# EMGZ491 and EMGZ492

## PLC Examples

Quick Start Guide for PROFINET, EtherNet/IP and EtherCAT

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# Contents

# Simatic PROFINET

## Setting up the project

- Copy the project to the PC on which the Simatic development software is installed.
- Open the example project EMGZ49x_PN_Vy_y (x stands for the utilized device, y stands for the example program version).
- Give the EMGZ491 or EMGZ492 the device name **emgz491** or **emgz492** and an IP-address that suits your network.
- Check if the EMGZ491 or EMGZ492 has got the assigned IP-address by open the web interface with the web browser.

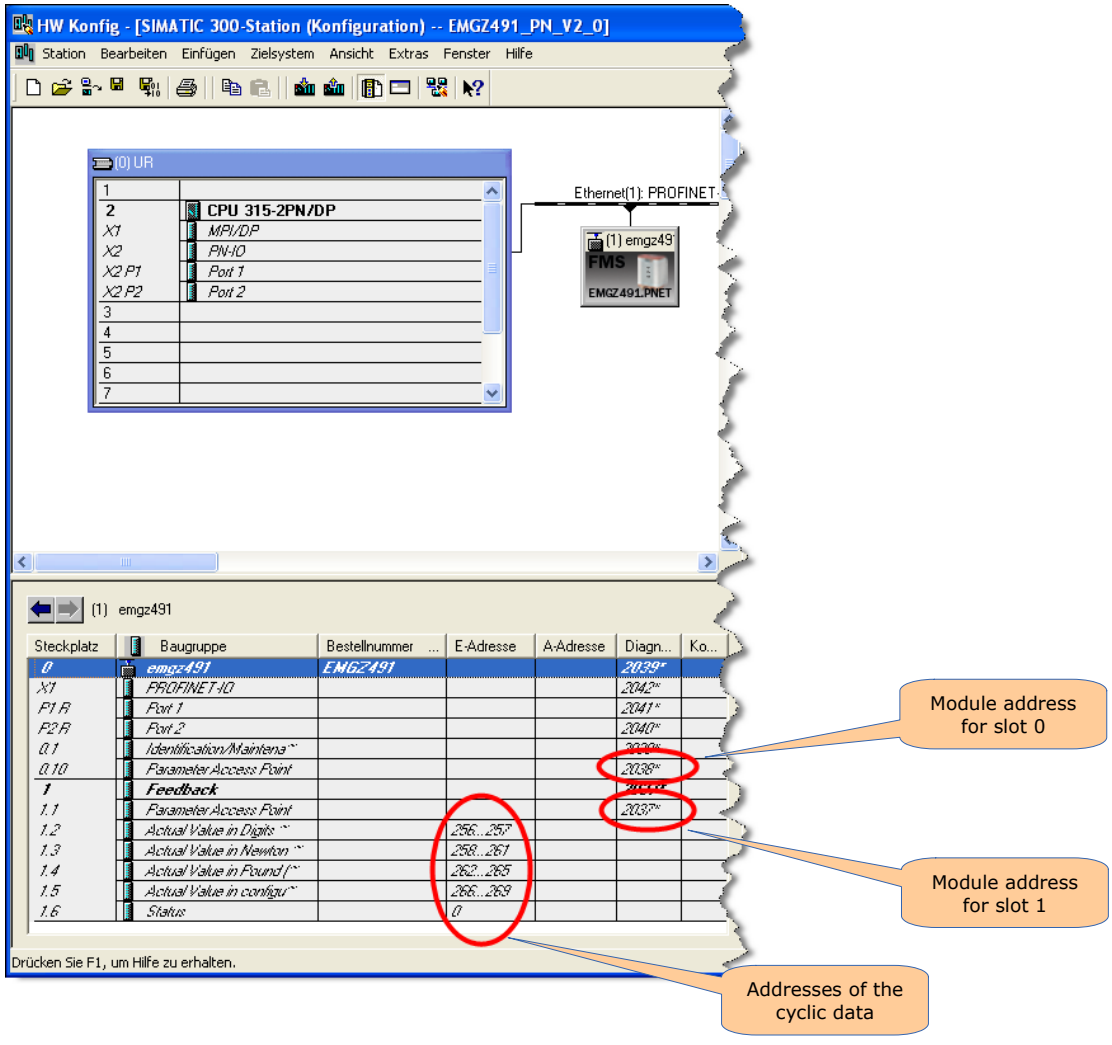
## Using of the example program

- Check the module hardware configuration and change it if it doesn't match.
- Open the following variable tables:
  - EMGZ491_Read_Data or EMGZ492_Read_Data
  - EMGZ491_Write_Input_Par or EMGZ492_Write_Input_CH_A and EMGZ492_Write_Input_CH_B
  - EMGZ491_Write_Output_Par or EMGZ492_Write_Output_Par
  - EMGZ491_Calibrate or EMGZ492_Calibrate
- Arrange the windows similar to the shown screenshot for the particular device.
- Follow the numbers ascending on the screenshot.

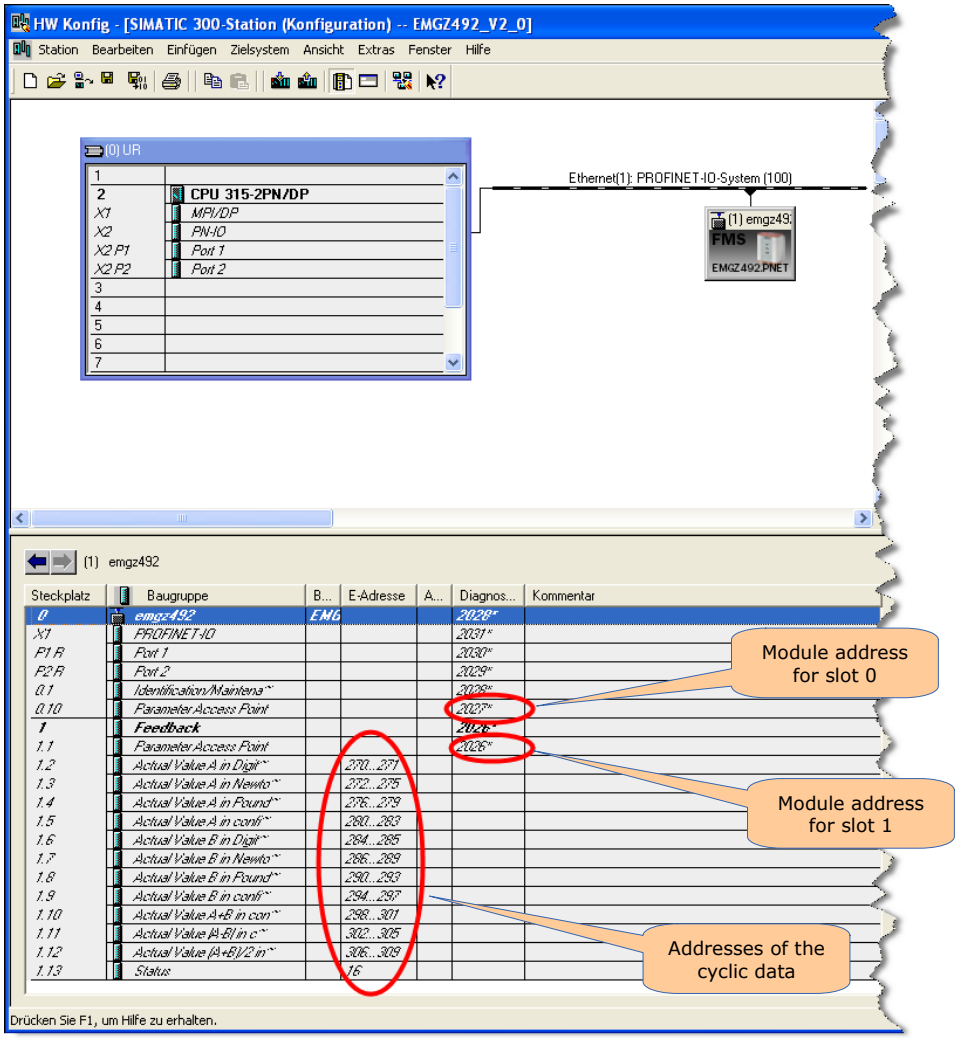
# Adaptation of the module address

By default, the example programs use the addresses shown in the below dialogs. Make sure that they are set accordingly.
The address for slot 0 gives access to the EMGZ49x output parameters.
The address for slot 1 gives access to the EMGZ49x configuration parameters as well as to the cycle data.
Make sure that the input addresses for the cyclic data are also set correctly.

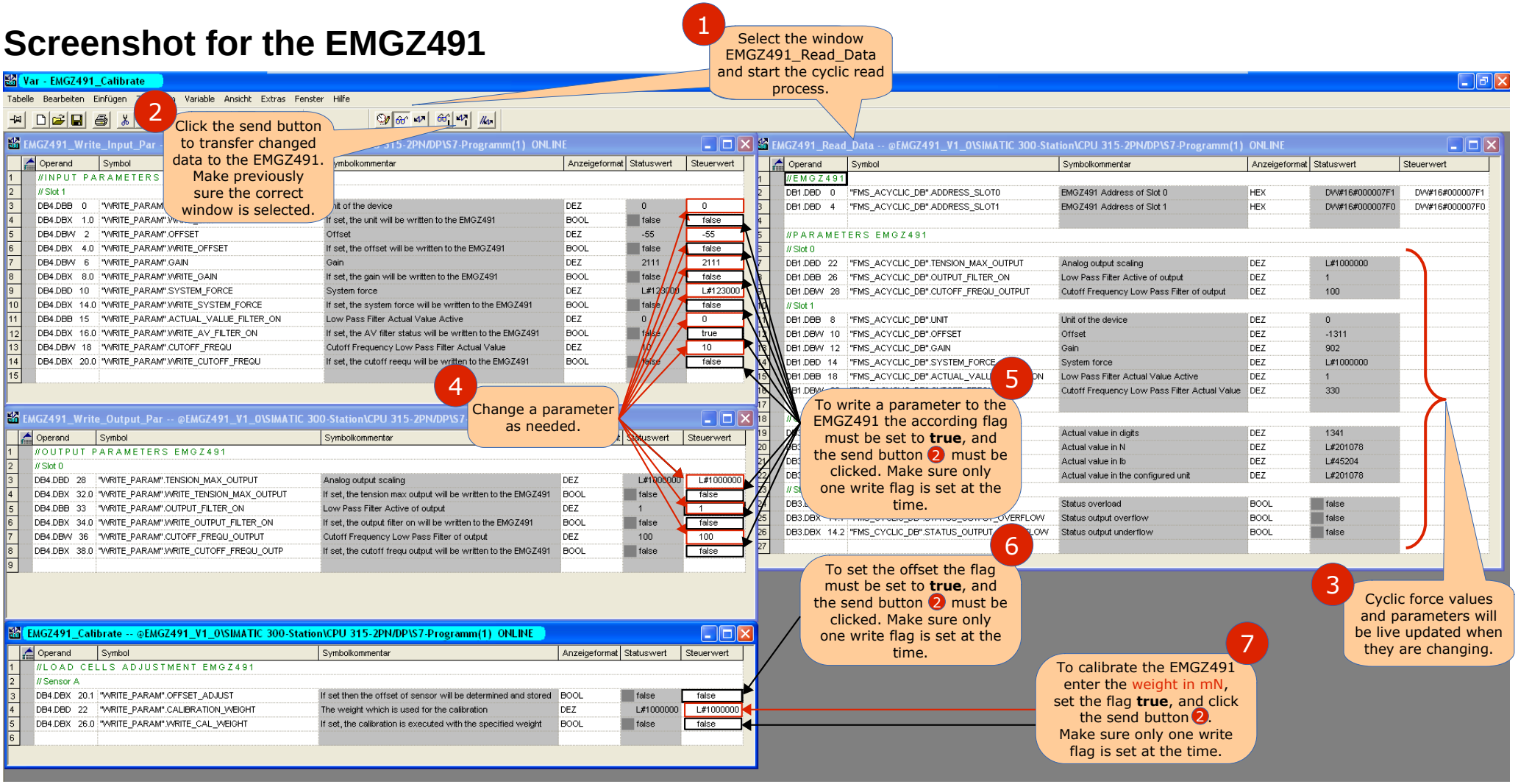
**EMGZ491**



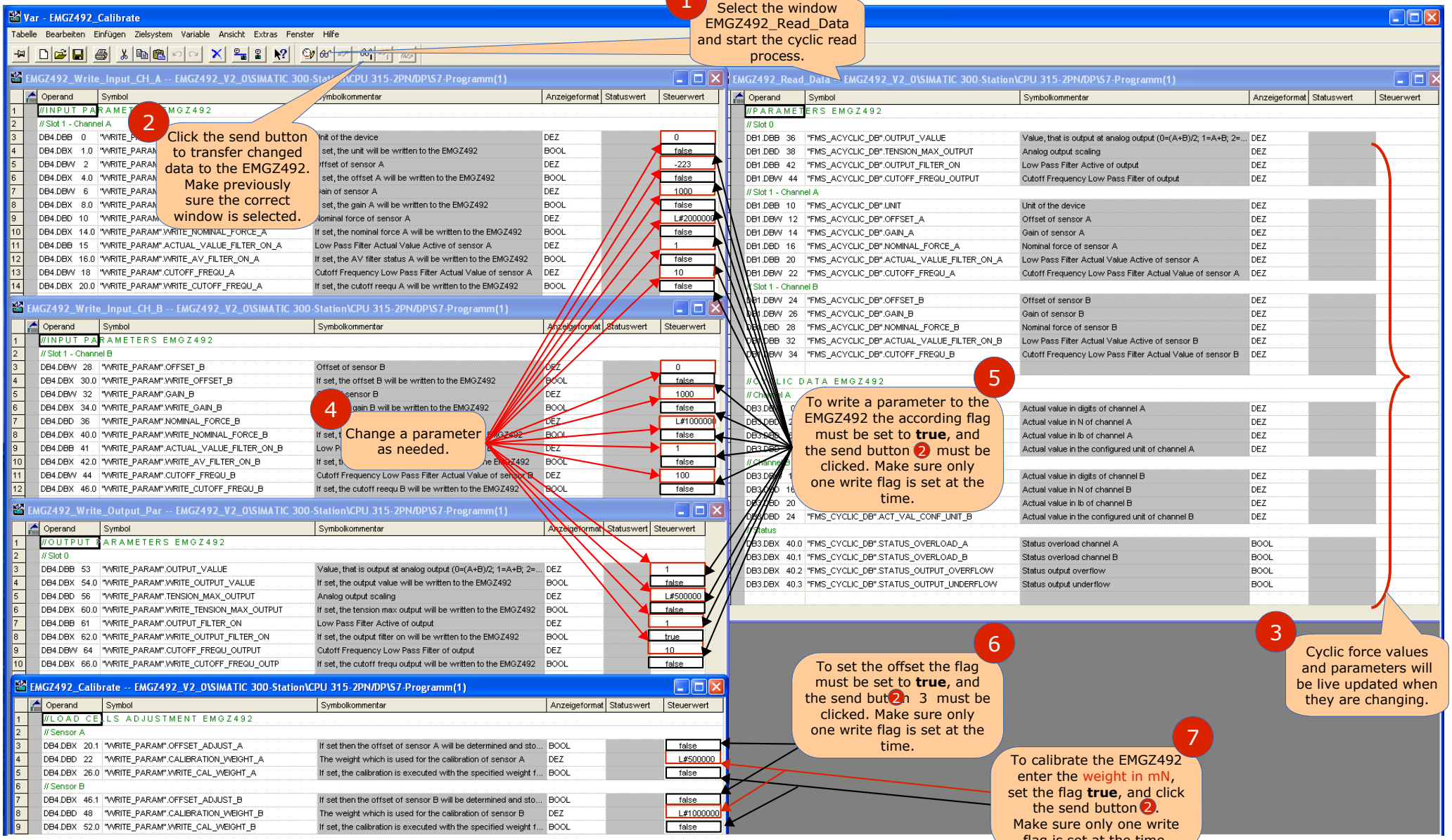
## EMGZ492


HW Konfig - [SIMATIC 300-Station (Konfiguration) -- EMGZ492_V2_0]
Station Bearbeiten Einfügen Zielsystem Ansicht Extras Fenster Hilfe
(0) UR
CPU 315-2PN/DP
MPI/DP
PN-IO
Port 1
Port 2
Ethernet(1): PROFINET-IO-System (100)
(1) emgz492
Module address for slot 0
Module address for slot 1
Addresses of the cyclic data
Drücken Sie F1, um Hilfe zu erhalten.

# Screenshot for the EMGZ491



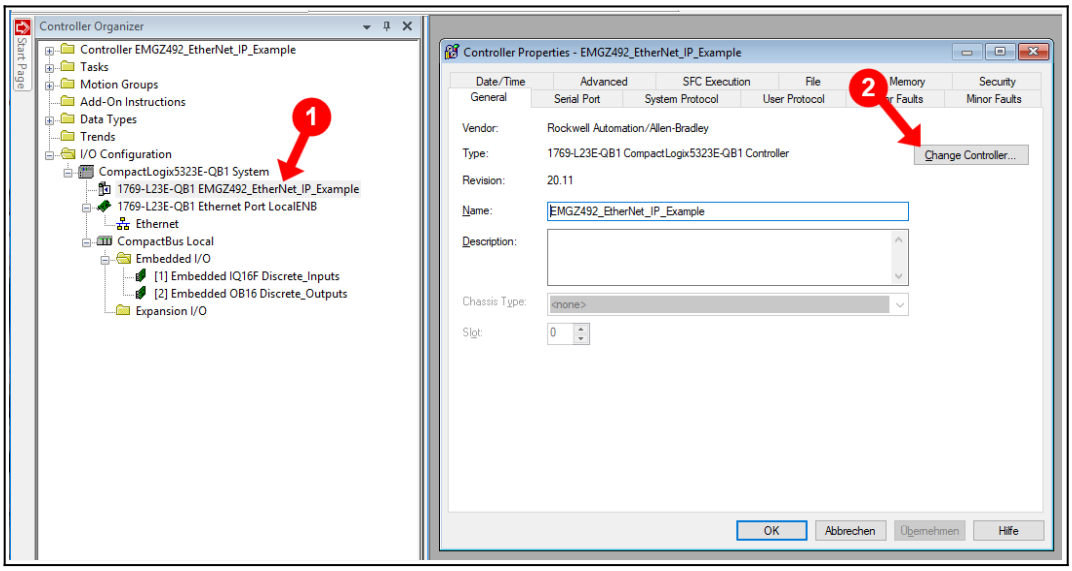
# Screenshot for the EMGZ492



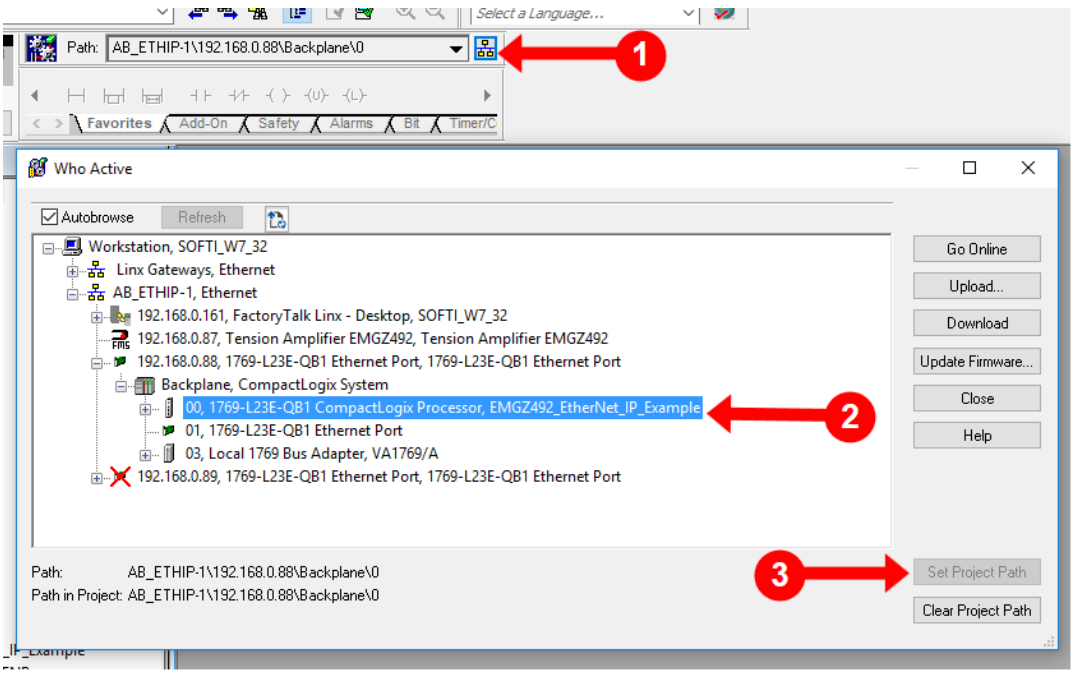
# RSLogix 5000 EtherNet/IP

## Setting up the project

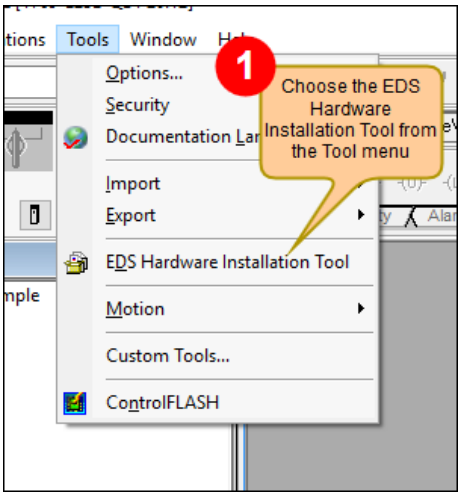
- Copy the project to the PC on which the RSLogix 5000 development software is installed.
- Open the example project EMGZ49x_EIP_Vy_y (x stands for the utilized device, y stands for the example program version).
- Change the controller that it matches your utilized controller.

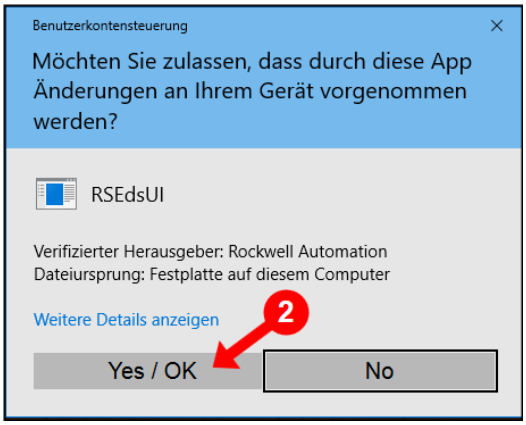


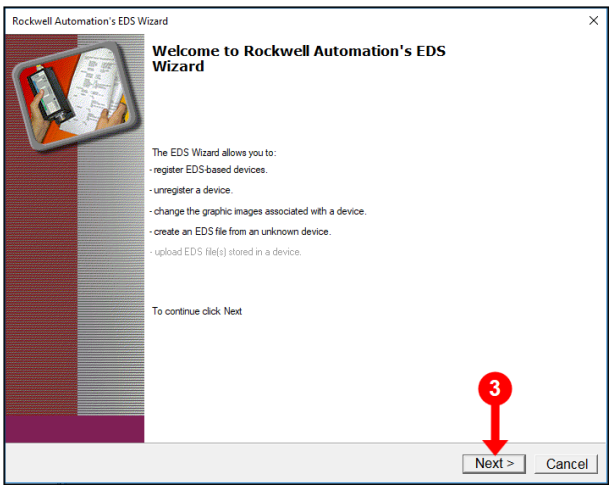

- Change the Path to the controller that you would like to use for the example program. If you have difficulty to change the path, use the Allen Bradley documentation for a further description.

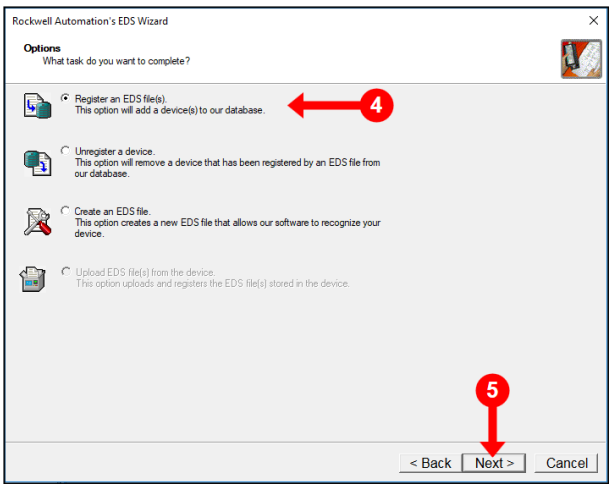


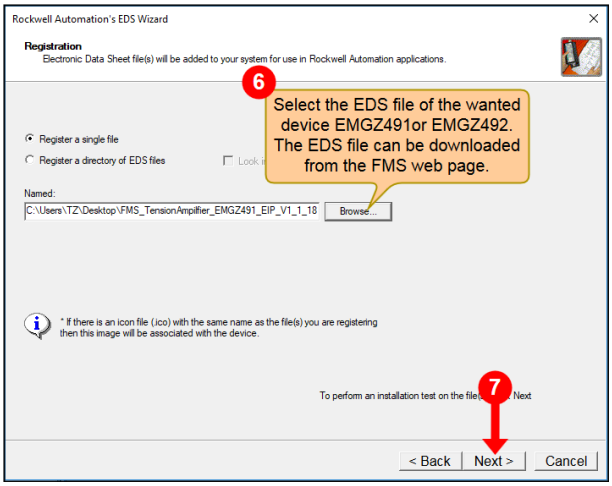
- To add the EMGZ491 or EMGZ492 to the project using the appropriate EDS file. Follow the steps on the below screenshots. After choosing the tool, there might appear a warning dialog to inform you about possible changes in the device configuration. Click on OK to accept changes. 2

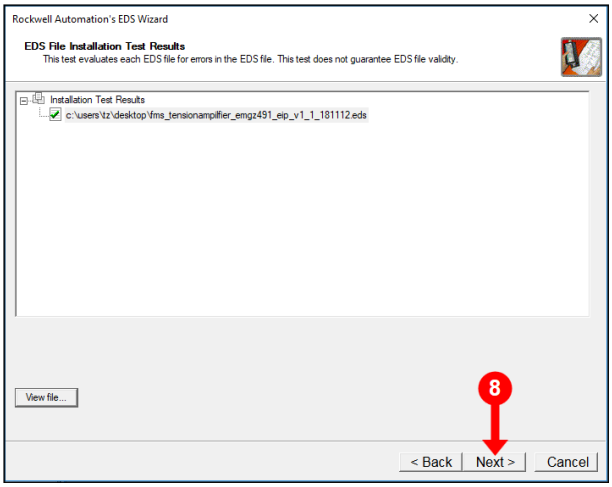


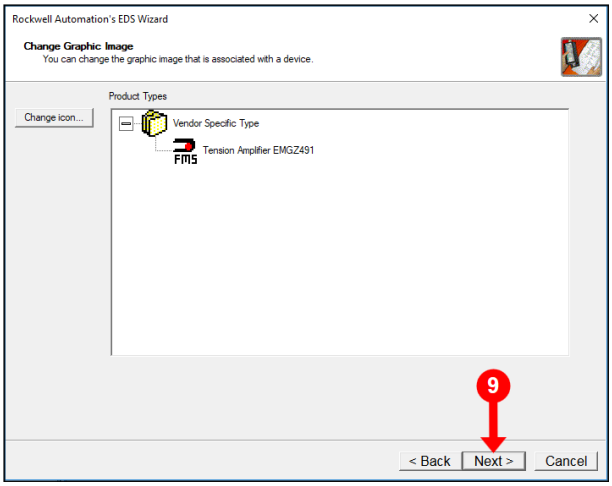



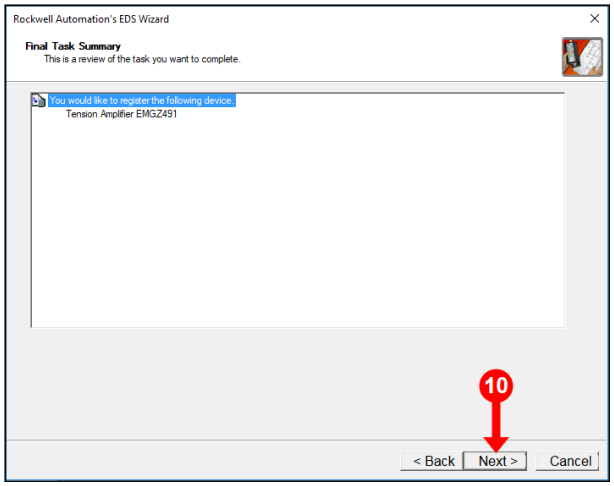



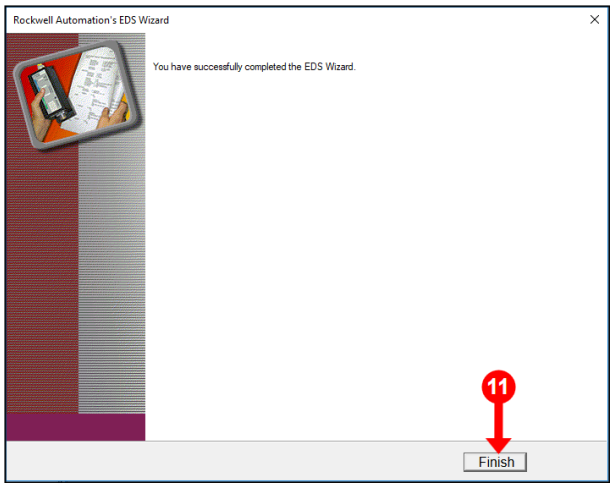



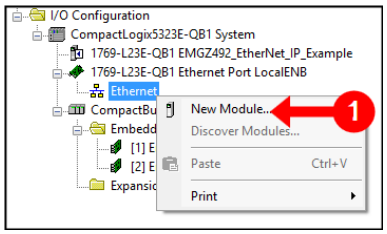



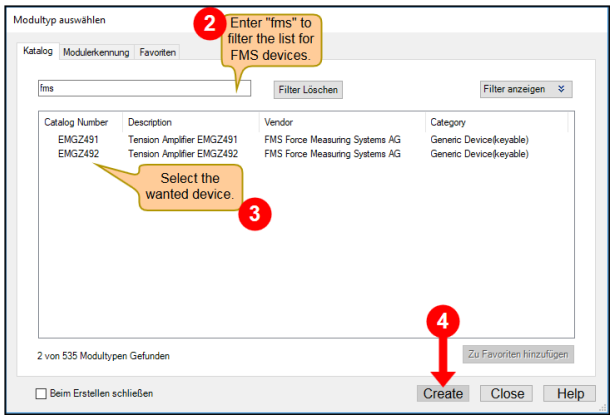


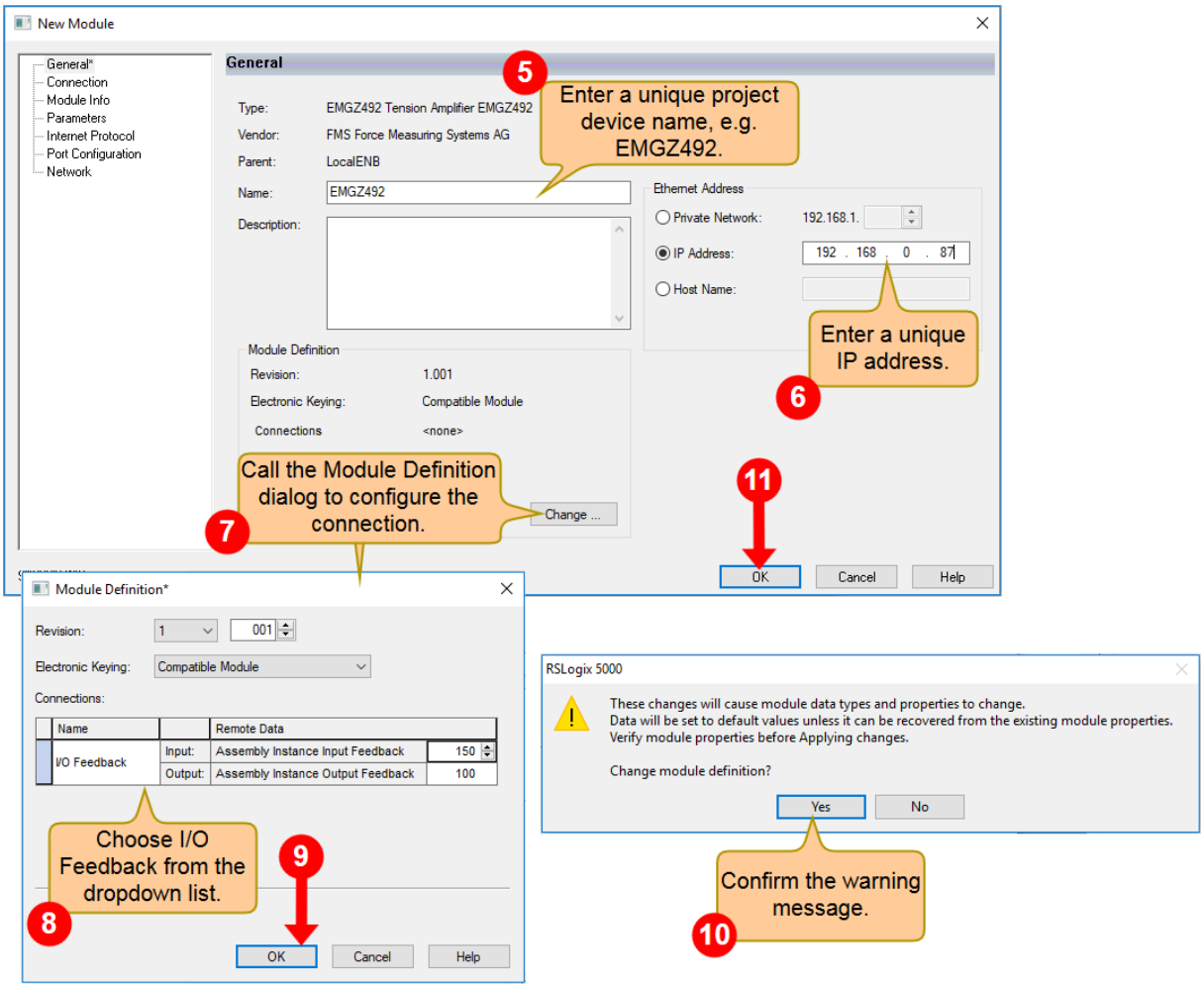




- Add the wanted device EMGZ491 or EMGZ492 to the project. Follow the steps on the below screenshots.



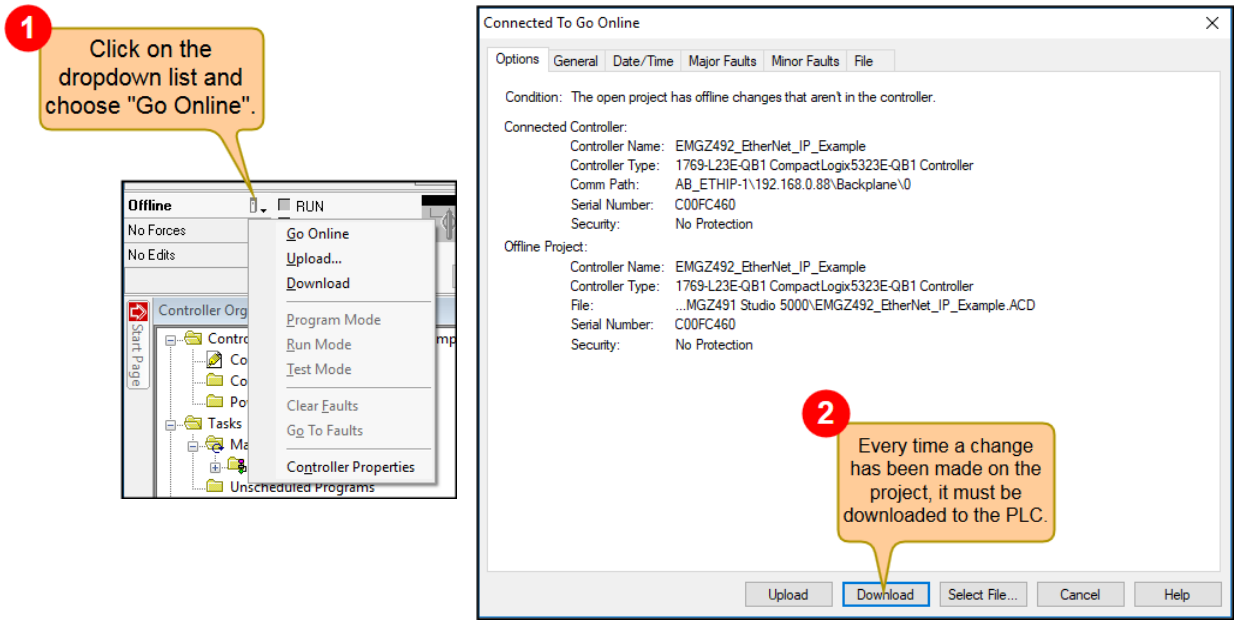



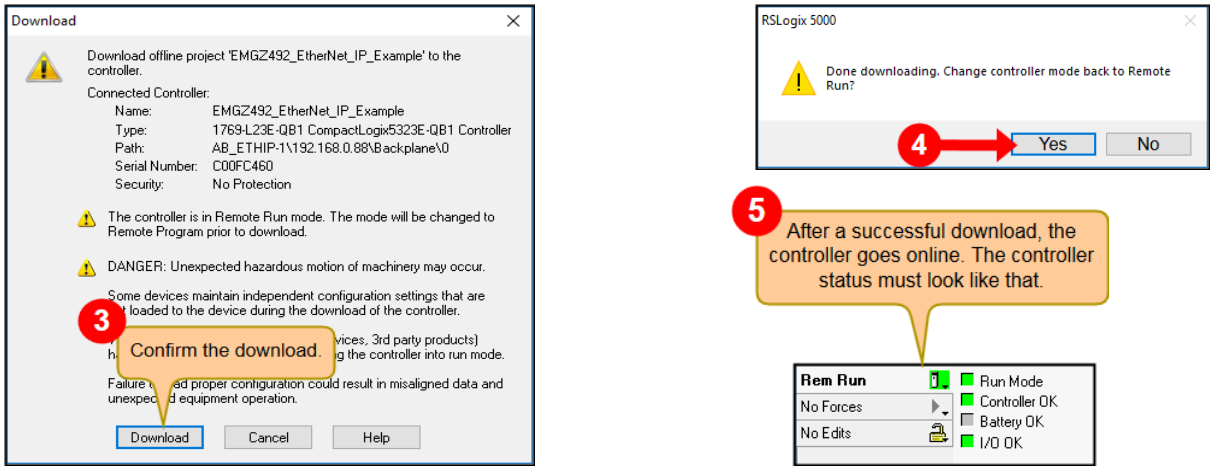



After point 11 the origin dialog "Select Module Type" shows up again. It can be closed by now. The device is now displaying in the Controller Organizer tree under the item Ethernet.

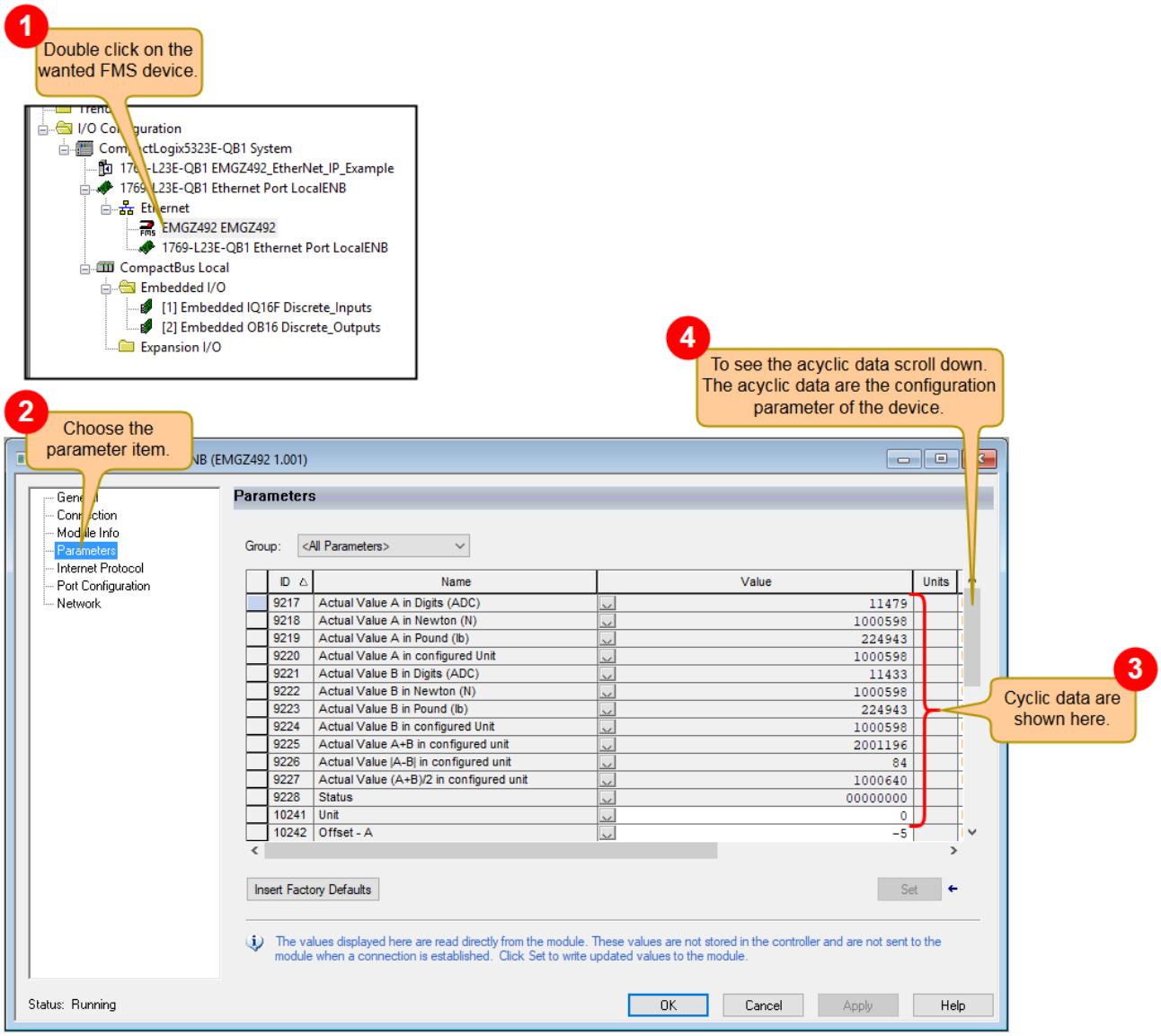
# Using of the example program

- Establish a connection with the PLC.

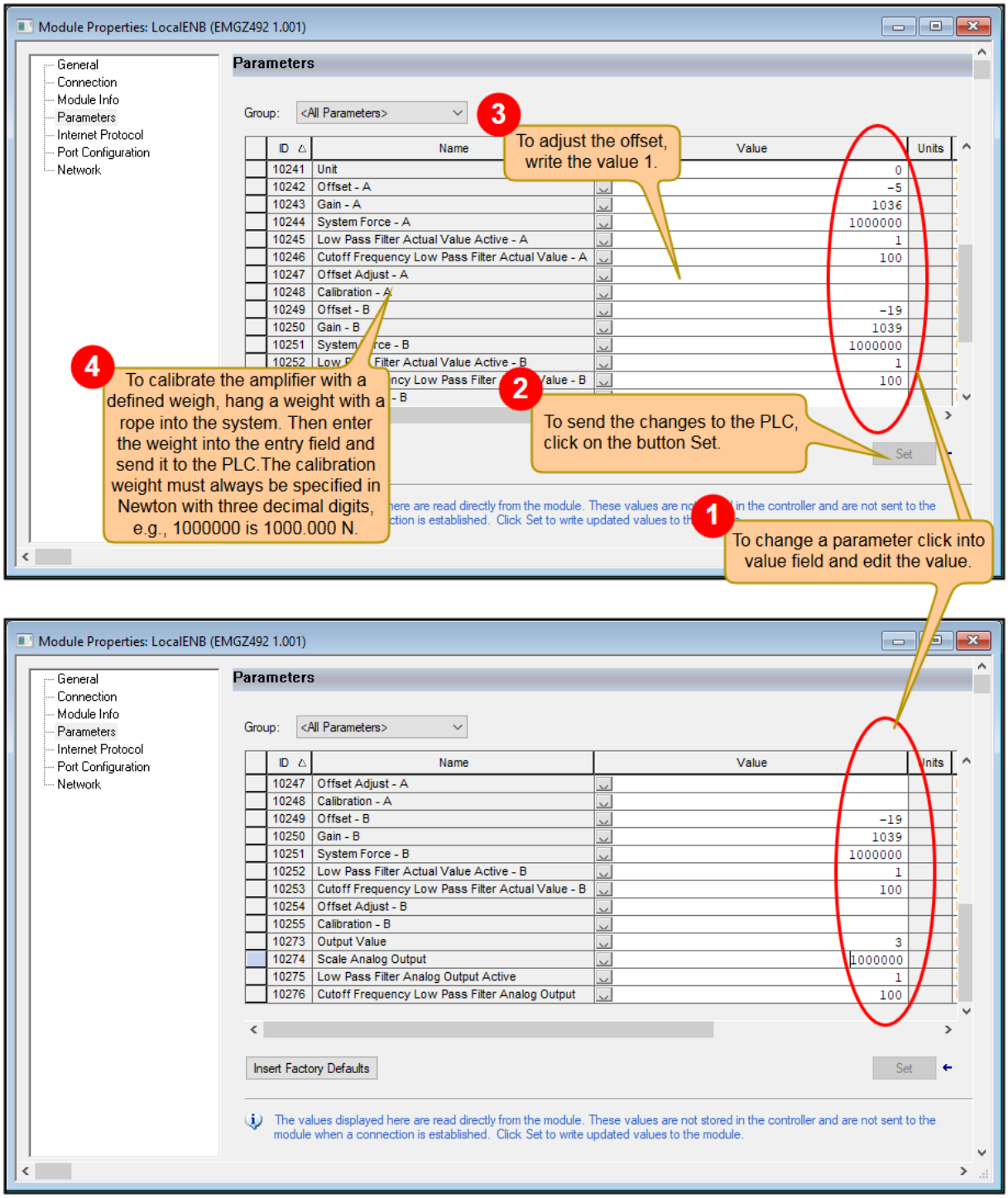


- Open the Module Properties dialog.



- To change device configuration parameters scroll down the parameter list box until the desired parameter is visible.



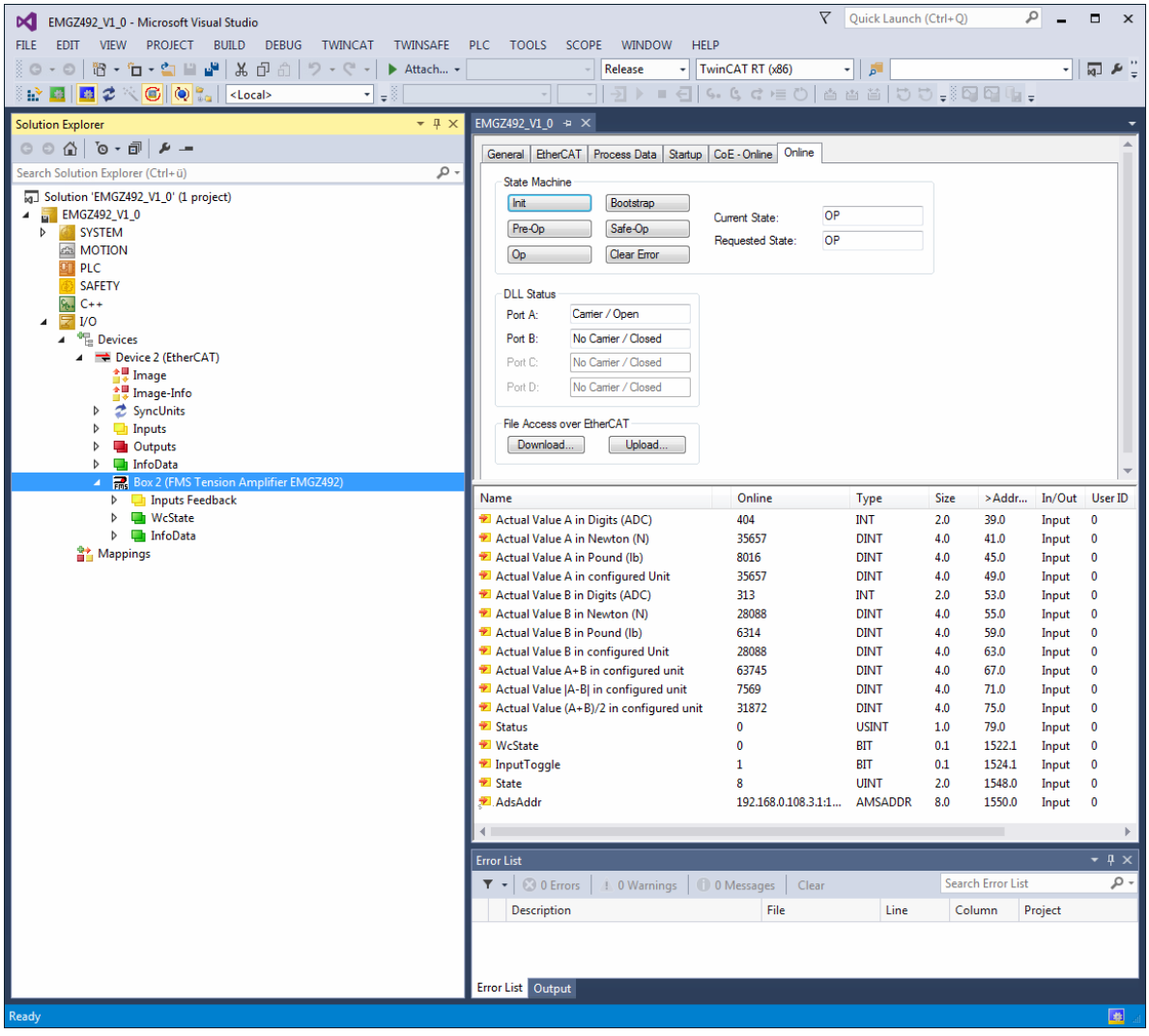
# TwinCAT 3 - EtherCAT

The example projects for the EMGZ491 or EMGZ492 contains the appropriate device integrated into the project. It shows the live data from the cyclic data and explains how parameters can be changed. It does not show and use any programming code as that is part of the EtherCAT developer, and we can not give support in that area too.

## Setting up the project

- Copy the project to the PC on which the TwinCAT 3 development software is installed.
- Open the example project EMGZ49x_ECAT_Vy_y (x stands for the utilized device, y stands for the example program version).

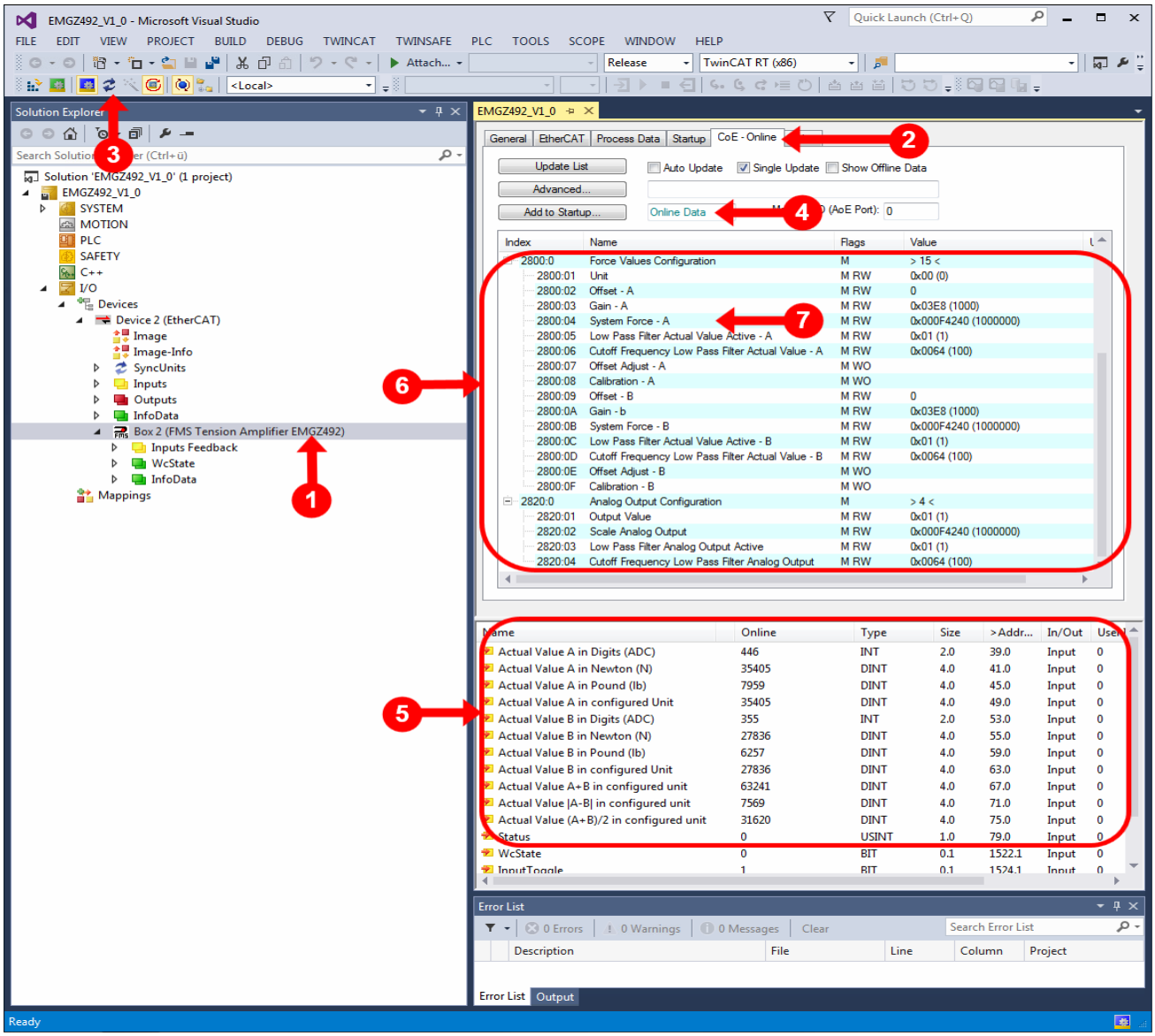
The screen should now show the project similar to the following picture.



# Using of the example program

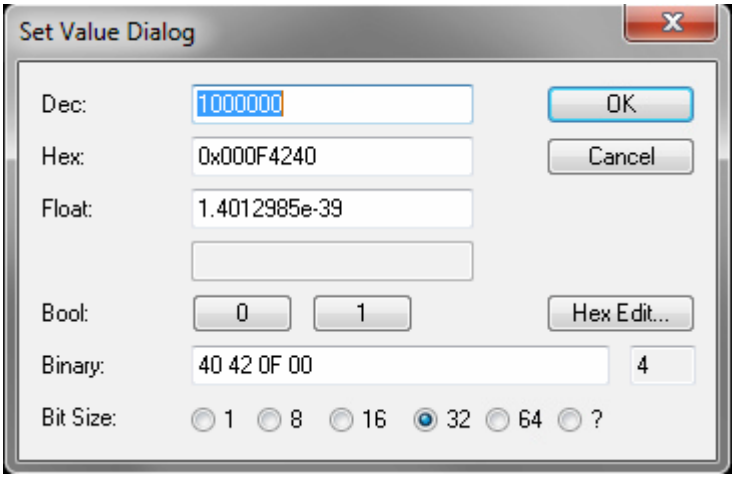
## Show cycle data

1. Double click on the appropriate device EMGZ491 or EMGZ492 from the Solution Explorer tree.
2. Select the CoE- Online tab.
3. Click on the Reload Devices button.
4. The status must now show Online Data. If that is not the case, then check if the loaded project corresponds with the device EMGZ491 or EMGZ492. Is the device connected to the PC properly or powered up at all. If all seems correct, consult the TwinCAT documentation what the problem might be.
5. The cycle data will be shown here.



## Change parameters

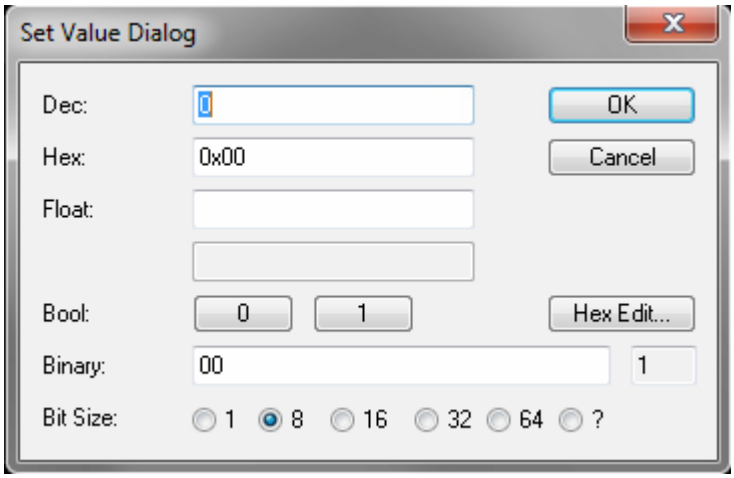
6. The parameters can be changed here. Open the tree index 2800 and 2820. After that, all parameters will be visible.
7. As an example double click on System Force. That opens the window Set Value Dialog. Enter a new value in the entry field Dec, e.g., 2000000 (that is interpreted as 2000.000N) and click on OK. A new system force has been set.




What the value ranges of the individual parameters are and how they will be interpreted can be seen in the manuals.

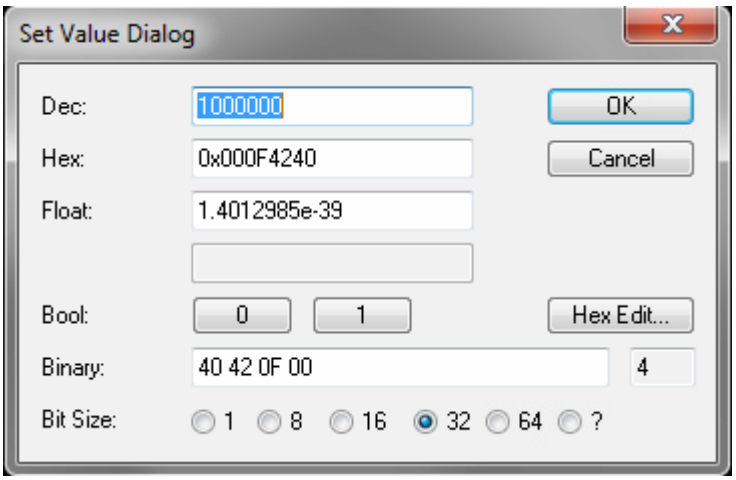
**Example to adjust the offset**

Double click on the parameter Offset Adjust. In the Set Value Dialog click on button 0 and OK. Be sure that the load call sensor is not loaded.



**Example to calibrate with a defined weight**

Double click on the parameter Calibration. In the Set Value Dialog enter the value of the loaded weight into the entry field Dec, e.g., 250000 (that is interpreted as 250.000N) and click on OK. That calculates the gain and saves it.




**Caution: All weight values must independent from the configured unite be entered in Newton (N).**