

Festo

SM3_Drive_ETC_Festo_CMMT_AS

Festo CMMT-AS EtherCAT SoftMotion driver

Supported drive models	Festo CMMT-AS motor controllers
Components	SM3_Drive_ETC_Festo_CMMT_AS.pdf SM3_Drive_ETC_Festo_CMMT_AS_....library SM3_Drive_EtherCAT_Festo_CMMT_AS_....devdesc.xml Festo-CMMT-AS-MP_SM_....devdesc.xml Festo-CMMT-AS-CiA402-....xml

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1 – Introduction

1.1 – Installation of the SoftMotion-Package

To use the SoftMotion package, CODESYS version 3.5.16 or newer is required. The package can be found on the Festo website's Support Portal. Double-clicking the package file will launch the Package Manager. After a successful installation, a restart of CODESYS is necessary to initialize the data. Afterwards, the motor controller can be used immediately within the user program.

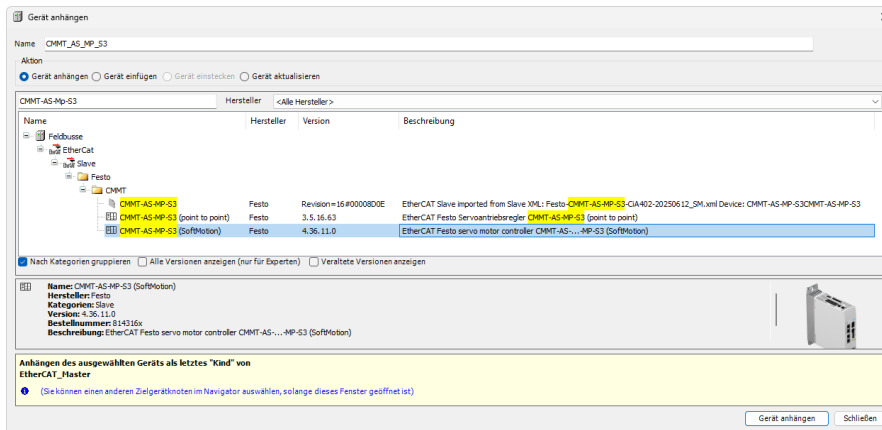


Figure 1: Codesys – Attach device

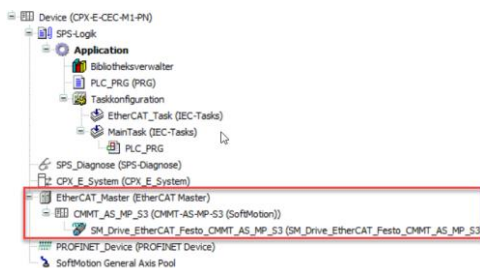


Figure 2: Codesys – Display of the integrated device

2 – Features

Features			Comment
Enabling/Disabling	bRegulatorOn	✓	Controls the power stage of the drive
	bDriveStart	✓	Executes a QuickStop if not set
Acknowledging Errors		✓	Drive errors can be acknowledged
Mechanical Brakes	SMC_BRAKE_AUTO	✓	Drive controls brake by default. Controlling the brake with SoftMotion function blocks is only possible, when the regulator is turned off. In this case SMC_BRAKE_AUTO will close the brake.
	SMC_BRAKE_OPEN	✓	Controlling the brake with SoftMotion function blocks is only possible, when the regulator is turned off.
	SMC_BRAKE_CLOSE	✓	Controlling the brake with SoftMotion function blocks is only possible, when the regulator is turned off.
Hardware Limit Switches		⊗	Not visible in SoftMotion
Controller Modes	Position	✓	Supported
	Velocity	✓	Supported
	Torque	✓	Supported
Homing (drive controlled)		✓	Supported Must be configured in the drive Drive feature 'Move to axis zero point after homing' must be disabled
Capturing/Latching		✓	Capturing via Touch-Probe supported without window function. See 2.7 Touch-Probe inputs must be configured in drive

3 – Device Properties

This device extends the base driver `AXIS_REF_ETC_DS402_CS`. It inherits all inputs, outputs, extensions and mappings, initialization objects from this base driver. This document only describes the extended or overloaded elements.

3.1 – Inputs

Parameter ID	Drive objects	Name	Description

3.2 – Outputs

Parameter ID	Drive objects	Name	Description

3.3 – Parameters

Parameter ID	Name	Type	Description
1031	dwErrorID	DWORD	Mapped to 16#21450C (default: 16#603F00)
1, 1100	fSetPosition	LREAL	Mapped to 16#607A00 (default: 16#606200)
1152	fMaxCurrent	LREAL	Mapped to 16#607300 (default: not mapped)
1162	fMaxTorque	LREAL	Mapped to 16#607200 (default: not mapped)
1243, 1244	diFollowingError, fFollowingError	DINT, LREAL	Not mapped

3.4 – AXIS_REF Extensions

Variable Name	Type	Description

3.5 – Specific error numbers (uiDriveInterfaceError)

Error Number	Error Description

3.6 – Initializations

Object ID	Value	Comment

3.7 – Capturing/Latching

TriggerInput. iTriggerNumber	Trigger description
0	Trigger1 / Touch-Probe 1, positive edge
1	Trigger1 / Touch-Probe 1, negative edge
2	Trigger2 / Touch-Probe 2, positive edge
3	Trigger2 / Touch-Probe 2, negative edge

4 – Change History

Version	Description	Autor	Date
1.0	Creation	Festo	23.01.2018
1.1	Additional controller modes (CSV, CST)	Festo	08.06.2018
1.2	Description corrected	Festo	27.11.2018
1.3	Description corrected	Festo	16.01.2019
1.4	Parameter table has changed (dwErrorID is mapped to default object)	Festo	28.05.2019
1.5	Added brake control features	Festo	13.01.2020
1.6	Added capturing/latching feature	Festo	28.04.2020
1.7	Parameter table has changed (dwErrorID)	Festo	09.11.2020
1.8	Added note to homing feature	Festo	22.12.2021
1.9	Added Codesys Introduction	Festo	19.11.2025