Multi Axis Drive
Controller *for* FESTO

April 5, 2024

Festo CMMT-AS/ST Configuration Manual

www.nutai.com

Overview

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Multi Axis Drive
Controller for FESTO

Introduction

This manual explains the configuration of Festo CMMT-AS/ST motor controller so that it can be operated from a UR robot using the NUTAI URCap Multi Axis Drive (MAD) Controller.

Note that this manual explains the minimum required configuration, so it is left pending for the user to complete other configuration options specific for their end application.

Multi Axis Drive
Controller for FESTO

Overview

Multi Axis Drive
Controller for FESTO

To configure the Festo CMMT-AS/ST motor controller, it will be necessary to download and install the Festo Automation Suite (FAS) software on your computer, available for Windows.

To do this, go to the Festo[1] website and download the latest version available, making sure that it is compatible with your CMMT-AS/ST controller, as indicated in the following slides.

[1] Festo oficial website:
https://www.festo.com

Necessary software

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Connection with controller

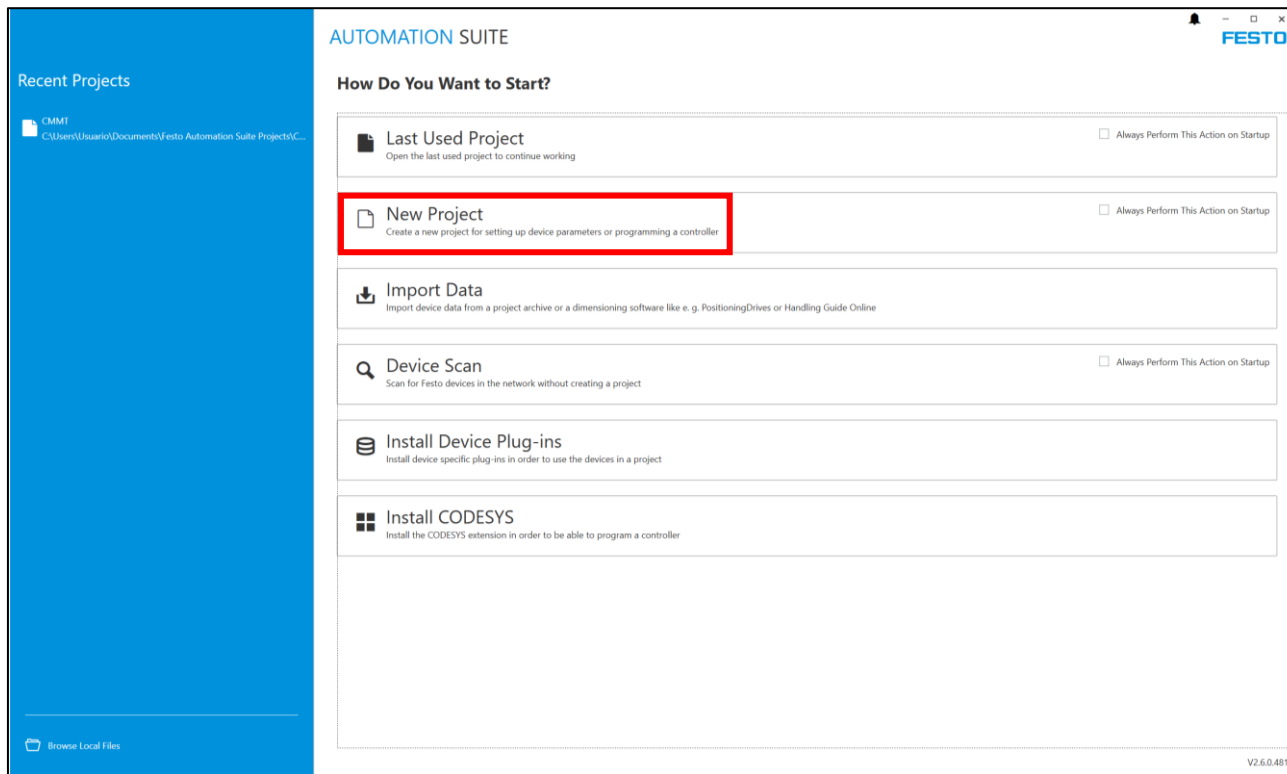Connect your Festo CMMT-AS/ST controller to your computer —directly or through a switch—via Ethernet.
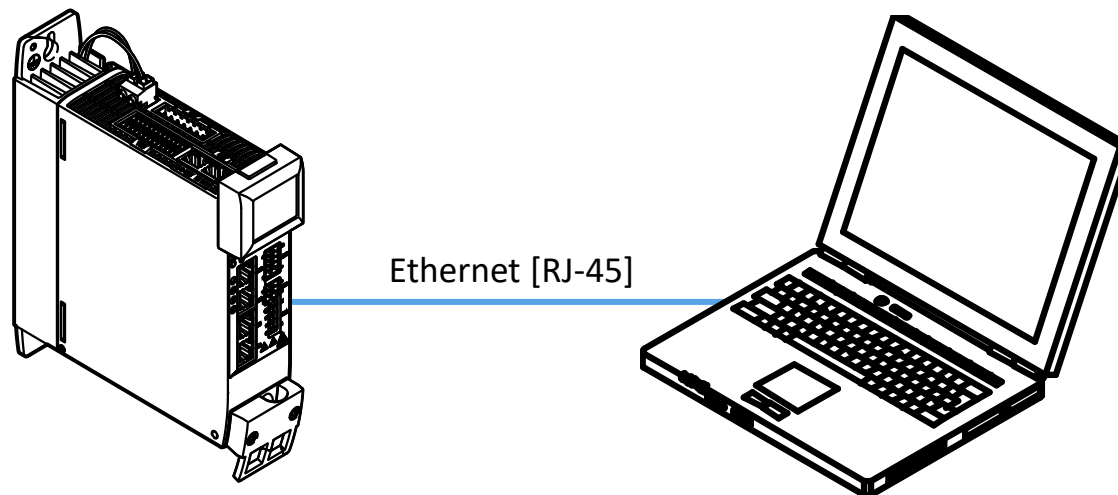
Ethernet [RJ-45]

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Project creation

Start the *Festo Automation Suite* application and click *New Project*.

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Component selection

Once the project is created, first indicate the model of your CMMT-AS/ST motor controller and click on the result found.

Multi Axis Drive
Controller for FESTO
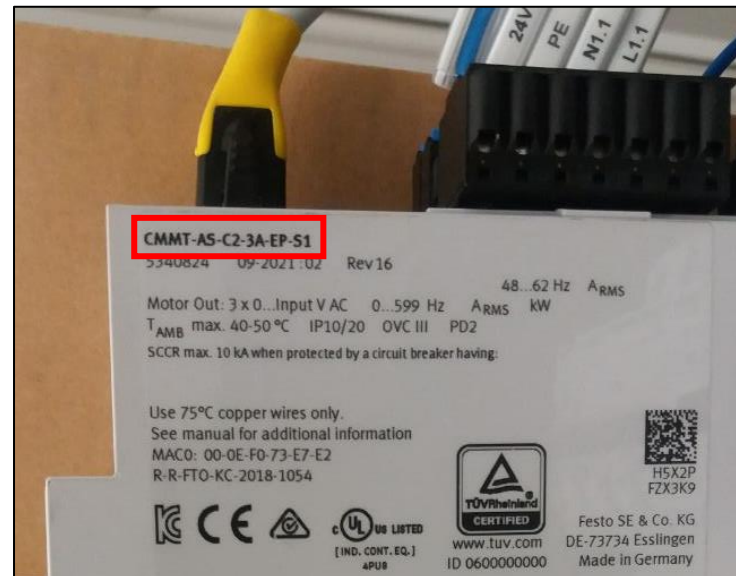
Component selection

Then, click on the image of your controller and wait for the controller plug-in to load. Once loaded, select the type of configuration to perform. In this case, the *Start First Setup* option will be selected.
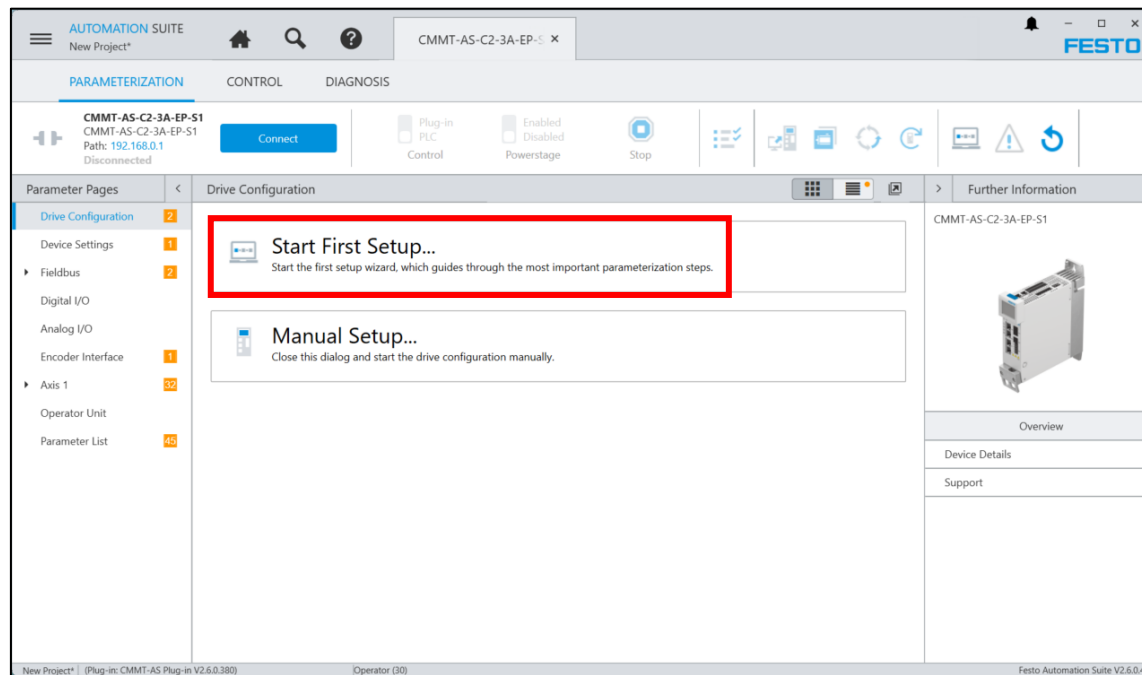
Component selection

Next, the rest of the system components will be configured: motor, axis, gear, etc.
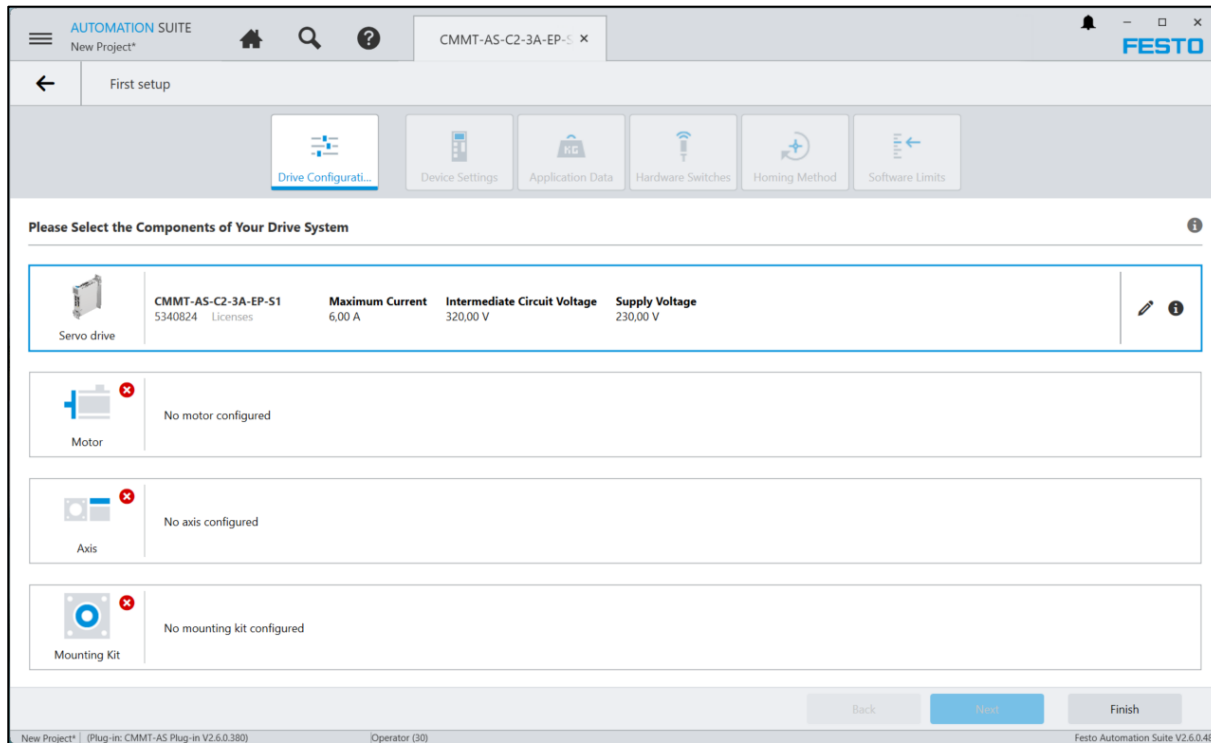
Component selection

We will start by indicating the motor to use.

Multi Axis Drive Controller for FESTO
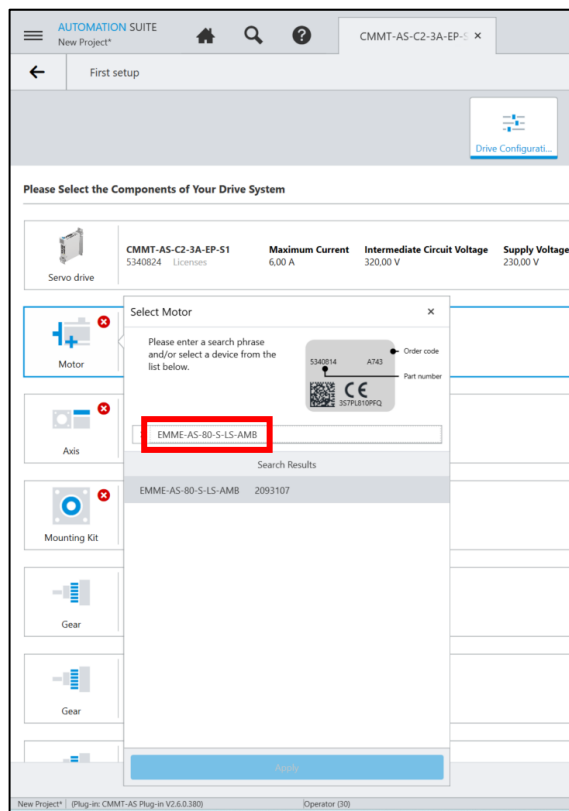
Component selection

We will continue indicating the axis to use.
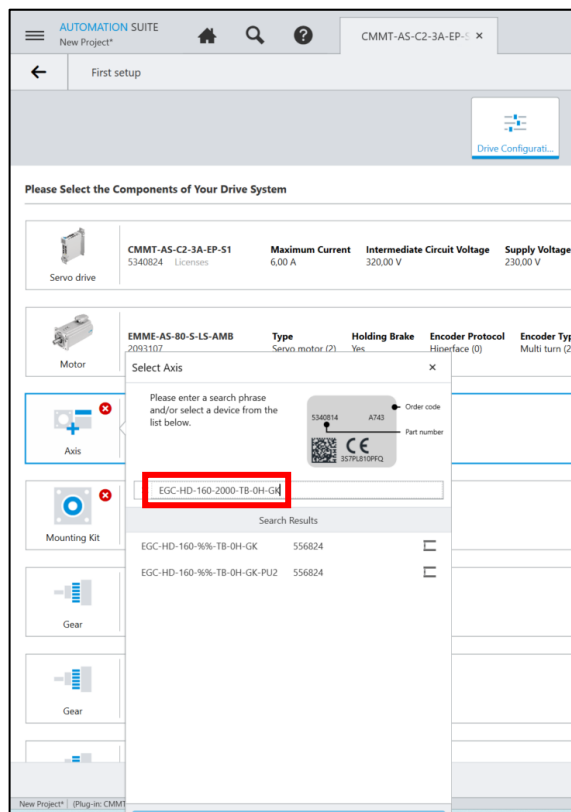
Component selection

Once the axis has been indicated, we will choose the units we want to use.
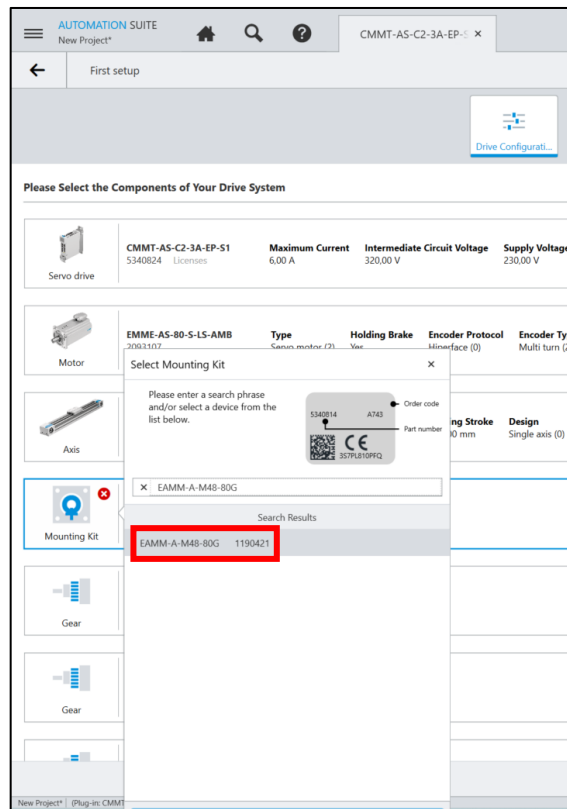
Component selection

Subsequently, we indicate the mounting kit to be used.

Component selection

Finally, we indicate the gear to be used.
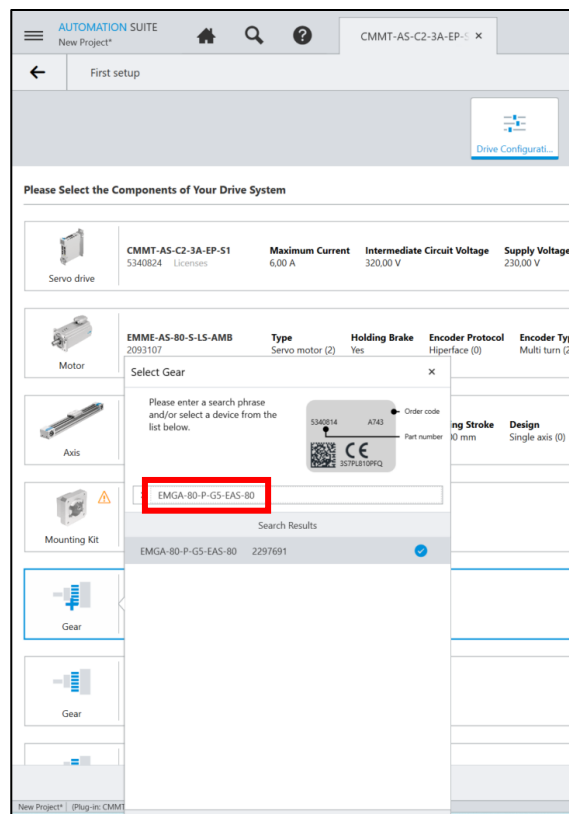
Component selection

Finally, verify that the configuration is correct and click *Next*.

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Configuration

First of all, the device configuration is done. Select the *Fieldbus (2)* activation via, telegram *111* and configure the desired IP address.

Configuration

Subsequently, the approximate total load is configured in the application data.
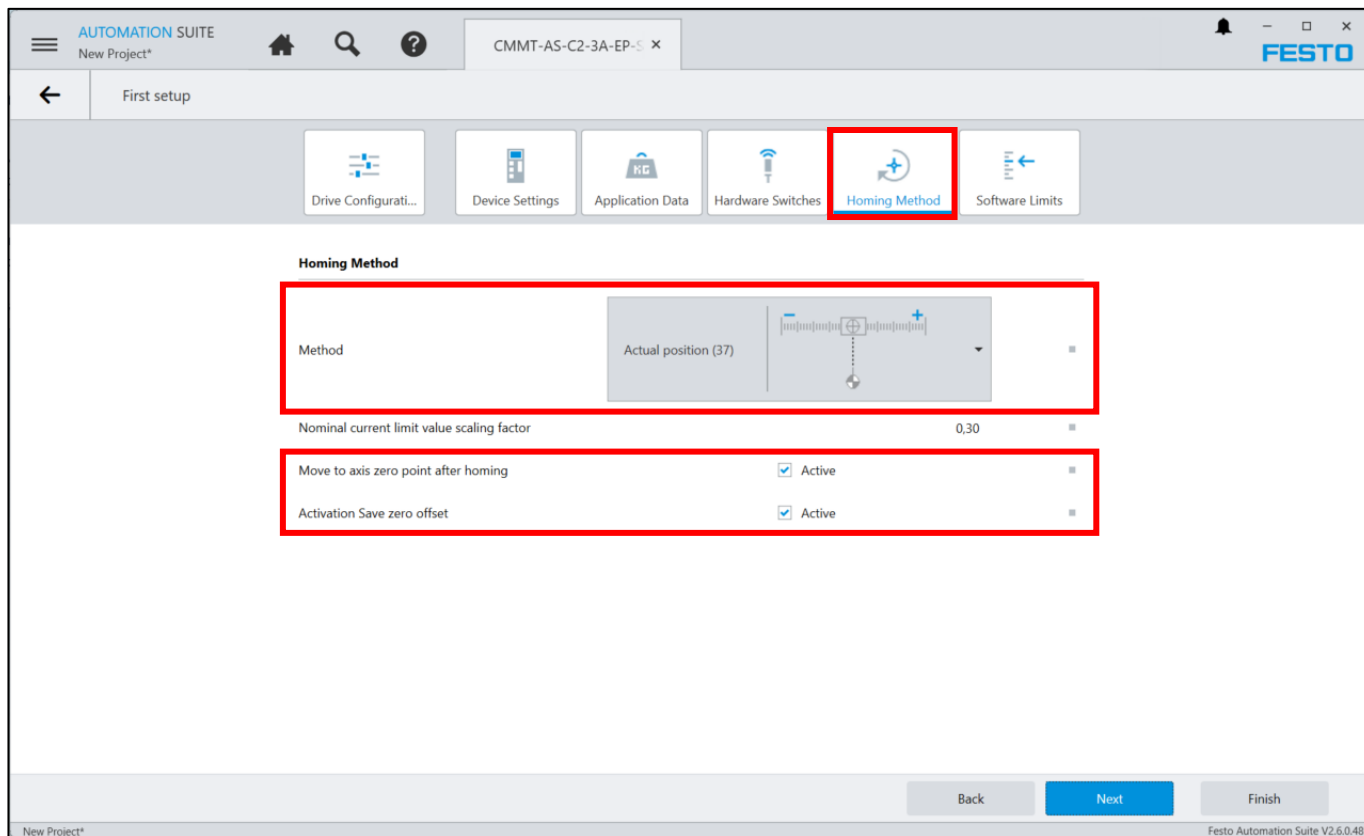
Configuration

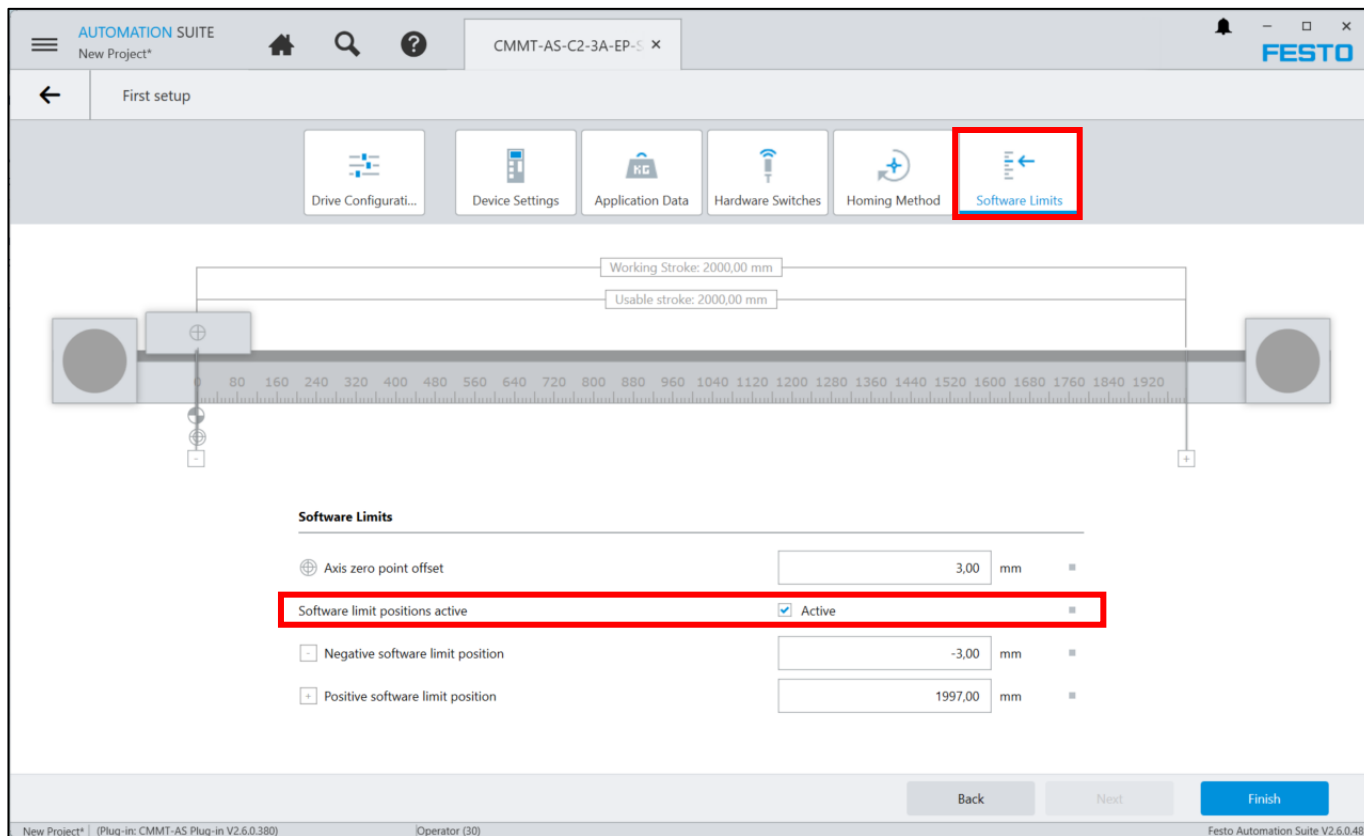Next, the hardware limits are configured, if any.
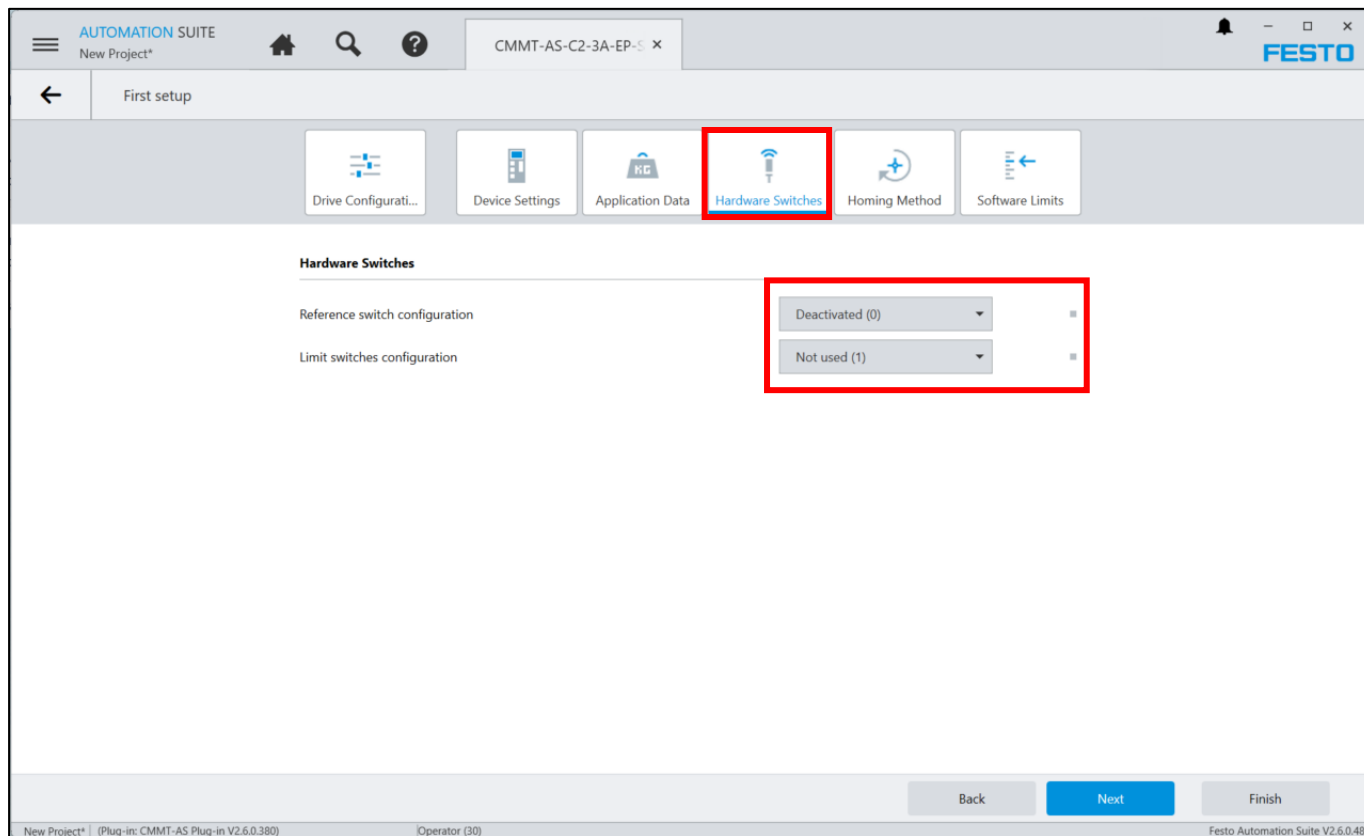
Configuration

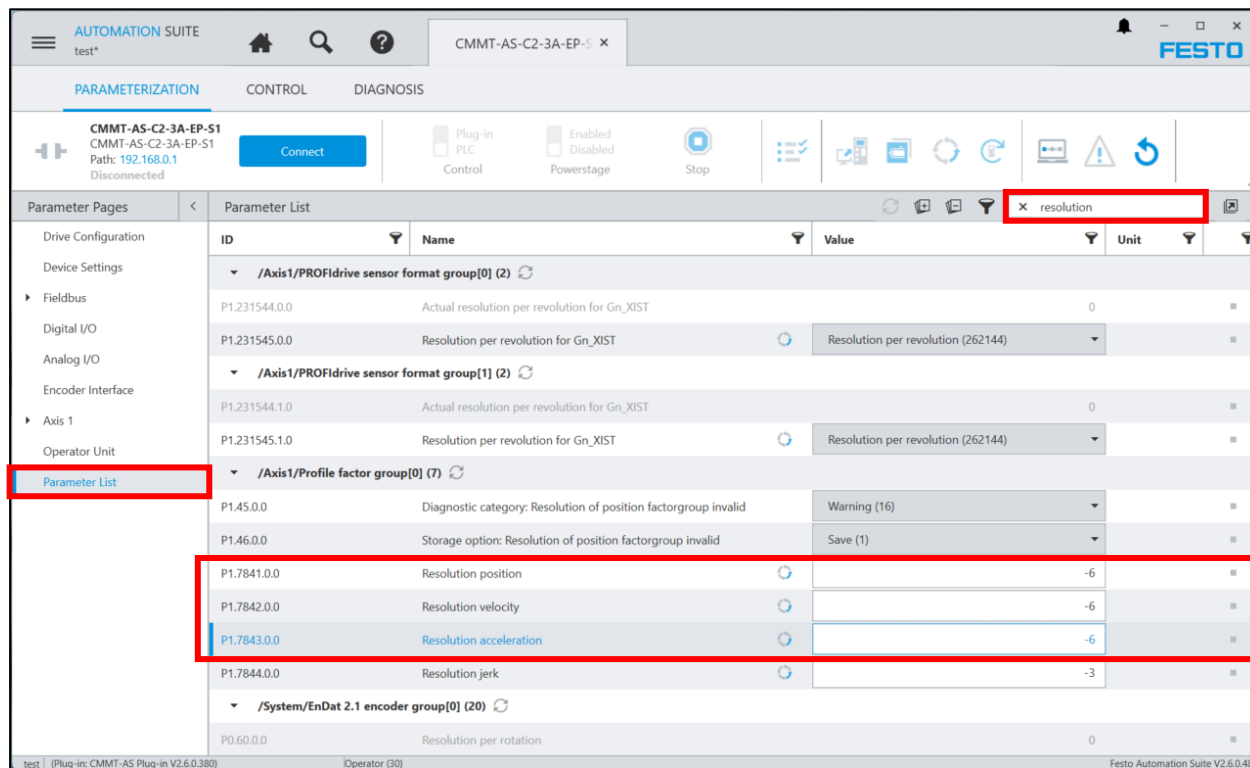Next, the desired homing method is configured.

Configuration

Finally, the software limits are enabled, which can later be configured from the URCap.

Configuration

Next, we access the *Parameter List* tab and configure the resolution of the position, velocity and acceleration with a value of -6.
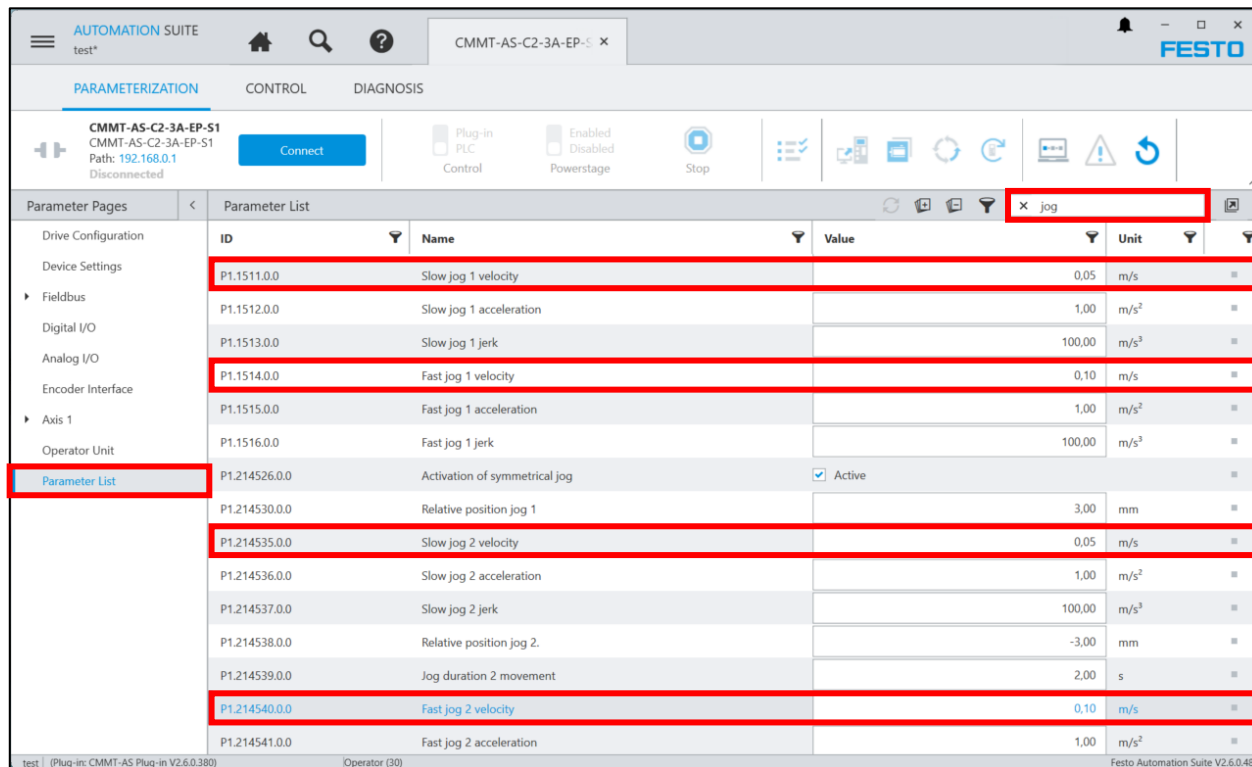
Configuration

Later, from the same tab, we configure the desired speeds for manual movement (Jog) in the slow and fast phase.

Configuration
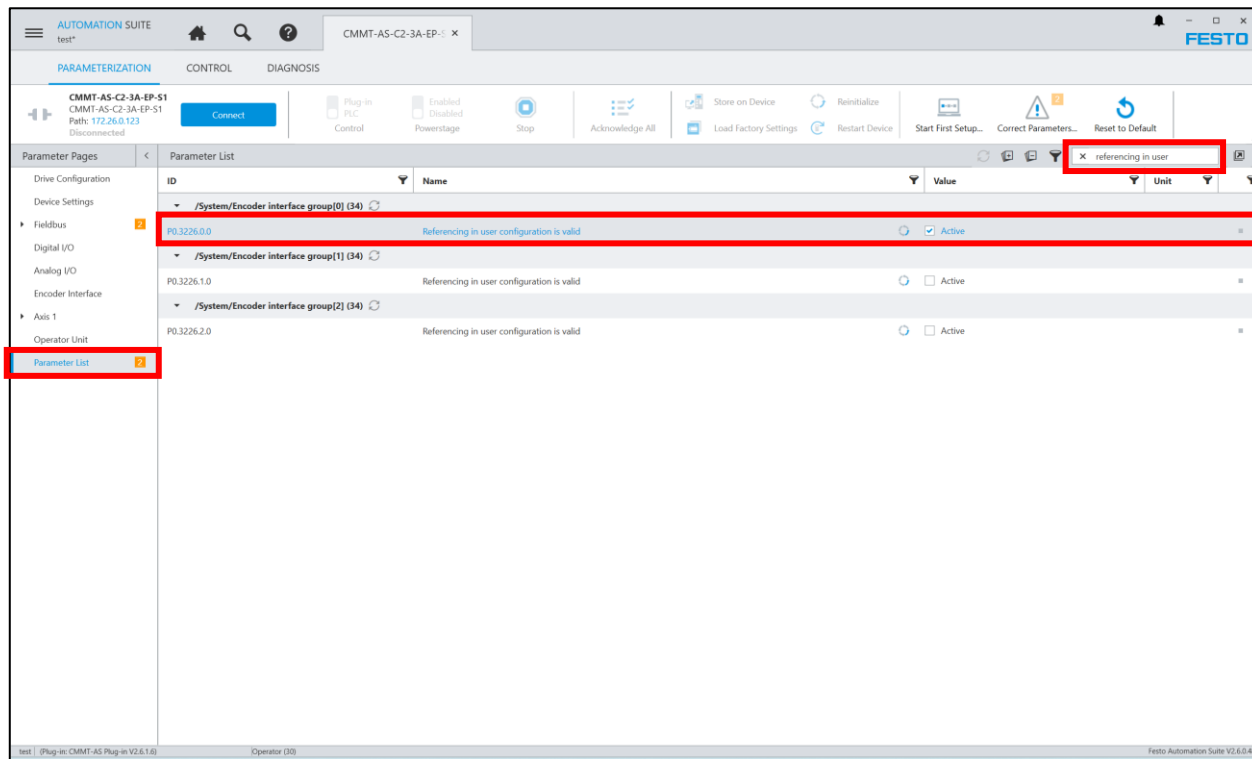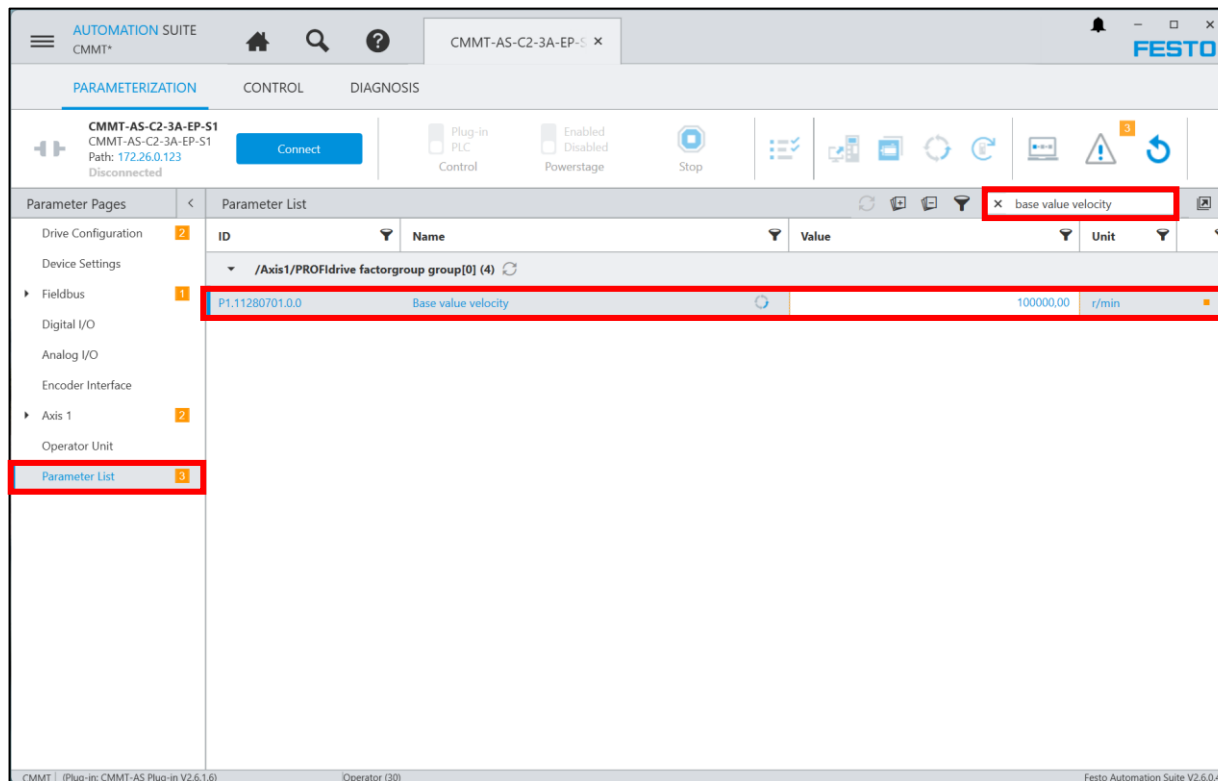
We also verify that the *Referencing in user configuration is valid* parameter is enabled.
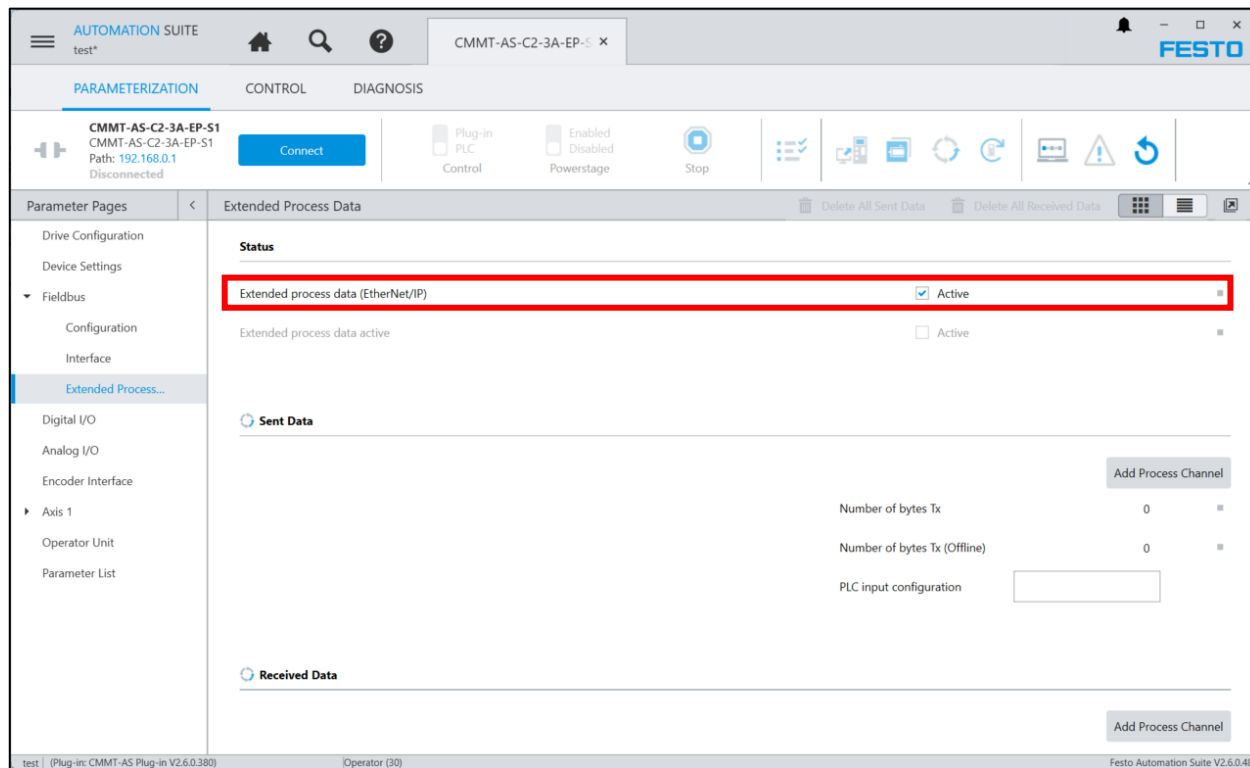
Configuration

Finally, we make sure to configure the *Base value velocity* parameter with a value of `100000`, regardless of the units used.
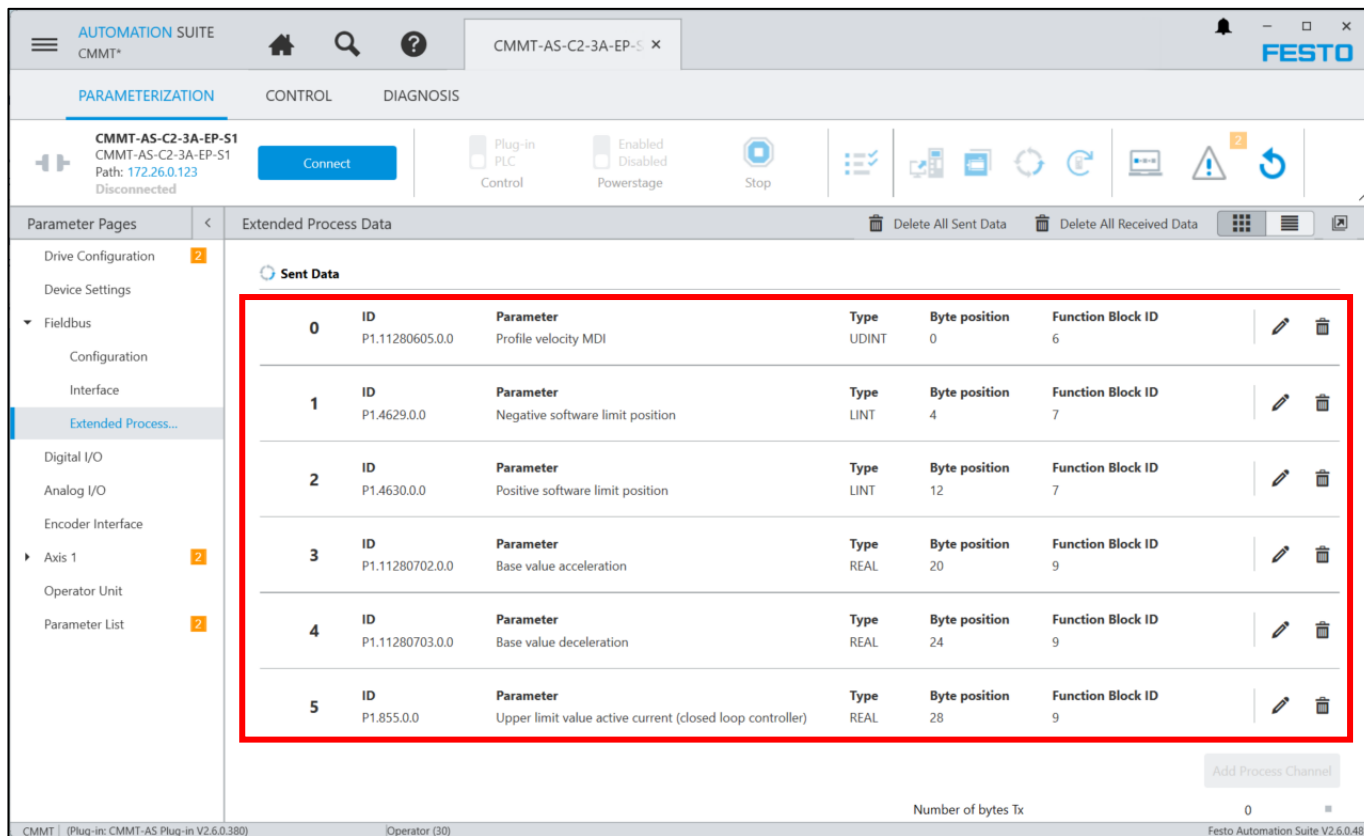
Configuration

Once the previous configuration has been made, we access *Fieldbus -> Extended Process Data* and verify that its status is *Active*.

Configuration

Later, we add the following parameters in the *Sent Data* section.

Configuration

Similarly, we add the same parameters in the *Received Data* section.

Once the configuration is complete, we will connect to the controller. To do this, we click on the IP address, perform a search and select it.
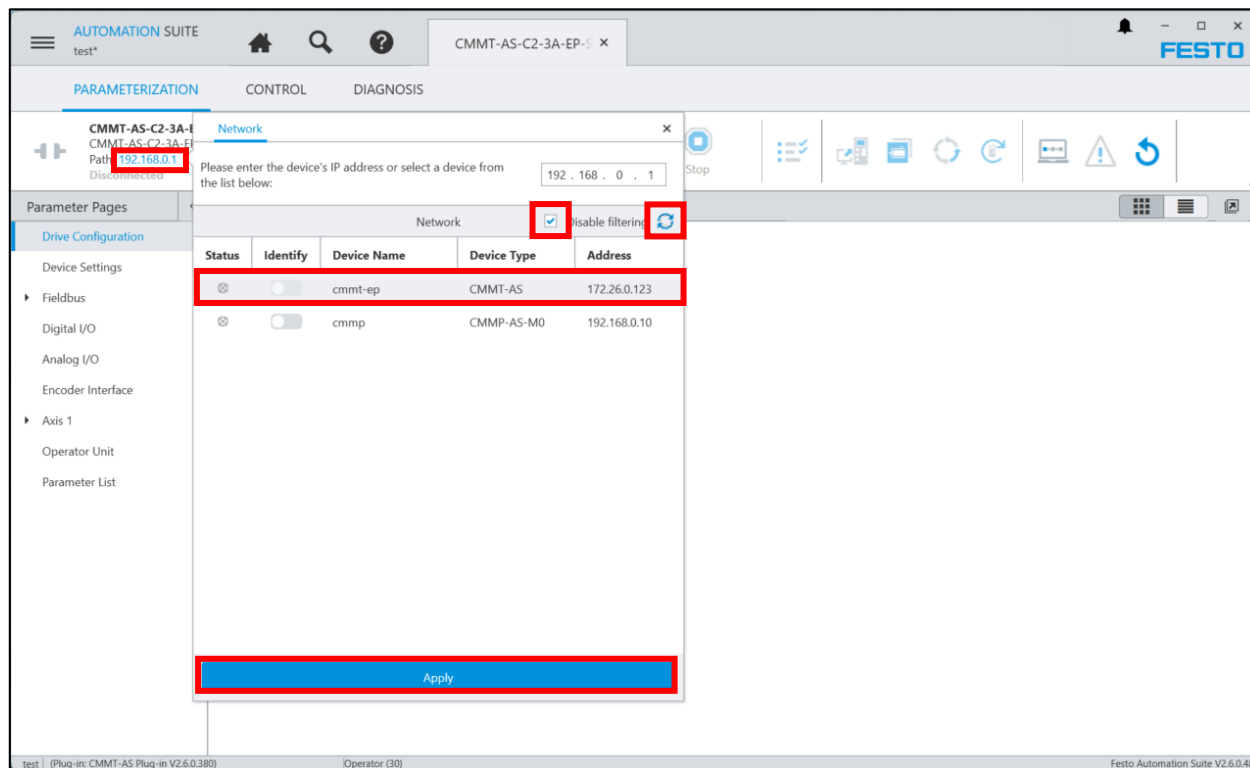
Configuration

Afterwards, we connect to the controller and download our configuration in the parameters synchronisation.

Configuration

Finally, to avoid possible incompatibilities, it is necessary to verify the firmware version of the motor controller (see next slide).
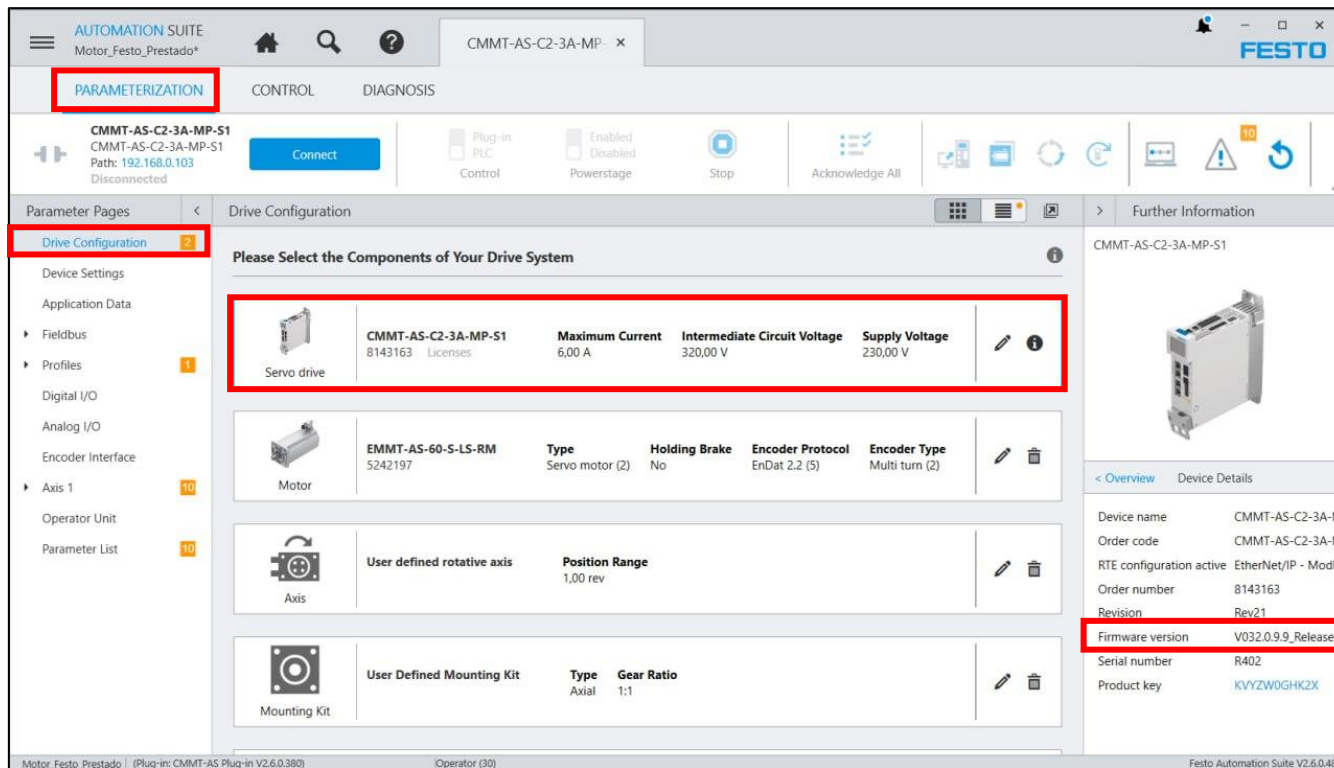
Depending on your motor controller model, verify that the firmware version is the following to avoid possible connection problems:

- CMMT-AS-…-MP:
Firmware 32.0.9.9.

- CMMT-ST-…-MP:
Firmware 32.0.10.10.

- CMMT-AS-…-EP
Firmware 24.0.2.94 and modify the timeout using the following [instructions](#).

Overview

ⓘ For further information, please contact:

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