00.00		
Unit:	ft/min	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_SEARCH_S[n]**	Search run: speed, cutting rate	Cross. R.:	

Description:
$P_SEARCH_S[n]
n: Number of spindle
Last programmed spindle speed collected during block search
or cutting rate

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:	Spindle					NCK Version:		20.01.00		
Unit:	Rot/min	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SDIR[n]**				Programmed direction of spindle rotation			Cross. R.:	
Description: $P_SDIR[n] n: Number of spindle Last programmed direction of spindle rotation 3: CW spindle rotation, 4: CCW spindle rotation, 5: Spindle stop									
Description of array limits: n: Spindle number 0 ... Max. spindle number for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.									
Axes:	Spindle				NCK Version:	06.00.00			
Unit:	-	min:	3			max:	5		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_SDIR[n]**				Current direction of spindle rotation			Cross. R.:	
Description: $AC_SDIR[n] n: Number of spindle Current direction of spindle rotation 3: CW spindle rotation, 4: CCW spindle rotation, 5: Spindle stop									
Description of array limits: n: Spindle number 0 ... Max. spindle number for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.									
Axes:	Spindle				NCK Version:	06.00.00			
Unit:	-	min:	3			max:	5		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$P_SEARCH_SDIR[n]**	Block search: progr. direction of spindle rotation	Cross. R.:	

Description:
$P_SEARCH_SDIR[n]
n: Number of spindle
Last programmed direction of spindle rotation collected during block search
3: M3 CW spindle rotation
4: M4 CCW spindle rotation
5: M5 Spindle stop
-19: M19, SPOS, SPOSA spindle positioning, position and approach mode
is read from SEARCH variables
70: M70 Changeover to axis mode
-5: No direction of rotation programmed, not output.

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:	Spindle					NCK Version:		20.01.00		
Unit:	-	min:	3				max:	70		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SMODE[n]**	Spindle mode	Cross. R.:	

Description:
$P_SMODE[n]
n: Number of spindle
The spindle mode resulting from the last spindle programming action is returned.
0: No spindle programmed in channel, or spindle is active in another channel, or
is being used by the PLC (FC18) or synchronized actions.
1: Speed control mode
2: Positioning mode
3: Synchronous mode
4: Axis mode

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:	Spindle					NCK Version:		06.00.00		
Unit:	-	min:					max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_SMODE[n]**		Current spindle mode			Cross. R.:				
Description: $AC_SMODE[n] n: Number of spindle Current spindle mode: 0: No spindle programmed in channel 1: Speed control mode 2: Positioning mode 3: Synchronous mode 4: Axis mode										
Description of array limits: n: Spindle number 0 ... Max. spindle number for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.										
Axes:	Spindle					NCK Version:		13.00.00		
Unit:	-	min:					max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SGEAR[n]**		Spindle: set gear stage			Cross. R.:				
Description: $P_SGEAR[n] n: Number of spindle Spindle gear stage last programmed or requested by S programming in the case of M40 1: 1. Gear stage requested .... 5: 5. Gear stage requested										
Description of array limits: n: Spindle number 0 ... Max. spindle number for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.										
Axes:						NCK Version:		41.00.00		
Unit:	-	min:	1				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_SGEAR[n]**	Active spindle gear stage	Cross. R.:	

Description:
$AC_SGEAR[n]
n: Number of spindle
Active spindle gear stage
1: 1. Gear stage is active
....
5: 5. Gear stage is active

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		41.00.00		
Unit:	-	min:	1				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SAUTOGEAR[n]**	Automatic gear stage change	Cross. R.:	

Description:
$P_SAUTOGEAR[n]
n: Number of spindle
Automatic gear stage change (M40) is programmed.
0: Gear stages are requested by M41..M45
1: Gear stage is calculated and requested according to programmed speed (S)
(M40 automatic gear stage change is active)

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		41.00.00		
Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SEARCH_SGEAR[n]**	Search run: Gear stage M code	Cross. R.:	

Description:
$P_SEARCH_SGEAR[n]
n: Number of spindle
Last programmed gear stage M function collected during block search
40: M40 automatic gear stage change
41: M41 1st gear stage requested
...
45: M45 5th gear stage requested

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		20.01.00		
Unit:	-	min:	1				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_SEARCH_SPOS[n]**	Search run: Spindle position, path	Cross. R.:	

Description:
$P_SEARCH_SPOS[n]
n: Number of spindle
Spindle position or traversing path last programmed via M19, SPOS or SPOSA and collected during block search.
Position: 0...359,999 if the value in MD 30330 MODULO_RANGE is 360.0 degrees
Path: -100000000 ... 100000000 degrees. The sign specifies the direction of travel.

Description of array limits:
n: Spindle number
0 ... max. spind
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		20.01.00		
Unit:	Degrees	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SEARCH_SPOSMODE[n]**	Search run: Position approach mode	Cross. R.:	

Description:
$P_SEARCH_SPOSMODE[n]
n: Number of spindle
Position approach mode last programmed via M19, SPOS or SPOSA and collected during block search.
0: DC
1: AC
2: IC
3: DC
4: ACP
5: ACN

Description of array limits:
n: Spindle number
0 ... Max. spindle number
for the spindle numbers configured in MD 35000 SPIND_ASSIGN_TO_MACHAX.

Axes:						NCK Version:		20.01.00		
Unit:	-	min:					max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_NUM_SPINDLES**	Number of spindles in channel	Cross. R.:	

Description:
$P_NUM_SPINDLES
Calculates the maximum number of spindles in the channel
0: No spindle programmed in channel.
1..n: Number of spindles in channel.

Axes:						NCK Version:		20.01.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_MSNUM**	Number of master spindle	Cross. R.:	

Description:
$P_MSNUM
Returns the number of the master spindle.
0: No spindle programmed in channel
1..n: Number of master spindle

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MSNUM**				Number of master spindle			Cross. R.:	
Description:									
$AC_MSNUM Returns the number of the current master spindle. 0: No spindle configured 1..n: Number of master spindle									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$P_MTHNUM**				Still to be defined			Cross. R.:	
Description:									
$P_MTHNUM - meaningful only when magazine management is active Returns the number of the master toolholder. 0: No master toolholder configured 1..n: Number of master toolholder									
Axes:					NCK Version:		20.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_MTHNUM**				Still to be defined			Cross. R.:	
Description:									
$AC_MTHNUM - meaningful only when magazine management is active Returns the number of the current master toolholder: 0: No master toolholder configured 1..n: Number of master toolholder									
Axes:					NCK Version:		20.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

BOOL	**$P_GWPS[31]**		Still to be defined				Cross. R.:		
Description:									
$P_GWPS[n]									
Constant grinding wheel surface speed ON if TRUE									
Description of array limits:									
n: Spindle number									
Axes:					NCK Version:		06.00.00		
Unit:	Lin.-/angle speed.	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT1LL**		Lower limit for 1st polynomial function				Cross. R.:		
Description:									
Variable $AC_FCT1LL is used to define the lower limit for the first polynomial function.									
The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT2LL**		Lower limit for 2nd polynomial function				Cross. R.:		
Description:									
Variable $AC_FCT2LL is used to define the lower limit for the second polynomial function.									
The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT3LL**			Lower limit for 3rd polynomial function			Cross. R.:		
Description:									
Variable $AC_FCT3LL is used to define the lower limit for the third polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FCT1UL**			Upper limit for 1st polynomial function			Cross. R.:		
Description:									
Variable $AC_FCT1UL is used to define the upper limit for the first polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FCT2UL**			Upper limit for 2nd polynomial function			Cross. R.:		
Description:									
Variable $AC_FCT2UL is used to define the upper limit for the second polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FCT3UL**				Upper limit for 3rd polynomial function			Cross. R.:	
Description:									
Variable $AC_FCT3UL is used to define the upper limit for the third polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FCT1C[4]**				Coefficients for 1st polynomial function			Cross. R.:	
Description:									
Array variable $AC_FCT1C[n] is used to program polynomial coefficients a0 - a3 for the first polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Description of array limits:									
n: Degree of order of coefficient 0 - 3									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FCT2C[4]**				Coefficients for 2nd polynomial function			Cross. R.:	
Description:									
Array variable $AC_FCT2C[n] is used to program polynomial coefficients a0 - a3 for the second polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).									
Description of array limits:									
n: Degree of order of coefficient 0 - 3									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:	X	X	X		X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FCT3C[4]**		Coefficients for 3rd polynomial function			Cross. R.:				
Description: Array variable $AC_FCT3C[n] is used to program polynomial coefficients a0 - a3 for the third polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
Description of array limits: n: Degree of order of coefficient 0 - 3										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCTLL[n]**		Lower limit of polynomial functions			Cross. R.:				
Description: Array variable $AC_FCTLL[n] is used to define the lower limit for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
Description of array limits: The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS. n: Number of the polynomial										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCTUL[n]**		Upper limit of polynomial functions			Cross. R.:				
Description: Array variable $AC_FCTUL[n] is used to define the upper limit for the nth polynomial function. The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).										
Description of array limits: The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS. n: Number of the polynomial										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT0[n]**	1st coefficient of polynomial functions	Cross. R.:	

Description:
Array variable $AC_FCT0[n] is used to program the a0 coefficient for the nth polynomial function.
The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).

Description of array limits:
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.
n: Number of the polynomial

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT1[n]**	2. coefficient of polynomial functions	Cross. R.:	

Description:
Array variable $AC_FCT1[n] is used to program the a1 coefficient for the nth polynomial function.
The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).

Description of array limits:
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.
n: Number of the polynomial

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT2[n]**	3. coefficient of polynomial functions	Cross. R.:	

Description:
Array variable $AC_FCT2[n] is used to program the a2 coefficient for the nth polynomial function.
The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).

Description of array limits:
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.
n: Number of the polynomial

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_FCT3[n]**	4. coefficient of polynomial functions	Cross. R.:	

Description:
Array variable $AC_FCT3[n] is used to program the a3 coefficient for the nth polynomial function.
The polynomial function can also be defined by FCTDEF(polynomial no., lower limit, upper limit, a0, a1, a2, a3).

Description of array limits:
The dimension is defined in $MC_MM_NUM_FCTDEF_ELEMENTS.
n: Number of the polynomial

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_ALARM_STAT**	Alarm responses	Cross. R.:	

Description:
Variable $AC_ALARM_STAT returns selected alarm responses.
The following bits are possible:
0x04Channel status NOREADY
0x40Stop due to alarm
0x200Signal to PLC
0x11Axes in follow-up

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AN_ESR_TRIGGER**	Still to be defined	Cross. R.:	

Description:
$AN_ESR_TRIGGER = 1
Trigger "Extended stop and retract"

Axes:						NCK Version:		16.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:		X					X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AN_BUS_FAIL_TRIGGER**			Reserved for Siemens				Cross. R.:	
Description:									
Reserved for Siemens									
Axes:					NCK Version:		51.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:		X					X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AC_ESR_TRIGGER**			Still to be defined				Cross. R.:	
Description:									
$AC_ESR_TRIGGER = 1 Trigger "numerically controlled ESR"									
Axes:					NCK Version:		42.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:		X					X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_OPERATING_TIME**			Operating time of NC programs in AUTOMATIC mode				Cross. R.:	
Description:									
$AC_OPERATING_TIME measures the total operating time of all NC programs in AUTOMATIC mode between NC Start and end of program / NC Reset (in seconds) The timer is zeroed after each Power On. The measurement can be activated using channel MD 27860 $MC_PROCESS_TIMER: Bit 0 = 1$AC_OPERATING_TIME measurement is active. The following selection of further measurement conditions is possible: Bit 4 = 0No measurement when dryrun feed active Bit 4 = 1Measurement even when dryrun feed active Bit 5 = 0No measurement during program test Bit 5 = 1Measurement even during program test Use in NC program: IF $AC_OPERATING_TIME < 12000 GOTOB STARTMARK									
Axes:					NCK Version:		19.00.00		
Unit:	s	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_CYCLE_TIME**	Execution time of the selected NC program	Cross. R.:	

Description:
$AC_CYCLE_TIME measures the operating time of the selected NC program between NC Start and end of program/NC Reset (in seconds).
The timer is cleared after each program start.
The measurement can be activated using channel MD 27860 $MC_PROCESS_TIMER:
Bit 1 = 1$AC_CYCLE_TIME measurement of current program operating time is active.
The following selection of further measurement conditions is possible:
Bit 4 = 0No measurement when dryrun feed active
Bit 4 = 1Measurement even when dryrun feed active
Bit 5 = 0No measurement during program test
Bit 5 = 1Measurement even during program test

Use in NC program:
IF $AC_CYCLE_TIME> 2400 GOTOF ALARM01

Axes:						NCK Version:		19.00.00		
Unit:	s	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_CUTTING_TIME**	Machining time	Cross. R.:	

Description:
$AC_CUTTING_TIME is used to measure the machining time (in seconds).
This time is defined as the operating time of the path axes (at least one is active)
excluding periods when rapid traverse is active in all NC programs between NC Start and end of program / NC Reset
optionally including/not including active tool.
The measurement is also interrupted whenever a dwell time is active.
The timer is automatically reset each time the control boots with default values.
The measurement can be activated using channel MD 27860 $MC_PROCESS_TIMER:
Bit 2 = 1$AC_CUTTING_TIME measurement is active.
The following selection of further measurement conditions is possible:
Bit 4 = 0No measurement when dryrun feed active
Bit 4 = 1Measurement even when dryrun feed active
Bit 5 = 0No measurement during program test
Bit 5 = 1Measurement even during program test

Use in NC program:
IF $AC_CUTTING_TIME> 6000 GOTOF ACT_M06

Axes:						NCK Version:		19.00.00		
Unit:	s	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_REQUIRED_PARTS**	Definition of the number of required workpieces	Cross. R.:	

Description:
$AC_REQUIRED_PARTS can be used to define the number of workpieces
which, when reached, causes the number of actual workpieces $AC_ACTUAL_PARTS
to be reset (workpiece target).
Channel MD 27880 $MC_PART_COUNTER can be used to activate the
display alarm "workpiece target reached" and channel VDI signal "workpiece target reached":

Bit 0 = 1:$AC_REQUIRED_PARTS counter is active

Further meaning of bit 1 only when bit 0 = 1:
Bit 1 = 0: Alarm/VDI output when $AC_ACTUAL_PARTS matches $AC_REQUIRED_PARTS
Bit 1 = 1: Alarm/VDI output when $AC_SPECIAL_PARTS matches $AC_REQUIRED_PARTS

Use in NC program:
$AC_REQUIRED_PARTS = ACTUAL_LOS
e.g. for defining a batch size, a daily production output ...

Axes:						NCK Version:		19.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOTAL_PARTS**	Total number of all machined workpieces	Cross. R.:	

Description:
The $AC_TOTAL_PARTS counter indicates the number of all workpieces machined since the start time.
The counter is incremented by 1 when the MC command defined in channel MD
27882$MC_PART_COUNTER_MCODE[0] is output to the PLC.
The counter is automatically reset only when the control boots with default values.
Channel MD 27880 $MC_PART_COUNTER can be used to activate the timer:
Bit 4 = 1: $AC_TOTAL_PARTS counter is active

Further meaning of bits 5-6 only when bit 4 = 1:
Bit 5 = 0: The $AC_TOTAL_PARTS counter is incremented by 1 on a VDI output of M02/M30
Bit 5 = 1: The $AC_TOTAL_PARTS counter is incremented by 1 when the M command from MD
PART_COUNTER_MCODE[0] is output.
Bit 6 = 0:$AC_TOTAL_PARTS active even during program test/block search
Bit 6 = 1:No processing of $AC_TOTAL_PARTS during program test/block search

Use in NC program:
IF $AC_TOTAL_PARTS> SERVICE_COUNT GOTOF MARK_END

Axes:						NCK Version:		19.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_ACTUAL_PARTS**	Number of workpieces currently machined	Cross. R.:	

Description:
The $AC_ACTUAL_PARTS counter records the number of all workpieces machined since the start time. When the workpiece target is reached ($AC_REQUIRED_PARTS), the counter is automatically reset ($AC_REQUIRED_PARTS not equal to 0).
The counter is incremented by 1 when the MC command defined in channel MD 27882$MC_PART_COUNTER_MCODE[1] is output to the PLC.
The counter is automatically reset only when the control boots with default values.
Channel MD 27880 $MC_PART_COUNTER can be used to activate the timer:
Bit 4 = 1: $AC_TOTAL_PARTS counter is active

Further meaning of bits 5-6 only when bit 4 = 1:
Bit 5 = 0: The $AC_TOTAL_PARTS counter is incremented by 1 on a VDI output of M02/M30
Bit 5 = 1: The $AC_TOTAL_PARTS counter is incremented by 1 when the M command from MD PART_COUNTER_MCODE[0] is output.
Bit 6 = 0:$AC_TOTAL_PARTS active even during program test/block search
Bit 6 = 1:No processing of $AC_TOTAL_PARTS during program test/block search

Use in NC program:
IF $AC_ACTUAL_PARTS == 0 GOTOF NEW_RUN

Axes:						NCK Version:		19.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_SPECIAL_PARTS**	Number of workpieces counter by user	Cross. R.:	

Description:
The $AC_SPECIAL_PARTS counter allows the user to apply his own strategy for counting workpieces.
Channel MD 27880 $MC_PART_COUNTER can be used to activate the timer:
Bit 12 = 1: $AC_SPECIAL_PARTS counter is active

Further meaning of bits 13-15 only when bit 12 = 1:
Bit 13 = 0: The $AC_SPECIAL_PARTS counter is incremented by 1 on a VDI output of M02/M30
Bit 13 = 1: The $AC_SPECIAL_PARTS counter is incremented by 1 when the M command from MD PART_COUNTER_MCODE[2] is output.
Bit 14 = 0: $AC_SPECIAL_PARTS active even during program test/block search
Bit 14 = 1: No processing of $AC_SPECIAL_PARTS during program test/block search

Use in NC program:
$AC_SPECIAL_PARTS = R20

Axes:						NCK Version:		19.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AC_G0MODE**	Path traversal with G0	Cross. R.:	

Description:
$AC_G0MODE
0: G0 not active
1: G0 and linear interpolation active
2: G0 and non-linear interpolation active.

The response of the path axes to G0 depends on machine data
$MC_G0_LINEAR_MODE (Siemens mode) or $MC_EXTERN_G0_LINEAR_MODE
(ISO mode):
With linear interpolation, the path axes traverse together,
With non-linear interpolation, the path axes are traversed
as positioning axes.

Axes:						NCK Version:		42.00.00		
Unit:	-	min:					max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_SEMA**	Semaphore to measurement interface	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AA_MEAS_SEMA is used to synchronize measuring processes. The variable should be set to 1 before each assignment of the measurement interface and set to 0 when releasing it. Only one measurement interface is available for each channel and should be assigned only if the $AC_MEAS_SEMA contains the value 0.
Application:

```
if ($AC_MEAS_SEMA == 0)
  $AC_MEAS_SEMA = 1 ; Assign measurement interface
endif
```

Axes:						NCK Version:		43.00.00		
Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_LATCH[4]**	Unlatch measuring points	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_LATCH[n] is used to unlatch all current axis positions with reference to a selected coordinate system. Variable $AC_MEAS_P1_COORD is used to select the coordinate system. $AC_MEAS_P4_COORD.
Application:
$AA_MEAS_LATCH[0] = 1 ; Unlatch 1st measuring point of all axes
$AA_MEAS_LATCH[1] = 1 ; Unlatch 2nd measuring point of all axes
$AA_MEAS_LATCH[2] = 1 ; Unlatch 3rd measuring point of all axes
$AA_MEAS_LATCH[3] = 1 ; Unlatch 4th measuring point of all axes

The unlatched measuring point is stored in $AA_MEAS_POINT1[ax].

Description of array limits:
0: 1st measuring point, .. , 3: 4th measuring point

Axes:						NCK Version:		43.00.00		
Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_P1_COORD**	Coordinate system 1st measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_P1_COORD is used to set the coordinate system frame for the 1st measuring point.
Application:
$AC_MEAS_P1_COORD = 0 ; WCS
$AC_MEAS_P1_COORD = 1 ; BCS
$AC_MEAS_P1_COORD = 2 ; MCS
$AC_MEAS_P1_COORD = 3 ; SZS

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_P2_COORD**	Coordinate system 2nd measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_P2_COORD is used to set the coordinate system frame for the 2nd measuring point.
Application:
$AC_MEAS_P2_COORD = 0 ; WCS
$AC_MEAS_P2_COORD = 1 ; BCS
$AC_MEAS_P2_COORD = 2 ; MCS
$AC_MEAS_P2_COORD = 3 ; SZS

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_P3_COORD**	Coordinate system 3rd measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_P3_COORD is used to set the coordinate system frame for the 3rd measuring point.
Application:
$AC_MEAS_P3_COORD = 0 ; WCS
$AC_MEAS_P3_COORD = 1 ; BCS
$AC_MEAS_P3_COORD = 2 ; MCS
$AC_MEAS_P3_COORD = 3 ; SZS

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_P4_COORD**	Coordinate system 4th measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_P4_COORD is used to set the coordinate system frame for the 4th measuring point.
Application:
$AC_MEAS_P4_COORD = 0 ; WCS
$AC_MEAS_P4_COORD = 1 ; BCS
$AC_MEAS_P4_COORD = 2 ; MCS
$AC_MEAS_P4_COORD = 3 ; SZS

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_SET_COORD**	Coordinate system of position setpoint	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_SET_COORD is used to set the coordinate system for the position setpoint.
Application:
$AC_MEAS_SET_COORD = 0 ; WCS
$AC_MEAS_SET_COORD = 1 ; BCS
$AC_MEAS_SET_COORD = 2 ; MCS
$AC_MEAS_SET_COORD = 3 ; SZS

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_MEAS_WP_SETANGLE**	Workpiece position angle setpoint	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_WP_SETANGLE is used to define an angle setpoint for the workpiece position.

Axes:						NCK Version:		43.00.00		
Unit:	Degrees	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_MEAS_CORNER_SETANGLE**	Cutting angle setpoint for workpiece corner	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AA_MEAS_CORNER_SETANGLE is used to define an angle setpoint for the corner of a workpiece.

Axes:						NCK Version:		43.00.00		
Unit:	Degrees	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_DIR_APPROACH**	Approach direction to workpiece	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AA_MEAS_DIR_APPROACH is used to define the direction of approach to the workpiece.
The following values are possible:
0:+x
1:-x
2:+y
3:-y
4:+z
5:-z

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	0				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_ACT_PLANE**	Working plane for workpiece	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_ACT_PLANE is used to define the working plane. The working plane is needed in order to define the tool orientation.
The following values are possible:
0: G17 working plane x/y infeed direction z
1: G18 working plane z/x infeed direction y
2: G19 working plane y/z infeed direction x

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	0				max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_FINE_TRANS**		Fine offset				Cross. R.:		
Description: Variable for workpiece and tool measurement. When measuring workpieces, translation offsets can be entered in the fine offset component of the selected frame. Variable $AC_MEAS_FINE_TRANS is used for this purpose. The following values are possible: 0: Translation offset is entered in coarse offset 1: Translation offset is entered in fine offset										
Axes:						NCK Version:		45.00.00		
Unit:	-	min:	0				max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_FRAME_SELECT**	Frame selection for workpiece measurement	Cross. R.:	

Description:

Variable for workpiece and tool measurement.
Variable $AC_MEAS_FRAME_SELECT is used to select the frame in which the calculated frame is entered.
The following values are possible:
0:$P_SETFRAME
1:$P_PARTFRAME
2:$P_EXTFRAME
10..25:$P_CHBFRAME[0..15]
50..65:$P_NCBFRAME[0..15]
100..199:$P_IFRAME
500:$P_TOOLFRAME
501:$P_WPFRAME
502:$P_TRAFRAME
503:$P_PFRAME
504:$P_CYCFRAME
1010..1025: $P_CHBFRAME[0..15], when G500 is active
1050..1065: $P_NCBFRAME[0..15], when G500 is active
2000: $P_SETFR
2001:$P_PARTFR
2002:$P_EXTFR
2010..2025: $P_CHBFR[0..15]
2050..2065: $P_NCBFR[0..15]
2100..2199: $P_UIFR[0..99]
2500:$P_TOOLFR
2501:$P_WPFR
2502:$P_TRAFR
2504:$P_CYCFR
3010..3025: $P_CHBFR[0..15], when G500 is active
3050..3065: $P_NCBFR[0..15], when G500 is active

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	0				max:	3065		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_CHSFR**	Frame selection for system frames	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
In order to convert a position from one coordinate system to another, $AC_MEAS_CHSFR can be used to define the composition of the desired frame chain. The value of the variable should be selected according to the system frame bitmask $MC_MM_SYSTEM_FRAME_MASK.
Application:
$AC_MEAS_CHSFR = 'B1001'
Only the system frames for preset actual value and TOROT are included in the calculation of the new overall frame.

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_NCBFR**	Frame selection for global basic frames	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
In order to convert a position from one coordinate system to another, $AC_MEAS_NCBFR can be used to define the composition of the desired frame chain. The value of the variable should be interpreted as a bitmask from 0x0 to 0xFFFF for the global basic frames (up to 16 frames in total).
Application:
$AC_MEAS_NCBFR = 'B11'
Only the first two global basic frames are included in the calculation of the new overall frame.

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	0xFFFF		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_CHBFR**	Frame selection for channel basic frames	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
In order to convert a position from one coordinate system to another, $AC_MEAS_CHBFR can be used to define the composition of the desired frame chain. The value of the variable should be interpreted as a bitmask from 0x0 to 0xFFFF for the channel basic frames (up to 16 frames in total).
Application:
$AC_MEAS_CHBFR = 'B11'
Only the first two channel basic frames are included in the calculation of the new overall frame.

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	0xFFFF		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_UIFR**	Frame selection for settable frames	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
In order to convert a position from one coordinate system to another, $AC_MEAS_UIFR can be used to define the composition of the desired frame chain. The variable range for the settable frames is from 0 to 99 (up to 100 in total).
Application:
$AC_MEAS_UIFR = 1
The G54 frame is included in the calculation of the new overall frame.

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	99		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_PFRAME**	Frame selection for the prog. frame	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
In order to convert a position from one coordinate system to another, $AC_MEAS_PFRAME can be used to define the composition of the desired frame chain.
The following values are allowed:
$AC_MEAS_PFRAME = 1 ; Programmable frame is not included in calculation
$AC_MEAS_PFRAME = 0 ; Programmable frame is included in calculation

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_T_NUMBER**	Tool selection	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_T_NUMBER is used to select the tool for workpiece and tool measurement. The tool number of the active tool must match the selected tool. The active tool is included in the calculation when T0 is selected. If no tool is selected, the tool selected by $AC_MEAS_T_NUMBER is used in the calculation.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_TOOL_MASK**	Tool position	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_TOOL_MASK specifies the tool position and considers the tool lengths for workpiece and tool measurement.
The following values are possible:
0x0:Default setting; all tool lengths are included
0x1:The radius of the tool is not included in the calculation
0x2:The tool position is in the x direction (G19)
0x4:The tool position is in the y direction (G18)
0x8:The tool position is in the z direction (G17)
0x10:The length of the tool is not included in the calculation.

Whether or not the radius of a milling tool is included in the calculation is determined from the tool position and direction of approach. If the direction of approach is not specified explicitly, it is derived from the selected plane. The direction of approach is in -z for G17, -y for G18 and -x for G19.

Axes:						NCK Version:		50.00.00		
Unit:	-	min:	0				max:	0x10		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_D_NUMBER**	Cutting edge selection	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_D_NUMBER is used to select the tool cutting edge for workpiece and tool measurement. The tool cutting edge number of the active tool must match the selected cutting edge. The active cutting edge is included in the calculation when D0 is selected. If no tool is selected, the cutting edge selected by $AC_MEAS_D_NUMBER is used in the calculation.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_TYPE**	Measurement type selection	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AA_MEAS_TYPE is used to select the type of measurement.
The following values are possible:
0: Default setting
1: x edge
2: y edge
3: z edge
4: Corner 1
5: Corner 2
6: Corner 3
7: Corner 4
8: Hole
9: Shaft
10: Tool length
11: Tool diameter
12: Groove
13: Web
14: Preset actual value memory for geo and special axes
15: Preset actual value memory for special axes only
16: Inclined edge
17: Plane_Angles (2 solid angles in one plane)
18: Plane_Normal (3 solid angles in one plane with specified setpoint)
19: Dimension_1 (1-dimensional setpoint specification)
20: Dimension_2 (2-dimensional setpoint specification)
21: Dimension_3 (3-dimensional setpoint specification)
22: ToolMagnifier (ShopTurn: Measurement of tool lengths with magnifier)
23: ToolMarkedPos (ShopTurn: Measurement of a tool length with marked position)
24: Coordinate transformation of a position
25: Rectangle

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	0				max:	25		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_MEAS_VALID**	Validity bits of measurement variables.	Cross. R.:	

Description:

Variable for workpiece and tool measurement.
Variable $AC_MEAS_VALID is used to define which system variables are valid for the current measurement. The value should be set to 0 before every measurement
The individual bits are set implicitly when the corresponding variables are written.
Bit 0: $AA_MEAS_POINT1[axis]
Bit 1: $AA_MEAS_POINT2[axis]
Bit 2:$AA_MEAS_POINT3[axis]
Bit 3: $AA_MEAS_POINT4[axis]
Bit 4: $AA_MEAS_SETPOINT[axis]
Bit 5: $AC_MEAS_WP_SETANGLE
Bit 6: $AC_MEAS_CORNER_SETANGLE
Bit 7: $AC_MEAS_T_NUMBER
Bit 8: $AC_MEAS_D_NUMBER
Bit 9: $AC_MEAS_DIR_APPROACH
Bit 10: $AC_MEAS_ACT_PLANE
Bit 11:$AC_MEAS_FRAME_SELECT
Bit 12: $AC_MEAS_TYPE
Bit 13: $AC_MEAS_FINE_TRANS
Bit 14: $AA_MEAS_SETANGLE[axis]
Bit 15: $AC_MEAS_SCALEUNIT
Bit 16: $AC_MEAS_TOOL_MASK
Bit 17: $AC_MEAS_P1_COORD
Bit 18: $AC_MEAS_P2_COORD
Bit 19: $AC_MEAS_P3_COORD
Bit 20: $AC_MEAS_P4_COORD
Bit 21: $AC_MEAS_SET_COORD
Bit 22: $AC_MEAS_CHSFR
Bit 23: $AC_MEAS_NCBFR
Bit 24: $AC_MEAS_CHBFR
Bit 25: $AC_MEAS_UIFR
Bit 26: $AC_MEAS_PFRAME

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

FRAME	**$AC_MEAS_FRAME**	Result frame for workpiece measurement	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_FRAME is the result frame for workpiece measurement. This frame is calculated by the MEASURE() function or a PI service and is not part of the active frame chain. The calculated result frame can then be copied into the selected frame ($AC_MEAS_FRAME_SELECT) by the part program or a further PI service.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_MEAS_WP_ANGLE**	Workpiece position angle	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_WP_ANGLE is the calculated workpiece position angle for workpiece measurement. The value specifies the relative position of the workpiece in the workpiece coordinate system (WCS).

Axes:						NCK Version:		43.00.00		
Unit:	Degrees	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_MEAS_CORNER_ANGLE**	Angle of a corner	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Variable $AC_MEAS_CORNER_ANGLE is the calculated cutting angle of the corner for workpiece measurement.

Axes:						NCK Version:		43.00.00		
Unit:	Degrees	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_MEAS_DIAMETER**				Tool diameter			Cross. R.:	
Description: Variable for workpiece and tool measurement. Variable $AC_MEAS_DIAMETER is the calculated diameter for tool measurement.									
Axes:					NCK Version:	43.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_MEAS_TOOL_LENGTH**				Tool length			Cross. R.:	
Description: Variable for workpiece and tool measurement. Variable $AC_MEAS_TOOL_LENGTH is the calculated tool length for tool measurement.									
Axes:					NCK Version:	43.00.00			
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_MEAS_RESULTS[10]**				Measurement results			Cross. R.:	
Description: Variable for workpiece and tool measurement. Array variable $AC_MEAS_RESULTS[n] contains the calculation results. The measurement type ($AC_MEAS_TYPE) determines which elements of the array are written.									
Description of array limits: Measurement results									
Axes:					NCK Version:	45.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_MEAS_SCALEUNIT**		Measurement unit				Cross. R.:		
Description:									
Variable for workpiece and tool measurement. Variable $AC_MEAS_SCALEUNIT defines the unit of measurement according to the configuration for input and output values. The following values are possible: 0: Unit of measurement as configured (default setting) 1: Unit of measurement with reference to active G code is INCH: G70/G700 METRIC: G71/G710									
Axes:				NCK Version:		48.00.00			
Unit:	-	min:	0		max:	1			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:	X				X		X		7
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$P_CHANNO**		Still to be defined				Cross. R.:		
Description:									
Interrogate current channel number.									
Axes:				NCK Version:		48.00.00			
Unit:	-	min:	1		max:	10			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_SERUPRO**		Still to be defined				Cross. R.:		
Description:									
$AC_SERUPRO Interrogate whether search type Serupro is active. (Serupro: "Block search via program test") Can be used in Synacts and the part program $AC_SERUPRO == 0 Search type Serupro is not active $AC_SERUPRO == 1 Search type Serupro is active									
Axes:				NCK Version:		48.00.00			
Unit:	-	min:			max:	1			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$AC_VACTBF**			Path velocity in the BCS			Cross. R.:		
Description:									
$AC_VACTBF supplies the path velocity in the basic coordinate system. FGroup and FGREF are taken into account.									
Axes:					NCK Version:		55.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X			
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_VACTWF**			Path velocity in the WCS			Cross. R.:		
Description:									
Path velocity in workpiece coordinate system. FGROUP and FGREF are taken into account.									
Axes:					NCK Version:		55.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X			
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

FRAME	**$P_CHBFR0**			Access to 1st channel basic frame			Cross. R.:		
Description:									
Access to 1st channel basic frame. Corresponds to $P_CHBFR[0].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFR1**				Access to 2nd channel basic frame				Cross. R.:	
Description:										
Access to 2nd channel basic frame. Corresponds to $P_CHBFR[1].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR2**				Access to 3rd channel basic frame				Cross. R.:	
Description:										
Access to 3rd channel basic frame. Corresponds to $P_CHBFR[2].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR3**				Access to 4th channel basic frame				Cross. R.:	
Description:										
Access to 4th channel basic frame. Corresponds to $P_CHBFR[3].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR4**		Access to 5th channel basic frame				Cross. R.:		
Description:									
Access to 5th channel basic frame. Corresponds to $P_CHBFR[4].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFR5**		Access to 6th channel basic frame				Cross. R.:		
Description:									
Access to 6th channel basic frame. Corresponds to $P_CHBFR[5].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFR6**		Access to 7th channel basic frame				Cross. R.:		
Description:									
Access to 7th channel basic frame. Corresponds to $P_CHBFR[6].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFR7**		Access to 8th channel basic frame			Cross. R.:				
Description:										
Access to 8th channel basic frame. Corresponds to $P_CHBFR[7].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR8**		Access to 9th channel basic frame			Cross. R.:				
Description:										
Access to 9th channel basic frame. Corresponds to $P_CHBFR[8].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR9**		Access to 10th channel basic frame			Cross. R.:				
Description:										
Access to 10th channel basic frame. Corresponds to $P_CHBFR[9].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR10**		Access to 11th channel basic frame			Cross. R.:				
Description: Access to 11th channel basic frame. Corresponds to $P_CHBFR[10].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR11**		Access to 12th channel basic frame			Cross. R.:				
Description: Access to 12th channel basic frame. Corresponds to $P_CHBFR[11].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR12**		Access to 13th channel basic frame			Cross. R.:				
Description: Access to 13th channel basic frame. Corresponds to $P_CHBFR[12].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR13**		Access to 14th channel basic frame			Cross. R.:				
Description:										
Access to 14th channel basic frame. Corresponds to $P_CHBFR[13].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR14**		Access to 15th channel basic frame			Cross. R.:				
Description:										
Access to 15th channel basic frame. Corresponds to $P_CHBFR[14].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFR15**		Access to 16th channel basic frame			Cross. R.:				
Description:										
Access to 16th channel basic frame. Corresponds to $P_CHBFR[15].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFR0**				Access to 1st NCU-global basic frame			Cross. R.:	
Description:									
Access to 1st NCU-global basic frame. Corresponds to $P_NCBFR[0].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR1**				Access to 2nd NCU-global basic frame			Cross. R.:	
Description:									
Access to 2nd NCU-global basic frame. Corresponds to $P_NCBFR[1].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR2**				Access to 3rd NCU-global basic frame			Cross. R.:	
Description:									
Access to 3rd NCU-global basic frame. Corresponds to $P_NCBFR[2].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR3**			Access to 4th NCU-global basic frame			Cross. R.:		
Description:									
Access to 4th NCU-global basic frame. Corresponds to $P_NCBFR[3].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR4**			Access to 5th NCU-global basic frame			Cross. R.:		
Description:									
Access to 5th NCU-global basic frame. Corresponds to $P_NCBFR[4].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR5**			Access to 6th NCU-global basic frame			Cross. R.:		
Description:									
Access to 6th NCU-global basic frame. Corresponds to $P_NCBFR[5].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR6**			Access to 7th NCU-global basic frame			Cross. R.:		
Description: Access to 7th NCU-global basic frame. Corresponds to $P_NCBFR[6].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR7**			Access to 8th NCU-global basic frame			Cross. R.:		
Description: Access to 8th NCU-global basic frame. Corresponds to $P_NCBFR[7].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR8**			Access to 9th NCU-global basic frame			Cross. R.:		
Description: Access to 9th NCU-global basic frame. Corresponds to $P_NCBFR[8].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR9**				Access to 10th NCU-global basic frame			Cross. R.:	
Description:									
Access to 10th NCU-global basic frame. Corresponds to $P_NCBFR[9].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR10**				Access to 11th NCU-global basic frame			Cross. R.:	
Description:									
Access to 11th NCU-global basic frame. Corresponds to $P_NCBFR[10].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR11**				Access to 12th NCU-global basic frame			Cross. R.:	
Description:									
Access to 12th NCU-global basic frame. Corresponds to $P_NCBFR[11].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFR12**				Access to 13th NCU-global basic frame				Cross. R.:	
Description:										
Access to 13th NCU-global basic frame. Corresponds to $P_NCBFR[12].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFR13**				Access to 14th NCU-global basic frame				Cross. R.:	
Description:										
Access to 14th NCU-global basic frame. Corresponds to $P_NCBFR[13].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFR14**				Access to 15th NCU-global basic frame				Cross. R.:	
Description:										
Access to 15th NCU-global basic frame. Corresponds to $P_NCBFR[14].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFR15**				Access to 16th NCU-global basic frame			Cross. R.:	
Description:									
Access to 16th NCU-global basic frame. Corresponds to $P_NCBFR[15].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME0**				Access to 1st current channel basic frame			Cross. R.:	
Description:									
Access to 1st current channel basic frame. Corresponds to $P_CHBFRAME[0].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME1**				Access to 2nd current channel basic frame			Cross. R.:	
Description:									
Access to 2nd current channel basic frame. Corresponds to $P_CHBFRAME[1].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME2**				Access to 3rd current channel basic frame			Cross. R.:	
Description:									
Access to 3rd current channel basic frame. Corresponds to $P_CHBFRAME[2].									
Axes:	Geometry axis Channel axis Machine axis					NCK Version:	56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME3**				Access to 4th current channel basic frame			Cross. R.:	
Description:									
Access to 4th current channel basic frame. Corresponds to $P_CHBFRAME[3].									
Axes:	Geometry axis Channel axis Machine axis					NCK Version:	56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME4**				Access to 5th current channel basic frame			Cross. R.:	
Description:									
Access to 5th current channel basic frame. Corresponds to $P_CHBFRAME[4].									
Axes:	Geometry axis Channel axis Machine axis					NCK Version:	56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME5**				Access to 6th current channel basic frame				Cross. R.:	
Description:										
Access to 6th current channel basic frame. Corresponds to $P_CHBFRAME[5].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME6**				Access to 7th current channel basic frame				Cross. R.:	
Description:										
Access to 7th current channel basic frame. Corresponds to $P_CHBFRAME[6].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME7**				Access to 8th current channel basic frame				Cross. R.:	
Description:										
Access to 8th current channel basic frame. Corresponds to $P_CHBFRAME[7].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_CHBFRAME8**				Access to 9th current channel basic frame			Cross. R.:	
Description:									
Access to 9th current channel basic frame. Corresponds to $P_CHBFRAME[8].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME9**				Access to 10th current channel basic frame			Cross. R.:	
Description:									
Access to 10th current channel basic frame. Corresponds to $P_CHBFRAME[9].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME10**				Access to 11th current channel basic frame			Cross. R.:	
Description:									
Access to 11th current channel basic frame. Corresponds to $P_CHBFRAME[10].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME11**				Access to 12th current channel basic frame			Cross. R.:	
Description:									
Access to 12th current channel basic frame. Corresponds to $P_CHBFRAME[11].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME12**				Access to 13th current channel basic frame			Cross. R.:	
Description:									
Access to 13th current channel basic frame. Corresponds to $P_CHBFRAME[12].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME13**				Access to 14th current channel basic frame			Cross. R.:	
Description:									
Access to 14th current channel basic frame. Corresponds to $P_CHBFRAME[13].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME14**				Access to 15th current channel basic frame			Cross. R.:	
Description:									
Access to 15th current channel basic frame. Corresponds to $P_CHBFRAME[14].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_CHBFRAME15**				Access to 16th current channel basic frame			Cross. R.:	
Description:									
Access to 16th current channel basic frame. Corresponds to $P_CHBFRAME[15].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME0**				1. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 1st current NCU-global basic frame. Corresponds to $P_NCBFRAME[0].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME1**				2. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 2nd current NCU-global basic frame. Corresponds to $P_NCBFRAME[1].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME2**				3. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 3rd current NCU-global basic frame. Corresponds to $P_NCBFRAME[2].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME3**				4. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 4th current NCU-global basic frame. Corresponds to $P_NCBFRAME[3].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME4**		5. 1st current NCU-global basic frame					Cross. R.:	
Description:									
Access to 5th current NCU-global basic frame. Corresponds to $P_NCBFRAME[4].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME5**		6. 1st current NCU-global basic frame					Cross. R.:	
Description:									
Access to 6th current NCU-global basic frame. Corresponds to $P_NCBFRAME[5].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME6**		7. 1st current NCU-global basic frame					Cross. R.:	
Description:									
Access to 7th current NCU-global basic frame. Corresponds to $P_NCBFRAME[6].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME7**			8. 1st current NCU-global basic frame			Cross. R.:		
Description:									
Access to 8th current NCU-global basic frame. Corresponds to $P_NCBFRAME[7].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME8**			9. 1st current NCU-global basic frame			Cross. R.:		
Description:									
Access to 9th current NCU-global basic frame. Corresponds to $P_NCBFRAME[8].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME9**			10. 1st current NCU-global basic frame			Cross. R.:		
Description:									
Access to 10th current NCU-global basic frame. Corresponds to $P_NCBFRAME[9].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME10**				11. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 11th current NCU-global basic frame. Corresponds to $P_NCBFRAME[10].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME11**				12. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 12th current NCU-global basic frame. Corresponds to $P_NCBFRAME[11].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME12**				13. 1st current NCU-global basic frame			Cross. R.:	
Description:									
Access to 13th current NCU-global basic frame. Corresponds to $P_NCBFRAME[12].									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	56.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

FRAME	**$P_NCBFRAME13**		14. 1st current NCU-global basic frame			Cross. R.:				
Description:										
Access to 14th current NCU-global basic frame. Corresponds to $P_NCBFRAME[13].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFRAME14**		15. 1st current NCU-global basic frame			Cross. R.:				
Description:										
Access to 15th current NCU-global basic frame. Corresponds to $P_NCBFRAME[14].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

FRAME	**$P_NCBFRAME15**		16. 1st current NCU-global basic frame			Cross. R.:				
Description:										
16. 16th current NCU-global basic frame Corresponds to $P_NCBFRAME[15].										
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$P_TRAFO_CHAIN[4]**	Programmed chained transformation	Cross. R.:	

Description:
$P_TRAFO_CHAIN[n]
Code numbers of chained transformations of programmed TRACON according to machine data $MC_TRAFO_TYPE_m.
.
Supplies the code number of the nth chained transformation of the programmed TRACON, starting with n=0.
$P_TRAFO_CHAIN[0] is the 1st chained transformation if a TRACON is programmed. If a TRACON command is not programmed, the code number of the programmed transformation is returned (e.g. 257 for TRANSMIT). If there is no transformation programmed, the value '0' is returned.
$P_TRAFO_CHAIN[1] is the 2nd chained transformation if a TRACON is programmed. Otherwise a '0' is returned.
The same applies accordingly for $P_TRAFO_CHAIN[2] and $P_TRAFO_CHAIN[3].

Description of array limits:
n: Index of the chained transformation.

Axes:						NCK Version:		51.06.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_TRAFO_CHAIN[4]**	Active chained transformation	Cross. R.:	

Description:
$AC_TRAFO_CHAIN[n]
Code numbers of chained transformations of active TRACON according to machine data $MC_TRAFO_TYPE_m.
.
Supplies the code number of the nth chained transformation of the active TRACON, starting with n=0.
$AC_TRAFO_CHAIN[0] is the 1st chained transformation if a TRACON is programmed. If a TRACON command is not active, the code number of the programmed transformation is returned (e.g. 257 for TRANSMIT). If no transformation is active, the value '0' is returned.
$AC_TRAFO_CHAIN[1] is the 2nd chained transformation if a TRACON is active. Otherwise a '0' is returned.
The same applies accordingly for $AC_TRAFO_CHAIN[2] and $AC_TRAFO_CHAIN[3].

Description of array limits:
n: Index of the chained transformation.

Axes:						NCK Version:		51.06.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_MEAS_INPUT[10]**		Measuring input parameter				Cross. R.:		
Description:									
Variable for workpiece and tool measurement. Array variable $AC_MEAS_INPUT[n] is used to enter measuring input parameters for workpiece and tool measurement. The control effect of the parameters is documented in the measurement variants.									
Description of array limits:									
n=0..9: Measuring input parameter									
Axes:						NCK Version:	51.08.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DBSB[1024]**		PLC data byte (signed)				Cross. R.:		
Description:									
Array variable $A_DBSB[n] is used to read and write a data byte (8 bits) from PLC. The byte is signed and can be read and written in the range from -128 to 127. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBB[n].									
Description of array limits:									
n: Position offset within I/O area 0 - ...									
Axes:						NCK Version:	58.00.00		
Unit:	-	min:	-128			max:	127		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_DBSW[1024]**		PLC data word (signed)				Cross. R.:		
Description:									
Array variable $A_DBSW[n] is used to read and write a data word (16 bits) from PLC. The word is signed and can be read and written in the range from -32768 to 32767. A memory area is reserved in the communications buffer of these modules (DPR) for high-speed data exchange between PLC and NC. The PLC uses function calls (FC) and the NCK uses $ variables to access this memory. See also $A_DBW[n].									
Description of array limits:									
n: Position offset within I/O area 0 - ...									
Axes:						NCK Version:	58.00.00		
Unit:	-	min:	-32768			max:	32767		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X		X		X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_SUB_AXFCT**	Substitution active	Cross. R.:	

Description:
Returns a bitmask according to machine data $MA_AXIS_LANG_SUB_MASK. An enabled bit means that the substitution of the corresponding function is active:

Bit 0 = 1:Automatic gear stage change (M40)
and direct gear stage change (M41-M45)
Bit 1 = 1:Spindle positioning with SPOS/SPOSA/M19

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**$P_SUB_GEAR**	Programmed gear stage	Cross. R.:	

Description:
Returns the programmed or calculated gear stage in the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK. Outside the substitution subprogram, the variable returns the gear stage of the master spindle.

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	41				max:	45		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

BOOL	**$P_SUB_AUTOGEAR**	Automatic gear stage change active	Cross. R.:	

Description:
In the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK, this variable indicates whether an automatic gear stage change (M40) was active in the part program line which initiated the substitution process.
Outside the substitution process, the variable returns the current setting in the interpreter.

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

AXIS	**$P_SUB_LA**	Leading spindle of active coupling	Cross. R.:	

Description:
In the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK, this variable supplies the axis identifier of the leading spindle of the active coupling which initiated the substitution process.
Outside the substitution process, the variable aborts program execution and triggers an alarm.

Axes:						NCK Version:		58.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

AXIS	**$P_SUB_CA**	Following spindle of active coupling	Cross. R.:	

Description:
In the substitution subprogram of an NC language substitution configured with $MA_AXIS_LANG_SUB_MASK, this variable supplies the axis identifier of the following spindle of the active coupling which initiated the substitution process.
Outside the substitution process, the variable aborts program execution and triggers an alarm.

Axes:						NCK Version:		58.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**$P_BLOCKNO**	Modal block number level-specific	Cross. R.:	

Description:
$P_BLOCKNO[n]
Supplies the last programmed block number of program level n.

Example:
$P_BLOCKNO[0]
Supplies the modal block number of the program on program level 0 = main program name.

MD 10284 $MN_DISPLAY_FUNCTION_MASK Bit0 must be = 1.
Block numbers programmed during DISPLOF cannot be read with $P_BLOCKNO.

Description of array limits:
n: Defines the program level from which the block number is to be read.
Numerical value: 0 to 11
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_LINENO[12]**			Line number level-specific			Cross. R.:	
Description: $P_LINENO[n] Supplies the last programmed line number of program level n. Example: $P_LINENO[0] Supplies the line number of the program on program level 0 = main program level.								
Description of array limits: n: Defines the program level from which the line number is to be read. Numerical value: 0 to 11								
Axes:					NCK Version:		58.00.00	
Unit:	-	min:	INT_MIN			max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AC_AUTO_JOG_STATE**			Status Jog in Auto			Cross. R.:	
Description: 1: Automatic is selected, $MN_JOG_MODE_MASK is set and the mode group is "BAG-Reseted". By actuating the +/- buttons or the handwheel, you can jog in Auto mode. 2: After a JOG movement has been performed, this mode group was switched by the system to JOG. The VDI and OPI still display Automatic mode. 0: Other Remark: This information covers the whole mode group and is available to each mode group channel via $AC_AUTO_JOG_STATE.								
Axes:					NCK Version:		59.00.00	
Unit:	-	min:	0			max:	2	
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X				X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_FIFO[n,m]**	FIFO stack	Cross. R.:	

Description:

Variable $AC_FIFO[n,m] access the n-th. first in first out stack. See also $AC_FIFO1 .. $AC_FIFO10.
$MC_NUM_AC_FIFO is used to define the range of n values and thus the number of FIFO Stacks $AC_FIFO1 - $AC_FIFO10.
The elements of the stack memory are saved in R variables. The length of all FIFO stacks is configured with $MC_LEN_AC_FIFO.
$MC_START_AC_FIFO is used to specify the number of the start R variable, from which the FIFO elements are stored.
R variables assigned to FIFO areas should not be written elsewhere.
The number of R variables must be set in machine data $MC_MM_NUM_R_PARAM such that all FIFO variables can be stored:
$MC_MM_NUM_R_PARAM = $MC_MM_START_FIFO + $MC_NUM_AC_FIFO * ($MC_LEN_AC_FIFO + 6)
The FIFO variable is an array variable.
Indices 0 - 5 have special meanings:
m = 0: When written with index 0, a new value is stored in the FIFO.
When read with index 0, the oldest element is read and removed from the FIFO.
m=1: Access to the first element read
m=2: Access to the last element read
m=3: Total of all FIFO elements if Bit0 in $MC_MM_MODE_FIFO is set.
m=4: Number of elements available in the FIFO
m=5: Current write index relative to the start of the FIFO
m=6: Oldest element
m=7: Second oldest etc.

Description of array limits:

The dimension is defined in $MC_NUM_AC_FIFO.
The dimension is defined in $MC_LEN_AC_FIFO.

Axes:						NCK Version:		60.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_AUXFU_M_VALUE[64]**	Value of active m-auxiliary function	Cross. R.:	

Description:
The array variable $AC_AUXFU_M_VALUE[n] is used to read the value of the M auxiliary function that has been collected last for an auxiliary function group (search run) or output. Auxiliary functions are assigned to groups. The index corresponds to the group number decremented by one. The index 0 determines the value of the M auxiliary function output last for the first group. If an auxiliary function has not yet been output for the group specified, the variable returns the value -1. The relevant extension can be determined with the variable $AC_AUXFU_M_EXT[n]. The variable $AC_AUXFU_M_STATE[n] determines the current output status.

Description of array limits:
The index corresponds to the auxiliary function group number decremented by one.

Axes:						NCK Version:		59.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_AUXFU_M_EXT[64]**	Extension of active m-auxiliary function	Cross. R.:	

Description:
The array variable $AC_AUXFU_M_EXT[n] is used to read the extension of the M auxiliary function that has been collected last for an auxiliary function group (search run) or output. Auxiliary functions are assigned to groups. The index corresponds to the group number decremented by one. The index 0 determines the extension of the M auxiliary function output last for the first group. If an auxiliary function has not yet been output for the group specified, the variable returns the value -1. The relevant value of the auxiliary function can be determined with the variable $AC_AUXFU_M_VALUE[n]. The variable $AC_AUXFU_M_STATE[n] determines the current output status.

Description of array limits:
The index corresponds to the auxiliary function group number decremented by one.

Axes:						NCK Version:		59.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AC_AUXFU_M_STATE[64]**	Output state of axtive m-auxiliary function	Cross. R.:	

Description:

The array variable $AC_AUXFU_M_STATE[n] is used to read the output status of the M auxiliary function that has been collected last for an auxiliary function group (search run) or output. Auxiliary functions are assigned to groups. The index corresponds to the group number decremented by one. The index 0 determines the status of the M auxiliary function output last for the first group. If an auxiliary function has not yet been output for the group specified, the variable returns the value 0. If the value is greater than 0, the relevant auxiliary function value can be determined with the variable $AC_AUXFU_M_VALUE[n]. The variable $AC_AUXFU_M_EXT[n] determines the current extension of the auxiliary function.
The variable returns the following values:
0: Auxiliary function not available
1: M-auxiliary function collected via search run
2: M-auxiliary function output to the PLC
3: M-auxiliary function output to the PLC, transfer has been acknowledged.
4: M-auxiliary function managed by the PLC and integrated into the PLC.
5: M-auxiliary function managed by the PLC, function has been acknowledged.

Description of array limits:

The index corresponds to the auxiliary function group number decremented by one.

Axes:						NCK Version:		59.00.00		
Unit:	-	min:	0				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_THREAD_PITCH**	programmed thread pitch	Cross. R.:	

Description:

$P_THREAD_PITCH provides the lead with G33, G34, G35, G331 and G332 programmed under the address I, J or K. Value 0 is supplied in the RESET state or if no lead has been programmed. With G33, G34 and G35 a positive value is always returned. With G331 and G332, the sign results from the spindle rotation direction: positive in clockwise direction (as with M3) or negative in counterclokckwise direction (as with M4).
In the following example, $P_THREAD_PITCH provides the value "1.5".

```
N11 M4 S500
N12 G33 Z10 K1.4
N13 G33 Z12 K1.5
N14 R1=$P_THREAD_PITCH  ;R1=1.5
```

Axes:						NCK Version:		60.00.00		
Unit:	THREAD_PITCH	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_THREAD_PITCH_INC**	programmed thread pitch increment	Cross. R.:	

Description:
$P_THREAD_PITCH_INC supplies the value programmed under the address F for the lead change (G34/G35). Value 0 is supplied in the RESET state or if no lead change has been programmed.
The returned value is positive in the case of G34 or negative in the case of G35.

Example:
M3 S400
G35 F2 Z10 K5
R1=$P_THREAD_PITCH_INC ;R1= -2

Axes:						NCK Version:		60.00.00		
Unit:	THREAD_PITCH_INCREMENT	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_THREAD_PITCH**	programmed thread pitch	Cross. R.:	

Description:
$AC_THREAD_PITCH provides the lead for G33, G34, G35, G331 and G332 programmed under address I, J or K. In the RESET state or if no lead has been programmed, the value 0 is given. With G33, G34 and G35, a positive value is always returned. With G331 and G332, the sign from the spindle rotating direction is as follows: positive for clockwise rotation (as with M3) or negative for counterclockwise rotation (as with M4).
In the following example, $AC_THREAD_PITCH provides the value "1.5" :
...
N11 M4 S500
N12 G33 Z10 K1.4
N13 G33 Z12 K1.5
N14 R1=$AC_THREAD_PITCH ;R1= 1.5

Axes:						NCK Version:		60.00.00		
Unit:	THREAD_PITCH	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_THREAD_PITCH_INC**	current thread pitch increment	Cross. R.:	

Description:
$AC_THREAD_PITCH_INC provides the value programmed under the address F for the lead change (G34/G35). In the RESET state or if a change in lead has not been programmed, the value 0 will be supplied.

Example:
M3 S400
G34 F4 Z10 K2
R1=$P_THREAD_PITCH_INC ;R1= 4

Axes:						NCK Version:		60.00.00		
Unit:	THREAD_PITCH_INCREMENT	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AC_THREAD_PITCH_ACT**	current thread pitch just now	Cross. R.:	

Description:
$AC_THREAD_PITCH_ACT provides the current value for the lead. This value is continuously updated in blocks with G34 or G35 according to the value programmed under F.
Only with thread blocks (G33, G34, G35, G331 and G332) a value unequal zero is supplied.

Axes:						NCK Version:		60.00.00		
Unit:	THREAD_PITCH	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_TOOLROT[3]**	Programmed tool rotation direction	Cross. R.:	

Description:
$P_TOOLROTn]
Programmed tool rotation vector
Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1.
1: x-component
2: y-component
3: z-component
If no tool is active, the following unit vector is returned, depending on the active plane:
G17: (0, 1, 0)
G18: (1, 0, 0)
G19: (0, 0, 1)

Description of array limits:
n: Components 1 - 3

Axes:						NCK Version:		60.00.00		
Unit:	-	min:	-1.0				max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOOLR_ACT[3]**	Active tool rotation direction	Cross. R.:	

Description:
$AC_TOOLR_ACT[n]
Active command rotation vector
Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1.
1: x-component
2: y-component
3: z-component
If no tool is active, the following unit vector is returned, depending on the active plane:
G17: (0, 1, 0)
G18: (1, 0, 0)
G19: (0, 0, 1)

Description of array limits:
n: Components 1 - 3

Axes:						NCK Version:		60.00.00		
Unit:	-	min:	-1.0				max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOOLR_END[3]**	End rotation direction vector	Cross. R.:	

Description:
$AC_TOOLR_END[n]
End rotation vector of active block
Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1.
1: x-component
2: y-component
3: z-component
If no tool is active, the following unit vector is returned, depending on the active plane:
G17: (0, 1, 0)
G18: (1, 0, 0)
G19: (0, 0, 1)

Description of array limits:
n: Components 1 - 3

Axes:						NCK Version:		60.00.00		
Unit:	-	min:	-1.0				max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AC_TOOLR_DIFF**	Remaining angle of the tool rotation direction	Cross. R.:	

Description:
$AC_TOOLR_DIFF
Remaining angle of tool rotation in active block in degree in the range 0 ... 180 degree.

Axes:						NCK Version:		60.00.00		
Unit:	Degrees	min:	0.0				max:	180.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$VC_TOOLR[3]**	Actual rotation direction vector	Cross. R.:	

Description:
$VC_TOOLR[n]
Actual tool rotation
Normalized vector with length 1 and the components (n = 1, 2, 3) in the range - 1, ..., 1.
1: x-component
2: y-component
3: z-component
If no tool is active, the following unit vector is returned, depending on the active plane:
G17: (0, 1, 0)
G18: (1, 0, 0)
G19: (0, 0, 1)

Description of array limits:
n: Components 1 - 3

Axes:						NCK Version:		60.00.00		
Unit:	-	min:	-1.0				max:	1.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$VC_TOOLR_DIFF**	Angle between set and actual rotation	Cross. R.:	

Description:
$VC_TOOLR_DIFF
Angle between command and actual tool rotation in degree in the range 0 ... 180 degree.

Axes:						NCK Version:		60.00.00		
Unit:	Degrees	min:	0.0				max:	180.0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$VC_TOOLR_STAT**	Status of actual rotation direction vector	Cross. R.:	

Description:
$VC_TOOLR_STAT
Status of calculation of actual tool rotation:
0: MCS -> BCS Transformation in one ipo cycle
-1: MCS -> BCS transformation not in one ipo cycle possible

Axes:						NCK Version:		60.00.00		
Unit:	-	min:	-1				max:	0		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

BOOL	**$P_SIMUL**	Simulation search run active	Cross. R.:	

Description:
Value==TRUE

The part program is executed in the control under the Simulation search run mode.

The simulation search run is a search run (with calculation)
which is aborted with an internal M30 once the
end of the program has been reached.

The control is internally in search run mode, the variables $P_SEARCH,
$P_SERACH1, $P_SEARCH2 and $P_SERACHL are also correctly supplied.

Parts program adjustments can be made through variables
$P_SEARCH* or $P_SIMUL. $P_SIMUL is designed only for adjustments
restricted to the simulation search run.

Value==FALSE No simulation search run is active.

Axes:						NCK Version:		61.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

INT	**$P_SUB_STAT**	state of substitution subroutine	Cross. R.:	

Description:
A replacement of the tool programming has been configured (address D, DL, T or M function through which the tool change cycle is called up). $P_SUB_STAT now permits polling to see if the substitution process is active and if the process is executed at the start or the end of the block:

Value 0: Substitution subprogram not active
Value 1: Substitution subprogram active,
call-up at start of block
Value 2: Substitution subprogram active,
call-up at end of block

The system variable is influenced by machine data
$MN_T_NO_FCT_CYCLE_MODE bit1 and 2.

Axes:						NCK Version:		61.00.00		
Unit:	-	min:	0				max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**$A_USEDND[32]**	Workpiece counts for cutting edges	Cross. R.:	

Description:
$A_USEDND[toolHolder]
The number of cutting edges used in tool holder s, counted since the last setpiece command, including the currently active cutting edge.
toolHolder=1,...,maximum tool holder number
toolHolder=0 = The master tool holder is selected
Result = >0 = Number of cutting edges that have been used.
Result = 0 = There have been no cuts since the last setpiece command.
Result = -1 = Tool Management Tool Monitoring is not active.
Result = -2 = toolHolder is not the value of a defined tool holder.

Description of array limits:
toolHolder: Spindle number / Tool holder number
1 - SLMAXMAGLOCATIONSWITHDISTANCE
0 = designates the master tool holder

Axes:						NCK Version:		62.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_USEDT[32,1500]**	Workpiece counts for cutting edges	Cross. R.:	

Description:
$A_USEDT[toolHolder, usedCuttingEdgeIndex]
T-Number for the i-th cutting edge used with tool holder s since the last setpiece command, including the currently active cutting edge.
toolHolder=1,...,maximum tool holder number
toolHolder=0 = The master tool holder is selected
Result = >0 = T-Number (can occur several times) (if different D-corrections of the tool were used).
Result = 0 = There have been no cuts since the last setpiece command.
Result = -1 = Tool Management Tool Monitoring is not active.
Result = -2 = toolHolder is not the value of a defined tool holder.

Description of array limits:
toolHolder: Spindle number / Tool holder number
1 - SLMAXMAGLOCATIONSWITHDISTANCE
0 = designates the master tool holder
usedCuttingEdgeIndex: index
1 - $A_USEDND[toolHolder]

Axes:						NCK Version:		62.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_USEDD[32,1500]**	Workpiece counts for cutting edges	Cross. R.:	

Description:
$A_USEDD[toolHolder, usedCuttingEdgeIndex]
D-Number for the i-th cutting edge used with tool holder s since the last setpiece command, including the currently active cutting edge.
toolHolder=1,...,maximum tool holder number
toolHolder=0 = The master tool holder is selected
Result = >0 = D-Number (can occur several times) (if different D-corrections of the tool were used).
Result = 0 = There have been no cuts since the last setpiece command.
Result = -1 = Tool Management Tool Monitoring is not active.
Result = -2 = toolHolder is not the value of a defined tool holder.

Description of array limits:
toolHolder: Spindle number / Tool holder number
1 - SLMAXMAGLOCATIONSWITHDISTANCE
0 = designates the master tool holder
usedCuttingEdgeIndex: index
1 - $A_USEDND[toolHolder]

Axes:						NCK Version:		62.00.00		
Unit:	-	min:	0				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

1.1.5 Toolholder data

DOUBLE	**$TC_CARR1[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR1[n]
x component of offset vector l1
Attention! All system parameters beginning with '$TC_' are parameters belonging to the TOA area.
The special characteristic of this area is that machine data 28085 = MM_LINK_TOA_UNIT can be set to allow
different NCK channels to access these parameters.
If this type of parameter setting has been selected by the NCK, you must be aware that changing these data can have
a negative impact on other channels. Before you change any data settings, make sure that the changes will have
only a local effect on the channel in which they are made.

Description of array limits:
The maximum number of toolholders can be set in
$MN_MM_NUM_TOOL_CARRIER.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR2[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR2[n]
y component of offset vector l1

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR3[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR3[n]
z component of offset vector l1

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR4[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR4[n]
x component of offset vector l2

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR5[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR5[n]
y component of offset vector l2

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR6[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR6[n]
z component of offset vector l2

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR7[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR7[n]
x component of rotary axis v1

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR8[n]**				Still to be defined				Cross. R.:	
Description:										
$TC_CARR8[n]										
y component of rotary axis v1										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR9[n]**				Still to be defined				Cross. R.:	
Description:										
$TC_CARR9[n]										
z component of rotary axis v1										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR10[n]**				Still to be defined				Cross. R.:	
Description:										
$TC_CARR10[n]										
x component of rotary axis v2										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR11[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR11[n]
y component of rotary axis v2

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR12[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR12[n]
z component of rotary axis v2

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR13[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR13[n]
Angle of rotation alpha1 (in degrees)

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR14[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR14[n]
Angle of rotation alpha2 (in degrees)

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	-	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR15[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR15[n]
x component of offset vector l3

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		13.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR16[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR16[n]
y component of offset vector l3

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		14.00.00		
Unit:	inch	min:	DBL_MIN			max:		DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR17[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR17[n]
z component of offset vector l3

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		14.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR18[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR18[n]
x component of offset vector l4

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		14.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR19[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR19[n]
y component of offset vector l4

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		20.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR20[n]**				Still to be defined			Cross. R.:	
Description:									
$TC_CARR20[n]									
z component of offset vector l4									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:						NCK Version:	20.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

AXIS	**$TC_CARR21[n]**				Still to be defined			Cross. R.:	
Description:									
$TC_CARR21[n]									
Axis identifier of 1st rotary axis									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:						NCK Version:	20.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

AXIS	**$TC_CARR22[n]**				Still to be defined			Cross. R.:	
Description:									
$TC_CARR22[n]									
Axis identifier of 2nd rotary axis									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:						NCK Version:	20.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

CHAR	**$TC_CARR23[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR23[n]
Type of kinematics: P: Rotatable workpiece (Part)
M: Rotatable tool and rotatable workpiece (Mixed)
T or any other character apart from P and M: Rotatable tool

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = T, i.e. toolholder with orientatable tool.

Axes:						NCK Version:		20.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR24[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR24[n]
Offset of 1st rotary axis in degrees
Specifies the angle in degrees of the 1st rotary axis at which the axis assumes its initial position.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR25[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR25[n] Offset of 2nd rotary axis in degrees Specifies the angle in degrees of the 2nd rotary axis at which the axis assumes its initial position.									
Description of array limits:									
The maximum number of toolholders can be set in machine data. The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR26[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR26[n] Specifies the offset of the 1st rotary axis if its position is not continuously variable (Hirth tooth system). It is evaluated only if $TC_CARR28 is set to a value other than zero. For exact meanings, please refer to the description of $TC_CARR28									
Description of array limits:									
The maximum number of toolholders can be set in machine data. The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR27[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR27[n]
Specifies the offset of the 1st rotary axis if its position
is not continuously variable (Hirth tooth system).
It is evaluated only if $TC_CARR29 is set to a value other than zero.
For exact meanings, please refer to the description of $TC_CARR29

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR28[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR28[n]
Specifies the size of the minimum increment (in degrees)
by which the rotary axis can change position (e.g.
for Hirth tooth systems).
A programmed or calculated angle is rounded to the nearest
value calculated from phi = s + n * d when n
is an integer.

In this equation
s = $TC_CARR28
d = $TC_CARR26
If $TC_CARR28 equals zero, $TC_CARR26 and $TC_CARR28
are not used.
The settings in machine data
$MC_TOCARR_ROT_ANGLE_INCR[i] and $MC_TOCARR_ROT_ANGLE_OFFSET[i]
are applied instead.

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR29[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR29[n]
Specifies the size of the minimum increment (in degrees)
by which the second rotary axis can change position (e.g.
for Hirth tooth systems).
A programmed or calculated angle is rounded to the nearest
value calculated from phi = s + n * d when n
is an integer.

In this equation
s = $TC_CARR29
d = $TC_CARR27
If $TC_CARR29 equals zero, $TC_CARR28 and $TC_CARR29
are not used.
The settings in machine data
$MC_TOCARR_ROT_ANGLE_INCR[i] and $MC_TOCARR_ROT_ANGLE_OFFSET[i]
are applied instead.

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR30[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR30[n]
Specifies the minimum position of the 1st rotary axis. Zu vollstaendigen
For description, see $TC_CARR32

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR31[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR31[n]
Specifies the minimum position of the 2nd rotary axis. Zu vollstaendigen
For description, see $TC_CARR33

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR32[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR32[n]
Specifies the maximum position of the 1st rotary axis.
When the angle of the 1st rotary axis of an orientatable
toolholder aligned according to a frame (TCOFR) is calculated,
the only acceptable solutions are those which lie within the
$TC_CARR30 to $TC_CARR32 range.
The same applies when the rotary angle is programmed absolutely
(TCOABS).
If both $TC_CARR30 and $TC_CARR32 equal zero, the
limits are not evaluated.

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR33[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR33[n]
Specifies the maximum position of the 2nd rotary axis.
When the angle of the 2nd rotary axis of an orientatable toolholder aligned according to a frame (TCOFR) is calculated, the only acceptable solutions are those which lie within the $TC_CARR31 to $TC_CARR33 range.
The same applies when the rotary angle is programmed absolutely (TCOABS).
If both $TC_CARR31 and $TC_CARR33 equal zero, the limits are not evaluated.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$TC_CARR34[n,MAX_STRINGLENGTH]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR34[n]
Contains a freely definable string. This is provided as a free identifier for the orientatable toolholder.
Within the NCK, however, it has no significance at all and is therefore not evaluated.
This identifier should not be used for other purposes as it may be used in a future upgrade to allow the activation of an orientatable toolholder via a name rather than a number.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.
max. string length

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$TC_CARR35[n,MAX_STRINGLENGTH]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR35[n]
Contains a freely definable string. This is provided as a
free identifier for the first rotary axis.
Within the NCK, however, it has no significance at all and is therefore
not evaluated.
It can also be used for any other purpose.

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.
max. string length

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$TC_CARR36[n,MAX_STRINGLENGTH]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR36[n]
Contains a freely definable string. This is provided as a
free identifier for the second rotary axis.
Within the NCK, however, it has no significance at all and is therefore
not evaluated.
It can also be used for any other purpose.

Description of array limits:
The maximum number of toolholders can be set in
machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.
max. string length

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_CARR37[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR37[n]
Contains an integer number for identifying the toolholder.
Within the NCK, however, it has no significance at all and is therefore not evaluated.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR38[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR38[n]
Contains a position (X component of retraction position)
Within the NCK, however, it has no significance at all and is therefore not evaluated.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR39[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR39[n]
Contains a position (Y component of retraction position)
Within the NCK, however, it has no significance at all and is therefore not evaluated.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR40[n]**	Still to be defined	Cross. R.:	

Description:
$TC_CARR40[n]
Contains a position (X component of retraction position)
Within the NCK, however, it has no significance at all and is therefore not evaluated.

Description of array limits:
The maximum number of toolholders can be set in machine data.
The default setting is = 0, i.e. no data of this type are configured on the NCK.

Axes:						NCK Version:		48.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR41[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR41[n]									
x component of fine offset of offset vector l1									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR42[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR42[n]									
y component of fine offset of offset vector l1									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR43[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR43[n]									
z component of fine offset of offset vector l1									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR44[n]**		Still to be defined					Cross. R.:		
Description:										
$TC_CARR44[n]										
x component of fine offset of offset vector l2										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR45[n]**		Still to be defined					Cross. R.:		
Description:										
$TC_CARR45[n]										
y component of fine offset of offset vector l2										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR46[n]**		Still to be defined					Cross. R.:		
Description:										
$TC_CARR46[n]										
x component of fine offset of offset vector l2										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR55[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR55[n]									
x component of fine offset of offset vector l3									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR56[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR56[n]									
y component of fine offset of offset vector l3									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR57[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR57[n]									
z component of fine offset of offset vector l3									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR58[n]**		Still to be defined					Cross. R.:		
Description:										
$TC_CARR58[n]										
x component of fine offset of offset vector l4										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR59[n]**		Still to be defined					Cross. R.:		
Description:										
$TC_CARR59[n]										
y component of fine offset of offset vector l4										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR60[n]**		Still to be defined					Cross. R.:		
Description:										
$TC_CARR60[n]										
z component of fine offset of offset vector l4										
Description of array limits:										
The maximum number of toolholders can be set in machine data.										
The default setting is = 0, i.e. no data of this type are configured on the NCK.										
Axes:						NCK Version:		52.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR64[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR64[n]									
Fine offset of offset ($TC_CARR24) of 1st rotary axis in degrees									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_CARR65[n]**		Still to be defined				Cross. R.:		
Description:									
$TC_CARR65[n]									
Fine offset of offset ($TC_CARR25) of 2nd rotary axis in degrees									
Description of array limits:									
The maximum number of toolholders can be set in machine data.									
The default setting is = 0, i.e. no data of this type are configured on the NCK.									
Axes:					NCK Version:		52.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.6 Channel-specific protection zones

BOOL	**$SC_PA_ACTIV_IMMED[n]**	Protection zone immediately active	Cross. R.:	

Description:
$SC_PA_ACTIV_IMMED[n]
Protection zone immediately active after boot
TRUE: The protection zone is activated immediately
the control has booted and the axes have been referenced
FALSE: The protection zone is not immediately active

Note: This variable can only be written as a system variable and is not affected by
the NC commands between NPROTDEF(..) and EXECUTE(n).

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

CHAR	**$SC_PA_T_W[n]**	Protection zone specific to workpiece/tool	Cross. R.:	

Description:
$SC_PA_T_W[n]
Protection zone specific to workpiece/tool
0: Workpiece-specific protection zone
3: Tool-specific protection zone

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SC_PA_ORI[n]**	Orientation of protection zone	Cross. R.:	

Description:
$SC_PA_ORI[n]
Orientation of protection zone
0: Polygon definition in the plane from the 1st and 2nd geo axes (G17)
1: Polygon definition in the plane from the 3rd and 1st geo axes (G18)
2: Polygon definition in the plane from the 2nd and 3rd geo axes (G19)

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SC_PA_LIM_3DIM[n]**	Scope of application-limiting protection zone	Cross. R.:	

Description:
$SC_PA_LIM_3DIM[n]
Identifier for limitation of protection zone in the axis
perpendicular to the polygon definition
0: No limitation
1: Limitation in the positive direction
2: Limitation in the negative direction
3: Limitation in both directions

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SC_PA_PLUS_LIM[n]**	Limitation of protection zone applicate plus	Cross. R.:	

Description:
$SC_PA_PLUS_LIM[n]
Positive limitation of protection zones in the axis
perpendicular to the polygon definition.
Effective only if $SC_PA_LIM_3DIM[n]=1 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SC_PA_MINUS_LIM[n]**	Limitation of protection zone applicate minus	Cross. R.:	

Description:
$SC_PA_MINUS_LIM[n]
Negative limitation of protection zone in minus direction in the axis
perpendicular to the polygon definition
Effective only if $SC_PA_LIM_3DIM[n]=2 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SC_PA_CONT_NUM[n]**	Number of valid contour elements	Cross. R.:	

Description:
$SC_PA_CONT_NUM[n]
Number of valid contour elements
Protection zones need at least 2 contour elements for a complete description.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	10		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SC_PA_CONT_TYP[n,m]**	Type of the contour element	Cross. R.:	

Description:
$SC_PA_CONT_TYP"[n,m]
Type (G1, G2, G3) of contour element
=0: Contour not defined
=1: Straight
=2: Circle element (clockwise)
=3: Circle element (counterclockwise)
The end point is determined by $SC_PA_CONT_ORD or $SC_PA_CONT_ABS. With contour types G2 and G3, $SC_PA_CENT_ORD or $SC_PA_CENT_ABS determines the center point of the circle element.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SC_PA_CONT_ORD[n,m]**	End point of contour element (ordinate)	Cross. R.:	

Description:
$SC_PA_CONT_ORD[n,m]
End point of contour element (ordinate)
See also description of $SC_PA_CONT_TYP

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SC_PA_CONT_ABS[n,m]**	End point of contour element (abscissa)	Cross. R.:	

Description:
$SC_PA_CONT_ABS[n,m]
End point of contour element (abscissa)
See also description of $SC_PA_CONT_TYP

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SC_PA_CENT_ORD[n,m]**	Center point of contour element (ordinate)	Cross. R.:	

Description:
$SC_PA_CENT_ORD[n,m]
Center point of contour element (ordinate)
Relevant only if $SC_PA_CONT_TYP[n,m] = 2 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SC_PA_CENT_ABS[n,m]**	Center point of contour element (abscissa)	Cross. R.:	

Description:
$SC_PA_CENT_ABS[n,m]
Center point of contour element (abscissa)
Relevant only if $SC_PA_CONT_TYP[n,m] = 2 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_CHAx_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI
CHAx: x=channel no.

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_CHAN.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.7 Tool parameters

INT	**$TC_DP1[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP1[t,d]
Tool type
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP1[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP2[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP2[t,d]
Tool point direction
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP2[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP3[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP3[t,d]
Geometry - length 1
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP3[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP4[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP4[t,d]
Geometry - length 2
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP4[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP5[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP5[t,d]
Geometry - length 3
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP5[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP6[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP6[t,d]
Geometry - radius
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP6[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP7[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP7[t,d]
Slotting saw: Corner radius
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP7[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP8[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP8[t,d]
Slotting saw: Length
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP8[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP9[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP9[t,d]
Reserved
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP9[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP10[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP10[t,d]
Angle between tool face and toroidal surface
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP10[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP11[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP11[t,d]
Angle between tool longitudinal axis and upper end of toroidal surface
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP11[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP12[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP12[t,d]
Wear - length 1 - $TC_DP3
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP12[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP13[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP13[t,d]
Wear - length 2 - $TC_DP4
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP13[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP14[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP14[t,d]
Wear - length 3 - $TC_DP5
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP14[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP15[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP15[t,d]
Wear - radius - $TC_DP6
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP15[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP16[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP16[t,d]
Slotting saw: Wear - corner radius - $TC_DP7
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP16[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP17[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP17[t,d]
Slotting saw: Wear length - $TC_DP8
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP17[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP18[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP18[t,d]
Wear - reserved - $TC_DP9
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP18[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP19[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP19[t,d]
Wear - angle between tool face and toroidal surface - $TC_DP10
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP19[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP20[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP20[t,d]
Wear - angle between tool longitudinal axis and upper end of toroidal surface - $TC_DP11
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP20[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP21[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP21[t,d]
Basis - length 1
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP21[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP22[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP22[t,d]
Basis - length 2
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP22[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP23[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP23[t,d]
Basis - length 3
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP23[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP24[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP24[t,d]
Clearance angle
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP24[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DP25[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DP25[t,d]
Reserved
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DP25[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_DPCE[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_DPCE[t,d] = 'cutting edge number' of compensation data block t,d When the 'flat D number management' function is active, the syntax is as follows: $TC_DPCE[d] CE stands for <C>utting<E>dge Value range of legal 'cutting edge numbers': 1 up to value of machine data $MN_MM_MAX_CUTTING_EDGE_PERTOOL.				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	16.00.00					
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_DPH[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_DPH[t,d] = 'H cutting edge number' of compensation data block t,d for Fanuc0 M When the 'flat D number management' function is active, the syntax is as follows: $TC_DPH[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	17.00.00					
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_DPV[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_DPV[t,d] = tool cutting edge orientation When the 'flat D number management' function is active, the syntax is as follows: $TC_DPV[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	43.00.00					
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPV3[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DPV3[t,d] = L1 component of tool cutting edge orientation
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPV3[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPV4[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DPV4[t,d] = L2 component of tool cutting edge orientation
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPV4[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPV5[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_DPV5[t,d] = Z component of tool cutting edge orientation
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPV5[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		43.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPVN3[32000,32000]**				L1 component of the orientation normal			Cross. R.:	
Description:									
$TC_DPVN3[t,d] = L1 component of the orientation normal of the tool cutting edge. If the function 'flat D-number management' is active, the syntax is as follows: $TC_DPVN3[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: tool cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:						NCK Version:		58.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPVN4[32000,32000]**				L2 component of the orientation normal			Cross. R.:	
Description:									
$TC_DPVN4[t,d] = L2 component of the orientation normal of the tool cutting edge. If the function 'flat D-number management' is active, the syntax is as follows: $TC_DPVN4[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: tool cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:						NCK Version:		58.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPVN5[32000,32000]**				L3 component of the orientation normal			Cross. R.:	
Description:									
$TC_DPVN5[t,d] = L3 component of the orientation normal of the tool cutting edge. If the function 'flat D-number management' is active, the syntax is as follows: $TC_DPVN5[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: tool cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:						NCK Version:		58.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.8 OEM user cutting edge data

DOUBLE	**$TC_DPC1[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC1[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC1[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC2[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC2[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC2[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC3[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC3[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC3[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC4[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC4[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC4[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC5[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC5[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC5[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC6[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC6[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC6[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC7[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC7[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC7[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC8[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC8[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC8[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC9[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC9[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC9[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPC10[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPC10[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPC10[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS1[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS1[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS1[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS2[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS2[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS2[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS3[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS3[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS3[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS4[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS4[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS4[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS5[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS5[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS5[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS6[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS6[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS6[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS7[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS7[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS7[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS8[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS8[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS8[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS9[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS9[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS9[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_DPCS10[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. DOUBLE is the default setting
$TC_DPCS10[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_DPCS10[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP13[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP3: $TC_SCP13[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP13[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP14[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP4: $TC_SCP14[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP14[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP15[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP5: $TC_SCP15[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP15[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP16[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP6: $TC_SCP16[t,d] comparable to $TC_DP15[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP16[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP17[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP7: $TC_SCP17[t,d] comparable to $TC_DP16[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP17[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP18[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP8: $TC_SCP18[t,d] comparable to $TC_DP17[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP18[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP19[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP9: $TC_SCP19[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP19[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP20[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP10: $TC_SCP20[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP20[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP21[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP11: $TC_SCP21[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP21[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP23[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP3: $TC_SCP23[t,d] comparable to $TC_DP12[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP23[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP24[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP4: $TC_SCP24[t,d] comparable to $TC_DP13[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP24[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP25[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP5: $TC_SCP25[t,d] comparable to $TC_DP14[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP25[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP26[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_SCP26[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP26[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP27[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_SCP27[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP27[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP28[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
$TC_SCP28[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP28[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP29[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP9: $TC_SCP29[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP29[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP30[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP10: $TC_SCP30[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP30[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP31[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP11: $TC_SCP31[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP31[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP33[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP3: $TC_SCP33[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP33[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP34[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP4: $TC_SCP34[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP34[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP35[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP5: $TC_SCP35[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP35[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP36[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_SCP36[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP36[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_SCP37[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_SCP37[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP37[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_SCP38[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP8: $TC_SCP38[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP38[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_SCP39[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP9: $TC_SCP39[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP39[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP40[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP10: $TC_SCP40[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP40[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP41[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP11: $TC_SCP41[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP41[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP43[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP3: $TC_SCP43[t,d] comparable to $TC_DP12[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP43[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP44[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP4: $TC_SCP44[t,d] comparable to $TC_DP13[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP44[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP45[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP5: $TC_SCP45[t,d] comparable to $TC_DP14[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP45[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP46[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP6: $TC_SCP46[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP46[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP47[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP7: $TC_SCP47[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP47[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP48[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP8: $TC_SCP48[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP48[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP49[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_SCP49[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP49[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP50[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_SCP50[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP50[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP51[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_SCP51[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP51[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP53[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP3: $TC_SCP53[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP53[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP54[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP4: $TC_SCP54[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP54[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP55[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP5: $TC_SCP55[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP55[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:			NCK Version:	15.00.00					
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP56[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP6: $TC_SCP56[t,d] comparable to $TC_DP15[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP56[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP57[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP7: $TC_SCP57[t,d] comparable to $TC_DP16[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP57[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP58[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP8: $TC_SCP58[t,d] comparable to $TC_DP17[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP58[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP59[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP9: $TC_SCP59[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP59[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP60[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP10: $TC_SCP60[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP60[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP61[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP11: $TC_SCP61[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP61[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP63[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP3: $TC_SCP63[t,d] comparable to $TC_DP12[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP63[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP64[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP4: $TC_SCP64[t,d] comparable to $TC_DP13[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP64[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP65[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP5: $TC_SCP65[t,d] comparable to $TC_DP14[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP65[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP66[32000,32000]**	Still to be defined					Cross. R.:		
Description: Offset for $TC_DP6: $TC_SCP66[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP66[d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_SCP67[32000,32000]**	Still to be defined					Cross. R.:		
Description: Offset for $TC_DP7: $TC_SCP67[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP67[d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_SCP68[32000,32000]**	Still to be defined					Cross. R.:		
Description: Offset for $TC_DP8: $TC_SCP68[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_SCP68[d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_SCP69[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_SCP69[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP69[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP70[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_SCP70[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP70[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_SCP71[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_SCP71[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_SCP71[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP13[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP3: $TC_ECP13[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP13[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP14[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP4: $TC_ECP14[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP14[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP15[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
Offset for $TC_DP5: $TC_ECP15[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP15[d]				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP16[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_ECP16[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP16[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP17[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_ECP17[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP17[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP18[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP8: $TC_ECP18[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP18[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP19[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_ECP19[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP19[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP20[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_ECP20[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP20[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP21[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_ECP21[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP21[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP23[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP3: $TC_ECP23[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP23[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP24[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP4: $TC_ECP24[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP24[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP25[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP5: $TC_ECP25[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP25[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP26[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_ECP26[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP26[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP27[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_ECP27[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP27[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP28[32000,32000]**	Still to be defined					Cross. R.:		
Description:									
$TC_ECP28[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP28[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP29[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_ECP29[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP29[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP30[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_ECP30[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP30[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP31[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_ECP31[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP31[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP33[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP3: $TC_ECP33[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP33[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP34[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP4: $TC_ECP34[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP34[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP35[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP5: $TC_ECP35[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP35[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP36[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_ECP36[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP36[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP37[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_ECP37[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP37[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP38[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP8: $TC_ECP38[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP38[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP39[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_ECP39[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP39[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP40[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_ECP40[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP40[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP41[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_ECP41[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP41[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP43[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP3: $TC_ECP43[t,d] comparable to $TC_DP12[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP43[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP44[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP4: $TC_ECP44[t,d] comparable to $TC_DP13[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP44[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP45[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP5: $TC_ECP45[t,d] comparable to $TC_DP14[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP45[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP46[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP6: $TC_ECP46[t,d] comparable to $TC_DP15[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP46[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP47[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP7: $TC_ECP47[t,d] comparable to $TC_DP16[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP47[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP48[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP8: $TC_ECP48[t,d] comparable to $TC_DP17[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP48[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP49[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_ECP49[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP49[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP50[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_ECP50[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP50[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP51[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_ECP51[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP51[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP53[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP3: $TC_ECP53[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP53[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP54[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP4: $TC_ECP54[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP54[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP55[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP5: $TC_ECP55[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP55[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP56[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_ECP56[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP56[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP57[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_ECP57[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP57[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP58[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP8: $TC_ECP58[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP58[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP59[32000,32000]**			Still to be defined				Cross. R.:	
Description:									
Offset for $TC_DP9: $TC_ECP59[t,d] comparable to $TC_DP18[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP59[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP60[32000,32000]**			Still to be defined				Cross. R.:	
Description:									
Offset for $TC_DP10: $TC_ECP60[t,d] comparable to $TC_DP19[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP60[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP61[32000,32000]**			Still to be defined				Cross. R.:	
Description:									
Offset for $TC_DP11: $TC_ECP61[t,d] comparable to $TC_DP20[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP61[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP63[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP3: $TC_ECP63[t,d] comparable to $TC_DP12[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP63[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP64[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP4: $TC_ECP64[t,d] comparable to $TC_DP13[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP64[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP65[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP5: $TC_ECP65[t,d] comparable to $TC_DP14[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP65[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ECP66[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP6: $TC_ECP66[t,d] comparable to $TC_DP15[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP66[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP67[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP7: $TC_ECP67[t,d] comparable to $TC_DP16[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP67[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP68[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
Offset for $TC_DP8: $TC_ECP68[t,d] comparable to $TC_DP17[t,d] When the 'flat D number management' function is active, the syntax is as follows: $TC_ECP68[d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP69[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP9: $TC_ECP69[t,d] comparable to $TC_DP18[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP69[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP70[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP10: $TC_ECP70[t,d] comparable to $TC_DP19[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP70[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_ECP71[32000,32000]**	Still to be defined	Cross. R.:	

Description:
Offset for $TC_DP11: $TC_ECP71[t,d] comparable to $TC_DP20[t,d]
When the 'flat D number management' function is active, the syntax is as follows:
$TC_ECP71[d]

Description of array limits:
t: T number 1 - SLMAXTOOLNUMBER
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.9 Tool management monitoring data

DOUBLE	**$TC_MOP1[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_MOP1[t,d]				
Prewarning limit for downtime				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER				
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_MOP2[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_MOP2[t,d]				
Residual tool life				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER				
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOP3[32000,32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_MOP3[t,d]				
Prewarning limit for workpiece count				
Description of array limits:				
t: T number 1 - SLMAXTOOLNUMBER				
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER				

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOP4[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_MOP4[t,d]									
Residual workpieces									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_MOP5[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_MOP5[t,d]									
Prewarning limit for wear									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		15.00.00			
Unit:	inch	min:			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_MOP6[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_MOP6[t,d]									
Residual wear									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		15.00.00			
Unit:	inch	min:			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_MOP11[32000,32000]**				Still to be defined			Cross. R.:		
Description: $TC_MOP11[t,d] Specified tool life										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER										
Axes:						NCK Version:		15.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOP13[32000,32000]**				Still to be defined			Cross. R.:		
Description: $TC_MOP13[t,d] Specified workpiece count										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER										
Axes:						NCK Version:		15.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_MOP15[32000,32000]**				Still to be defined			Cross. R.:		
Description: $TC_MOP15[t,d] Specified wear										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER										
Axes:						NCK Version:		15.00.00		
Unit:	inch	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.10 OEM user monitoring data

INT	**$TC_MOPC1[32000,32000]**				Still to be defined			Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MOPC1[t,d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:						NCK Version:		06.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOPC2[32000,32000]**				Still to be defined			Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MOPC2[t,d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:						NCK Version:		06.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOPC3[32000,32000]**				Still to be defined			Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MOPC3[t,d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:						NCK Version:		06.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOPC4[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC4[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPC5[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC5[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPC6[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC6[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPC7[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC7[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPC8[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC8[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPC9[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC9[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPC10[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPC10[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS1[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPCS1[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS2[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPCS2[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS3[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPCS3[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS4[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPCS4[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS5[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MOPCS5[t,d]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS6[32000,32000]**		Still to be defined					Cross. R.:		
Description:										
The type can be specified by machine data. INT is the default setting $TC_MOPCS6[t,d]										
Description of array limits:										
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOPCS7[32000,32000]**		Still to be defined					Cross. R.:		
Description:										
The type can be specified by machine data. INT is the default setting $TC_MOPCS7[t,d]										
Description of array limits:										
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOPCS8[32000,32000]**		Still to be defined					Cross. R.:		
Description:										
The type can be specified by machine data. INT is the default setting $TC_MOPCS8[t,d]										
Description of array limits:										
t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MOPCS9[32000,32000]**	Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MOPCS9[t,d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MOPCS10[32000,32000]**	Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MOPCS10[t,d]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER d: Cutting edge number / D number 1 - SLMAXCUTTINGEDGENUMBER									
Axes:					NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.11 Tool-related data

STRING	**$TC_TP2[32000,MAX_STRINGLENGTH]**	Still to be defined					Cross. R.:		
Description: $TC_TP2[t] Tool identifier									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER max. string length									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_TP1[32000]**		Still to be defined					Cross. R.:		
Description: $TC_TP1[t] Duplo number										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP3[32000]**		Still to be defined					Cross. R.:		
Description: $TC_TP3[t] Size on left										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP4[32000]**		Still to be defined					Cross. R.:		
Description: $TC_TP4[t] Size on right										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP5[32000]**				Still to be defined				Cross. R.:	
Description: $TC_TP5[t] Size at top										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP6[32000]**				Still to be defined				Cross. R.:	
Description: $TC_TP6[t] Size at bottom										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP7[32000]**				Still to be defined				Cross. R.:	
Description: $TC_TP7[t] Magazine location type										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP8[32000]**		Still to be defined					Cross. R.:		
Description: $TC_TP8[t] Status										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP9[32000]**		Still to be defined					Cross. R.:		
Description: $TC_TP9[t] Type of tool monitoring										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP11[32000]**		Still to be defined					Cross. R.:		
Description: $TC_TP11[t] Replacement-change strategy										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_TP10[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_TP10[t]									
Tool info									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC1[32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting									
$TC_TPC1[t]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC2[32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting									
$TC_TPC2[t]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC3[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC3[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC4[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC4[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC5[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC5[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC6[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC6[t]										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_TPC7[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC7[t]										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_TPC8[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC8[t]										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_TPC9[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC9[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPC10[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPC10[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS1[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS1[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS2[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS2[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS3[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS3[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS4[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS4[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS5[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS5[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS6[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS6[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS7[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_TPCS7[t]									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS8[32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_TPCS8[t]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS9[32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_TPCS9[t]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPCS10[32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_TPCS10[t]									
Description of array limits:									
t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.12 Tool-related grinding data

INT	**$TC_TPG1[32000]**				Still to be defined			Cross. R.:	
Description: $TC_TPG1[t] Spindle number									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_TPG2[32000]**				Still to be defined			Cross. R.:	
Description: $TC_TPG2[t] Chaining rule									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPG3[32000]**				Still to be defined			Cross. R.:	
Description: $TC_TPG3[t] Minimum grinding wheel radius									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:	06.00.00			
Unit:	inch	min:			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPG4[32000]**				Still to be defined				Cross. R.:	
Description: $TC_TPG4[t] Minimum grinding wheel width										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	inch	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_TPG5[32000]**				Still to be defined				Cross. R.:	
Description: $TC_TPG5[t] Current grinding wheel width										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	inch	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_TPG6[32000]**				Still to be defined				Cross. R.:	
Description: $TC_TPG6[t] Maximum speed										
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$TC_TPG7[32000]**			Still to be defined			Cross. R.:		
Description: $TC_TPG7[t] Max. peripheral speed									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:		06.00.00		
Unit:	ft/s	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_TPG8[32000]**			Still to be defined			Cross. R.:		
Description: $TC_TPG8[t] Angle of inclined grinding wheel									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_TPG9[32000]**			Still to be defined			Cross. R.:		
Description: $TC_TPG9[t] Parameter no. f. radius calculation									
Description of array limits: t: T number 1 - SLMAXTOOLNUMBER									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.13 Magazine location data

BOOL	**$TC_MPP3[32000,32000]**		Still to be defined				Cross. R.:		
Description: $TC_MPP3[n,m] Consider adjacent location On/Off									
Description of array limits: n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	FALSE		max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPP1[32000,32000]**		Still to be defined				Cross. R.:		
Description: $TC_MPP1[n,m] Location type									
Description of array limits: n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:			max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPP2[32000,32000]**		Still to be defined				Cross. R.:		
Description: $TC_MPP2[n,m] Location type									
Description of array limits: n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		00.00.00			
Unit:	-	min:			max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPP6[32000,32000]**				Still to be defined				Cross. R.:	
Description: $TC_MPP6[n,m] T no. of tool in this location										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPP4[32000,32000]**				Still to be defined				Cross. R.:	
Description: $TC_MPP4[n,m] Location state										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPP5[32000,32000]**				Still to be defined				Cross. R.:	
Description: $TC_MPP5[n,m] Buffer magazine: Location type index Real magazines:Wear group number										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPP7[32000,32000]**	Still to be defined						Cross. R.:		
Description: $TC_MPP7[n,m] Adapter number of tool adapter in this location										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		15.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPP66[32000,32000]**	Still to be defined						Cross. R.:		
Description: $TC_MPP66[n,m] T no. of tool stored in buffer for which the location defined by n,m is reserved. A write operation is meaningful only when a backup file is loaded to the NCK. The name assignment is based on $TC_MPP6 - T no. of tool stored in the magazine location.										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		43.00.00		
Unit:	-	min:					max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.14 OEM user magazine location data

INT	**$TC_MPPC1[32000,32000]**	Still to be defined						Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MPPC1[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPC2[32000,32000]**				Still to be defined				Cross. R.:	
Description:										
The type can be specified by machine data. INT is the default setting $TC_MPPC2[n,m]										
Description of array limits:										
n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPC3[32000,32000]**				Still to be defined				Cross. R.:	
Description:										
The type can be specified by machine data. INT is the default setting $TC_MPPC3[n,m]										
Description of array limits:										
n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPC4[32000,32000]**				Still to be defined				Cross. R.:	
Description:										
The type can be specified by machine data. INT is the default setting $TC_MPPC4[n,m]										
Description of array limits:										
n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPC5[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MPPC5[n,m]									
Description of array limits:									
n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPPC6[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MPPC6[n,m]									
Description of array limits:									
n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPPC7[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MPPC7[n,m]									
Description of array limits:									
n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPPC8[32000,32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MPPC8[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPC9[32000,32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MPPC9[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPC10[32000,32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MPPC10[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS1[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MPPCS1[n,m]									
Description of array limits:									
n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPPCS2[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MPPCS2[n,m]									
Description of array limits:									
n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPPCS3[32000,32000]**		Still to be defined				Cross. R.:		
Description:									
The type can be specified by machine data. INT is the default setting $TC_MPPCS3[n,m]									
Description of array limits:									
n: Physical magazine number m: Physical location number									
Axes:				NCK Version:		18.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MPPCS4[32000,32000]**				Still to be defined				Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MPPCS4[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS5[32000,32000]**				Still to be defined				Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MPPCS5[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS6[32000,32000]**				Still to be defined				Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MPPCS6[n,m]										
Description of array limits: n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS7[32000,32000]**		Still to be defined					Cross. R.:		
Description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS7[n,m]										
Description of array limits:										
n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS8[32000,32000]**		Still to be defined					Cross. R.:		
Description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS8[n,m]										
Description of array limits:										
n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS9[32000,32000]**		Still to be defined					Cross. R.:		
Description:										
The type can be specified by machine data. INT is the default setting $TC_MPPCS9[n,m]										
Description of array limits:										
n: Physical magazine number m: Physical location number										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPPCS10[32000,32000]**	Still to be defined	Cross. R.:	

Description:
The type can be specified by machine data. INT is the default setting
$TC_MPPCS10[n,m]

Description of array limits:
n: Physical magazine number
m: Physical location number

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MDP1[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_MDP1[n,m]
Distance to tool change point
betw. magazine n and location m
of 1st internal magazine
internal mag. 1 distance parameter

Description of array limits:
n: Physical magazine number
m: Physical location number

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MDP2[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_MDP2[n,m]
Distance to tool change point
betw. magazine n and location m
of 2nd internal magazine
internal mag. 2 distance parameter

Description of array limits:
n: Physical magazine number
m: Physical location number

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MLSR[32000,32000]**	Still to be defined	Cross. R.:	

Description:
$TC_MLSR[n,m]=0
Assignment of buffer location n to buffer location m
m must identify a location of type 'Spindle'.
n must identify a location which is not a 'Spindle' type location.
In this way it is possible, for example, to define which grippers, spindles, etc.
are assigned. The default parameter setting is 0.
The write operation defines a relationship, the read operation checks whether
a particular relationship exists. If it does not exist, the read operation
generates an alarm.
define links of grippers,... to spindles.

Description of array limits:
n: Physical magazine location number of location type other than SPINDLE
m: Physical magazine location number of location type SPINDLE

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MPTH[8,8]**	Still to be defined	Cross. R.:	

Description:
$TC_MPTH[n,m]
Magazine location type hierarchy
mag.location (place)types hierarchy parameter

Description of array limits:
n: Hierarchy 0 - SLMAXHIERARCHYNUMBER-1
m: Location type 0 - SLMAXHIERARCHYENTRIES - 1

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.15 Tool management magazine description data

STRING	**$TC_MAP2[32000,MAX_STRINGLENGTH]**	Still to be defined	Cross. R.:	
Description:				
$TC_MAP2[n] Identifier of magazine				
Description of array limits:				
n: Magazine number 1 - .. max. string length				

Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:										
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAP1[32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_MAP1[n] Type of magazine				
Description of array limits:				
n: Magazine number 1 - ..				

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAP3[32000]**	Still to be defined	Cross. R.:	
Description:				
$TC_MAP3[n] Status of magazine				
Description of array limits:				
n: Magazine number 1 - ..				

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAP4[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_MAP4[n]									
Chaining to next magazine									
Description of array limits:									
n: Magazine number 1 - ..									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MAP5[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_MAP5[n]									
Chaining to previous magazine									
Description of array limits:									
n: Magazine number 1 - ..									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MAP6[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_MAP6[n]									
Number of lines									
Description of array limits:									
n: Magazine number 1 - ..									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MAP7[32000]**		Still to be defined					Cross. R.:		
Description: $TC_MAP7[n] Number of columns										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAP8[32000]**		Still to be defined					Cross. R.:		
Description: $TC_MAP8[n] Current magazine position in relation to tool change position										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAP9[32000]**		Still to be defined					Cross. R.:		
Description: $TC_MAP9[n] Current wear group number										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		15.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAP10[32000]**				Still to be defined			Cross. R.:	
Description:									
$TC_MAP10[n]									
Current search strategies of magazine.									
- Tool search strategy									
- Empty location search strategy									
The NCK enters the value of $TC_MAMP2 per default.									
Description of array limits:									
n: Magazine number 1 - ..									
Axes:						NCK Version:		20.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.16 OEM user tool management magazine description data

INT	**$TC_MAPC1[32000]**				Still to be defined			Cross. R.:	
Description:									
The type can be specified by machine data. INT is the default setting									
$TC_MAPC1[n]									
Description of array limits:									
n: Magazine number 1 - ..									
Axes:						NCK Version:		06.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPC2[32000]**				Still to be defined			Cross. R.:	
Description:									
The type can be specified by machine data. INT is the default setting									
$TC_MAPC2[n]									
Description of array limits:									
n: Magazine number 1 - ..									
Axes:						NCK Version:		06.00.00	
Unit:	-	min:	INT_MIN				max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPC3[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC3[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPC4[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC4[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPC5[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC5[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPC6[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC6[n]									
Description of array limits: n: Magazine number 1 - ..									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MAPC7[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC7[n]									
Description of array limits: n: Magazine number 1 - ..									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MAPC8[32000]**		Still to be defined				Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC8[n]									
Description of array limits: n: Magazine number 1 - ..									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$TC_MAPC9[32000]**				Still to be defined				Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC9[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPC10[32000]**				Still to be defined				Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MAPC10[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS1[32000]**				Still to be defined				Cross. R.:	
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS1[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS2[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS2[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS3[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS3[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS4[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS4[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS5[32000]**				Still to be defined				Cross. R.:	
Description:										
The type can be specified by machine data. INT is the default setting $TC_MAPCS5[n]										
Description of array limits:										
n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS6[32000]**				Still to be defined				Cross. R.:	
Description:										
The type can be specified by machine data. INT is the default setting $TC_MAPCS6[n]										
Description of array limits:										
n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS7[32000]**				Still to be defined				Cross. R.:	
Description:										
The type can be specified by machine data. INT is the default setting $TC_MAPCS7[n]										
Description of array limits:										
n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS8[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS8[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS9[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS9[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAPCS10[32000]**		Still to be defined					Cross. R.:		
Description: The type can be specified by machine data. INT is the default setting $TC_MAPCS10[n]										
Description of array limits: n: Magazine number 1 - ..										
Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.17 Magazine module parameter

STRING	**$TC_MAMP1[-1,MAX_STRINGLENGTH]**	Still to be defined	Cross. R.:	

Description:
$TC_MAMP1
Identifier of magazine block

Description of array limits:
Scalar variable
max. string length

Axes:						NCK Version:		06.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAMP2[-1]**	Still to be defined	Cross. R.:	

Description:
$TC_MAMP2
Type of tool search

Description of array limits:
Scalar variable

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$TC_MAMP3[-1]**	Still to be defined	Cross. R.:	

Description:
$TC_MAMP3
Handling of tools in wear groups

Description of array limits:
Scalar variable

Axes:						NCK Version:		15.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.18 Adapter data

INT	**$TC_ADPTT[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_ADPTT[a]									
Adapter transformation number									
Description of array limits:									
a: Adapter number 1 - SLMAXADAPTERNUMBER									
Axes:				NCK Version:		15.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ADPT1[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_ADPT1[a]									
Adapter geometry: Length 1									
Description of array limits:									
a: Adapter number 1 - SLMAXADAPTERNUMBER									
Axes:				NCK Version:		15.00.00			
Unit:	inch	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ADPT2[32000]**		Still to be defined				Cross. R.:		
Description:									
$TC_ADPT2[a]									
Adapter geometry: Length 2									
Description of array limits:									
a: Adapter number 1 - SLMAXADAPTERNUMBER									
Axes:				NCK Version:		15.00.00			
Unit:	inch	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$TC_ADPT3[32000]**				Still to be defined				Cross. R.:	
Description: $TC_ADPT3[a] Adapter geometry: Length 3										
Description of array limits: a: Adapter number 1 - SLMAXADAPTERNUMBER										
Axes:						NCK Version:		15.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.19 Measuring system compensation values

DOUBLE	**$AA_ENC_COMP[n,m]**				Still to be defined				Cross. R.:	
Description: $AA_ENC_COMP[n,m,a] Compensation values a: Machine axes										
Description of array limits: n: Encoder no. 0-1 m: Point no. 0 - <MD value>										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_ENC_COMP_STEP[n]**				Still to be defined				Cross. R.:	
Description: $AA_ENC_COMP_STEP[n,a] Increment a: Machine axes										
Description of array limits: n: Encoder no. 0-1										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_ENC_COMP_MIN[n]**			Still to be defined				Cross. R.:	
Description:									
$AA_ENC_COMP_MIN[n,a] Start position of compensation a: Machine axes									
Description of array limits:									
n: Encoder no. 0-1									
Axes:	Machine axis				NCK Version:	06.00.00			
Unit:	Lin.-/Angle pos.	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$AA_ENC_COMP_MAX[n]**			Still to be defined				Cross. R.:	
Description:									
$AA_ENC_COMP_MAX[n,a] End position of compensation a: Machine axes									
Description of array limits:									
n: Encoder no. 0-1									
Axes:	Machine axis				NCK Version:	06.00.00			
Unit:	Lin.-/Angle pos.	min:	DBL_MIN		max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

BOOL	**$AA_ENC_COMP_IS_MODULO[n]**			Still to be defined				Cross. R.:	
Description:									
$AA_ENC_COMP_IS_MODULO[n,a] Compensation is modulo a: Machine axes									
Description of array limits:									
n: Encoder no. 0-1									
Axes:	Machine axis				NCK Version:	06.00.00			
Unit:	-	min:	FALSE		max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.20 Quadrant error compensation

DOUBLE	**$AA_QEC[n,m]**	Still to be defined	Cross. R.:	
Description:				
$AA_QEC[n,m,a]				
Result of learning process				
a: Machine axes				
Description of array limits:				
n: 0				
m: No. of point: 0 - $MN_MM_QEC_MAX_POINTS				

Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AA_QEC_COARSE_STEPS[n]**	Still to be defined	Cross. R.:	
Description:				
$AA_QEC_COARSE_STEPS[n,a]				
Compensation values: Rough quantization of characteristic				
a: Machine axes				
Description of array limits:				
n: 0				

Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AA_QEC_FINE_STEPS[n]**	Still to be defined	Cross. R.:	
Description:				
$AA_QEC_FINE_STEPS[n,a]				
Fine quantization of characteristic				
a: Machine axes				
Description of array limits:				
n: 0				

Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_ACCEL_1[n]**				Still to be defined				Cross. R.:	
Description:										
$AA_QEC_ACCEL_1[n,a]										
Acceleration at 1st knee point according to definition [mm/s2 or inch/s2 or degree/s2]										
a: Machine axes										
Description of array limits:										
n: 0										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_ACCEL_2[n]**				Still to be defined				Cross. R.:	
Description:										
$AA_QEC_ACCEL_2[n,a]										
Acceleration at 2nd knee point according to definition [mm/s2 or inch/s2 or degree/s2]										
a: Machine axes										
Description of array limits:										
n: 0										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_ACCEL_3[n]**				Still to be defined				Cross. R.:	
Description:										
$AA_QEC_ACCEL_3[n,a]										
Acceleration at 3rd knee point according to definition [mm/s2 or inch/s2 or degree/s2]										
a: Machine axes										
Description of array limits:										
n: 0										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_MEAS_TIME_1[n]**				Still to be defined				Cross. R.:	
Description: $AA_QEC_MEAS_TIME_1[n,a] Measuring time for range $AA_QEC_ACCEL_1 a: Machine axes										
Description of array limits: n: 0										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	s	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_MEAS_TIME_2[n]**				Still to be defined				Cross. R.:	
Description: $AA_QEC_MEAS_TIME_2[n,a] Measuring time for range $AA_QEC_ACCEL_2 a: Machine axes										
Description of array limits: n: 0										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	s	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_MEAS_TIME_3[n]**				Still to be defined				Cross. R.:	
Description: $AA_QEC_MEAS_TIME_3[n,a] Measuring time for range $AA_QEC_ACCEL_3 a: Machine axes										
Description of array limits: n: 0										
Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	s	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_TIME_1[n]**	Still to be defined	Cross. R.:	
Description:				
$AA_QEC_TIME_1[n,a]				
1. Filtering time for feedforward element				
a: Machine axes				
Description of array limits:				
n: 0				

Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	s	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_TIME_2[n]**	Still to be defined	Cross. R.:	
Description:				
$AA_QEC_TIME_2[n,a]				
2. Filtering time for feedforward element				
a: Machine axes				
Description of array limits:				
n: 0				

Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	s	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AA_QEC_LEARNING_RATE[n]**	Still to be defined	Cross. R.:	
Description:				
$AA_QEC_LEARNING_RATE[n,a]				
Learning rate for network				
a: Machine axes				
Description of array limits:				
n: 0				

Axes:	Machine axis					NCK Version:		06.00.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				No restriction				

BOOL	**$AA_QEC_DIRECTIONAL[n]**		Still to be defined				Cross. R.:		
Description: $AA_QEC_DIRECTIONAL[n,a] TRUE: Direction-dependent compensation FALSE: No direction-dependent compensation a: Machine axes									
Description of array limits: n: 0									
Axes:	Machine axis				NCK Version:		06.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.21 Interpolator compensation

DOUBLE	**$AN_CEC[n,m]**		Still to be defined				Cross. R.:		
Description: $AN_CEC[n,m] Compensation value									
Description of array limits: n: Number of compensation table 0 - (maximum value can be set in MD) m: Number of interpolation point 0 - (maximum value can be set in MD)									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

AXIS	**$AN_CEC_INPUT_AXIS[n]**		Still to be defined				Cross. R.:		
Description: $AN_CEC_INPUT_AXIS[n]: Name of axis whose setpoint is used as the compensation table input									
Description of array limits: n: Number of compensation table 0 - (maximum value can be set in MD)									
Axes:					NCK Version:		06.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

AXIS	**$AN_CEC_OUTPUT_AXIS[n]**			Still to be defined			Cross. R.:		
Description:									
$AN_CEC_OUTPUT_AXIS[n]:									
Name of axis to which the output of the compensation table is applied									
Description of array limits:									
n: Number of compensation table 0 - (maximum value can be set in MD)									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AN_CEC_STEP[n]**			Still to be defined			Cross. R.:		
Description:									
$AN_CEC_STEP[n]									
Distance of offset values									
Description of array limits:									
n: Number of compensation table 0 - (maximum value can be set in MD)									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AN_CEC_MIN[n]**			Still to be defined			Cross. R.:		
Description:									
AN_CEC_MIN[n]									
Start position of compensation table									
Description of array limits:									
n: Number of compensation table 0 - (maximum value can be set in MD)									
Axes:					NCK Version:	06.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$AN_CEC_MAX[n]**		Still to be defined					Cross. R.:		
Description: AN_CEC_MAX[n] End position of compensation table										
Description of array limits: n: Number of compensation table 0 - (maximum value can be set in MD)										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AN_CEC_DIRECTION[n]**		Still to be defined					Cross. R.:		
Description: $AN_CEC_DIRECTION[n] Activates direction-dependent action of compensation table										
Description of array limits: n: Number of compensation table 0 - (maximum value can be set in MD)										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AN_CEC_MULT_BY_TABLE[n]**		Still to be defined					Cross. R.:		
Description: $AN_CEC_MULT_BY_TABLE[n] Number of table whose output value is to be multiplied by the output value of the compensation table 0: Both travel directions of basic axis 1: Positive travel direction of basic axis -1: Negative travel direction of basic axis										
Description of array limits: n: Number of compensation table 0 - (maximum value can be set in MD)										
Axes:						NCK Version:		06.00.00		
Unit:	-	min:	-1				max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

BOOL	**$AN_CEC_IS_MODULO[n]**		Still to be defined				Cross. R.:		
Description: $AN_CEC_IS_MODULO[n] TRUE: Cyclical repetition of compensation table FALSE: No cyclical repetition of compensation table									
Description of array limits: n: Number of compensation table 0 - (maximum value can be set in MD)									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	FALSE		max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.22 NCK-specific protection zones

BOOL	**$SN_PA_ACTIV_IMMED[n]**		Protection zone immediately active				Cross. R.:		
Description: $SN_PA_ACTIV_IMMED[n] Protection zone immediately active after boot TRUE: The protection zone is activated immediately the control has booted and the axes have been referenced FALSE: The protection zone is not immediately active Note: This variable can only be written as a system variable and is not affected by the NC commands between NPROTDEF(..) and EXECUTE(n). Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
Description of array limits: n: Number of protection zone The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.									
Axes:				NCK Version:		06.00.00			
Unit:	-	min:	FALSE		max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X		X		
write:	X				X		X		7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

CHAR	**$SN_PA_T_W[n]**				Protection zone specific to workpiece/tool			Cross. R.:	
Description:									
$SN_PA_T_W[n] Protection zone specific to workpiece/tool 0: Workpiece-specific protection zone 3: Tool-specific protection zone Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
Description of array limits:									
n: Number of protection zone The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.									
Axes:						NCK Version:	06.00.00		
Unit:	-	min:	0			max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SN_PA_ORI[n]**				Orientation of protection zone			Cross. R.:	
Description:									
$SN_PA_ORI[n] Orientation of protection zone 0: Polygon definition in the plane from the 1st and 2nd geo axes (G17) 1: Polygon definition in the plane from the 3rd and 1st geo axes (G18) 2: Polygon definition in the plane from the 2nd and 3rd geo axes (G19) Note: This variable is not restored during REORG. Note: This variable is saved during data backup. Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI									
Description of array limits:									
n: Number of protection zone The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.									
Axes:						NCK Version:	06.00.00		
Unit:	-	min:	0			max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SN_PA_LIM_3DIM[n]**	Scope of application-limiting protection zone	Cross. R.:	

Description:
$SN_PA_LIM_3DIM[n]
Identifier for limitation of protection zone in the axis perpendicular to the polygon definition
0: No limitation
1: Limitation in the positive direction
2: Limitation in the negative direction
3: Limitation in both directions

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SN_PA_PLUS_LIM[n]**	Limitation of protection zone applicate plus	Cross. R.:	

Description:
$SN_PA_PLUS_LIM[n]
Positive limitation of protection zones in the axis perpendicular to the polygon definition
Effective only if $SN_PA_LIM_3DIM[n]=1 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SN_PA_MINUS_LIM[n]**	Limitation of protection zone applicate minus	Cross. R.:	

Description:
$SN_PA_MINUS_LIM[n]
Negative limitation of protection zone in minus direction in the axis perpendicular to the polygon definition
Effective only if $SN_PA_LIM_3DIM[n]=2 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SN_PA_CONT_NUM[n]**	Number of valid contour elements	Cross. R.:	

Description:
$SN_PA_CONT_NUM[n]
Number of valid contour elements
Protection zones need at least 2 contour elements for a complete description.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	10		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$SN_PA_CONT_TYP[n,m]**	Type of the contour element	Cross. R.:	

Description:
$SN_PA_CONT_TYP[n,m]
Type (G1, G2, G3) of contour element
=0: Contour not defined
=1: Straight
=2: Circle element (clockwise)
=3: Circle element (counterclockwise)
The end point is determined by $SN_PA_CONT_ORD or $SN_PA_CONT_ABS. With contour types G2 and G3, $SN_PA_CENT_ORD or $SN_PA_CENT_ABS determines the center point of the circle element.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SN_PA_CONT_ORD[n,m]**	End point of contour element (ordinate)	Cross. R.:	

Description:
$SN_PA_CONT_ORD[n,m]
End point of contour element (ordinate)
See also description of $SN_PA_CONT_TYP

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SN_PA_CONT_ABS[n,m]**	End point of contour element (abscissa)	Cross. R.:	

Description:
$SN_PA_CONT_ABS[n,m]
End point of contour element (abscissa)
See also description of $SN_PA_CONT_TYP

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SN_PA_CENT_ORD[n,m]**	Center point of contour element (ordinate)	Cross. R.:	

Description:
$SN_PA_CENT_ORD[n,m]
Center point of contour element (ordinate)
Relevant only if $SN_PA_CONT_TYP[n,m] = 2 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$SN_PA_CENT_ABS[n,m]**	Center point of contour element (abscissa)	Cross. R.:	

Description:
$SN_PA_CENT_ABS[n,m]
Center point of contour element (abscissa)
Relevant only if $SN_PA_CONT_TYP[n,m] = 2 or = 3.

Note: This variable is not restored during REORG.

Note: This variable is saved during data backup.
Blocks: _N_NCK_PRO, _N_COMPLETE_PRO and _N_INITIAL_INI

Description of array limits:
n: Number of protection zone
The maximum dimension is defined in MD $MN_MM_NUM_PROTECT_AREA_NCK.
m: Number of the contour element
(0 - MAXNUM_CONTOURNO_PROTECTAREA)

Axes:						NCK Version:		06.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.23 Cycle parameter assignment

DOUBLE	**$C_A**	ISO cycle parameter for address A	Cross. R.:	

Description:
$C_A
Value of programmed address A in ISO2/3 mode for cycle parameterization

Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_B**	ISO cycle parameter for address B	Cross. R.:	

Description:
$C_B
Value of programmed address B in ISO2/3 mode for cycle parameterization

Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_C**				ISO cycle parameter for address C			Cross. R.:	
Description: $C_C Value of programmed address C in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_D**				ISO cycle parameter for address D			Cross. R.:	
Description: $C_D Value of programmed address D in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_E**				ISO cycle parameter for address E			Cross. R.:	
Description: $C_E Value of programmed address E in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_F**				ISO cycle parameter for address F			Cross. R.:	
Description: $C_F Value of programmed address F in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_G**				ISO cycle parameter for address G				Cross. R.:	
Description: $C_G Value of programmed address G in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_H**				ISO cycle parameter for address H				Cross. R.:	
Description: $C_H Value of programmed address H in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_I[10]**				ISO cycle parameter for address I				Cross. R.:	
Description: $C_I[] Value of programmed address I in ISO2/3 mode for cycle parameterization and macro programming with G65/G66.										
Description of array limits: Up to 10 entries with address K can be made in the block for macro programming with G65/G66. The values are stored in the array in the sequence in which they were programmed.										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_J[10]**				ISO cycle parameter for address J				Cross. R.:	
Description:										
$C_J[]										
Value of programmed address J in ISO2/3 mode for cycle parameterization and macro programming with G65/G66.										
Description of array limits:										
Up to 10 entries with address K can be made in the block for macro programming with G65/G66. The values are stored in the array in the sequence in which they were programmed.										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_K[10]**				ISO cycle parameter for address K				Cross. R.:	
Description:										
$C_K[]										
Value of programmed address K in ISO2/3 mode for cycle parameterization and macro programming with G65/G66.										
Description of array limits:										
Up to 10 entries with address K can be made in the block for macro programming with G65/G66. The values are stored in the array in the sequence in which they were programmed.										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_L**				ISO cycle parameter for address L				Cross. R.:	
Description:										
$C_L										
Value of programmed address L in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_M**				ISO cycle parameter for address M				Cross. R.:	
Description: $C_M Value of programmed address M in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_N**				ISO cycle parameter for address N				Cross. R.:	
Description: $C_N Value of programmed address N in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_O**				ISO cycle parameter for address O				Cross. R.:	
Description: $C_O Value of programmed address O in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_P**				ISO cycle parameter for address P				Cross. R.:	
Description: $C_P Value of programmed address P in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_Q**				ISO cycle parameter for address Q			Cross. R.:	
Description: $C_Q Value of programmed address Q in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_R**				ISO cycle parameter for address R			Cross. R.:	
Description: $C_R Value of programmed address R in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_S**				ISO cycle parameter for address S			Cross. R.:	
Description: $C_S Value of programmed address S in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_T**				Cycle parameter for address T			Cross. R.:	
Description: $C_T Value of programmed address T for cycle parameterization (ISO2/3 mode) and T function substitution (ISO2/3 and standard modes)									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_U**				ISO cycle parameter for address U				Cross. R.:	
Description: $C_U Value of programmed address U in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_V**				ISO cycle parameter for address V				Cross. R.:	
Description: $C_V Value of programmed address V in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_W**				ISO cycle parameter for address W				Cross. R.:	
Description: $C_W Value of programmed address W in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_X**				ISO cycle parameter for address X				Cross. R.:	
Description: $C_X Value of programmed address X in ISO2/3 mode for cycle parameterization										
Axes:						NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$C_Y**				ISO cycle parameter for address Y			Cross. R.:	
Description: $C_Y Value of programmed address Y in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_Z**				ISO cycle parameter for address Z			Cross. R.:	
Description: $C_Z Value of programmed address Z in ISO2/3 mode for cycle parameterization									
Axes:					NCK Version:	17.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_DL**				ISO parameter for address DL			Cross. R.:	
Description: Value of programmed address DL (additive tool offset) in the case of a subprogram call by M/T function substitution									
Axes:					NCK Version:	43.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_PI**				ISO cycle parameter for address P			Cross. R.:	
Description: Program number of interrupt routine programmed with M96 Pxx in ISO2/3 mode									
Axes:					NCK Version:	52.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

STRING	**$C_TS[-1,MAX_STRINGLENGTH]**	Still to be defined	Cross. R.:	

Description:
$C_TS
String of the tool identifier programmed under address T for
T function substitution (with active tool monitoring only)

Description of array limits:
The tool name appears once only in the block.
Maximum string length

Axes:						NCK Version:		18.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_A_PROG**	ISO cycle parameter for address A	Cross. R.:	

Description:
$C_A_PROG
Address A is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_B_PROG**	ISO cycle parameter for address B	Cross. R.:	

Description:
$C_B_PROG
Address B is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_C_PROG**	ISO cycle parameter for address C	Cross. R.:	

Description:
$C_C_PROG
Address C is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_D_PROG**	ISO cycle parameter for address D	Cross. R.:	

Description:
$C_D_PROG
Address D is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_E_PROG**	ISO cycle parameter for address E	Cross. R.:	

Description:
$C_E_PROG
Address E is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_F_PROG**	ISO cycle parameter for address F	Cross. R.:	

Description:
$C_F_PROG
Address F is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_G_PROG**	ISO cycle parameter for address G	Cross. R.:	

Description:
$C_G_PROG
G function for cycle call is programmed in this block
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_H_PROG**	ISO cycle parameter for address H	Cross. R.:	

Description:
$C_H_PROG
Address H is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_I_PROG**	ISO cycle parameter for address I	Cross. R.:	

Description:
$C_I_PROG
Address I is programmed in a block with cycle macro call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_J_PROG**	ISO cycle parameter for address J	Cross. R.:	

Description:
$C_J_PROG
Address J is programmed in a block with cycle macro call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_K_PROG**	ISO cycle parameter for address K	Cross. R.:	

Description:
$C_K_PROG
Address K is programmed in a block with cycle macro call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_L_PROG**	ISO cycle parameter for address L	Cross. R.:	

Description:
$C_L_PROG
Address L is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_M_PROG**	ISO cycle parameter for address M	Cross. R.:	

Description:
$C_M_PROG
Address M is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_N_PROG**	ISO cycle parameter for address N	Cross. R.:	

Description:
$C_N_PROG
Address N is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_O_PROG**	ISO cycle parameter for address O	Cross. R.:	

Description:
$C_O_PROG
Address O is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_P_PROG**	ISO cycle parameter for address P	Cross. R.:	

Description:
$C_P_PROG
Address P is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_Q_PROG**	ISO cycle parameter for address Q	Cross. R.:	

Description:
$C_Q_PROG
Address Q is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_R_PROG**	ISO cycle parameter for address R	Cross. R.:	

Description:
$C_R_PROG
Address R is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_S_PROG**	ISO cycle parameter for address S	Cross. R.:	

Description:
$C_S_PROG
Address S is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_T_PROG**	ISO cycle parameter for address T	Cross. R.:	

Description:
$C_T_PROG
Address T is programmed in a block with cycle call or T function substitution
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_U_PROG**	ISO cycle parameter for address U	Cross. R.:	

Description:
$C_U_PROG
Address U is programmed in the current block
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_V_PROG**	ISO cycle parameter for address V	Cross. R.:	

Description:
$C_V_PROG
Address V is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_W_PROG**	ISO cycle parameter for address W	Cross. R.:	

Description:
$C_W_PROG
Address W is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_X_PROG**	ISO cycle parameter for address X	Cross. R.:	

Description:
$C_X_PROG
Address X is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_Y_PROG**	ISO cycle parameter for address Y	Cross. R.:	

Description:
$C_Y_PROG
Address Y is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_Z_PROG**	ISO cycle parameter for address Z	Cross. R.:	

Description:
$C_Z_PROG
Address Z is programmed in a block with cycle call
0 = Not programmed
1 = Programmed
3 = Programmed incrementally
Bit 0 is set if the address is programmed absolutely or incrementally.
Bit 1 is set in addition if the address is programmed incrementally.

Axes:						NCK Version:		17.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_DL_PROG**			ISO cycle parameter for address DL			Cross. R.:		
Description:									
Interrogation as to whether address DL (additive tool offset) has been programmed for a subprogram call per M/T function substitution. 0 = Not programmed 1 = An additive tool offset has been programmed under address DL.									
Axes:					NCK Version:	43.00.00			
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_TS_PROG**			Parameter for tool name as string			Cross. R.:		
Description:									
Interrogation as to whether a tool identifier has been programmed under address T for a subprogram call per T function substitution. (with active tool monitoring only) 0 = Not programmed 1 = Programmed									
Axes:					NCK Version:	18.00.00			
Unit:	-	min:				max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_PI_PROG**			ISO cycle parameter for address P			Cross. R.:		
Description:									
0 = Not programmed 1 = M96 Pxx interrupt routine programmed									
Axes:					NCK Version:	52.00.00			
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_ALL_PROG**				Bit pattern specifying which addresses are programmed			Cross. R.:	
Description:									
$C_ALL_PROG Bit pattern of all programmed addresses in a block with cycle call Bit0 = Address "A" .... Bit25 = Address "Z" Bit = 1 -> Address programmed Bit = 0 -> Address not programmed									
Axes:					NCK Version:		17.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_INC_PROG**				Bit pattern specifying whether addresses are programmed incr.			Cross. R.:	
Description:									
$C_INC_PROG Bit pattern of all incrementally programmed addresses in a block with cycle call Bit0 = Address "A" .... Bit25 = Address "Z" Bit = 1 -> Address incrementally programmed Bit = 0 -> Address absolutely programmed									
Axes:					NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_TYP_PROG**				Bit pattern specifying whether addresses are progr. as INT/REAL			Cross. R.:	
Description:									
$C_TYP_PROG Bit pattern of all addresses programmed with value INT or REAL Bit0 = Address "A" .... Bit25 = Address "Z" Bit = 1 -> Address programmed with real value Bit = 0 -> Address programmed with int value									
Axes:					NCK Version:		51.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_I_NUM**	Number of "I" addresses programmed in block	Cross. R.:	

Description:
$C_I_NUM
The number of "I" addresses programmed in the block is stored in $C_I_NUM.
This value is always 1 for cycle programming if bit 0 is set in $C_I_PROG.
In the case of macro programming with G65/G66, this variable contains the number of "I" addresses programmed in the block (max. 10).

Axes:						NCK Version:		18.00.00		
Unit:	-	min:					max:	10		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_J_NUM**	Number of "J" addresses programmed in block	Cross. R.:	

Description:
$C_J_NUM
The number of "J" addresses programmed in the block is stored in $C_J_NUM.
This value is always 1 for cycle programming if bit 0 is set in $C_J_PROG.
In the case of macro programming with G65/G66, this variable contains the number of "J" addresses programmed in the block (max. 10).

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_K_NUM**	Number of "K" addresses programmed in block	Cross. R.:	

Description:
$C_K_NUM
The number of "K" addresses programmed in the block is stored in $C_K_NUM.
This value is always 1 for cycle programming if bit 0 is set in $C_K_PROG.
In the case of macro programming with G65/G66, this variable contains the number of "K" addresses programmed in the block (max. 10).

Axes:						NCK Version:		18.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:	X					X				7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$C_I_ORDER[10]**				Block number of address I for IJK blocks			Cross. R.:	
Description:									
$C_I_ORDER[] Number of I J K block in which I has been programmed Up to 10 entries with address I can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between IJK blocks is always noted.									
Description of array limits:									
Up to 10 entries with address K can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between I J K blocks is always noted.									
Axes:					NCK Version:		49.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_J_ORDER[10]**				Block number of address J for IJK blocks			Cross. R.:	
Description:									
$C_J_ORDER[] Number of IJK block in which J has been programmed. Up to 10 entries with address J can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between IJK blocks is always noted.									
Description of array limits:									
Up to 10 entries with address K can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between I J K blocks is always noted.									
Axes:					NCK Version:		49.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_K_ORDER[10]**				Block number of address K for IJK blocks			Cross. R.:	
Description: $C_K_ORDER[] Number of IJK block in which K has been programmed. Up to 10 entries with address K can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between IJK blocks is always noted.									
Description of array limits: Up to 10 entries with address K can be made in the block for macro programming with G65/G66. This allows the sequence of IJK blocks to be evaluated The association between I J K blocks is always noted.									
Axes:					NCK Version:		49.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_ME**				Address extension for subprogram calls via M function			Cross. R.:	
Description: $C_ME Address extension for address M for subprogram call per M function									
Axes:					NCK Version:		42.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

INT	**$C_TE**				Address extension for subprogram calls via T function			Cross. R.:	
Description: $C_TE Address extension for address T for subprogram call per M function									
Axes:					NCK Version:		42.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

DOUBLE	**$C_MACPAR[33]**				Auxiliary variable for implementing # macros			Cross. R.:	
Description:									
$MAC_PAR[n] Macro variable in Iso2/3 mode programmed in the original program with #<number>									
Description of array limits:									
The maximum number of ISO macroparameters is 33									
Axes:					NCK Version:		47.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:	X				X				7
Attributes:	Global	Search run			Link				
		not classified			No restriction				

1.1.24 System data

DOUBLE	**$AN_SETUP_TIME**				Time since booting with default values			Cross. R.:	
Description:									
The $AN_SETUP_TIME timer counts the time elapsed since the control last booted with default values (in minutes). The timer is automatically reset each time the control boots with default data. Use in NC program: IF $AN_SETUP_TIME> 60000 GOTOF MARK01									
Axes:					NCK Version:		19.00.00		
Unit:	s	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
		State			No restriction				

DOUBLE	**$AN_POWERON_TIME**				Time since control last booted			Cross. R.:	
Description:									
The $AN_POWERON_TIME timer counts the time elapsed since the control last booted (in minutes). The timer is automatically reset each time the control boots. Use in NC program: IF $AN_POWERON_TIME == 480 GOTOF MARK02									
Axes:					NCK Version:		19.00.00		
Unit:	s	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
		State			No restriction				

DOUBLE	**$AN_NCK_VERSION**	NCK version	Cross. R.:	

Description:
NCK version
NCK version: only the integer places in the floating-point number are evaluated, the decimal places can contain identifiers for intermediate versions used by the development department. The integer places contain the official software version identifier of the NCK: For example, the value for NCK version 20.00.00 is variable 200000.0
compare OPI N/Y nckVersion

Axes:						NCK Version:		18.02.00		
Unit:	-	min:					max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		Indipendent				No restriction				

BOOL	**$AN_IPO_LOAD_LIMIT**	IPO utilization limit reached	Cross. R.:	

Description:
Variable $AN_IPO_LOAD_LIMIT returns TRUE when the interpolator load limit is reached. Machine data $MN_IPO_MAX_LOAD is used to specify the gross interpolator operating time (in % of the interpolation cycle) at which variable $AN_IPO_LOAD_LIMIT is set to TRUE. If the value falls below the limit again, the variable is reset to FALSE.

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_IPO_ACT_LOAD**	Current IPO runtime	Cross. R.:	

Description:
$AN_IPO_ACT_LOAD supplies the current interpolator runtime including the runtime of the synchronized actions in all channels.

Axes:						NCK Version:		54.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_IPO_MAX_LOAD**				Maximum IPO runtime			Cross. R.:	
Description:									
$AN_IPO_MAX_LOAD supplies the longest interpolator runtime of one interpolation cycle (including the runtime of the synchronized actions).									
Axes:					NCK Version:	54.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:	X	X			X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AN_IPO_MIN_LOAD**				Shortest IPO runtime			Cross. R.:	
Description:									
$AN_IPO_MIN_LOAD supplies the shortest interpolator runtime including the runtime of the synchronized actions per interpolation cycle in all channels.									
Axes:					NCK Version:	54.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:	X	X			X	X		X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AN_IPO_LOAD_PERCENT**				Ratio of current IPO runtime to IPO cycle			Cross. R.:	
Description:									
$AN_IPO_LOAD_PERCENT supplies the current interpolator load percentage across all channels. Is calculated from the ratio of the interpolator runtime across all channels in the last interpolation cycle to the interpolation cycle.									
Axes:					NCK Version:	54.00.00			
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AN_SYNC_ACT_LOAD**				Current runtime for synchronized actions			Cross. R.:	
Description:									
$AC_SYNC_ACT_LOAD supplies the current runtime for synchronized actions of the last interpolation cycle across all channels.									
Axes:						NCK Version:	54.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_SYNC_MAX_LOAD**				Longest runtime for synchronized actions			Cross. R.:	
Description:									
$AC_SYNC_MAX_LOAD supplies the longest runtime for synchronized actions of one interpolation cycle across all channels.									
Axes:						NCK Version:	54.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_SYNC_TO_IPO**				Synact / IPO computing time percentage			Cross. R.:	
Description:									
$AN_SYNC_TO_IPO supplies the percentage proportion of the synchronized action runtime measured against the overall interpolation runtime of the last interpolation cycle across all channels.									
Axes:						NCK Version:	54.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_SERVO_ACT_LOAD**				Current runtime of position controller				Cross. R.:	
Description: $AN_SERVO_ACT_LOAD supplies the current runtime of the position controller.										
Axes:						NCK Version:		54.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_SERVO_MAX_LOAD**				Longest runtime of position controller				Cross. R.:	
Description: $AN_SERVO_MAX_LOAD supplies the longest runtime of the position controller.										
Axes:						NCK Version:		54.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_SERVO_MIN_LOAD**				Shortest runtime of position controller				Cross. R.:	
Description: $AN_SERVO_MIN_LOAD supplies the shortest runtime of the position controller.										
Axes:						NCK Version:		54.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:	X	X				X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AN_REBOOT_DELAY_TIME**	Time until reboot	Cross. R.:	

Description:
A value higher than zero indicates that the NCK has received the "NCK Reset" signal from the HMI and displays the time period (in seconds) programmed on the NCK for rebooting (Power Off followed by Power ON).
The user can thus identify a reboot operation in a synchronized action
and prepare his application accordingly.
$AN_REBOOT_DELAY_TIME is 0.0 provided that no "NCK Reset" has been received.
Example:
A synchronized action reacts to the variable and switches the
axes to "Safe standstill" in a Safety Integrated application.
Comments:
- See also: $MN_REBOOT_DELAY_TIME
- The "NCK Reset" is implemented on the OPI by means of PI "_N_IBN_SS".

Axes:						NCK Version:		56.00.00		
Unit:	s	min:	0.0				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										
Attributes:	Global	Search run				Link				
	X	Indipendent				No restriction				

DOUBLE	**$AN_TIMER[n]**	System variable for global NCK time measurement	Cross. R.:	

Description:
$AN_TIMER[n]
Timer unit in seconds
The time is counted in multiples of an interpolation cycle.
The timers are started by $AN_TIMER[n]=<start value>.
The timers are stopped by $AN_TIMER[n]=-1.

When a timer is stopped, the last current time value is stored.

Description of array limits:
The dimension is defined in MD $MN_MM_NUM_AN_TIMER.

Axes:						NCK Version:		56.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
	X	not classified				not classified				

INT	**$A_PROBE[2]**				Probe status			Cross. R.:	
Description: $A_PROBE[1]: Status of first probe $A_PROBE[2]: Status of second probe 0 => not deflected 1 => deflected									
Description of array limits: n: Number of probe									
Axes:					NCK Version:		13.00.00		
Unit:	-	min:	0			max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

1.1.25 Axis system Variables

DOUBLE	**$P_EP**				Programmed end position			Cross. R.:	
Description: $P_EP[X] System variable $P_EP supplies the current WCS setpoint position in the interpreter. The numerical value is not necessarily identical to the value programmed in the part program. The two values differ in the following situations: - with incremental programming - when the WCS is changed by a frame or tool selection If an ASUB is started after a block search with calculation, the positions in the interpreter are synchronized with this operation. $P_EP then supplies the actual standstill positions of the axes in the Asub. The collected search position can be interrogated via system variable $AC_RETPOINT.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_EPM**				Programmed MCS target position			Cross. R.:	
Description:									
Axial variable $P_EPM[ax] determines the current programmed MCS target position in the preprocessor for the specified axis (see also $P_EP).									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	20.09.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_APR**				Still to be defined			Cross. R.:	
Description:									
$P_APR[X] Position of axis in workpiece coordinate system at starting point of approach movement on smooth approach to the contour									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_AEP**				Still to be defined			Cross. R.:	
Description:									
$P_AEP[X]									
Approach point: First contour point in workpiece coordinate system on smooth approach to contour									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$P_POLF**				Programmed retraction position of the axis			Cross. R.:	
Description:									
$P_POLF[X]									
supplies the programmed retraction position of the axis X: Axis									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	51.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$P_POLF_VALID**	Status of the value of $P_POLF	Cross. R.:	

Description:
$P_POLF_VALID[X]
Supplies the status of $P_POLF[X]
X: Axis
Return values:
0: No retraction programmed
1: Retraction programmed Position programmed
2: Retraction programmed as distance

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	51.00.00

Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_IW**	Current WCS setpoint of an axis	Cross. R.:	

Description:
Axial variable $AA_IW[ax] determines the current setpoint in the workpiece coordinate system (WCS) for the specified axis. The setpoint is equivalent to the interpolator output value for the current interpolation cycle. The WCS value contains no axial offset components (DRF, AA_OFF, ext. work offset, etc.).

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

BOOL	**$AA_REPOS_DELAY**		Still to be defined				Cross. R.:		
Description:									
$AA_REPOS_DELAY[X] TRUE: Repos suppression is currently active for this axis. FALSE: otherwise									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		51.00.00		
Unit:	-	min:	TRUE			max:	FALSE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X		X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			Not Lead Link axis				

DOUBLE	**$AA_IEN**		Current SZS setpoint of an axis				Cross. R.:		
Description:									
Axial variable $AA_IEN[ax] determines the current setpoint in the settable zero coordinate system (SZS) for the specified axis. See also $AA_IW[ax]. The SZS value contains no axial offset components (DRF, AA_OFF, ext. work offset, etc.).									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_IBN**		Current BZS setpoint of an axis				Cross. R.:		
Description:									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_IB**		Current BCS setpoint of an axis				Cross. R.:		
Description:									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_ENC_AMPL[n]**	Gain factor for closed-loop amplitude control	Cross. R.:	

Description:
$AA_ENC_AMPL[n,ax] supplies the gain factor of the closed-loop amplitude control for diagnostics and monitoring purposes. The standard encoder voltage is 1V = 100%, the gain can fluctuate between 0.5V and 1.3V schwanken.

The meaning of the indices are as follows:
n: Encoder number
ax: Machine axes

Description of array limits:
n: Encoder number

Axes:	Geometry axis Channel axis Machine axis	NCK Version:	53.00.00

Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X		X	
write:										

Attributes:	Global	Search run	Link	
		not classified	No restriction	

DOUBLE	**$AA_IM**	Current MCS setpoint of an axis	Cross. R.:	

Description:
Axial variable $AA_IM[ax] determines the current setpoint in the machine coordinate system (MCS) for the specified axis. See also $AA_IW[ax]. The MCS value contains all axial offset components (DRF, $AA_OFF, ext. work offset, etc.).

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		According to part program	not classified	

INT	**$AA_ACT_INDEX_AX_POS_NO**	Current indexing position	Cross. R.:	

Description:
$AA_ACT_INDEX_AX_POS_NO[X]
0: Not an indexing axis, no indexing position is thus available.
> 0: Number of last reached or last crossed indexing position

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	-	min:	INT_MIN			max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_PROG_INDEX_AX_POS_NO**	Programmed indexing position	Cross. R.:	

Description:
$AA_PROG_INDEX_AX_POS_NO[X]
0: Not an indexing axis, no indexing position is thus available or
the indexing axis is not currently approaching an indexing position
> 0: Number of programmed indexing position

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	-	min:	INT_MIN			max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_ENC_ACTIVE**	Measuring system is active	Cross. R.:	

Description:
Axial variable $AA_ENC_ACTIVE[ax] determines whether the active measuring system is operating below the encoder limit frequency.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	-	min:	FALSE			max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_ENC1_ACTIVE**	1. Measuring system is active	Cross. R.:	

Description:
Axial variable $AA_ENC1_ACTIVE[ax] determines whether the first measuring system is operating below the encoder limit frequency.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_ENC2_ACTIVE**	2. Measuring system is active	Cross. R.:	

Description:
Axial variable $AA_ENC2_ACTIVE[ax] determines whether the second measuring system is operating below the encoder limit frequency.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_IM**	Current MCS actual value of an axis	Cross. R.:	

Description:
Axial variable $VA_IM[ax] determines the encoder actual value (measured by active measuring system) in the machine coordinate system (MCS). All actual value compensations are corrected (leadscrew error compensation, backlash compensation, quadrant error compensation).
When a spindle or axis disable is active, this variable returns the current setpoint by definition. If it is preferred to return the actual value in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	Lin.- /Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_IM1**				Current MCS actual value of an axis			Cross. R.:	
Description:									
Axial variable $VA_IM1[ax] determines the encoder actual value (measured by encoder 1) in the machine coordinate system (MCS). All actual value compensations are corrected (leadscrew error compensation, backlash compensation, quadrant error compensation). When a spindle or axis disable is active, this variable returns the current setpoint by definition. If it is preferred to return the actual value in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_IM2**				Current MCS actual value of an axis			Cross. R.:	
Description:									
Axial variable $VA_IM2[ax] determines the encoder actual value (measured by encoder 2) in the machine coordinate system (MCS). All actual value compensations are corrected (leadscrew error compensation, backlash compensation, quadrant error compensation). When a spindle or axis disable is active, this variable returns the current setpoint by definition. If it is preferred to return the actual value in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_LAG_ERROR**				Axis following error				Cross. R.:	
Description:										
Variable $VA_LAG_ERROR[X] supplies the contour-related following error, i.e. position setpoint after fine interpolator actual position value.										
Axes:	Channel axis Machine axis					NCK Version:		53.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MW**				Measured probe position (WCS)				Cross. R.:	
Description:										
$AA_MW[X] Probe measured value in workpiece coordinate system										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MM**				Measured probe position (MCS)				Cross. R.:	
Description:										
$AA_MM[X] Probe measured value in machine coordinate system										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MW1**				Probe position trigger 1 (WCS)			Cross. R.:	
Description: $AA_MW1[X] Measurement result axial measurement Trigger event 1 in WCS									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_MW2**				Probe position trigger 2 (WCS)			Cross. R.:	
Description: $AA_MW2[X] Measurement result axial measurement Trigger event 2 in WCS									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_MW3**				Probe position trigger 3 (WCS)			Cross. R.:	
Description:									
$AA_MW3[X]									
Measurement result axial measurement									
Trigger event 3 in WCS									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_MW4**				Probe position trigger 4 (WCS)			Cross. R.:	
Description:									
$AA_MW4[X]									
Measurement result axial measurement									
Trigger event 4 in WCS									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:	X	X	X		X	X	X	X	7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_MM1**		Probe position trigger 1 (MCS)			Cross. R.:				
Description: $AA_MM1[X] Measurement result axial measurement Trigger event 1 in MCS										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MM2**		Probe position trigger 2 (MCS)			Cross. R.:				
Description: $AA_MM2[X] Measurement result axial measurement Trigger event 2 in MCS										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MM3**		Probe position trigger 3 (MCS)			Cross. R.:				
Description: $AA_MM3[X] Measurement result axial measurement Trigger event 3 in MCS										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MM4**		Probe position trigger 4 (MCS)			Cross. R.:				
Description: $AA_MM4[X] Measurement result axial measurement Trigger event 4 in MCS										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_MEAACT**				Axial measurement active			Cross. R.:	
Description:									
$AA_MEAACT[X] Value is TRUE when axial measurement is active for X Corresponds to PLC interface signal DB31...DBX62.3									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_DRF**				Handwheel override of an axis			Cross. R.:	
Description:									
Axial variable $AC_DRF[ax] determines the axial override value caused by the handwheel (DRF offset).									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.- /Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_PRESET**				PRESET value of an axis			Cross. R.:	
Description:									
Axial variable $AC_PRESET[ax] determines the last defined PRESET value.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.- /Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:							X		7
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_ETRANS**	External zero offset	Cross. R.:	

Description:
Axial variable $AA_ETRANS[ax] is used to enter an external work offset which can be activated by the PLC. After activation by the PLC, the offset value is traversed as an axial override in the next block.

If Bit 1 is set in $MC_MM_SYSTEM_FRAME_MASK, an active movement is stopped immediately, on activation by the PLC, the preprocessor is reorganized, and the system frame is initialized with the axis value of $AA_ETRANS[ax] and is activated. The offset is traversed before resuming the interrupted movement. The external work offset has an absolute effect on the translation of the current system frame. Multiple activation is thus not additive; only the coarse component of the translation (not the fine offset) is overwritten with the value from $AA_ETRANS[ax].

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_MEAS_P1_VALID**	Unlatch 1st measuring point of an axis	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_P1_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P1_COORD is used to select the coordinate system.
Application:
$AA_MEAS_P1_VALID[ax] = 0 ; 1st measuring point of axis is invalid
$AA_MEAS_P1_VALID[ax] = 1 ; Determining 1st measuring point of axis

The unlatched measuring point is stored in $AA_MEAS_POINT1[ax].

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	-	min:				max:	1			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_MEAS_P2_VALID**	Unlatch 2nd measuring point of an axis	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_P2_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P2_COORD is used to select the coordinate system.
Application:
$AA_MEAS_P2_VALID[ax] = 0 ; 2nd measuring point of axis is invalid
$AA_MEAS_P2_VALID[ax] = 1 ; Determining 2nd measuring point of axis

The unlatched measuring point is stored in $AA_MEAS_POINT2[ax].

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_MEAS_P3_VALID**	Unlatch 3rd measuring point of an axis	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_P3_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P3_COORD is used to select the coordinate system.
Application:
$AA_MEAS_P3_VALID[ax] = 0 ; 3rd measuring point of axis is invalid
$AA_MEAS_P3_VALID[ax] = 1 ; Determining 3rd measuring point of axis

The unlatched measuring point is stored in $AA_MEAS_POINT3[ax].

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_MEAS_P4_VALID**				Unlatch 4th measuring point of an axis			Cross. R.:	
Description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_P4_VALID[ax] is used to unlatch the current axis position with reference to a selected coordinate system. Variable $AC_MEAS_P4_COORD is used to select the coordinate system. Application: $AA_MEAS_P4_VALID[ax] = 0 ; 4th measuring point of axis is invalid $AA_MEAS_P4_VALID[ax] = 1 ; Determining 4th measuring point of axis The unlatched measuring point is stored in $AA_MEAS_POINT4[ax].									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		43.00.00	
Unit:	-	min:					max:	1	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MEAS_POINT1**				1. measuring point			Cross. R.:	
Description:									
Variable for workpiece and tool measurement. Axial variable $AA_MEAS_POINT1[ax] is used to write the 1st measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[0], $AA_MEAS_P1_VALID[ax]. Application: $AA_MEAS_POINT1[x] = $AA_IW[x] $AA_MEAS_POINT1[y] = $AA_IW[y] $AA_MEAS_POINT1[z] = $AA_IW[z]									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		43.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MEAS_POINT2**	2. measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_POINT2[ax] is used to write the 2nd measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[1], $AA_MEAS_P2_VALID[ax].
Application:
$AA_MEAS_POINT2[x] = $AA_IW[x]
$AA_MEAS_POINT2[y] = $AA_IW[y]
$AA_MEAS_POINT2[z] = $AA_IW[z]

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN	max:	DBL_MAX

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_MEAS_POINT3**	3. measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_POINT3[ax] is used to write the 3rd measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[2], $AA_MEAS_P3_VALID[ax].
Application:
$AA_MEAS_POINT3[x] = $AA_IW[x]
$AA_MEAS_POINT3[y] = $AA_IW[y]
$AA_MEAS_POINT3[z] = $AA_IW[z]

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN	max:	DBL_MAX

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_MEAS_POINT4**	4. measuring point	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_POINT4[ax] is used to write the 4th measuring point for workpiece and tool measurement. The measuring point can be either written directly or unlatched with variables $AC_MEAS_LATCH[3], $AA_MEAS_P4_VALID[ax].
Application:
$AA_MEAS_POINT4[x] = $AA_IW[x]
$AA_MEAS_POINT4[y] = $AA_IW[y]
$AA_MEAS_POINT4[z] = $AA_IW[z]

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_MEAS_SP_VALID**	Validity of position setpoint	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_SP_VALID[ax] is used to set the defined setpoint of an axis to valid or invalid.
Application:
$AA_MEAS_SP_VALID[ax] = 0 ; Position setpoint of axis is invalid
$AA_MEAS_SP_VALID[ax] = 1 ; Position setpoint of axis is valid

The position setpoint is stored in $AA_MEAS_SETPOINT[ax]

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	-	min:				max:	1			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MEAS_SETPOINT**	Position setpoint of an axis	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_SETPOINT[ax] is used to define a position setpoint for an axis. This position setpoint is considered when calculating the workpiece position or the tool length.
Application:
$AA_MEAS_SETPOINT[x] = 0.0
$AA_MEAS_SETPOINT[y] = 0.0
$AA_MEAS_SETPOINT[z] = 0.0

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_MEAS_SETANGLE**	Angle setpoint of an axis	Cross. R.:	

Description:
Variable for workpiece and tool measurement.
Axial variable $AA_MEAS_SETANGLE[ax] is used to define an angle setpoint for an axis. This angle setpoint is considered when calculating the workpiece position or the tool length.
Application:
$AA_MEAS_SETANGLE[x] = 0.0
$AA_MEAS_SETANGLE[y] = 0.0
$AA_MEAS_SETANGLE[z] = 0.0

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	48.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:	X					X		X		7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_OFF**		Overlaid movement of an axis				Cross. R.:		
Description:									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:		X					X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_OFF_LIMIT**		Limit value reached for axis offset				Cross. R.:		
Description:									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	-	min:	-1			max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

Description:
Axial variable $AA_OFF_LIMIT[ax] is used to interrogate a limit value for the axis offset $AA_OFF[ax].
The following values are possible:
0:Limit value not reached
1:Limit value reached in positive axis direction
-1:Limit value reached in negative axis direction

DOUBLE	**$AA_OFF_VAL**				Integrated path of axis offset			Cross. R.:	
Description:									
Axial variable $AA_OFF_VAL[ax] determines the integrated value of the overlaid movement for an axis. An overlaid movement can be canceled again by means of the negative value of this variable. e.g. $AA_OFF[axis] = -$AA_OFF_VAL[axis]									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		20.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AC_RETPOINT**				Repositioning point in Asub			Cross. R.:	
Description:									
$AC_RETPOINT[X] $AC_RETPOINT[] supplies the WCS position of an axis at which an ASUB has been started. The axis can then be repositioned at this point in the Asub. If an Asub is started immediately after a block search with calculation, $AC_RETPOINT then supplies the collected search position. For a modulo axis $AC_RETPOINT[] supplies the position as modulo converted. System variable $AC_RPVALID[] can be used to check whether $AC_RETPOINT[] is supplying a valid repositioning point within the current program context (see documentation for $AC_RPVALID[]). Note about application in synchronized actions: The points generated by REPOS are supplied while the REPOS approach blocks are being processed. The current parameter settings for the REPOS operation (approach to interruption point, block start point, etc.) defined by G codes RMI, RMB, RME, RMN or VDI signal are also taken into account.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_TOFF**	Offset in tool direction	Cross. R.:	

Description:
Variable $AA_TOFF[geo axis] is used to overlay a movement in the corresponding tool direction. The behavior of the overlaid movement can be configured with $MC_TOFF_MODE.
Activation in the part program is performed using the TOFFON instruction.
The TOFFOF instruction can be used to reset the offset values.

The velocity for the offset can be defined with MD 21194 TOFF_VELO; the acceleration can be defined with MD21196 TOFF_ACCEL.

The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.

Axes:	Geometry axis					NCK Version:		50.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_TOFF_VAL**	Integrated value of offset in TCS	Cross. R.:	

Description:
Variable $AA_TOFF_VAL[geo axis] determines the integrated value of the overlaid movement in the corresponding tool direction.
The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.

Axes:	Geometry axis					NCK Version:		50.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_TOFF_LIMIT**	Limit value for offset in TCS reached	Cross. R.:	

Description:
Axial variable $AA_TOFF_LIMIT[ax] is used to interrogate a limit value for the offset in the tool direction (TCS) via $AA_TOFF[geo axis].
The following values are possible:
0: Limit value not reached
1: Limit value reached in positive axis direction
-1: Limit value reached in negative axis direction

The limit values can be defined with SD 42970 TOFF_LIMIT.

The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.

Axes:	Geometry axis					NCK Version:		50.00.00		
Unit:	-	min:	-1				max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_TOFF_PREP_DIFF**	Difference value of main run/preprocessing run in TCS	Cross. R.:	

Description:
Variable $AA_TOFF_PREP_DIFF[geo axis] determines the difference value of the overlaid movement in the corresponding tool direction between the main run and preprocessing run.
The variable is only appropriate in conjunction with an active orientation transformation or an active toolholder.

Axes:	Geometry axis					NCK Version:		50.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_SOFTENDP**				Software limit position, positive direction			Cross. R.:	
Description:									
$AA_SOFTENDP[X] Current software limit position, positive direction									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_SOFTENDN**				Software limit position, negative direction			Cross. R.:	
Description:									
$AA_SOFTENDN[X] Software limit position, negative direction									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTBW**				Distance from block start in WCS			Cross. R.:	
Description:									
Axial variable $AA_DTBW[ax] determines the axial distance from the start of the block in the workpiece coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTBB**				Distance from block start in BCS			Cross. R.:	
Description:									
Axial variable $AA_DTBB[ax] determines the axial distance from the start of the block in the basic coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTEW**				Distance from block end in WCS			Cross. R.:	
Description:									
Axial variable $AA_DTEW[ax] determines the axial distance to the end of the block in the workpiece coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTEB**				Distance from block end in BCS			Cross. R.:	
Description:									
Axial variable $AA_DTEB[ax] determines the axial distance to the end of the block in the basic coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTEPW**				Distance to go of a reciprocating axis in WCS			Cross. R.:	
Description: Axial variable $AA_DTEPW[ax] determines the axial distance to go for the infeed reciprocation in the workpiece coordinate system.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTEPB**				Distance to go of a reciprocating axis in BCS			Cross. R.:	
Description: Axial variable $AA_DTEPB[ax] determines the axial distance to go for the infeed reciprocation in the basic coordinate system.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_OSCILL_REVERSE_POS1**				Reciprocation reversal position 1			Cross. R.:	
Description:									
$AA_OSCILL_REVERSE_POS1[X] Supplies current reversal position 1 for reciprocation. In synchronized actions, the value of setting data $SA_OSCILL_REVERSE_POS1 is evaluated online. The variable can be accessed only from synchronized actions.									
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		06.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_OSCILL_REVERSE_POS2**				Reciprocation reversal position 2			Cross. R.:	
Description:									
$AA_OSCILL_REVERSE_POS2[X] Supplies current reversal position 2 for reciprocation. In synchronized actions, the value of setting data $SA_OSCILL_REVERSE_POS2 is evaluated online. The variable can be accessed only from synchronized actions.									
Axes:	Geometry axis Channel axis Machine axis					NCK Version:		06.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_DELT**				Stored axial distance to go after DDTG			Cross. R.:	
Description: $AA_DELT[X] Stored axial distance to go in workpiece coordinate system after axial delete distance to go by a motion-synchronous action.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$P_FA**				Programmed axial feedrate			Cross. R.:	
Description: $P_FA[X] Last programmed axial feedrate									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X				X				
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_OVR**				Axial override			Cross. R.:	
Description:									
$AA_OVR[<axis>]									
Axial override for motion-synchronous actions.									
Multiplicative override component, applied in addition to operator override,									
programmed override and transformational override.									
The value is limited to max. 200%. If a value of < 0.0 is entered,									
it is assumed to be 0 and alarm 14756 is output.									
$AA_OVR[<axis>] must be rewritten in every Ipo cycle or else a value of 100% is applied.									
Variable $AA_OVR[<spindle>] alters the spindle override.									
The variable can be accessed only from motion-synchronous actions.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	06.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:		X					X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_PLC_OVR**				Axial override from PLC			Cross. R.:	
Description:									
$AA_PLC_OVR[ax] supplies the axial override defined by the PLC.									
Axes:	Channel axis					NCK Version:	54.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_TOTAL_OVR**				Overall axial override			Cross. R.:	
Description:									
$AA_TOTAL_OVR[ax] supplies the overall axial override (PLC_OVR*NC_OVR).									
Axes:	Channel axis					NCK Version:	54.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_VC**	Additive axial feedrate override	Cross. R.:	

Description:
$AA_VC[X]
Additive axial feedrate override for motion-synchronous actions.
The override value must be rewritten in every Ipo cycle or else a value of 0 is applied.
A setting of 0 makes the override inoperative and is not applied to the override value.
The total feedrate cannot be made negative by an override value.
An upper limit is applied to ensure that the maximum axis velocities and acceleration rates cannot be exceeded.
The calculation of other feed components is not affected by $AA_VC.
The override values defined by machine data: $MN_OVR_FACTOR_LIMIT_BIN, $MN_OVR_FACTOR_FEEDRATE[30], $MN_OVR_FACTOR_AX_SPEED[30] and $MN_OVR_FACTOR_SPIND_SPEED cannot be exceeded. The additive feedrate override is limited such that the resultant feedrate does not exceed the maximum override value of the programmed feedrate.
The variable can be accessed only from synchronized actions.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	Lin.-/angle speed.	min:	DBL_MIN	max:	DBL_MAX

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:		X					X		X	7

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_VACTB**	Axis velocity in the BCS	Cross. R.:	

Description:
Axial variable $AA_VACTB[ax] determines the axis velocity in the basic coordinate system.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	Lin.-/angle speed.	min:	DBL_MIN	max:	DBL_MAX

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_VACTW**				Axis velocity in the WCS			Cross. R.:	
Description:									
Axial variable $AA_VACTW[ax] determines the axis velocity in the workpiece coordinate system.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_VACTM**				Axis velocity in the MCS			Cross. R.:	
Description:									
Axial variable $AA_VACTM[ax] determines the axis velocity on the setpoint side in the machine coordinate system. The variable also returns valid values for replacement and PLC axes.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$VA_VACTM**				Axis velocity actual value in the MCS			Cross. R.:	
Description:									
Axial variable $VA_VACTM[ax] determines the axis velocity actual value in the machine coordinate system. The variable supplies an undefined value if the encoder limit frequency is exceeded. When a spindle/axis disable is active, this variable returns the current velocity setpoint. If it is preferred to return the actual velocity in this situation, BIT3 in $MA_MISC_FUNCTION_MASK must be set.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00	
Unit:	Lin.-/angle speed.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X	X				X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_LOAD**				Drive load			Cross. R.:	
Description:									
$AA_LOAD[X] Drive load in % Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		06.00.00	
Unit:	-	min:	-100				max:	100	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$VA_LOAD**		Drive load				Cross. R.:		
Description:									
$VA_LOAD[X] Drive load in % Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	17.00.00		
Unit:	-	min:	-100			max:	100		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X			
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$AA_TORQUE**		Drive torque setpoint				Cross. R.:		
Description:									
$AA_TORQUE[X] Drive torque setpoint in Nm or actual force in N (for 611D HLA only) Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	06.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$VA_TORQUE**		Drive torque setpoint			Cross. R.:				
Description:										
$VA_TORQUE[X] Drive torque setpoint in Nm or actual force in N (for 611D HLA only) Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X			
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$AA_POWER**		Drive active power			Cross. R.:				
Description:										
$AA_POWER[x] Drive active power in W Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		06.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$VA_POWER**	Drive active power	Cross. R.:	

Description:
$VA_POWER[x]
Drive active power in W
Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	17.00.00

Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X			
write:										

Attributes:	Global	Search run	Link	
		State	not classified	

DOUBLE	**$AA_CURR**	Drive actual current	Cross. R.:	

Description:
$AA_CURR[X]
Actual current of axis or spindle in A
Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		State	not classified	

DOUBLE	**$VA_CURR**	Drive actual current	Cross. R.:	

Description:
$VA_CURR[X]
Actual current of axis or spindle in A
Only available for 611D and Profibus drives. On the Profibus, the value must be prepared explicitly by the drive and transported across the bus by variable telegram programming.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	17.00.00

Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X			
write:										

Attributes:	Global	Search run	Link	
		State	not classified	

DOUBLE	**$VA_DIST_TORQUE**		Disturbing torque				Cross. R.:		
Description:									
$VA_DIST_TORQUE[X]									
Normalized disturbing torque (disturbing torque/max. motor torque) = output signal of disturbance monitor on drive - only available on Profibus with Telegram 203									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		45.00.00		
Unit:	-	min:	-100			max:	100		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$VA_VALVELIFT**		Still to be defined				Cross. R.:		
Description:									
$VA_VALVELIFT[X]									
Actual valve lift in mm (for 611D hydraulic module only)									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		17.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$VA_PRESSURE_A**		Still to be defined				Cross. R.:		
Description:									
$VA_PRESSURE_A[X]									
Pressure at A end of cylinder in bar (for 611D hydraulic module only)									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		17.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

DOUBLE	**$VA_PRESSURE_B**				Still to be defined			Cross. R.:	
Description:									
$VA_PRESSURE_B[X]									
Pressure at B end of cylinder in bar (for 611D hydraulic module only)									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		17.00.00		
Unit:	-	min:				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		State			not classified				

INT	**$VA_DP_ACT_TEL[20]**				Profibus actual telegram from drive to NC			Cross. R.:	
Description:									
$VA_DP_ACT_TEL[b,a]									
b: Word index (16-bit access) in Profibus telegram									
a: Machine axes									
Actual value telegram contents - only available for Profibus.									
For details, please see telegram configuration in PROFIdrive or drive documentation									
Description of array limits:									
b: Word index in Profibus actual value telegram									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		50.00.00		
Unit:	-	min:				max:	65535		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_STAT**	Axis status	Cross. R.:	

Description:
$AA_STAT[<axis>]
Axis status:
0: No axis status available
1: Traversing movement in progress
2: Axis has reached Ipo end
3: Axis in position (exact stop coarse)
4: Axis in position (exact stop fine)

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	-	min:	0			max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
	X	not classified	not classified	

INT	**$AA_SNGLAX_STAT**	Status of single axis	Cross. R.:	

Description:
$AA_SNGLAX_STAT[X]
Axis status:
0: Axis is not a single axis
1: Single axis in Reset
2: Single axis has ended
3: Single axis is interrupted
4: Single axis is active
5: Single axis alarm is active

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	48.00.00

Unit:	-	min:				max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_REF**				Axis is homed			Cross. R.:	
Description: $AA_REF[X] Axis status: 0: Axis is not homed 1: Axis is homed									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		06.00.00		
Unit:	-	min:				max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
	X	not classified			not classified				

INT	**$AA_TYP**				Axis type			Cross. R.:	
Description: $AA_TYP[<axis>] Axis type: 0: Axis in another channel 1: Program axis of own channel 2: Neutral axis 3: PLC axis 4: Oscillating axis 5: Neutral axis which is currently executing a JOG or homing motion 6: Following axis coupled via master value 7: Coupled motion following axis 8: Command axis 9: CompileCycles axis 10: Coupled slave axis (master-slave function) 11: Program axis which is currently executing a JOG or homing motion									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	-	min:	0			max:	11		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_MASL_STAT**	Master-slave coupling status	Cross. R.:	

Description:
The current status of a master-slave coupling.
Val. 0: Axis is not a slave axis or no coupling is active.
Value> 0: Coupling is active, the relevant machine axis number of the master axis is supplied.
$AA_MASL_STAT[X]

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	42.00.00

Unit:	-	min:					max:	MACHAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$P_SEARCH_MASLC**	Master-slave coupling status changed	Cross. R.:	

Description:
$P_SEARCH_MASLC[axis identifier]
The current status of a master-slave coupling has been changed during a block search.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	-	min:					max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$P_SEARCH_MASLD**	Master-slave position offset	Cross. R.:	

Description:
$P_SEARCH_MASLD[axis identifier]
Positional offset between master and slave axes calculated
during block search as coupling was closed.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	43.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_FXS**	Still to be defined	Cross. R.:	

Description:
$AA_FXS[X]
Status desired state "Travel to fixed stop"
0: Axis not at limit stop
1: Fixed stop has been successfully approached
2: Approach to fixed stop has failed
3: Selection of travel to fixed stop active
4: Fixed stop has been detected
5: Deselection of travel to fixed stop active

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	06.00.00

Unit:	-	min:				max:	5			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7

Attributes:	Global	Search run	Link	
		According to part program	not classified	

INT	**$VA_FXS**				Still to be defined			Cross. R.:	
Description:									
$VA_FXS[X]									
Status actual state "Travel to fixed stop"									
0: Axis not at limit stop									
1: Fixed stop has been successfully approached									
2: Approach to fixed stop has failed									
3: Selection of travel to fixed stop active									
4: Fixed stop has been detected									
5: Deselection of travel to fixed stop active									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	44.00.00		
Unit:	-	min:				max:	5		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

INT	**$VA_FXS_INFO**				Still to be defined			Cross. R.:	
Description:									
$VA_FXS_INFO[X]									
Additional information with "Travel to fixed stop" if $VA_FXS[]=2									
0: No additional information available									
1: No approach movement programmed									
2: Programmed end position reached, motion completed									
3: Abort by NC RESET (key reset)									
4: Axis has exited fixed stop window									
5: Torque reduction rejected by drive									
6: PLC has cancelled enables									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	45.00.00		
Unit:	-	min:				max:	6		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X		
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$VA_TORQUE_AT_LIMIT**	Still to be defined				Cross. R.:	
Description:							
$VA_TORQUE_AT_LIMIT[X] "Torque limit reached" status 0: Torque limit not yet reached 1: Torque limit reached In digital 611D systems, the drive returns a status signal indicating whether the programmed torque limit has been reached.							
Axes:	Geometry axis Channel axis Machine axis Spindle			NCK Version:	20.00.00		
Unit:	-	min:		max:	1		

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_FOC**	Still to be defined				Cross. R.:	
Description:							
$AA_FOC[X] Status desired state "ForceControl" 0: ForceControl not active 1: ForceControl active modally 2: ForceControl active non-modally							
Axes:	Geometry axis Channel axis Machine axis Spindle			NCK Version:	20.00.00		
Unit:	-	min:		max:	2		

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X	X	X	7

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$VA_FOC**				Still to be defined				Cross. R.:	
Description: $VA_FOC[X] Status actual state "ForceControl" 0: ForceControl not active 1: ForceControl active modally 2: ForceControl active non-modally										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		44.00.00		
Unit:	-	min:					max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_COUP_ACT**				Coupling type of a following axis/spindle				Cross. R.:	
Description: $AA_COUP_ACT[C] C: following axis C or S2: following spindle 2 It is possible to determine whether an axis/spindle is being used by a coupling. The coupling type is returned when the coupling is active. The system variable must be read out for the following axis/spindle. Values: 0: Axis/spindle is not coupled with a leading spindle/leading axis 1,2,3: Axis is made to follow tangentially (TANG) 4: Synchronous spindle coupling (COUP) 8: Axis is made to follow (TRAIL) 16: Following axis in master value coupling (LEAD) 32: Following axis for electronic gear (ELG) 64: Axis is active in a gantry grouping 128,256,384: Axis is made to follow tangentially (TANG with optimization) If the axis/spindle is a following axis/spindle in several couplings, the total is returned as the value.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		06.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
	X	not classified				not classified				

DOUBLE	**$AA_EG_SYNFA**	Still to be defined	Cross. R.:	

Description:
$AA_EG_SYNFA[a]
a: Following axis
Synchronous position of following axis

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	Lin.-/Angle pos.	min:	DBL_MIN	max:	DBL_MAX

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

STRING	**$P_EG_BC**	Still to be defined	Cross. R.:	

Description:
$P_EG_BC[a]
Block change criterion for EGONSYN, EGON, WAITC.

Axes:	Geometry axis Channel axis Spindle	NCK Version:	16.00.00

Unit:	-	min:		max:	

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_EG_NUM_LA**	Still to be defined	Cross. R.:	

Description:
$AA_EG_NUM_LA[a]
a: Following axis
Number of leading axes specified with EGDEF

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:	INT_MIN	max:	INT_MAX

	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$VA_EG_SYNCDIFF**		Still to be defined				Cross. R.:		
Description: $VA_EG_SYNCDIFF[a] a: Following axis Synchronism deviation									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		16.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_EG_SYNCDIFF_S**		Still to be defined				Cross. R.:		
Description: $VA_EG_SYNCDIFF_S[a] a: Following axis Signed synchronism deviation									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		50.00.00		
Unit:	Lin.-/Angle pos.	min:	-DBL_MAX			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

AXIS	**$AA_EG_AX[20]**	Still to be defined	Cross. R.:	

Description:
$AA_EG_AX[n,a]
n: Index for leading axis
a: Following axis
Identifier for the nth leading axis

Description of array limits:
n: Index for leading axis (nth leading axis)

Axes:	Geometry axis Channel axis Spindle	NCK Version:	18.00.00

Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X		
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_LEAD_SP**	Still to be defined	Cross. R.:	

Description:
$AA_LEAD_SP[LW]
Simulated master value position

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	13.00.00

Unit:	Lin.- /Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_LEAD_SV**				Still to be defined				Cross. R.:	
Description:										
$AA_LEAD_SV[LW]										
Simulated master value velocity										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_LEAD_P_TURN**				Still to be defined				Cross. R.:	
Description:										
$AA_LEAD_P_TURN[LW]										
Current master value positional component										
lost as a result of modulo reduction.										
The actual master value position										
(used internally by the control)										
is $AA_LEAD_P[LW] + $AA_LEAD_P_TURN[LW]										
If LW is a modulo axis, $AA_LEAD_P_TURN is an										
integral multiple of $MA_MODULO_RANGE.										
If LW is not a modulo axis, $AA_LEAD_P_TURN is always 0.										
Example_1:										
$MA_MODULO_RANGE[LW]=360										
$AA_LEAD_P[LW] =290										
$AA_LEAD_P_TURN[LW] =720										
The actual master value position										
(used internally by the control) is 1010.										
Example_2:										
$MA_MODULO_RANGE[LW]=360										
$AA_LEAD_P[LW] =290										
$AA_LEAD_P_TURN[LW] =-360										
The actual master value position										
(used internally by the control) is -70.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_LEAD_P**				Still to be defined			Cross. R.:	
Description:									
$AA_LEAD_P[LW]									
Current master value position (modulo-reduced)									
If LW is a modulo axis, the following always applies:									
0 <= $AA_LEAD_P[LW] <= $MA_MODULO_RANGE[LW]									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_LEAD_V**				Still to be defined			Cross. R.:	
Description:									
$AA_LEAD_V[LW]									
Current master value velocity									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	Lin.-/angle speed.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_SYNC**	Still to be defined					Cross. R.:		
Description:									
$AA_SYNC[FA] Coupling status of following axis with master value coupling 0 => No synchronism 1 => Coarse synchronism 2 => Fine synchronism 3 => Coarse and fine synchronism									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		13.00.00		
Unit:	-	min:				max:	3		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_IN_SYNC**	Still to be defined					Cross. R.:		
Description:									
$AA_IN_SYNC[FA] Synchronization status of following axis with master value coupling and ELG 1 => Synchronization in progress, i.e. following axis is being synchronized with leading axis									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		48.00.00		
Unit:	-	min:				max:	1		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X			
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$P_COUP_OFFS**		Programmed position offset				Cross. R.:		
Description:									
$P_COUP_OFFS[S2] S2: spindle 2 or C: axis C Programmed position offset from synchronous spindle (following spindle) to leading spindle									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	46.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X				
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_COUP_OFFS**		Position offset on setpoint side				Cross. R.:		
Description:									
$AA_COUP_OFFS[S2] S2: spindle 2 or C: axis C Position offset from synchronous spindle (following spindle) to leading spindle on setpoint side									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:	06.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_COUP_OFFS**				Position offset on actual value side			Cross. R.:	
Description:									
$VA_COUP_OFFS[S2]									
S2: spindle 2 or C: axis C									
Position offset from synchronous spindle (following spindle) to leading spindle on actual value side									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		06.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_SCTRACE**				Still to be defined			Cross. R.:	
Description:									
$AA_SCTRACE[X] = 1									
Write: Activate IPO trigger for servo trace									
0: No action									
!0: Activate trigger									
Read:									
Always 0 because trigger cannot be read back									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		13.00.00	
Unit:	-	min:	FALSE				max:	TRUE	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$VA_DPE**		Power enable for machine axis				Cross. R.:		
Description:									
$VA_DPE[X1] Status of power enable for a machine axis									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		16.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_ACC**		Current axial acceleration value				Cross. R.:		
Description:									
$AA_ACC Current acceleration value of axis with single-axis interpolation. $AA_ACC = $MA_MAX_AX_ACCEL * progr. acceleration override.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		16.00.00		
Unit:	Lin.-/angle acc.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_ACC_PERCENT**		Current acceleration value percentage				Cross. R.:		
Description:									
Variable $AA_ACC_PERCENT supplies the current acceleration value of the axis for single-axis interpolation in percent.									
Axes:					NCK Version:		53.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$PA_ACCLIMA**			Still to be defined				Cross. R.:	
Description:									
$PA_ACCLIMA Acceleration override set with ACCLIMA in preprocessing run									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:	50.00.00			
Unit:	-	min:	1			max:	200		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$PA_VELOLIMA**			Still to be defined				Cross. R.:	
Description:									
$PA_VELOLIMA Velocity override set with VELOLIMA in preprocessing run									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:	50.00.00			
Unit:	-	min:	1			max:	200		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$PA_JERKLIMA**			Still to be defined				Cross. R.:	
Description:									
$PA_JERKLIMA Jerk override set with JERKLIMA in preprocessing run									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:	50.00.00			
Unit:	-	min:	1			max:	200		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_ACCLIMA**			Still to be defined				Cross. R.:	
Description:									
$AA_ACCLIMA Acceleration override set with ACCLIMA in main run									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		50.00.00		
Unit:	-	min:	1			max:	200		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_VELOLIMA**			Still to be defined				Cross. R.:	
Description:									
$AA_VELOLIMA Velocity override set with VELOLIMA in main run									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		50.00.00		
Unit:	-	min:	1			max:	200		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_JERKLIMA**			Still to be defined				Cross. R.:	
Description:									
$AA_JERKLIMA Jerk override set with JERKLIMA in main run									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		50.00.00		
Unit:	-	min:	1			max:	200		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_MOTEND**	Current axial end of motion criterion	Cross. R.:	

Description:
$AA_MOTEND
Current end of motion criterion with single-axis interpolation
1 = End of motion with exact stop FINE
2 = End of motion with exact stop COARSE
3 = End of motion at end of interpolation
4 = Block change in braking ramp of axis motion
5 = Block change in braking ramp of axis motion with tolerance window for setpoint
6 = Block change in braking ramp of axis motion with tolerance window for actual value

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:	1				max:	6		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_SCPAR**	Setpoint parameter set	Cross. R.:	

Description:
$AA_SCPAR
Current setpoint parameter set

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_ESR_STAT**	ESR status of an axis	Cross. R.:	

Description:
$AA_ESR_STAT[X]
Status of "Extended stop and retract", bit-coded:
BIT0: Generator mode is activated
BIT1: Retraction is activated
BIT2: Extended stop is activated
BIT3: DC-link undervoltage
BIT4: Generator minimum speed

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:					max:	15		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_ESR_ENABLE**	ESR enable	Cross. R.:	

Description:
$AA_ESR_ENABLE[X] = 1
Enabling of "Extended stop and retract"

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_ESR_TRIGGER**	Triggers a single-axis ESR	Cross. R.:	

Description:
$AA_ESR_TRIGGER[X] = 1
Activation of "NC-controlled ESR" for PLC-controlled axis (= single axis)
X: PLC-controlled axis

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	48.00.00

Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:		X					X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_POLFA**				Programmed retraction position for single axis			Cross. R.:	
Description:									
$AA_POLFA[X] X: PLC-controlled axis (= single axis) Supplies the programmed retraction position of the PLC-controlled axis									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		51.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_POLFA_VALID**				Status of the value of $AA_POLFA			Cross. R.:	
Description:									
$AA_POLFA_VALID[X] Supplies the current status of $AA_POLFA[X] X: PLC-controlled axis (= single axis) Return values: 0: Retraction not programmed 1: Retraction programmed as position 2: Retraction programmed as distance									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		51.00.00		
Unit:	-	min:				max:	2		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$AA_ALARM_STAT**	Still to be defined	Cross. R.:	

Description:
$AA_ALARM_STAT
(Selected) alarm reactions for synchronous actions (SYNFCT)

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	48.00.00

Unit:	-	min:	INT_MIN			max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

BOOL	**$AN_AXCTSWA**	Axis container rotation	Cross. R.:	

Description:
Is axis container rotation active ?
Example: EVERY $AN_AXCTSWA[n] == TRUE DO M99
Read:
TRUE: An axis container rotation is currently being executed on the
axis container with axis container name n
FALSE: Axis container rotation is not active.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:	FALSE			max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AN_AXCTAS**	Axis container current rotation	Cross. R.:	

Description:
Axis container current rotation:
The number of slots by which the axis container is currently being rotated
is specified for the axis container with axis container name n.
The value ranges from 0 to the maximum number of occupied slots in the axis container -1.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	16.00.00

Unit:	-	min:	INT_MIN			max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

BOOL	**$AC_AXCTSWA**				Channel enable for axis container rotation			Cross. R.:	
Description:									
Enables the axis container rotation in the channel. TRUE: The channel has enabled rotation for the axis container with axis container name n and this rotation is not yet finished. FALSE: The axis container rotation is finished.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		16.00.00	
Unit:	-	min:	FALSE				max:	TRUE	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$VA_POSCTRL_MODE**				Position controller mode			Cross. R.:	
Description:									
$VA_POSCTRL_MODE[X] Position controller mode: 0 = Closed-loop position control 1 = Closed-loop speed control 2 = Stop 3 = Park 4 = Follow-up									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		55.00.00	
Unit:	-	min:	0				max:	4	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		State				not classified				

BOOL	**$VA_SCE**				Status of speed controller enable				Cross. R.:	
Description:										
$VA_SCE[X]										
Status of speed controller enable										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		55.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_TRAVEL_DIST**				Total traverse path				Cross. R.:	
Description:										
Total traversing distance of axis in MCS in mm or degrees. The total traversing distance of the axis since the SRAM contents were last erased is added.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		56.00.00		
Unit:	Lin.-/Angle pos.	min:	0.0				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		According to part program				not classified				

DOUBLE	**$AA_TRAVEL_TIME**				Total traversing time of axis				Cross. R.:	
Description:										
Total traversing time of axis in MCS in seconds. The total traversing time of the axis since the SRAM contents were last erased is added.										
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		56.00.00		
Unit:	s	min:	0.0				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		According to part program				not classified				

DOUBLE	**$AA_TRAVEL_COUNT**				Number of traversing operations			Cross. R.:	
Description: Number of traversing operations of axis in MCS. The total number of traversing operations since the SRAM contents were last erased is stored.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	-	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			not classified				

DOUBLE	**$AA_TRAVEL_DIST_HS**				Total traversing distance at high velocity			Cross. R.:	
Description: Total traversing distance of axis in MCS in mm or degrees at high velocity, i.e. at a velocity of >= 80% of the maximum axis velocity. This value is stored in the SRAM.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	Lin.-/Angle pos.	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			not classified				

DOUBLE	**$AA_TRAVEL_TIME_HS**				Total traversing time of axis at high velocity			Cross. R.:	
Description: Total traversing time of axis in seconds at high velocity in MCS, i.e. at a velocity of >= 80% of the maximum axis velocity. This value is stored in the SRAM.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	s	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			not classified				

DOUBLE	**$AA_TRAVEL_COUNT_HS**				No. of traversing operations at high velocity			Cross. R.:	
Description:									
Number of traversing operations of axis in MCS at high velocity, i.e. at a velocity of >= 80% of the maximum axis velocity. This value is stored in the SRAM.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	-	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			not classified				

DOUBLE	**$AA_JERK_TOT**				Total axial jerk			Cross. R.:	
Description:									
Total axial jerk in m/s^3. The total jerk applied to the axis is added up and stored in the SRAM.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	Lin.-/angle jerk	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			not classified				

DOUBLE	**$AA_JERK_TIME**				Total traversing time of axis with jerk			Cross. R.:	
Description:									
Total traversing time of axis in seconds in MCS with jerk. The total time period for which the axis traverses with jerk is added up and stored in the SRAM.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	s	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		According to part program			not classified				

DOUBLE	**$AA_JERK_COUNT**		Number of traversing operations with jerk				Cross. R.:		
Description:									
Number of traversing operations executed by axis in MCS with jerk. This value is stored in the SRAM.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		56.00.00		
Unit:	-	min:	0.0			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		According to part program				not classified				

BOOL	**$AC_RPVALID**		Repos position valid				Cross. R.:		
Description:									
$AC_RPVALID[X] $AC_RPVALID[axis identifier] returns TRUE if a valid Repos position, which can be interrogated with $AC_RETPOINT[axis identifier], is available for this axis. Valid Repos positions are generally available while system and user Asubs are being processed. However, this is not the case in the following situations: - The Asub activates a modified radius when tool radius compensation is active. $AC_RPVALID then returns FALSE for geometry axes while the Asub is running. The newly calculated Repos positions only become available with the approach blocks generated by the REPOS command. - The end position of the axis was last specified by the main run (FC18, synchronized actions, reciprocation, transfer from another channel after axis replacement).									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		51.06.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_SYNCDIFF**				Synchronism deviation between actual values			Cross. R.:	
Description:									
$VA_SYNCDIFF[FA] FA: Following axis/following spindle Deviation in synchronism between actual values for LEAD, TRAIL, ELG and COUP. The deviation in synchronism between actual values is the deviation in distance between the servo actual position of the following axis/following spindle and a point calculated (according to the coupling rule) from the servo actual position of the leading axis/leading spindle. $VA_SYNCDIFF[FA] = $VA_IM[FA] - K($VA_IM[LA]) K: Coupling rule LA: Leading axis/leading spindle									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		56.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_SYNCDIFF**				Synchronism deviation between setpoints			Cross. R.:	
Description:									
$AA_SYNCDIFF[FA] FA: Following axis/following spindle Deviation in synchronism between setpoints for LEAD, TRAIL, ELG and COUP. The deviation in synchronism between setpoints is the deviation in distance between the setpoint position of the following axis/following spindle and a point calculated (according to the coupling rule) from the setpoint position of the leading axis/leading spindle. $AA_SYNCDIFF[FA] = $AA_IM[FA] - K($AA_IM[LA]) K: Coupling rule LA: Leading axis/leading spindle									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		56.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$VA_SYNCDIFF_STAT**				Status of synchronism deviation between actual values			Cross. R.:	
Description:									
VA_SYNCDIFF_STAT[FA] FA: Following axis/following spindle Status of synchronism deviation between actual values: -4: Reserved -3: No valid value in $VA_SYNCDIFF, tangential control (not TANG(... "P")) -2: No valid value in $VA_SYNCDIFF, master value coupling and simulated MV -1: No valid value in $VA_SYNCDIFF 0: No valid value in $VA_SYNCDIFF, coupling not active 1: Valid value in $VA_SYNCDIFF									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		56.00.00	
Unit:	-	min:	-4				max:	1	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_SYNCDIFF_STAT**				Status synchron. dev. between setpoints			Cross. R.:	
Description:									
$AA_SYNCDIFF_STAT[FA] FA: Following axis/following spindle Status of synchronism deviation between setpoints: -4: No valid value in $AA_SYNCDIFF, coupled motion from part program -3: Reserved -2: Reserved -1: No valid value in $AA_SYNCDIFF 0: No valid value in $AA_SYNCDIFF, coupling not active 1: Valid value in $AA_SYNCDIFF									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		56.00.00	
Unit:	-	min:	-4				max:	1	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_OSCILL_BREAK_POS1**	Reciprocation interruption position 1	Cross. R.:	

Description:
$AA_OSCILL_BREAK_POS1[<axis>]
The current approach to reversal position 1 is finished at this position or the last approach to reversal position 1 was finished at this position (reversal position 2 currently being approached).
$AA_OSCILL_BREAK_POS1[<axis>] is not equal to $AA_OSCILL_REVERSE_POS1[<axis>] if the reciprocation motion was interrupted by an external signal (PLC).
The variable can be accessed only from synchronized actions.

Axes:	Geometry axis Channel axis Machine axis					NCK Version:		57.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_OSCILL_BREAK_POS2**	Reciprocation interruption position 2	Cross. R.:	

Description:
$AA_OSCILL_BREAK_POS2[<axis>]
The current approach to reversal position 2 is finished at this position or the last approach to reversal position 2 was finished at this position (reversal position 1 currently being approached).
$AA_OSCILL_BREAK_POS2[<axis>] is not equal to $AA_OSCILL_REVERSE_POS2[<axis>] if the reciprocation motion was interrupted by an external signal (PLC).
The variable can be accessed only from synchronized actions.

Axes:	Geometry axis Channel axis Machine axis					NCK Version:		57.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$AA_BCS_OFFSET**	Total axis offsets	Cross. R.:	

Description:
Axial variable $AA_BCS_OFFSET[ax] is used to determine the total axis offsets for an axis. The total consists of the handwheel (DRF) offset, the overlaid movement ($AA_OFF[ax]) and the external work offset. This offset is included in the BCS. The MCS is displaced in relation to the BCS according to the offset.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	58.00.00

Unit:	-	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_CHANNO**	Axis in the channel	Cross. R.:	

Description:
This variable returns the number of the channel in which the axis is being interpolated.
If value 0 is output, the axis could not be assigned to a channel.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	59.00.00

Unit:	-	min:	0			max:	10			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										

Attributes:	Global	Search run	Link	
	X	not classified	not classified	

DOUBLE	**$AA_IW_CORR**	Actual PCS-Position of one axis incl. overlay rates	Cross. R.:	

Description:
The axial variable $AA_IW_CORR[ax] calculates the actual interpolator position of the part coordinate system (PCS) for the specified axis. The position corresponds to the value of the interpolator for the actual interpolation cycle. The PCS-Value contains any axial overlay rate (DRF, $AA_OFF, external Frame, etc.).

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	59.00.00

Unit:	Lin.- /Angle pos.	min:	DBL_MIN			max:	DBL_MAX			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_IEN_CORR**				Actual FCS-Position of one axis incl. overlay rates			Cross. R.:	
Description:									
The axial variable $AA_IEN_CORR[ax] calculates the actual interpolator position of the adjustable coordinate system (ACS) for the specified axis. See also $AA_IW_CORR[ax]. The ACS-Value contains any axial overlay rate (DRF, $AA_OFF, external Frame, etc.).									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		59.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_IBN_CORR**				Actual FCS-Position of one axis incl. overlay rates			Cross. R.:	
Description:									
The axial variable $AA_IBN_CORR[ax] calculates the actual interpolator position of the foot coordinate system (FCS) for the specified axis. See also $AA_IW_CORR[ax]. The FCS-Value contains any axial overlay rate (DRF, $AA_OFF, external Frame, etc.).									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		59.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_IB_CORR**				Actual BCS-Position of one axis incl. overlay rates			Cross. R.:	
Description:									
The axial variable $AA_IB_CORR[ax] calculates the actual interpolator position of the base coordinate system (BCS) for the specified axis. See also $AA_IW_CORR[ax]. The BCS-Value contains any axial overlay rate (DRF, $AA_OFF, external Frame, etc.).									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		59.00.00	
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$AA_TYPE**				Axis type			Cross. R.:	
Description:									
$AA_TYPE[<axis>] Axis type: 0: Type is not ascertainable 1: NC-Program axis 2: Neutral axis 3: PLC axis 4: Oscillating axis 5: Neutral axis which is currently executing a JOG or homing motion 6: Following axis coupled via master value 7: Coupled motion following axis 8: Command axis 9: CompileCycles axis 10: Coupled slave axis (master-slave function) 11: Program axis which is currently executing a JOG or homing motion									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		59.00.00	
Unit:	-	min:	0				max:	11	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
	X	not classified				not classified				

DOUBLE	**$AA_DTSW**				Distance from start of motion in PCS			Cross. R.:	
Description:									
Axial variable $AA_DTSW[ax] determines the axial distance (with algebraic sign) from the start of motion in the workpiece coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		59.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_DTSB**				Distance from start of motion in BCS			Cross. R.:	
Description:									
Axial variable $AA_DTSB[ax] determines the axial distance (with algebraic sign) from the start of motion in the basic coordinate system for positioning and synchronized axes. The programmed position is the only factor used to calculate the distance. If the axis is a coupled axis, the position component derived from the axis coupling is not considered.									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		59.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:		X	X			X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_COUP_CORR**	Following spindle: Compensation value f. synch. spindle coupling	Cross. R.:	

Description:

$AA_COUP_CORR[Sn]
with spindle Sn (n: spindle number), example S2: spindle 2 or C: axis C
The variable serves to execute the functionality "Correcting deviation of synchronism" and provides the compensation value for the position offset of the synchronized spindle coupling.
For the duration (MD 30455 MISC_FUNCTION_MASK, bit 7) of the activation of the VDI interface signal DB31..,DBX31.6 'Correct synchronism' for the following spindle with active coupling, the actual values of this spindle are compared with the setpoint values. The difference is the compensation value which can be read with system variable $AA_COUP_CORR.
If the compensation value is known, this value can be written directly into the system variable, too. The VDI interface signal DB31..,DBX31.6 must not be activated in this case!
In the coupling module, the variable $AA_COUP_CORR is considered and results in a correction of the setpoint values.
The compensation value is deleted when switching on the synchronized spindle coupling for the relevant following spindle with COUPON(..) or COUPONC(..) as well as in the case of NC RESET, reference point approach or zero mark synchronization. The system variable returns the value 'zero'.
Depending on the application, the compensation value can also be deleted at an earlier point in time by describing the the variables with the value '0'.

Axes:	Channel axis Machine axis Spindle					NCK Version:		60.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$AA_AXCHANGE_TYP**	axchange axistype	Cross. R.:	

Description:
$AA_AXCHANGE_TYP[<Axis>]
Type of axis regarding axis interchange
0: Axis assigned to NC program
1: Axis assigned to PLC, or active as command or reciprocating axis
2: Other channel has right to interpolate
3: Neutral axis
4: Neutral axis controlled by PLC
5: Other channel has right to interpolate, axis requested for NC program
6: Other channel has right to interpolate, axis requested as neutral axis
7: Axis is PLC axis or active as command or reciprocating axis, axis requested for NC program
8: Axis is PLC axis or active as command or reciprocating axis, axis requested as neutral axis.

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	61.00.00

Unit:	-	min:	0				max:	8		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_AXCHANGE_STAT**	axchange axis state	Cross. R.:	

Description:
$AA_AXCHANGE_STAT[<Axis>]
Axis status regarding axis interchange:
0: Axis can be interchanged
1: Axis is assigned to the channel, but can become the PLC, command or reciprocating axis
2: Axis cannot be interchanged

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	61.00.00

Unit:	-	min:	0				max:	2		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:		X					X		X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

INT	**$AA_INPOS_STAT**	State of the programmed position	Cross. R.:	

Description:
$AA_INPOS_STAT[<Axis>] determines the status for a programmed position (see also VDI interface 'Spindle in position', 'Indexing axis in position'). The following values are possible:
0: No status available (axis / spindle outside the programmed position)
1: Awaiting traversing movement
2: Position reached via setpoint
3: Position reached via 'Exact stop coarse'
4: Position reached via 'Exact stop fine'

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	61.00.00

Unit:	-	min:	0			max:	4		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										

Attributes:	Global	Search run	Link	
	X	not classified	not classified	

INT	**$AA_EG_TYPE**	Still to be defined	Cross. R.:	

Description:
$AA_EG_TYPE[a,b]
a: Following axis
b: Leading axis
Type of coupling for leading axis b
0: Actual value coupling
1: Setpoint value coupling

Axes:	Geometry axis Channel axis Machine axis Spindle	NCK Version:	18.00.00

Unit:	-	min:				max:	1		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										

Attributes:	Global	Search run	Link	
		not classified	not classified	

DOUBLE	**$AA_EG_NUMERA**		Still to be defined				Cross. R.:		
Description:									
$AA_EG_NUMERA[a,b] a: Following axis b: Leading axis Numerator of coupling factor for leading axis b									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		18.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_EG_DENOM**		Still to be defined				Cross. R.:		
Description:									
$AA_EG_DENOM[a,b] a: Following axis b: Leading axis Denominator of coupling factor for leading axis b									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		18.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

DOUBLE	**$AA_EG_SYN**		Still to be defined				Cross. R.:		
Description:									
$AA_EG_SYN[a,b] a: Following axis b: Leading axis Synchronous position of leading axis b									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		18.00.00		
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$AA_EG_ACTIVE**		Still to be defined				Cross. R.:		
Description:									
$AA_EG_ACTIVE[a,b] a: Following axis b: Leading axis Coupling for leading axis b is active, i.e. switched on									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:		18.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

1.1.26 Safety Integrated

INT	**$A_STOPESI**	Stop E active					Cross. R.:		
Description:									
$A_STOPESI Current Safety Integrated Stop E for any axis: Val. 0: No Stop E Value not 0: For one of the axes, a Stop E is currently active									
Axes:					NCK Version:		48.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X		X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

BOOL	**$A_INSE[SF_MAXNUM_DIG_EXT_INBITS]**	External NCK SPL input signal					Cross. R.:		
Description:									
$A_INSE[n] n = bit number (1...64) External NCK SPL input signal NCK SPL interface for SPL control signal I/O interface logic									
Description of array limits:									
n: Number of input 1 - ...									
Axes:					NCK Version:		10.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$A_INSED[SF_MAXNUM_DIG_EXT_INWORDS]**				External NCK SPL input signals (32-bit)			Cross. R.:	
Description: $A_INSED[n] n = doubleword number (1,2) External NCK SPL input signals (32-bit) NCK SPL interface for SPL control signal I/O interface logic									
Description of array limits: n: Number of input word 1 - ...									
Axes:					NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_INSEP[SF_MAXNUM_DIG_EXT_INBITS]**				External PLC SPL input signal			Cross. R.:	
Description: $A_INSEP[n] n = bit number (1...64) Image of an external PLC SPL input signal PLC SPL interface for SPL control signal I/O interface logic Readable only during the SPL start-up phase									
Description of array limits: n: Number of input 1 - ...									
Axes:					NCK Version:		10.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_INSEPD[SF_MAXNUM_DIG_EXT_INWORDS]**	External PLC SPL input signals (32-bit)	Cross. R.:	

Description:
$A_INSEPD[n]
n = doubleword number (1,2)

Image of external PLC SPL input signals (32-bit)
PLC SPL interface for SPL control signal I/O interface logic

Readable only during the SPL start-up phase

Description of array limits:
n: Number of input word 0 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_OUTSE[SF_MAXNUM_DIG_EXT_OUTBITS]**	External NCK SPL output signal	Cross. R.:	

Description:
$A_OUTSE[n]
n = bit number (1...64)

External NCK SPL output signal
NCK SPL interface for SPL status signal I/O interface logic

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of output 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_OUTSED[SF_MAXNUM_DIG_EXT_OUTWORDS]**				External NCK SPL output signals (32-bit)			Cross. R.:	
Description: $A_OUTSED[n] n = doubleword number (1,2) External NCK SPL output signals (32-bit) NCK SPL interface for SPL status signal I/O interface logic Can be written only from SPL (SAFE.SPF program)									
Description of array limits: n: Number of output word 1 - ...									
Axes:					NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_OUTSEP[SF_MAXNUM_DIG_EXT_OUTBITS]**				External PLC SPL output signal			Cross. R.:	
Description: $A_OUTSEP[n] n = bit number (1...64) Image of an external PLC SPL output signal PLC SPL interface for SPL status signal I/O interface logic Readable only during the SPL start-up phase									
Description of array limits: n: Number of output 1 - ...									
Axes:					NCK Version:		10.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_OUTSEPD[SF_MAXNUM_DIG_EXT_OUTWORDS]**	External PLC SPL output signals (32-bit)	Cross. R.:	

Description:
$A_OUTSEPD[n]
n = doubleword number (1,2)

Image of external PLC SPL output signals (32-bit)
PLC SPL interface for SPL status signal I/O interface logic

Readable only during the SPL start-up phase

Description of array limits:
n: Number of output word 0 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_INSI[SF_MAXNUM_DIG_INT_INBITS]**	Internal NCK SPL input signal	Cross. R.:	

Description:
$A_INSI[n]
n = bit number (1...64)

Internal NCK SPL input signal
Interface to the status signals of the axial NCK monitoring channels

Description of array limits:
n: Number of input 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_INSID[SF_MAXNUM_DIG_INT_INWORDS]**	Internal NCK SPL input signals (32-bit)	Cross. R.:	

Description:
$A_INSID[n]
n = doubleword number (1,2)

Internal NCK SPL input signals (32-bit)
Interface to the status signals of the axial NCK monitoring channels

Description of array limits:
n: Number of input word 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_INSIP[SF_MAXNUM_DIG_INT_INBITS]**	Internal PLC SPL input signal	Cross. R.:	

Description:
$A_INSIP[n]
n = bit number (1...64)

Image of an internal PLC SPL input signal
Interface to the status signals of the axial 611D monitoring channels

Readable only during the SPL start-up phase

Description of array limits:
n: Number of input 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_INSIPD[SF_MAXNUM_DIG_INT_INWORDS]**	Internal PLC SPL input signals (32-bit)	Cross. R.:	

Description:
$A_INSIPD[n]
n = doubleword number (1,2)

Image of internal PLC SPL input signals (32-bit)
Interface to the status signals of the axial 611D monitoring channels

Readable only during the SPL start-up phase

Description of array limits:
n: Number of input word 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_OUTSI[SF_MAXNUM_DIG_INT_OUTBITS]**	Internal NCK SPL output signal	Cross. R.:	

Description:
$A_OUTSI[n]
n = bit number (1...64)

Internal NCK SPL output signal
Interface to the control signals of the axial NCK monitoring channels

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of output 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_OUTSID[SF_MAXNUM_DIG_INT_OUTWORDS]**	Internal NCK SPL output signals (32-bit)	Cross. R.:	

Description:
$A_OUTSID[n]
n = doubleword number (1,2)

Internal NCK SPL output signals (32-bit)
Interface to the control signals of the axial NCK monitoring channels

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of output word 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_OUTSIP[SF_MAXNUM_DIG_INT_OUTBITS]**	Internal PLC SPL output signal	Cross. R.:	

Description:
$A_OUTSIP[n]
n = bit number (1...64)

Image of an internal PLC SPL output signal
Interface to the control signals of the 611D monitoring channels

Readable only during the SPL start-up phase

Description of array limits:
n: Number of output 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_OUTSIPD[SF_MAXNUM_DIG_INT_OUTWORDS]**	Internal PLC SPL output signals (32-bit)	Cross. R.:	

Description:
$A_OUTSIPD[n]
n = doubleword number (1,2)

Image of internal PLC SPL output signals (32-bit)
Interface to the control signals of the 611D monitoring channels

Readable only during the SPL start-up phase

Description of array limits:
n: Number of output word 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_MARKERSI[SF_MAXNUM_MARKER]**	NCK SPL flags	Cross. R.:	

Description:
$A_MARKERSI[n]
n = bit number (1...64)

NCK SPL flags

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of flag 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_MARKERSID[SF_MAXNUM_MARKER_WORDS]**	NCK SPL flag word	Cross. R.:	

Description:
$A_MARKERSID[n]
n = doubleword number (1,2)

NCK SPL flag word (32-bit)

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of flag word 1 - ...

Axes:						NCK Version:		13.09.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_MARKERSIP[SF_MAXNUM_MARKER]**	PLC SPL flags	Cross. R.:	

Description:
$A_MARKERSIP[n]
n = bit number (1...64)

Image of a PLC SPL flag

Readable only during the SPL start-up phase

Description of array limits:
n: Number of flag 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_MARKERSIPD[SF_MAXNUM_MARKER_WORDS]**	PLC SPL flag word	Cross. R.:	

Description:
$A_MARKERSIPD[n]
n = doubleword number (1,2)

Image of a PLC SPL flag word (32-bit)

Readable only during the SPL start-up phase

Description of array limits:
n: Number of flag word 1 - ...

Axes:						NCK Version:		13.09.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$A_TIMERSI[SF_MAXNUM_TIMER]**	SPL timers	Cross. R.:	

Description:
$A_TIMERSI[n]
n=timer number (1...16)

SPL timers
Unit in seconds
The time is counted internally in multiples of the interpolation cycle.

Incrementation of the time variable is started by value assignment

$A_TIMERSI[n]=<start value>

Incrementation of a time variable is stopped through assignment of a negative value

$A_TIMERSI[n]=-1

The current timer count can be read while the time variable is running or stopped. When the time variable is stopped by assigning -1, the last count value remains stored in the variable and can continue to be read. The timers are not stopped by a channel/mode group reset.

Description of array limits:
n: Number of timer 1 - ...

Axes:						NCK Version:		10.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_STATSID**	SPL status signals	Cross. R.:	

Description:
$A_STATSID

Status of data cross-check between NCK and PLC (SPL DCC)
if the value does not equal zero, an error has occurred in the SPL DCC.
Meaning
Bit 0 ... 27: DCC error in input/output signals or flags
Bit 28:DCC error "SPL protection status" ($MN_PREVENT_SYNACT_LOCK status not equal to DB18.DBX36.0)
Bit 29:Time error during communication between NCK and PLC (all ext. NCK SPL outputs are set to zero in 5 sec. and the PLC switches to Stop)
Bit 30: Stop signaled from PLC to NCK

Axes:						NCK Version:		13.03.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_CMDSI[SF_MAXNUM_CMD_MARKER]**	SPL DCC control signals	Cross. R.:	

Description:
$A_CMDSI[n]
n = bit number (1..0.16)

Control word for data cross-check between NCK and PLC (SPL DCC).
n = 1: Increase time for signal change monitoring to 10 s.

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of control signal for SPL data cross-check

Axes:						NCK Version:		13.03.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_LEVELSID**	SPL DCC level	Cross. R.:	

Description:
$A_LEVELSID

Displays the fill level for signal change monitoring during data cross-check between NCK and PLC SPL (SPL DCC).
Specifies the number of signals currently tagged for cross-checking.
The value is already zero if an SPL signal has different levels on the NCK and PLC but the allowed discrepancy time for the signals (2 sec) has not yet expired.

Axes:						NCK Version:		13.03.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

INT	**$A_XFAULTSI**	DCC status	Cross. R.:	

Description:
$A_XFAULTSI

Information on Stop F for a Safety axis:
Bit 0 = 1:An actual value error has been detected by the data cross-check between NCK and 611D for any Safety axis.
Bit 1 = 1:Any error on any axis has been detected by the data cross-check between NCK and 611D and the waiting time before triggering of Stop B on that axis is running or has expired ($MA_SAFE_STOP_SWITCH_TIME_F).

Axes:						NCK Version:		45.00.00		
Unit:	-	min:	0				max:	3		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_PLCSIIN[SF_MAXNUM_PLCIN_MARKER]**	SPL signal from PLC to NCK	Cross. R.:	

Description:
$A_PLCSIIN[n]
n = bit number (1..0.32)

Single-channel signals from PLC SPL (DB18) to NCK SPL.

Application:
$A_MARKERSI[1] = $A_PLCSIIN[1] ; Signal from PLC-SPL

Description of array limits:
n: Number of signal 1 - ... from PLC to NCK

Axes:						NCK Version:		45.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

BOOL	**$A_PLCSIOUT[SF_MAXNUM_PLCOUT_MARKER]**	SPL signal from NCK to PLC	Cross. R.:	

Description:
$A_PLCSIOUT[n]
n = bit number (1..0.32)

Single-channel signals from NCK SPL to PLC SPL (DB18).

Application:
$A_PLCSIOUT[1] = $A_MARKERSI[1] ; Signal to PLC-SPL

Can be written only from SPL (SAFE.SPF program)

Description of array limits:
n: Number of signal 1 - ... from NCK to PLC

Axes:						NCK Version:		45.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X	X			X	X	X	X	
write:	X	X	X			X	X		X	7
Attributes:	Global	Search run				Link				
		not classified				not classified				

DOUBLE	**$VA_IS**				Safe actual position NCK			Cross. R.:	
Description: $VA_IS[X] X = axis identifier Safe actual position for NCK monitoring channel									
Axes:	Geometry axis Channel axis Machine axis Spindle				NCK Version:	06.00.00			
Unit:	Lin.-/Angle pos.	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$VA_STOPSI**				Stop by Safety Integrated			Cross. R.:	
Description: $VA_STOPSI[X] X = axis identifier Current Safety Integrated Stop for the relevant axis Value Meaning -1No Stop 0Stop A 1Stop B 2Stop C 3Stop D 4Stop E 5Stop F 10Test Stop NC 11Test ext. pulse suppression									
Axes:	Geometry axis Channel axis Machine axis				NCK Version:	48.00.00			
Unit:	-	min:				max:	7		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X	X		X	X	X	X	
write:									
Attributes:	Global	Search run			Link				
		not classified			not classified				

INT	**$VA_XFAULTSI**				Stop F by data cross-check error active			Cross. R.:	
Description: $VA_XFAULTSI[X] X = axis identifier Information about Safety Integrated Stop F for this axis: Bit 0 set:An actual value error has been detected by the data cross-check between NCK and 611D. Bit 1 set:Any error has been detected by the data cross-check between NCK and 611D and the waiting time before triggering of Stop B ($MA_SAFE_STOP_SWITCH_TIME_F) is running or has expired.									
Axes:	Geometry axis Channel axis Machine axis Spindle					NCK Version:		45.00.00	
Unit:	-	min:	0				max:	3	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X		X	
write:										
Attributes:	Global	Search run				Link				
		not classified				not classified				

1.1.27 User specific system variables

DOUBLE	**SYG_RM[n]**				Synact Real parameters for GUD2 block			Cross. R.:	
Description: SYG_RM[n] Synact Real parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[1])									
Axes:						NCK Version:		57.00.00	
Unit:	-	min:	DBL_MIN				max:	DBL_MAX	
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_IM[n]**			Synact Integer parameters for GUD2 block			Cross. R.:	
Description: SYG_IM[n] Synact Integer parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[1])								
Axes:					NCK Version:		57.00.00	
Unit:	-	min:	INT_MIN			max:	INT_MAX	
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_BM[n]**			Synact Boolean parameters for GUD2 block			Cross. R.:	
Description: SYG_BM[n] Synact Boolean parameters in GUD2 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.								
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[1])								
Axes:					NCK Version:		57.00.00	
Unit:	-	min:	FALSE			max:	TRUE	
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_AM[n]**	Synact Axis parameters for GUD2 block	Cross. R.:	

Description:
SYG_AM[n] Synact axis parameters in GUD2 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[1])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_CM[n]**	Synact char parameters for GUD2 block	Cross. R.:	

Description:
SYG_CM[n] Synact char parameters in GUD2 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[1])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_SM[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact string parameters for GUD2 block	Cross. R.:	

Description:
SYG_SM[n] Synact string parameters in GUD2 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD string is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[1])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_RU[n]**	Synact Real parameters for UGUD block	Cross. R.:	

Description:
SYG_RU[n] Synact Real parameters in UGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least three
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[2])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_IU[n]**				Synact Integer parameters for UGUD block			Cross. R.:	
Description: SYG_IU[n] Synact Integer parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[2])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_BU[n]**				Synact Boolean parameters for UGUD block			Cross. R.:	
Description: SYG_BU[n] Synact Boolean parameters in UGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least three GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[2])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_AU[n]**	Synact Axis parameters for UGUD block	Cross. R.:	

Description:
SYG_AU[n] Synact Axis parameters in UGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least three
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[2])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_CU[n]**	Synact char parameters for UGUD block	Cross. R.:	

Description:
SYG_CU[n] Synact char parameters in UGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least three
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[2])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_SU[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact string parameters for UGUD block	Cross. R.:	

Description:
SYG_SU[n] Synact string parameters in UGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least three
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[2])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_R4[n]**	Synact Real parameters for GUD4 block	Cross. R.:	

Description:
SYG_R4[n] Synact Real parameters in GUD4 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[3])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_I4[n]**		Synact Integer parameters for GUD4 block				Cross. R.:		
Description: SYG_I4[n] Synact Integer parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[3])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

BOOL	**SYG_B4[n]**		Synact Boolean parameters for GUD4 block				Cross. R.:		
Description: SYG_B4[n] Synact Boolean parameters in GUD4 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least four GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[3])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

AXIS	**SYG_A4[n]**	Synact Axis parameters for GUD4 block	Cross. R.:	

Description:
SYG_A4[n] Synact Real parameters in GUD4 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[3])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_C4[n]**	Synact Char parameters for GUD4 block	Cross. R.:	

Description:
SYG_C4[n] Synact Char parameters in GUD4 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[3])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_S4[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact String parameters for GUD4 block	Cross. R.:	

Description:
SYG_S4[n] Synact String parameters in GUD4 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least four
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[3])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_R5[n]**	Synact Real parameters for GUD5 block	Cross. R.:	

Description:
SYG_R5[n] Synact Real parameters in GUD5 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least five
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[4])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_I5[n]**	Synact Integer parameters for GUD5 block	Cross. R.:	

Description:
SYG_I5[n] Synact Integer parameters in GUD5 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least five
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[4])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	INT_MIN				max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

BOOL	**SYG_B5[n]**	Synact Boolean parameters for GUD5 block	Cross. R.:	

Description:
SYG_B5[n] Synact Boolean parameters in GUD5 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least five
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[4])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	FALSE				max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

AXIS	**SYG_A5[n]**	Synact Axis parameters for GUD5 block	Cross. R.:	

Description:
SYG_A5[n] Synact Axis parameters in GUD5 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least five
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[4])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_C5[n]**	Synact Char parameters for GUD5 block	Cross. R.:	

Description:
SYG_C5[n] Synact Char parameters in GUD5 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least five
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[4])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_S5[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact String parameters for GUD5 block	Cross. R.:	

Description:
SYG_S5[n] Synact String parameters in GUD5 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least five
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[4])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_R6[n]**	Synact Real parameters for GUD6 block	Cross. R.:	

Description:
SYG_R6[n] Synact Real parameters in GUD6 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least six
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[5])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_I6[n]**		Synact Integer parameters for GUD6 block			Cross. R.:	
Description: SYG_I6[n] Synact Integer parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.							
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[5])							
Axes:				NCK Version:	57.00.00		
Unit:	-	min:	INT_MIN	max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_B6[n]**		Synact Boolean parameters for GUD6 block			Cross. R.:	
Description: SYG_B6[n] Synact Boolean parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least six GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.							
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[5])							
Axes:				NCK Version:	57.00.00		
Unit:	-	min:	FALSE	max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_A6[n]**	Synact Axis parameters for GUD6 block	Cross. R.:	

Description:
SYG_A6[n] Synact Axis parameters in GUD6 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least six
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[5])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_C6[n]**	Synact Char parameters for GUD6 block	Cross. R.:	

Description:
SYG_C6[n] Synact Char parameters in GUD6 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least six
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[5])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_S6[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact String parameters for GUD6 block	Cross. R.:	

Description:
SYG_S6[n] Synact String parameters in GUD6 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least six
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[5])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_R7[n]**	Synact Real parameters for GUD7 block	Cross. R.:	

Description:
SYG_R7[n] Synact Real parameters in GUD6 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least seven
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[6])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_I7[n]**				Synact Integer parameters for GUD7 block			Cross. R.:	
Description: SYG_I7[n] Synact Integer parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[6])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_B7[n]**				Synact Boolean parameters for GUD7 block			Cross. R.:	
Description: SYG_B7[n] Synact Boolean parameters in GUD7 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[6])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_A7[n]**				Synact Axis parameters for GUD7 block				Cross. R.:	
Description: SYG_A7[n] Synact Axis parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
Description of array limits: The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[6])										
Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_C7[n]**				Synact Char parameters for GUD7 block				Cross. R.:	
Description: SYG_C7[n] Synact Char parameters in GUD6 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least seven GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.										
Description of array limits: The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[6])										
Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_S7[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact String parameters for GUD7 block	Cross. R.:	

Description:
SYG_S7[n] Synact String parameters in GUD6 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least seven
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[6])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_R8[n]**	Synact Real parameters for GUD8 block	Cross. R.:	

Description:
SYG_R8[n] Synact Real parameters in GUD8 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least eight
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[7])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_I8[n]**		Synact Integer parameters for GUD8 block				Cross. R.:		
Description: SYG_I8[n] Synact Integer parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[7])									
Axes:				NCK Version:		57.00.00			
Unit:	-	min:	INT_MIN		max:	INT_MAX			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_B8[n]**		Synact Boolean parameters for GUD8 block				Cross. R.:		
Description: SYG_B8[n] Synact Boolean parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[7])									
Axes:				NCK Version:		57.00.00			
Unit:	-	min:	FALSE		max:	TRUE			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_A8[n]**	Synact Axis parameters for GUD8 block	Cross. R.:	

Description:
SYG_A8[n] Synact Axis parameters in GUD8 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least eight
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[7])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_C8[n]**	Synact Char parameters for GUD8 block	Cross. R.:	

Description:
SYG_C8[n] Synact Char parameters in GUD8 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least eight
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[7])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_S8[n,MD_MAXNUM_STRLEN_SYNACT]**				Synact String parameters for GUD8 block			Cross. R.:	
Description: SYG_S8[n] Synact String parameters in GUD8 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least eight GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[7]) to be defined									
Axes:					NCK Version:		61.00.00		
Unit:	-	min:				max:			
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

DOUBLE	**SYG_R9[n]**				Synact Real parameters for GUD9 block			Cross. R.:	
Description: SYG_R9[n] Synact Real parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[8])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

INT	**SYG_I9[n]**				Synact Integer parameters for GUD9 block			Cross. R.:	
Description: SYG_I9[n] Synact Integer parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[8])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_B9[n]**				Synact Boolean parameters for GUD9 block			Cross. R.:	
Description: SYG_B9[n] Synact Boolean parameters in GUD9 block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least nine GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[8])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_A9[n]**	Synact Axis parameters for GUD9 block	Cross. R.:	

Description:
SYG_A9[n] Synact Axis parameters in GUD9 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least nine
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[8])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_C9[n]**	Synact Char parameters for GUD9 block	Cross. R.:	

Description:
SYG_C9[n] Synact Char parameters in GUD9 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least nine
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[8])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_S9[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact String parameters for GUD9 block	Cross. R.:	

Description:
SYG_S9[n] Synact String parameters in GUD9 block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least nine
GUD blocks must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[8])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

DOUBLE	**SYG_RS[n]**	Synact Real parameters for SGUD block	Cross. R.:	

Description:
SYG_RS[n] Synchronization Real parameters in SGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least one
GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Real is defined in machine data ($MN_MM_NUM_SYNACT_GUD_REAL[0])

Axes:						NCK Version:		57.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

INT	**SYG_IS[n]**				Synact Integer parameters for SGUD block			Cross. R.:	
Description: SYG_IS[n] Synact Integer parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Integers is defined in machine data ($MN_MM_NUM_SYNACT_GUD_INT[0])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	INT_MIN			max:	INT_MAX		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

BOOL	**SYG_BS[n]**				Synact Boolean parameters for SGUD block			Cross. R.:	
Description: SYG_BS[n] Synact Boolean parameters in SGUD block. A protection level can be assigned to the parameters with REDEF. In order to create the parameters, at least one GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.									
Description of array limits: The maximum number of SynactGUD Boolean parameters is defined in machine data ($MN_MM_NUM_SYNACT_GUD_BOOL[0])									
Axes:					NCK Version:		57.00.00		
Unit:	-	min:	FALSE			max:	TRUE		
	Prep	Main run	PR-Stop	MR-Sync	PP	SA	OPI	OEM	Acc. R.
read:	X	X			X	X	X	X	
write:	X	X			X	X	X	X	7
Attributes:	Global	Search run			Link				
		According to part program			No restriction				

AXIS	**SYG_AS[n]**	Synact axis parameters for SGUD block	Cross. R.:	

Description:
SYG_AS[n] Synchronization axis parameters in SGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least one
GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD Axis is defined in machine data ($MN_MM_NUM_SYNACT_GUD_AXIS[0])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

CHAR	**SYG_CS[n]**	Synact char parameters for SGUD block	Cross. R.:	

Description:
SYG_CS[n] Synchronization Char parameters in SGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least one
GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD char is defined in machine data ($MN_MM_NUM_SYNACT_GUD_CHAR[0])

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

STRING	**SYG_SS[n,MD_MAXNUM_STRLEN_SYNACT]**	Synact string parameters for SGUD block	Cross. R.:	

Description:
SYG_SS[n] Synchronization string parameters in SGUD block.
A protection level can be assigned to the parameters with REDEF.
In order to create the parameters, at least one
GUD block must be activated with MD $MN_MM_NUM_GUD_MODULES.

Description of array limits:
The maximum number of SynactGUD String is defined in machine data ($MN_MM_NUM_SYNACT_GUD_STRING[0])
to be defined

Axes:						NCK Version:		61.00.00		
Unit:	-	min:					max:			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X	X				X	X	X	X	
write:	X	X				X	X	X	X	7
Attributes:	Global	Search run				Link				
		According to part program				No restriction				

1.1.28 Kinematic chain

STRING	**$NK_NAME[n,MAX_STRINGLENGTH]**	Name of chain element	Cross. R.:	

Description:
$NK_NAME[n]
Name of the nth element of a kinematic chain. The maximum possible number of chain elements is set in MD $MN_MM_MAX_NUM_KIN_CHAIN_ELEMENTS.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NK_NEXT[n,MAX_STRINGLENGTH]**	Name of next chain element	Cross. R.:	

Description:
$NK_NEXT[n]
Name of next chain element. An empty string "" means the end of the chain.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NK_NEXTP[n,MAX_STRINGLENGTH]**	Name of a further next chain element	Cross. R.:	

Description:
$NK_NAMEP[n]
Name of a further next chain element. This is needed for chain branches which occur in the case of parallel kinematic sequences. An empty string "" means that no further chain element exists.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NK_INSERT[n,MAX_STRINGLENGTH]**	Name of a chain to be inserted	Cross. R.:	

Description:
$NK_INSERT[n]
Name of a chain to be inserted. A chain or chain element inserted with $NK_INSERT[n] takes effect at the start of the element which contains it. Work offsets and rotations defined in an inserted chain element apply to the current element and all subsequent elements of the chain.

Description of array limits:
The maximum number of elements of kinematic chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NK_OFF[n,3]**	Offset component	Cross. R.:	

Description:
$NK_OFF[n, i]
Offset component i (0<=i<=2) of the nth element of a kinematic chain.

Description of array limits:
The maximum number of elements of kinematic chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
Index of the 3 components (0 <= i <= 2).

Axes:						NCK Version:		58.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NK_RPY[n,3]**	RPY angle	Cross. R.:	

Description:
$NK_RPY[n, i]
RPY angle i (0<=i<=2) of the nth element of a kinematic chain.

Description of array limits:
The maximum number of elements of kinematic chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
Index of the 3 components (0 <= i <= 2).

Axes:						NCK Version:		58.00.00		
Unit:	Degrees	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NK_AXIS[n,MAX_STRINGLENGTH]**	Axis name, frame name	Cross. R.:	

Description:
$NK_AXIS[n,i]
Axis or frame name. the axis is described in detail in $NK_AXINDEX. The null string is allowed for this variable. In this case, the entire data block describes a constant chain element.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

INT	**$NK_AXINDEX[n]**	Axis name, frame name	Cross. R.:	

Description:
$NK_AXIS[n]
Defines how the string in the variable $NK_AXIS is to be interpreted.
If this index is 0, the string defines a frame which describes the change in the chain element. If the index is greater than 0, the string designates an axis name and the index itself designates the number of the channel in which the axis is defined. If the axis name is a machine axis name, the index can contain any value greater than zero.
For example, $NK_AXIS[1, 1] = "X" defines that the 1st chain element is moved by the 1st channel axis X. $NK_AXIS[1] = "FRAME1" and $NK_INDEX = 0 defines that the 1st element of the chain is moved by frame "FRAME1". Frame "FRAME1" has to be provided by the active transformation.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NK_DIR[n,3]**	Axis direction	Cross. R.:	

Description:
$NK_DIR[n, i]
Component i of the axis direction vector (0<=i<=2) of the nth element of a kinematic chain.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.
Index of the 3 components (0 <= i <= 2).

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NK_A_OFF[n]**	Axis offset	Cross. R.:	

Description:
$NK_A_OFF[n]
Specifies the position of the axis at the point defined by $NK_OFF. This value is redundant because a kinematic chain can always be defined such that the offset is zero with suitable settings in $NK_OFF and $NK_RPY.

Description of array limits:
The maximum number of elements of kinematic
chains is set in MD $MN_MM_MAXNUM_KIN_CHAIN_ELEM.

Axes:						NCK Version:		58.00.00		
Unit:	inch	min:	DBL_MIN				max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

1.1.29 Protection area elements

STRING	**$NP_NAME[n,MAX_STRINGLENGTH]**	Name of protection zone element	Cross. R.:	

Description:
$NP_NAME[n]
Name of protection zone element n.

Description of array limits:
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_AREA_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NP_NEXT[n,MAX_STRINGLENGTH]**	Name of next protection zone element	Cross. R.:	

Description:
$NP_NEXT[n]
Name of next protection zone element.

Description of array limits:
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_PROT_AREA_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NP_ADD[n,MAX_STRINGLENGTH]**	Name of protection zone element	Cross. R.:	

Description:
$NP_ADD[n]
Name of protection element to be added to the current protection zone.

Description of array limits:
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_PROT_AREA_ELEM.
max. string length

Axes:						NCK Version:		58.00.00		
Unit:	-	min:	-				max:	-		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NP_CHAIN[n,MAX_STRINGLENGTH]**	Assignment to a kin. chain						Cross. R.:	
Description:									
$NP_CHAIN[n] Assignment to a kinematic chain. $NP_CHAIN[n] can contain the name of a point in a kinematic chain at which the protection zone is fixed. In a complete protection zone definition, only one element of $NP_CHAIN[n] may contain an entry not equal to the null string.									
Description of array limits:									
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_PROT_AREA_ELEM. max. string length									
Axes:				NCK Version:		58.00.00			
Unit:	-	min:	-		max:	-			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

STRING	**$NP_TYPE[n,MAX_STRINGLENGTH]**	Type of elementary body						Cross. R.:	
Description:									
$NP_TYPE[n] Type of elementary body. The following elementary bodies are available: 1. BOX (L, B, H): box parallel to the axis with a corner at the zero point and a further corner at X=L, Y=B, Z=H. 2. SPHERE (R): sphere at the zero point with radius R. 3. CYLINDER (H, R): cylinder with radius R and height H, longitudinal axis parallel to the Z axis and center point of the base circle at the zero point. 4. CONE (H, R): straight cone with base circle radius R and height H, longitudinal axis parallel to the Z axis, cone tip at Z=H and center point of the base circle at the zero point. 5. CONE_TR (H, R, r): straight cone trunk with base circle radius R, height H and top circle radius r, longitudinal axis parallel to the Z axis and center point of the base circle at the zero point.									
Description of array limits:									
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_AREA_ELEM. max. string length									
Axes:				NCK Version:		58.00.00			
Unit:	-	min:	-		max:	-			
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NP_PARA[n,3]**				Parameters for describing the type			Cross. R.:	
Description:									
$NP_PARA[n, i] Parameters for describing the type of an elementary body. A maximum of 3 parameters are required for the types of elementary body described under $NP_TYP.									
Description of array limits:									
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_AREA_ELEM. The maximum number of parameters is 3.									
Axes:					NCK Version:		58.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NP_OFF[n,3]**				Offset component			Cross. R.:	
Description:									
$NP_OFF[n, i] Component i (0<=i<=2) of the offset vector of protection zone element n.									
Description of array limits:									
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_AREA_ELEM. The 2nd index i designates the coordinate axis (0 <= i <= 2).									
Axes:					NCK Version:		58.00.00		
Unit:	inch	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

DOUBLE	**$NP_RPY[n,3]**				RPY angle			Cross. R.:	
Description:									
$NP_RPY[n, i] RPY angle i (0 <= i <= 2) of protection zone element n.									
Description of array limits:									
The maximum number of elements in protection zones is defined by MD $MN_MM_MAXNUM_AREA_ELEM. The 2nd index i designates the RPY angle (0 <= i <= 2).									
Axes:					NCK Version:		58.00.00		
Unit:	Degrees	min:	DBL_MIN			max:	DBL_MAX		
	Prep	Main run	PR-Stop	MR-Sync		PP	SA	OPI	OEM	Acc. R.
read:	X					X		X	X	
write:	X					X		X	X	7
Attributes:	Global	Search run				Link				
		not classified				No restriction				

References

A

An overview of publications which is updated each month and shows the languages available is provided on the Internet at:
http:/www.siemens.com/motioncontrol
via „Support“, „Technical documentation“, „Overview of publications“.

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Siemens AG

A&D MC BMS
P.O. Box 3180
D-91050 Erlangen
Federal Republic of Germany
Tel. +49 (0) 180 50 50 - 222 (Hotline)
Fax +49 (0) 9131 98 - 63315 (Documentation)
email: mailto:motioncontrol.docu@siemens.com

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SINUMERIK 840D
sl/840D/840Di/810D
System variables

User documentation

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Suggestions and/or corrections

Overview of documentation SINUMERIK 840D/840Di/810D (10.2004)

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- *SINUMERIK* 840D/810D — Brochure
- *SINUMERIK* 840D/840Di/ 810D/ — Catalog Ordering info. NC 60 ***)**
- *Safety Integrated* Application Manual — **Safety Interated** Application Manual

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- *SINUMERIK* 840D/840Di 810D — Operator's Guide **– HT 6**
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- *SINUMERIK* 840D/840Di 810D — **Operator Components** (HW) ***)**
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- *SINUMERIK SIMODRIVE* 611D 840D/810D — Description of Functions **Synchronized Actions**
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- *SINUMERIK* 840D/810D — Description of Functions Operator Interface **OP 030**
- *SINUMERIK* 840D/810D — **MCIS** –Computer Link –Tool Data Information Sy stem –NC Data Management –NC Data Transfer –Tool Data Communication

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- *SINUMERIK SIMODRIVE* — Description of Functions SINUMERIK **Safety Integrated**
- *SINUMERIK* 840D — Description of Functions **Digitizing**
- *SINUMERIK SIMODRIVE* — **Installation & Start–up Guide. *)** – 810D – 840D/611D – HMI
- *SINUMERIK SIMODRIVE* 840D/840Di 810D 611D — **Lists*)**
- *SINUMERIK SIMODRIVE* 840D 611D — Description of Functions **Linear motor**
- *SINUMERIK SIMODRIVE* 840D 611D — Description of Functions **– Hydraulics Modules – Analog Modules**
- *MOTION CONTROL SYSTEMS* — **EMV** Guidelines

Electronic Documentation

- *SINUMERIK SIMODRIVE* 840D/840Di/ 810D 611, Motoren — **DOC ON CD *)** The SINUMERIK System

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- *SINUMERIK* 840D/840Di/ 810D — Description of Functions **ISO–**Dialects for SINUMERIK
- *SINUMERIK* 840Di — **Manual** (HW + Installation and Start–up)
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