

### Special SoftMotion settings/Homing issues for CPX-CEC-M1-V3

The document describes special CODESYS V3 settings for CPX-CEC-M1-V3 (SoftMotion) controllers and the use of SoftMotion homing function "MC\_Home" in combination with Festo drives.

CPX-CEC-M1-V3

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# 1 Introduction

The document describes special CODESYS V3 settings for CPX-CEC-M1-V3 (SoftMotion) controllers and the use of SoftMotion homing function “MC\_Home” in combination with Festo drives.

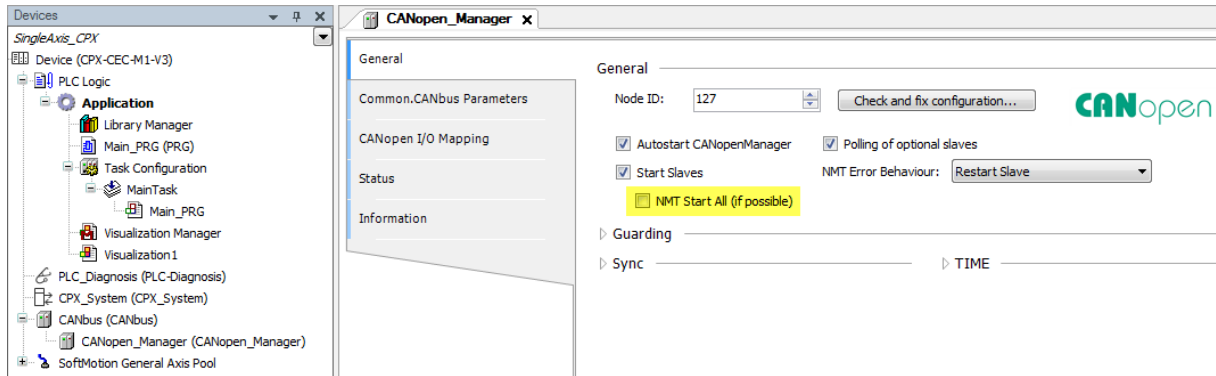
## 1.1 Components/Software used

Type/Name	Version Software/Firmware	Date of manufacture
CPX-CEC-M1-V3	CODESYS V3	--

Table 1.1: 1 Components/Software used

## 2 CAN-Bus settings for SoftMotion applications

Please do not use the CAN-Bus start option "NMT Start All" with SoftMotion. Using this function in case of a CAN-Bus communication error a power "Off" and power "On" of the system is required.



### 3 Motion Task settings for SoftMotion applications

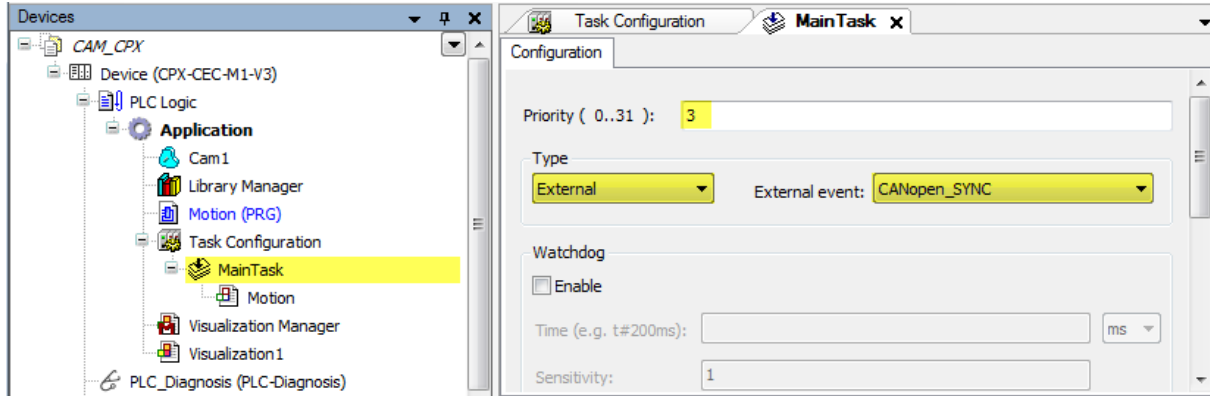
The Motion task setting has to be done according to version 2.3.

Priority: 1..3

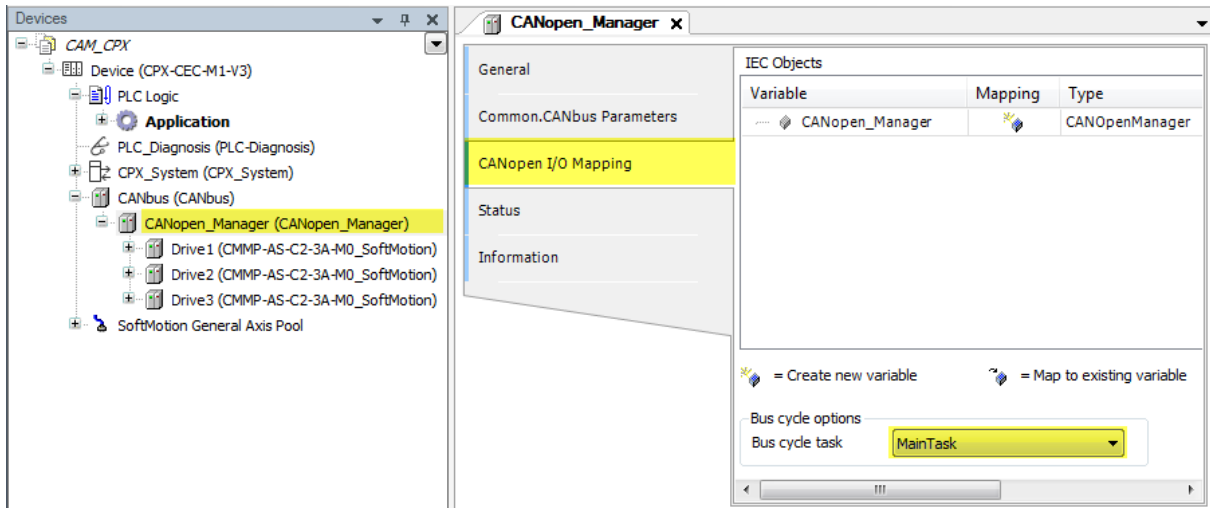
Type: External

External event: CANopen\_SYNC

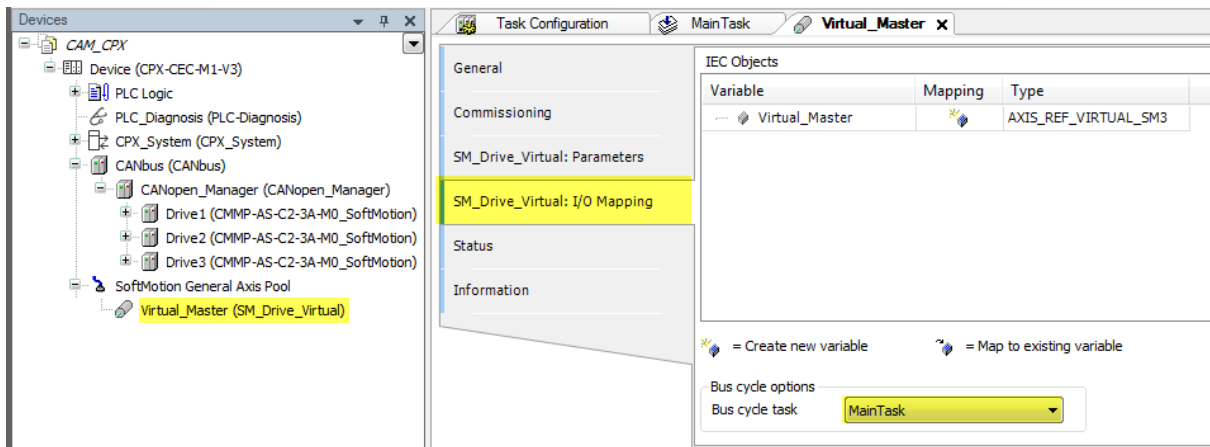
Remark: The CANopen\_SYNC Trigger signal is generated by the operating system Linux in order to be precise and with less jitter. For Codesys this signal is an external event.



In addition to the standard CAN-Bus settings, the update of the CAN-Bus task has to be done in the same task in which the Motion program is called (e.g. MainTask).



If virtual axes are used together with CANopen\_SYNC task the “Bus Cycle Task” has to be set for each virtual axis accordingly.

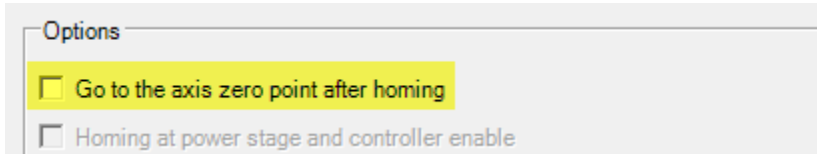


## 4 Special behaviour of SoftMotion functions

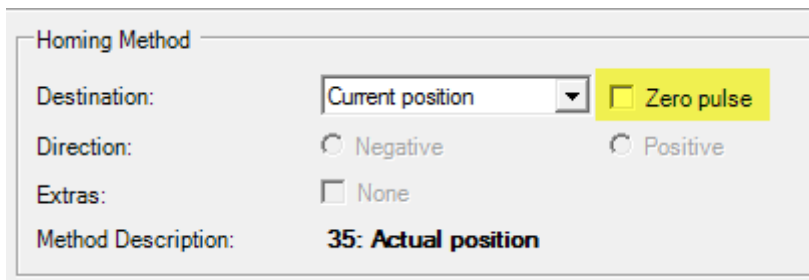
### 4.1 MC\_Home

Using the SoftMotion function MC\_Home the following FCT settings should not be used:

1. Go to Axis Zero Position:



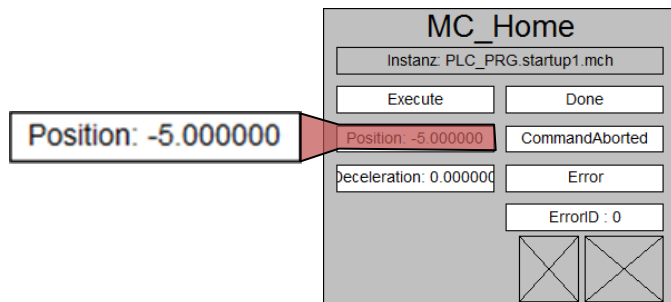
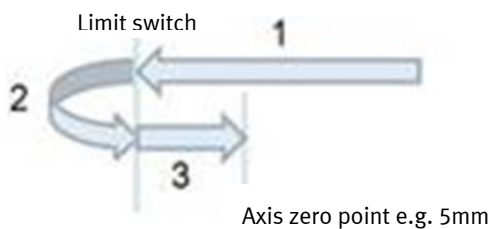
2. Zero Pulse



After Homing you have the possibility to use the function block MC\_MoveAbsolute and MC\_SetPosition to set the actual position to zero.

Moving direction for linear Axes:

Example: Setting a positive axis zero point:



To set the axis zero point according sequence 3 a **negative** position value (-5.0) is required.

That means to move the sequence 3 in the opposite direction the position value has to be **positive** (+5.0).



## **5 Documentation**

For further informations to Codesys and SoftMotion the Online help within CODESYS is available.