

BE_KOLLMORGEN_s300s700_CAN

General information

Product Id: 2112000002	Supplier BEST Engineering Scandinavia AB Sabelgatan 4 SE 25467, HELSINGBORG SWEDEN Support: Phone: +46-42-456 45 00 Email: info@best-engineering.net
Version: V1.0.0.0	
Short description Single axis motion function blocks for Kollmorgen s300 & s700	

System requirements and restrictions

Programming system	CODESYS Development System Version 3.5.0.0 or higher
Runtime System	CODESYS Control Version 3.5.0.0
Supported Operating Systems	All
Additional Requirements	CANopen interface
Restrictions	

Price:

150€/License (Single License)

Accessory:

Dongle without memory:	45,- Euro plus VAT
Dongle, small without memory:	45,- Euro plus VAT

Product description

Single Axis motion function block's for Kollmorgen s300/s700 drive.

Functional description

PLCopen part 1.

Administrative:

- MC_Power
- MC_ReadStatus
- MC_ReadAxisError
- MC_ReadParameter
- MC_WriteParameter
- MC_ReadActualPosition
- MC_Reset

Motion:

- MC_MoveAbsolute
- MC_MoveRelative
- MC_MoveVelocity
- MC_Home
- MC_Stop

PLCopen part 2.

Administrative:

- MC_TouchProbe
- MC_AbortTrigger
- MC_SetPosition
- MC_ReadActualVelocity
- MC_ReadActualTorque

Motion:

- MC_TorqueControl

Manufacturer specific

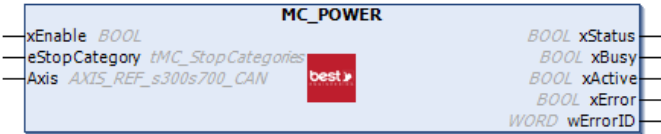
- MC_Jogg
- MC_ReadError_SafetyCard
- MC_ReadStatus_SafetyCard
- MC_ReadStatus_SafetyCard_IO
- RPM_TO_VEL
- VEL_TO_RPM

History of versions:

V1.0.0.0: First Release

Screenshots:

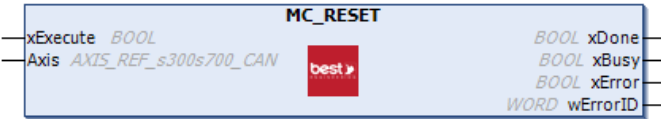
[MC Power](#)



MC_Power
Instance: %s

Enable	<input type="checkbox"/>	Status	<input type="checkbox"/>
		Active	<input type="checkbox"/>
		Busy	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d

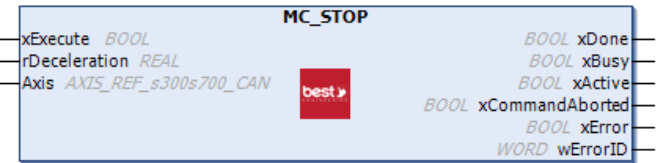
[MC Reset](#)



MC_Reset
Instance: %s

Execute	<input type="checkbox"/>	Done	<input type="checkbox"/>
		Busy	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d

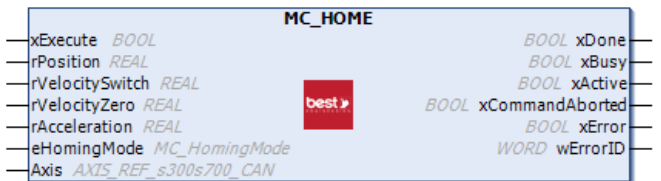
[MC Stop](#)



MC_Stop
Instance: %s

Execute	<input type="checkbox"/>	Done	<input type="checkbox"/>
Deceleration	%f	Busy	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d

[MC Home](#)



MC_Home
Instance: %s

Execute	<input type="checkbox"/>	Done	<input type="checkbox"/>
HomePosition	%f	Busy	<input type="checkbox"/>
VelocitySwitch	%f	Active	<input type="checkbox"/>
VelocityZero	%f	CommandAborted	<input type="checkbox"/>
Acceleration	%f	Error	<input type="checkbox"/>
HomingMode		ErrorID	%d

[MC_MoveAbsolute](#)



MC_MoveAbsolute
Instance: %s

Execute	<input type="checkbox"/>	Done	<input type="checkbox"/>
Position	%f	Busy	<input type="checkbox"/>
Velocity	%f	CommandAborted	<input type="checkbox"/>
Acceleration	%f	Error	<input type="checkbox"/>
Deceleration	%f	ErrorID	%d
BufferMode	<input type="text"/>		
Direction	<input type="text"/>		

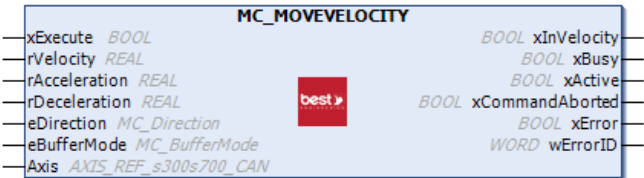
[MC_MoveRelative](#)



MC_MoveRelative
Instance: %s

Execute	<input type="checkbox"/>	Done	<input type="checkbox"/>
Position	%f	Busy	<input type="checkbox"/>
Velocity	%f	CommandAborted	<input type="checkbox"/>
Acceleration	%f	Error	<input type="checkbox"/>
Deceleration	%f	ErrorID	%d
BufferMode	<input type="text"/>		
Direction	<input type="text"/>		

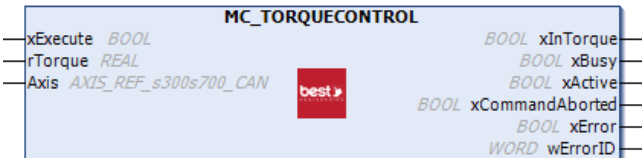
[MC_MoveVelocity](#)



MC_MoveVelocity
Instance: %s

Execute	<input type="checkbox"/>	InVelocity	<input type="checkbox"/>
Velocity	%f	Busy	<input type="checkbox"/>
Acceleration	%f	CommandAborted	<input type="checkbox"/>
Deceleration	%f	Error	<input type="checkbox"/>
BufferMode	<input type="text"/>	ErrorID	%d
Direction	<input type="text"/>		

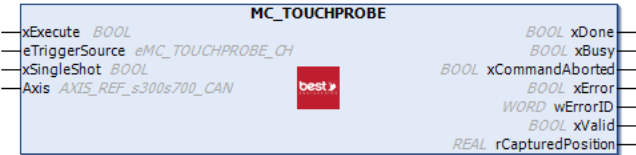
[MC_TorqueControl](#)



MC_TorqueControl
Instance: %s

Execute	<input type="checkbox"/>	InTorque	<input type="checkbox"/>
Torque	%f	Active	<input type="checkbox"/>
		Busy	<input type="checkbox"/>
		CommandAborted	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d

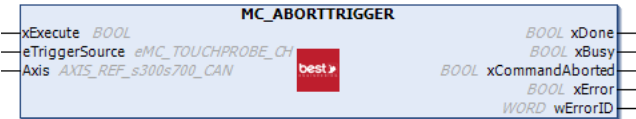
[MC_TouchProbe](#)



MC_TouchProbe
Instance: %s

Execute	<input type="radio"/>	Done	<input type="radio"/>
SingleShot	<input type="radio"/>	Busy	<input type="radio"/>
TriggerSource	<input type="text"/>	Error	<input type="radio"/>
		ErrorID	<input type="text"/> %d
		RecordedPosition	<input type="text"/> %f
		CommandAborted	<input type="radio"/>

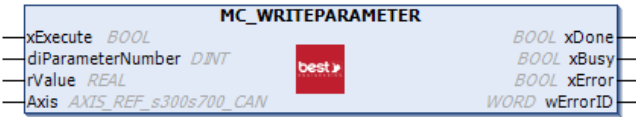
[MC_AbortTrigger](#)



MC_AbortTrigger
Instance: %s

Execute	<input type="radio"/>	Done	<input type="radio"/>
TriggerSource	<input type="text"/>	Busy	<input type="radio"/>
		Error	<input type="radio"/>
		ErrorID	<input type="text"/> %d

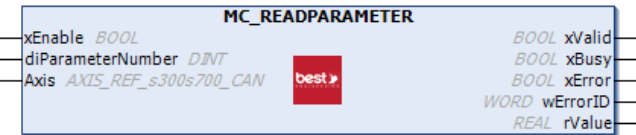
[MC_WriteParameter](#)



MC_WriteParameter
Instance: %s

Execute	<input type="radio"/>	Done	<input type="radio"/>
Parameter	<input type="text"/> 16#%x	Busy	<input type="radio"/>
Value	<input type="text"/> %f	Error	<input type="radio"/>
		ErrorID	<input type="text"/> %d

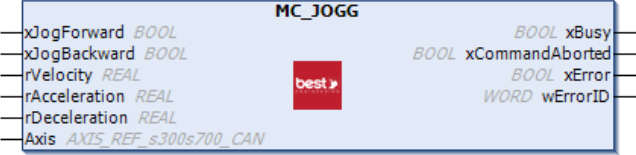
[MC_ReadParameter](#)



MC_ReadParameter
Instance: %s

Enable	<input type="radio"/>	Valid	<input type="radio"/>
Parameter	<input type="text"/> 16#%x	Busy	<input type="radio"/>
		Error	<input type="radio"/>
		ErrorID	<input type="text"/> %d
		Value	<input type="text"/> %f

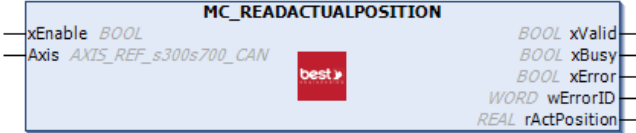
[MC_Jogg](#)



MC_Jogg
Instance: %s

JogForward	<input type="radio"/>	Busy	<input type="radio"/>
JogBackward	<input type="radio"/>	CommandAborted	<input type="radio"/>
Velocity	%f	Error	<input type="radio"/>
Acceleration	%f	ErrorID	%d
Deceleration	%f		

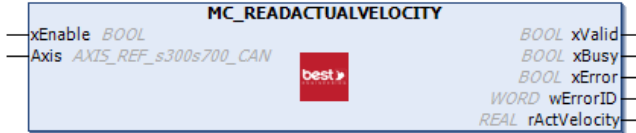
[MC_ReadActualPosition](#)



MC_ReadActualPosition
Instance: %s

Enable	<input type="radio"/>	Valid	<input type="radio"/>
		Busy	<input type="radio"/>
		Error	<input type="radio"/>
		ErrorID	%d
		Position	%f

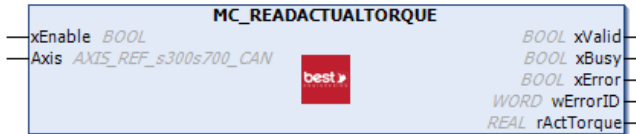
[MC_ReadActualVelocity](#)



MC_ReadActualVelocity
Instance: %s

Enable	<input type="radio"/>	Valid	<input type="radio"/>
		Busy	<input type="radio"/>
		Error	<input type="radio"/>
		ErrorID	%d
		Velocity	%f

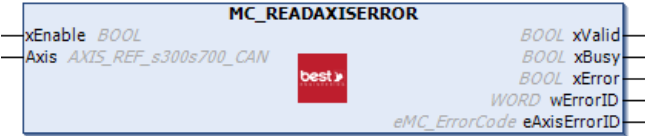
[MC_ReadActualTorque](#)



MC_ReadActualTorque
Instance: %s

Enable	<input type="radio"/>	Valid	<input type="radio"/>
		Busy	<input type="radio"/>
		Error	<input type="radio"/>
		ErrorID	%d
		Position	%f

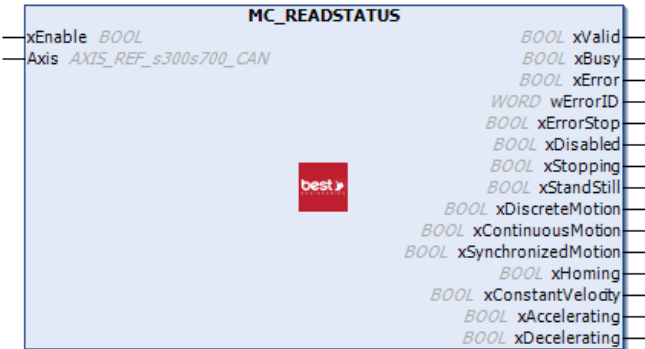
[MC_ReadAxisError](#)



MC_ReadAxisError
Instance: %s

Enable	<input type="radio"/>	Valid	<input type="checkbox"/>
		Busy	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d
		AxisErrorID	%s

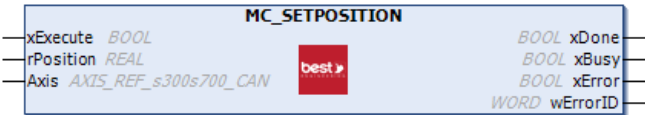
[MC_ReadStatus](#)



MC_ReadStatus
Instance: %s

Enable	<input type="radio"/>	Valid	<input type="checkbox"/>
		Busy	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d
		Disabled	<input type="checkbox"/>
		Errorstop	<input type="checkbox"/>
		Stopping	<input type="checkbox"/>
		StandStill	<input type="checkbox"/>
		DiscreteMotion	<input type="checkbox"/>
		ContinuousMotion	<input type="checkbox"/>
		SynchronizedMotion	<input type="checkbox"/>
		Homing	<input type="checkbox"/>
		ConstantVelocity	<input type="checkbox"/>
		Accelerating	<input type="checkbox"/>
		Decelerating	<input type="checkbox"/>

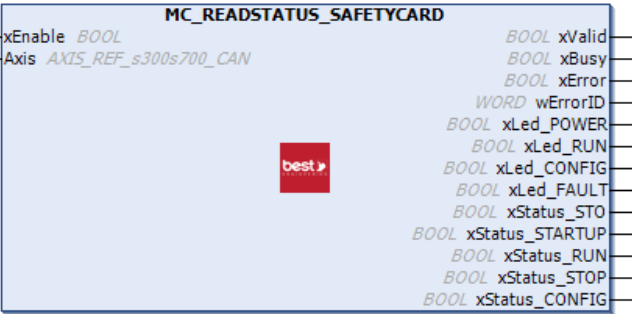
[MC_SetPosition](#)



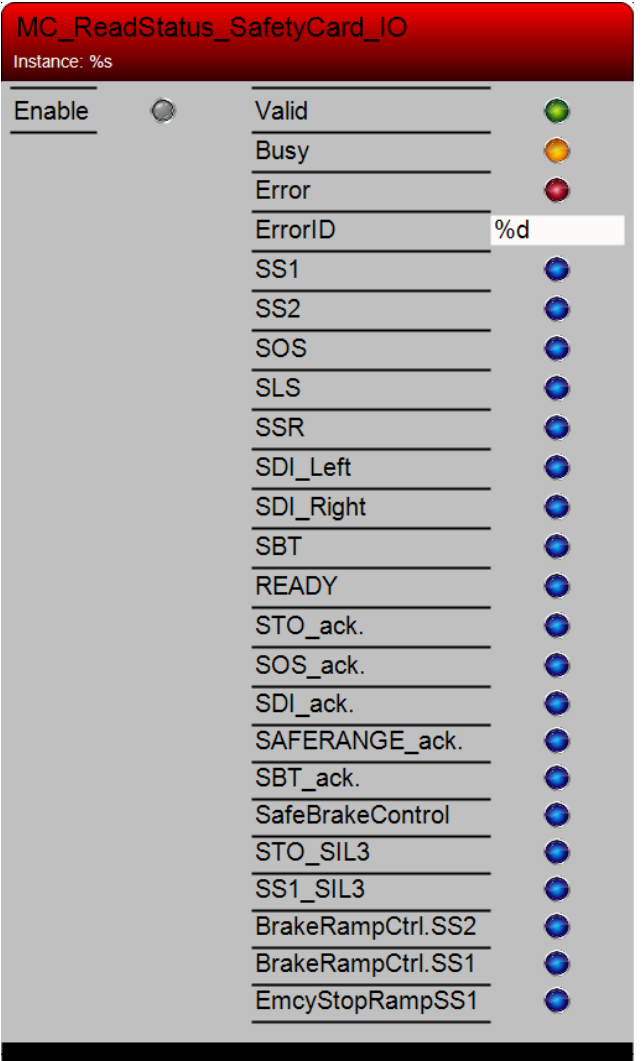
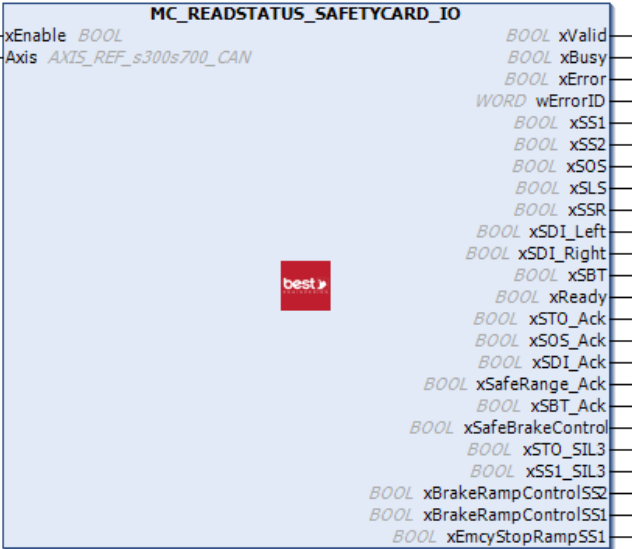
MC_SetPosition
Instance: %s

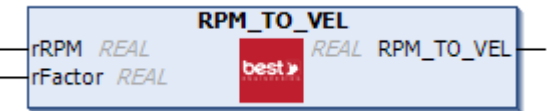
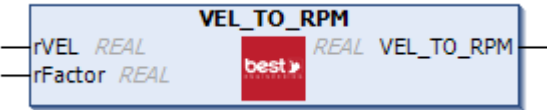
Execute	<input type="radio"/>	Done	<input type="checkbox"/>
Position	%f	Busy	<input type="checkbox"/>
		Error	<input type="checkbox"/>
		ErrorID	%d

[MC_ReadStatus_SafetyCard](#)



[MC_ReadStatus_SafetyCard_IO](#)





The screenshot displays the CODESYS environment for a project named 'Kollmorgen_s300s700_CAN_V1.0'. The main workspace shows a ladder logic program with several function blocks for motor control, including:

- MC_RESET_1**: Reset function block.
- MC_POWER_1**: Power enable function block.
- MC_HOME_1**: Home position function block.
- MC_MOVEABSOLUTE_1**: Absolute move function block.
- MC_MOVERELATIVE_1**: Relative move function block.
- MC_TORQUECONTROL_1**: Torque control function block.
- MC_STOP_1**: Stop function block.
- MC_READACTUALPOSITION_1**: Read actual position function block.
- MC_READACTUALVELOCITY_1**: Read actual velocity function block.
- MC_READACTUALTORQUE_1**: Read actual torque function block.

Additional blocks include **RPM_TO_VEL** and **VEL_TO_RPM** conversion blocks. The interface includes a menu bar, a toolbar, a project tree on the left, and a variable declaration table at the top of the workspace:

Expression	Type	Value	Prepared value	Address
rTestRPM	REAL	0		
rTestVEL	REAL	0		
rTestRPM	REAL	10000		
rTestRPM	REAL	17894.4		

The status bar at the bottom indicates 'Last build: 0 0 43', 'Precompile: ✓', and 'RUN' mode.