



Technical Paper
PLCopen Technical Committee 2 – Task Force
Function Blocks for motion control:
Part 4 – Coordinated Motion

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Appendix 1. Compliance Procedure and Compliance List

Listed in this Appendix are the requirements for the compliance statement from the supplier of the Motion Control Function Blocks. The compliance statement consists of two main groups: supported data types (see Appendix 1.2 Supported Data types) and supported Function Blocks, in combination with the applicable inputs and outputs see (Appendix 1.2 Supported Data types and its paragraphs). The supplier is required fill out the tables for the used data types and Function Blocks, according to their product, committing their support to the specification.

By submitting these tables to PLCopen, and after approval by PLCopen, the list will be published on the PLCopen website, www.plcopen.org , as well as a shortform overview, as specified in Appendix 1.5 Short overview of the Functions Blocks.

In addition to this approval, the supplier is granted access and usage rights of the PLCopen Motion Control logo, as described in chapter Appendix 1.6 The PLCopen Motion Control Logo and Its Usage.

Data types

The data type REAL listed in the Function Blocks and parameters (e.g. for velocity, acceleration, distance, etc.) may be exchanged to SINT, INT, DINT or LREAL without to be seen as incompliant to this standard, as long as they are consistent for the whole set of Function Blocks and parameters.

Implementation allows the extension of data types as long as the basic data type is kept. For example: WORD may be changed to DWORD, but not to REAL.

Function Blocks and Inputs and Outputs

An implementation which claims compliance with this PLCopen specification shall offer a set of Function Blocks for motion control, meaning one or more Function Blocks, with at least the **basic** input and output variables, marked as “**B**” in the tables. These inputs and outputs have to be supported to be compliant.

For higher-level systems and future extensions any subset of the **extended** input and output variables, marked as “**E**” in the tables can be implemented.

Vendor specific additions are marked with “**V**”, and can be listed as such in the supplier documentation.

- | | |
|--|---|
| - Basic input/output variables are mandatory | Marked in the tables with the letter “ B ” |
| - Extended input /output variables are optional | Marked in the tables with the letter “ E ” |
| - Vendor Specific additions | Marked in the vendor’s compliance documentation with “ V ” |

All the vendor specific items will not be listed in the comparison table on the PLCopen website, but in the detailed vendor specific list, which also is published.

All vendor specific in- and outputs of all FBs must be listed in the certification list of the supplier. With this, the certification listing from a supplier describes all the I/Os of the relevant FBs, including vendor-specific extensions, and thus showing the complete FBs as used by the supplier.

Appendix 1.1. Statement of Supplier

Supplier name	KEBA AG
Supplier address	Gewerbepark Urfahr
City	4041 Linz
Country	Austria
Telephone	+43 732 7090-0
Fax	+43 732 7090-66630
Email address	kamp@keba.com
Product Name	KeMotion
Product version	02.40
Release date	05.10.2011

I hereby state that the following tables as filled out and submitted do match our product as well as the accompanying user manual, as stated above.

Name of representation (person): Harald Kampenhuber

Date of signature (dd/mm/yyyy): 10.10.2011

Signature:



Appendix 1.2. Supported Data types

Defined datatypes with MC library:	Supported	If not supported, which datatype used
BOOL	Y	
INT	Y	
WORD	N	TMCE_ErrorID
REAL	N	LREAL
ENUM	Y	

Table 1: Supported datatypes

Table 1:Supported datatypes

Within the specification the following derived datatypes are defined. Which structure is used in this system:

Derived datatypes:	Where used	Supported	Which structure
AXES_GROUP_REF	Nearly all FBs	Y	AXES_GROUP_REF
IDENT_IN_GROUP_REF	MC_AddAxisToGroup MC_RemoveAxisFromGroup	N	
MC_BUFFER_MODE	In all buffered FBs	N	
MC_KIN_REF	MC_SetKinTransform MC_ReadKinTransform	N	
MC_EXECUTION_MODE	MC_SetKinTransform	N	
MC_COORD_REF	MC_SetCoordinateTransformation	N	
MC_GROUP_BUFFER_MODE	MC_MoveLinearAbsolute MC_MoveCircularAbsolute	N	
MC_TRANSITION_MODE	MC_MoveLinearAbsolute MC_MoveLinearRelative MC_MoveCircularAbsolute MC_MoveCircularRelative	N	
MC_CIRC_PATHCHOICE	MC_MoveCircularAbsolute MC_MoveCircularRelative	N	
MC_PATH_DATA_REF MC_PATH_REF	MC_PathSelect MC_MovePath	Y	TRCE_PathData

Table 2: Supported derived datatypes

Appendix 1.3. Supported Buffer Modes – not supported

No.	MC_BUFFER_MODE	Supported
0	Aborting	
1	Buffered	
2	BlendingLow	
3	BlendingPrevious	
4	BlendingNext	
5	BlendingHigh	

Table 3: Overview of buffer modes

Appendix 1.4. Supported Transition Modes – not supported

No.	MC_TRANSITION_MODE	Supported
0	TMNone	
1	TMMaxVelocity	
2	TMDefinedVelocity	
3	TMCornerDistance	
4	TMMaxCornerDeviation	
5 - 9	Reserved by PLCopen	
10 - ...	Supplier specific modes	

Table 4: Overview of available transition modes

Appendix 1.5. Short overview of the Function Blocks

Coordinated Function Blocks	Supported Yes / No	Comments (<= 48 char.)
MC_AddAxisToGroup	N	
MC_RemoveAxisFromGroup	N	
MC_UngroupAllAxes	N	
MC_GroupReadConfiguration	N	
MC_GroupEnable	N	RCE_GroupPower is used instead
MC_GroupDisable	N	RCE_GroupPower is used instead
MC_GroupHome	N	
MC_SetKinTransform	N	
MC_SetCartesianTransform	N	
MC_SetCoordinateTransform	N	
MC_ReadKinTransform	N	
MC_ReadCartesianTransform	N	
MC_ReadCoordinateTransform	N	
MC_GroupSetPosition	N	
MC_GroupReadActualPosition	N	RCE_GroupReadTCPData is used instead
MC_GroupReadActualVelocity	N	RCE_GroupReadTCPData is used instead
MC_GroupReadActualAcceleration	N	RCE_GroupReadTCPData is used instead
MC_GroupStop	N	
MC_GroupHalt	N	
MC_GroupInterrupt	Y	
MC_GroupContinue	Y	
MC_GroupReadStatus	N	Not compliant, GroupHoming, GroupStopping not supported
MC_GroupReadError	N	
MC_GroupReset	Y	
MC_MoveLinearAbsolute	N	
MC_MoveLinearRelative	N	
MC_MoveCircularAbsolute	N	
MC_MoveCircularRelative	N	
MC_MoveDirectAbsolute	N	
MC_MoveDirectRelative	N	
MC_PathSelect	Y	
MC_MovePath	Y	
MC_GroupSetOverride	Y	
Coordinated	Supported Yes / No	Comments (<= 48 char.)
MC_SyncAxisToGroup	N	
MC_SyncGroupToAxis	N	
MC_SetDynCoordTransform	N	
MC_TrackConveyorbelt		Is done by robot control. Use RCTracking.lib to do conveyorbelt operations.
MC_TrackRotaryTable		Is done by robot control.

Table 5: Short overview of the Function Blocks

Appendix A 5.1. MC_AddAxisToGroup – not supported

If Supported	MC_AddAxisToGroup	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
B	Axis		
VAR_INPUT			
B	Execute		
E	IdentInGroup		
VAR_OUTPUT			
B	Done		
E	Busy		
B	Error		
E	ErrorID		

Appendix A 5.2. MC_RemoveAxisFromGroup – not supported

If Supported	MC_RemoveAxisFromGroup	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
E	IdentInGroup		
VAR_OUTPUT			
B	Done		
E	Busy		
B	Error		
E	ErrorID		

Appendix A 5.3. MC_UngroupAllAxes – not supported

If Supported	MC_UngroupAllAxes	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
VAR_OUTPUT			
B	Done		
E	Busy		
B	Error		
E	ErrorID		

Appendix A 5.4. MC_GroupReadConfiguration – not supported

If Supported	MC_GroupReadConfiguration	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
B	IdentInGroup		
E	CoordSystem		
VAR_OUTPUT			
B	Axis		
B	Valid		
E	Busy		
B	Error		
E	ErrorID		

Appendix A 5.5. MC_GroupEnable – see RCE_GroupPower

If Supported	MC_GroupEnable	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
VAR_OUTPUT			
B	Done		
E	Busy		
B	Error		
E	ErrorID		

Appendix A 5.6. MC_GroupDisable – see RCE_GroupPower

If Supported	MC_GroupDisable	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
VAR_OUTPUT			
B	Done		
E	Busy		
B	Error		
E	ErrorID		

RCE_GroupPower

If Supported	RCE_GroupPower	Sup.Y/N	Comments
VAR_IN_OUT			
V	AxesGroup		
VAR_INPUT			
V	Enable		Enables or Disables the Axesgroup
VAR_OUTPUT			
V	Status		
V	Error		
V	ErrorID		

Appendix A 5.7. MC_GroupHome – not supported

If Supported	MC_GroupHome	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	Position		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		

E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.8. MC_SetKinTransform – not supported

If Supported	MC_SetKinTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
E	KinTransform		
E	ExecutionMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.9. MC_SetCartesianTransform – not supported

If Supported	MC_SetCartesianTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	TransX		
B	TransY		
B	TransZ		
B	RotAngle1		
B	RotAngle2		
B	RotAngle3		
E	ExecutionMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.10. MC_SetCoordinateTransform – not supported

If Supported	MC_SetCoordinateTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
E	CoordTransform		
E	ExecutionMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.11. MC_ReadKinTransform – not supported

If Supported	MC_ReadKinTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	KinTransform		
B	Error		
E	ErrorID		

Appendix A 5.12. MC_ReadCartesianTransform – not supported

If Supported	MC_ReadCartesianTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	TransX		
B	TransY		
B	TransZ		
B	RotAngle1		
B	RotAngle2		
B	RotAngle3		
B	Error		
E	ErrorID		

Appendix A 5.13. MC_ReadCoordinateTransform – not supported

If Supported	MC_ReadCoordinateTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	CoordTransform		
B	Error		
E	ErrorID		

Appendix A 5.14. MC_GroupSetPosition – not supported

If Supported	MC_GroupSetPosition	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	Position		
E	Relative		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.15. MC_GroupReadActualPosition – not supported

If Supported	MC_GroupReadActualPosition	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
E	CoordSystem		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	Error		
E	ErrorID		
B	Position		

Appendix A 5.16. MC_GroupReadActualVelocity – not supported

If Supported	MC_GroupReadActualVelocity	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
E	CoordSystem		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	Error		
E	ErrorID		
B	Velocity		
E	PathVelocity		

Appendix A 5.17. MC_GroupReadActualAcceleration – not supported

If Supported	MC_GroupReadActualAcceleration	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
E	CoordSystem		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	Error		
E	ErrorID		
B	Acceleration		
E	Path Acceleration		

Appendix A 5.18. MC_GroupStop – not supported

If Supported	MC_GroupStop	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
E	Deceleration		
E	Jerk		
E	BufferMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.19. MC_GroupHalt – not supported

If Supported	MC_GroupHalt	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
E	Deceleration		
E	Jerk		
E	BufferMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.20. MC_GroupInterrupt

If Supported	MC_GroupInterrupt	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup	Y	
VAR_INPUT			
B	Execute	Y	
E	Deceleration	N	
E	Jerk	N	
V	StopMode	Y	TRCE_StopMode eRCE_StopAllAxes - stop on path eRCE_StopContinueTracking - stop, but stay on tracking reference system eRCE_HardStop - stop joints, not on the path
VAR_OUTPUT			
B	Done	Y	
E	Busy	Y	
E	Comman Aborted	Y	
B	Error	Y	
E	ErrorID	Y	

Appendix A 5.21. MC_GroupContinue

If Supported	MC_GroupContinue	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup	Y	
VAR_INPUT			
B	Execute	Y	
VAR_OUTPUT			
B	Done	Y	
E	Busy	Y	
E	Comman Aborted	Y	
B	Error	Y	
E	ErrorID	Y	

Appendix A 5.22. MC_GroupReadStatus – not compliant

If Supported	MC_GroupReadStatus	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	GroupMoving		
V	GroupInterrupted		
B	GroupHoming		
B	GroupErrorStop		
B	GroupStandby		
B	GroupStopping		
B	GroupDisabled		
V	GroupPower		
E	OperationRelease		
E	SafetyRelease		
E	JogRelease		
E	ProgramRelease		

E	FullSpeedRelease		
E	GroupProgramActive		
V	GroupReposActive		
E	ConstantVelocity		
E	Accelerating		
E	Decelerating		
E	InPosition		
B	Error		
E	ErrorID		

Appendix A 5.23. MC_GroupReadError – not supported

If Supported	MC_GroupReadError	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Enable		
VAR_OUTPUT			
B	Valid		
E	Busy		
B	Error		
E	ErrorID		
B	GroupErrorID		

Appendix A 5.24. MC_GroupReset

If Supported	MC_GroupReset	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup	Y	
VAR_INPUT			
B	Execute	Y	
VAR_OUTPUT			
B	Done	Y	
E	Busy	Y	
B	Error	Y	
E	ErrorID	Y	

Appendix A 5.25. MC_MoveLinearAbsolute – not supported

If Supported	MC_MoveLinearAbsolute	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	Position		
E	Velocity		
E	Acceleration		
E	Deceleration		
E	Jerk		
E	CoordSystem		
E	BufferMode		
E	TransitionMode		
E	TransitionParameter		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.26. MC_MoveLinearRelative – not supported

If Supported	MC_MoveLinearRelative	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	Distance		
E	Velocity		
E	Acceleration		
E	Deceleration		
E	Jerk		
E	CoordSystem		
E	BufferMode		
E	TransitionMode		
E	TransitionParameter		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.27. MC_MoveCircularAbsolute – not supported

If Supported	MC_MoveCircularAbsolute	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	CircMode		
B	AuxPoint		
B	EndPoint		
E	PathChoice		
E	Velocity		
E	Acceleration		
E	Deceleration		
E	Jerk		
E	CoordSystem		
E	BufferMode		
E	TransitionMode		
E	TransitionParameter		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.28. MC_MoveCircularRelative – not supported

If Supported	MC_MoveCircularRelative	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	CircMode		
B	AuxPoint		
B	EndPoint		
E	PathChoice		
E	Velocity		
E	Acceleration		
E	Deceleration		
E	Jerk		
E	CoordSystem		
E	BufferMode		
E	TransitionMode		
E	TransitionParameter		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.29. MC_MoveDirectAbsolute – not supported

If Supported	MC_MoveDirectAbsolute	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	Position		
E	CoordSystem		
E	BufferMode		
E	TransitionMode		
E	TransitionParameter		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.30. MC_MoveDirectRelative – not supported

If Supported	MC_MoveDirectRelative	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
VAR_INPUT			
B	Execute		
B	Distance		
E	CoordSystem		
E	BufferMode		
E	TransitionMode		
E	TransitionParameter		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.31. MC_PathSelect

If Supported	MC_PathSelect	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup	Y	
B	PathData	Y	
B	PathDescription	N	
VAR_INPUT			
B	Execute	Y	
E	CoordSystem	N	
VAR_OUTPUT			
B	Done	Y	
E	Busy	Y	
B	Error	Y	
E	ErrorID	Y	
V	CommandAborted	Y	

Appendix A 5.32. MC_MovePath

If Supported	MC_MovePath	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup	Y	
B	PathData	Y	PathDescription
VAR_INPUT			
B	Execute	Y	
E	CoordSystem	N	
E	BufferMode	N	
E	TransitionMode	N	
E	TransitionParameter	N	
VAR_OUTPUT			
B	Done	Y	
E	Busy	Y	
E	Active	Y	
E	CommandAborted	Y	
B	Error	Y	
E	ErrorID	Y	

Appendix A 5.33. MC_GroupSetOverride

If Supported	MC_GroupSetOverride	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup	Y	
VAR_INPUT			
B	Enable	Y	
B	VelFactor	N	
E	AccFactor	N	
E	JerkFactor	N	
V	Factor	Y	Calculation (jerk, acc) is done within robot control
VAR_OUTPUT			
B	Done	Y	
E	Busy	Y	
B	Error	Y	
E	ErrorID	Y	

Appendix A 5.34. MC_SyncAxisToGroup – not supported

If Supported	MC_SyncAxisToGroup	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
B	SlaveAxis		
VAR_INPUT			
B	Execute		
E	RatioNumerator		
E	RatioDenominator		
E	Acceleration		
E	Deceleration		
E	Jerk		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
B	InSync		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.35 MC_SyncGroupToAxis – not supported

If Supported	MC_SyncGroupToAxis	Sup.Y/N	Comments
VAR_IN_OUT			
B	Master		
B	AxesGroup		
B	PathData		
VAR_INPUT			
B	Execute		
E	Mode		
E	TuCNumerator		
E	TuCDenominator		
E	Acceleration		
E	Deceleration		
E	Jerk		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
B	InSync		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.36. MC_SetDynCoordTransform – not supported

If Supported	MC_SetDynCoordTransform	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
B	MasterAxesGroup		
B	CoordTransform		
VAR_INPUT			
B	Execute		
E	Mode		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.37. MC_TrackConveyorBelt – not supported

If Supported	MC_TrackConveyorBelt	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
E	ConveyorBelt		
VAR_INPUT			
B	Execute		
B	ConveyorBeltOrigin		
E	InitialObjectPosition		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
B	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		

Appendix A 5.38. MC_TrackRotaryTable – not supported

If Supported	MC_TrackRotaryTable	Sup.Y/N	Comments
VAR_IN_OUT			
B	AxesGroup		
E	RotaryTable		
VAR_INPUT			
B	Execute		
B	RotaryTableOrigin		
E	InitialObjectPosition		
E	CoordSystem		
E	BufferMode		
VAR_OUTPUT			
E	Done		
E	Busy		
E	Active		
E	CommandAborted		
B	Error		
E	ErrorID		