

EMGZ491 and EMGZ492

PLC Examples

Quick Start Guide for PROFINET, EtherNet/IP and EtherCAT

Program version 2.1

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Rev. a

Autor

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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

HW Konfig - [SIMATIC 300-Station (Konfiguration) -- EMGZ491_PN_V2_0]

Station Bearbeiten Einfügen Zielsystem Ansicht Extras Fenster Hilfe

0) UR

1	
2	CPU 315-2PN/DP
X1	MPI/DP
X2	PN-IO
X2 P1	Port 1
X2 P2	Port 2
3	
4	
5	
6	
7	

Ethernet(1): PROFINET

(1) emgz491

Steckplatz	Baugruppe	Bestellnummer ...	E-Adresse	A-Adresse	Diagn...	Ko...
0	emgz491	EMGZ491			2039*	
X1	PROFINET-IO			2042*		
P1 R	Port 1			2041*		
P2 R	Port 2			2040*		
0.1	Identification/Maintenance			2039*		
0.10	Parameter Access Point			2038*		
1	Feedback			2039*		
1.1	Parameter Access Point			2038*		
1.2	Actual Value in Digits		256...257			
1.3	Actual Value in Newton		258...261			
1.4	Actual Value in Pound		262...265			
1.5	Actual Value in configur		266...269			
1.6	Status		0			

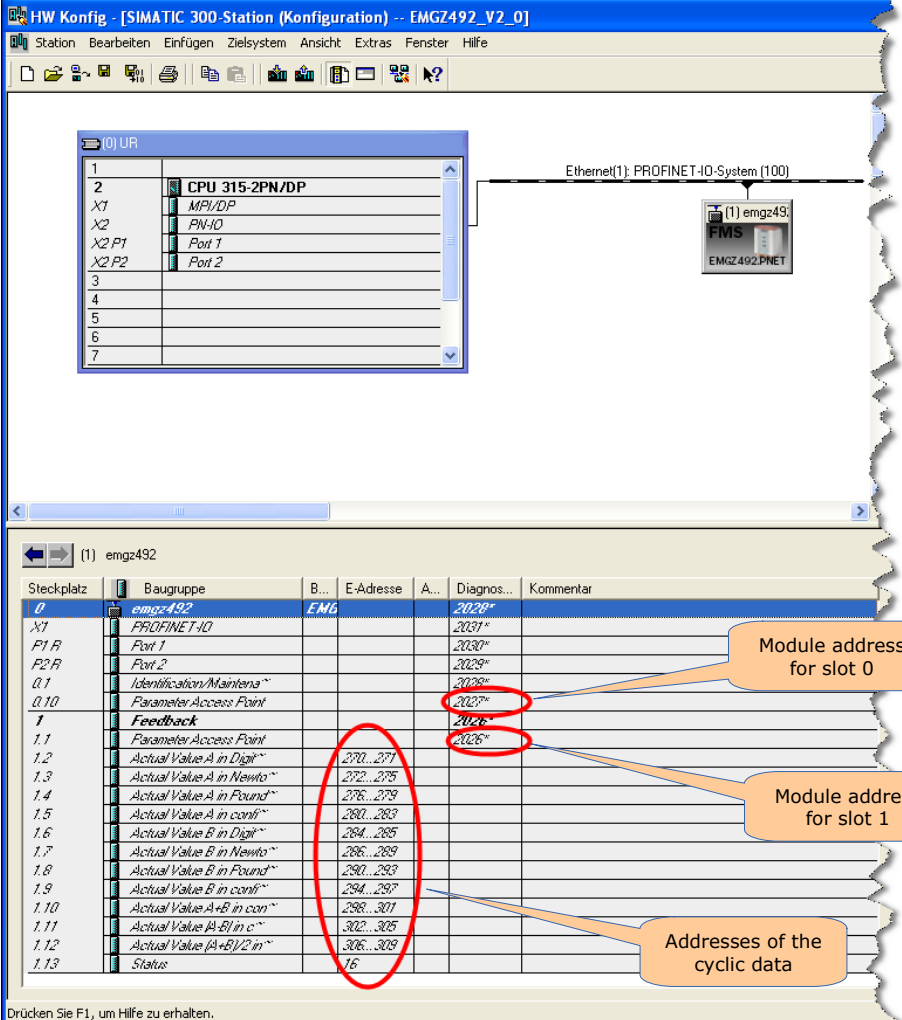
Drücken Sie F1, um Hilfe zu erhalten.

Module address for slot 0

Module address for slot 1

Addresses of the cyclic data

EMGZ492



HW Konfig - [SIMATIC 300-Station (Konfiguration) -- EMGZ492_V2_0]

Station Bearbeiten Einfügen Zielsystem Ansicht Extras Fenster Hilfe

1 2 CPU 315-2PN/DP

X1 MPI/DP

X2 PN-IO

X2 P1 Port 1

X2 P2 Port 2

3

4

5

6

7

Ethernet(1): PROFINET-IO-System (100)

(1) emgz492

Steckplatz	Baugruppe	B...	E-Adresse	A...	Diagnos...	Kommentar
0	emgz492	EMG		2028*		
X1	PROFINET-IO			2031*		
P1 R	Port 1			2030*		
P2 R	Port 2			2029*		
Q1	Identification/Maintena~			2028*		
Q10	Parameter Access Point			2027*		
1	Feedback			2026*		
1.1	Parameter Access Point			2026*		
1.2	Actual Value A in Digit~		270..271			
1.3	Actual Value A in Newito~		272..275			
1.4	Actual Value A in Pound~		276..279			
1.5	Actual Value A in confi~		280..283			
1.6	Actual Value B in Digit~		284..285			
1.7	Actual Value B in Newito~		286..289			
1.8	Actual Value B in Pound~		290..293			
1.9	Actual Value B in confi~		294..297			
1.10	Actual Value A+B in con~		298..301			
1.11	Actual Value A+B in c~		302..305			
1.12	Actual Value A+B/2 in ~		306..309			
1.13	Status		16			

Drücken Sie F1, um Hilfe zu erhalten.

Module address for slot 0

Module address for slot 1

Addresses of the cyclic data

Screenshot for the EMGZ491

1 Select the window EMGZ491_Read_Data and start the cyclic read process.

2 Click the send button to transfer changed data to the EMGZ491. Make previously sure the correct window is selected.

3 Cyclic force values and parameters will be live updated when they are changing.

4 Change a parameter as needed.

5 To write a parameter to the EMGZ491 the according flag must be set to **true**, and the send button **2** must be clicked. Make sure only one write flag is set at the time.

6 To set the offset the flag must be set to **true**, and the send button **2** must be clicked. Make sure only one write flag is set at the time.

7 To calibrate the EMGZ491 enter the **weight** in mN, set the flag **true**, and click the send button **2**. Make sure only one write flag is set at the time.

Operand	Symbol	Symbolkommentar	Anzeigeformat	Statuswert	Steuwert
1	DB4.DBB 0	"WRITE_PARAM" V...	DEZ	0	0
2	DB4.DBX 1.0	"WRITE_PARAM" V...	DEZ	false	false
3	DB4.DBW 2	"WRITE_PARAM" OFFSE...	DEZ	-55	-55
4	DB4.DBX 4.0	"WRITE_PARAM" WRITE_OFFSE...	DEZ	false	false
5	DB4.DBW 6	"WRITE_PARAM" GAIN	DEZ	2111	2111
6	DB4.DBX 8.0	"WRITE_PARAM" WRITE_GAIN	DEZ	false	false
7	DB4.DBD 10	"WRITE_PARAM" SYSTEM_FORCE	DEZ	L#123000	L#123000
8	DB4.DBX 14.0	"WRITE_PARAM" WRITE_SYSTEM_FORCE	DEZ	false	false
9	DB4.DBB 15	"WRITE_PARAM" ACTUAL_VALUE_FILTER_ON	DEZ	0	0
10	DB4.DBX 16.0	"WRITE_PARAM" WRITE_AV_FILTER_ON	DEZ	true	true
11	DB4.DBW 18	"WRITE_PARAM" CUTOFF_FREQU	DEZ	10	10
12	DB4.DBX 20.0	"WRITE_PARAM" WRITE_CUTOFF_FREQU	DEZ	false	false

Operand	Symbol	Symbolkommentar	Anzeigeformat	Statuswert	Steuwert
1	DB1.DBD 0	"FMS_ACYCLIC_DB" ADDRESS_SLOT0	HEX	DW#16#000007F1	DW#16#000007F1
2	DB1.DBD 4	"FMS_ACYCLIC_DB" ADDRESS_SLOT1	HEX	DW#16#000007F0	DW#16#000007F0
3	DB1.DBD 22	"FMS_ACYCLIC_DB" TENSION_MAX_OUTPUT	DEZ	L#1000000	L#1000000
4	DB1.DBB 26	"FMS_ACYCLIC_DB" OUTPUT_FILTER_ON	DEZ	1	1
5	DB1.DBW 28	"FMS_ACYCLIC_DB" CUTOFF_FREQU_OUTPUT	DEZ	100	100
6	DB1.DBB 8	"FMS_ACYCLIC_DB" UNIT	DEZ	0	0
7	DB1.DBW 10	"FMS_ACYCLIC_DB" OFFSET	DEZ	-1311	-1311
8	DB1.DBW 12	"FMS_ACYCLIC_DB" GAIN	DEZ	902	902
9	DB1.DBD 14	"FMS_ACYCLIC_DB" SYSTEM_FORCE	DEZ	L#1000000	L#1000000
10	DB1.DBB 18	"FMS_ACYCLIC_DB" ACTUAL_VALUE_FILTER_ON	DEZ	1	1
11	DB1.DBW 20	"FMS_ACYCLIC_DB" CUTOFF_FREQU_OUTPUT	DEZ	330	330
12	DB1.DBB 24	"FMS_ACYCLIC_DB" ACTUAL_VALUE_FILTER_ON	DEZ	1341	1341
13	DB1.DBB 28	"FMS_ACYCLIC_DB" ACTUAL_VALUE_FILTER_ON	DEZ	L#201078	L#201078
14	DB1.DBB 32	"FMS_ACYCLIC_DB" ACTUAL_VALUE_FILTER_ON	DEZ	L#45204	L#45204
15	DB1.DBB 36	"FMS_ACYCLIC_DB" ACTUAL_VALUE_FILTER_ON	DEZ	L#201078	L#201078
16	DB3.DBB 1	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
17	DB3.DBB 5	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
18	DB3.DBB 9	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
19	DB3.DBB 13	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
20	DB3.DBB 17	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
21	DB3.DBB 21	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
22	DB3.DBB 25	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
23	DB3.DBB 29	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
24	DB3.DBB 33	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
25	DB3.DBB 37	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
26	DB3.DBB 41	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false
27	DB3.DBB 45	"FMS_ACYCLIC_DB" STATUS_OUTPUT_OVERFLOW	DEZ	false	false

Operand	Symbol	Symbolkommentar	Anzeigeformat	Statuswert	Steuwert
1	DB4.DBB 20.1	"WRITE_PARAM" OFFSET_ADJUST	DEZ	false	false
2	DB4.DBD 22	"WRITE_PARAM" CALIBRATION_WEIGHT	DEZ	L#1000000	L#1000000
3	DB4.DBX 26.0	"WRITE_PARAM" WRITE_CAL_WEIGHT	DEZ	false	false

Screenshot for the EMGZ492

1 Select the window EMGZ492_Read_Data and start the cyclic read process.

2 Click the send button to transfer changed data to the EMGZ492. Make previously sure the correct window is selected.

3 Change a parameter as needed.

4 To write a parameter to the EMGZ492 the according flag must be set to **true**, and the send button **2** must be clicked. Make sure only one write flag is set at the time.

5 To set the offset the flag must be set to **true**, and the send button **2** must be clicked. Make sure only one write flag is set at the time.

6 To calibrate the EMGZ492 enter the weight in mN, set the flag **true**, and click the send button **2**. Make sure only one write flag is set at the time.

7 Cyclic force values and parameters will be live updated when they are changing.

Operand	Symbol	Symbolkommentar	Anzeigeformat	Statuswert	Steuwert
1	//INPUT PARAMETERS EMGZ492				
2	// Slot 1 - Channel A				
3	DB4.DBX 0	"WRITE_PARAM"WRITE_OFFSET_A	DEZ	0	0
4	DB4.DBX 1.0	"WRITE_PARAM"WRITE_OFFSET_B	DEZ	false	false
5	DB4.DBX 2	"WRITE_PARAM"WRITE_GAIN_A	DEZ	-223	-223
6	DB4.DBX 4.0	"WRITE_PARAM"WRITE_GAIN_B	DEZ	false	false
7	DB4.DBX 6	"WRITE_PARAM"WRITE_NOMINAL_FORCE_A	DEZ	1000	1000
8	DB4.DBX 8.0	"WRITE_PARAM"WRITE_NOMINAL_FORCE_B	DEZ	false	false
9	DB4.DBX 10	"WRITE_PARAM"WRITE_FILTER_ON_A	DEZ	L#2000000	L#2000000
10	DB4.DBX 14.0	"WRITE_PARAM"WRITE_FILTER_ON_B	DEZ	false	false
11	DB4.DBX 15	"WRITE_PARAM"WRITE_CUTOFF_FREQU_A	DEZ	1	1
12	DB4.DBX 16.0	"WRITE_PARAM"WRITE_CUTOFF_FREQU_B	DEZ	false	false
13	DB4.DBX 18	"WRITE_PARAM"WRITE_CUTOFF_FREQU_C	DEZ	10	10
14	DB4.DBX 20.0	"WRITE_PARAM"WRITE_CUTOFF_FREQU_D	DEZ	false	false

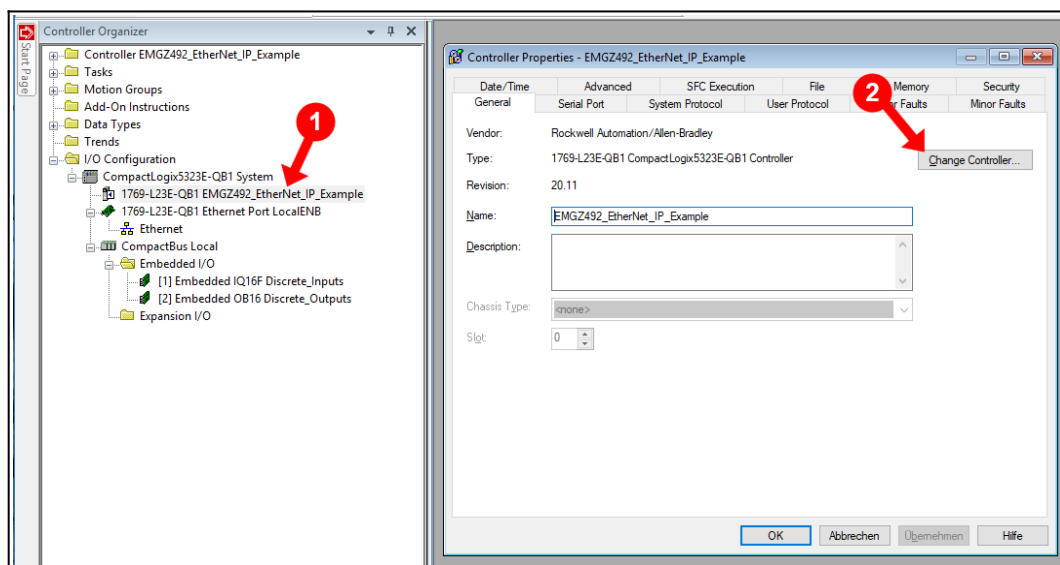
Operand	Symbol	Symbolkommentar	Anzeigeformat	Statuswert	Steuwert
1	//OUTPUT PARAMETERS EMGZ492				
2	// Slot 0				
3	DB4.DBX 53	"WRITE_PARAM"OUTPUT_VALUE	DEZ	1	1
4	DB4.DBX 54.0	"WRITE_PARAM"OUTPUT_TENSION_MAX_OUTPUT	DEZ	false	false
5	DB4.DBX 56	"WRITE_PARAM"OUTPUT_FILTER_ON	DEZ	L#5000000	L#5000000
6	DB4.DBX 60.0	"WRITE_PARAM"OUTPUT_FILTER_ON	DEZ	false	false
7	DB4.DBX 61	"WRITE_PARAM"OUTPUT_FILTER_ON	DEZ	1	1
8	DB4.DBX 62.0	"WRITE_PARAM"OUTPUT_FILTER_ON	DEZ	true	true
9	DB4.DBX 64	"WRITE_PARAM"OUTPUT_FILTER_ON	DEZ	10	10
10	DB4.DBX 66.0	"WRITE_PARAM"OUTPUT_FILTER_ON	DEZ	false	false

Operand	Symbol	Symbolkommentar	Anzeigeformat	Statuswert	Steuwert
1	//LOAD CE LS ADJUSTMENT EMGZ492				
2	// Sensor A				
3	DB4.DBX 20.1	"WRITE_PARAM"OFFSET_ADJUST_A	DEZ	false	false
4	DB4.DBX 22	"WRITE_PARAM"CALIBRATION_WEIGHT_A	DEZ	L#5000000	L#5000000
5	DB4.DBX 26.0	"WRITE_PARAM"CALIBRATION_WEIGHT_B	DEZ	false	false
6	// Sensor B				
7	DB4.DBX 46.1	"WRITE_PARAM"OFFSET_ADJUST_B	DEZ	false	false
8	DB4.DBX 48	"WRITE_PARAM"CALIBRATION_WEIGHT_B	DEZ	L#1000000	L#1000000
9	DB4.DBX 52.0	"WRITE_PARAM"CALIBRATION_WEIGHT_C	DEZ	false	false

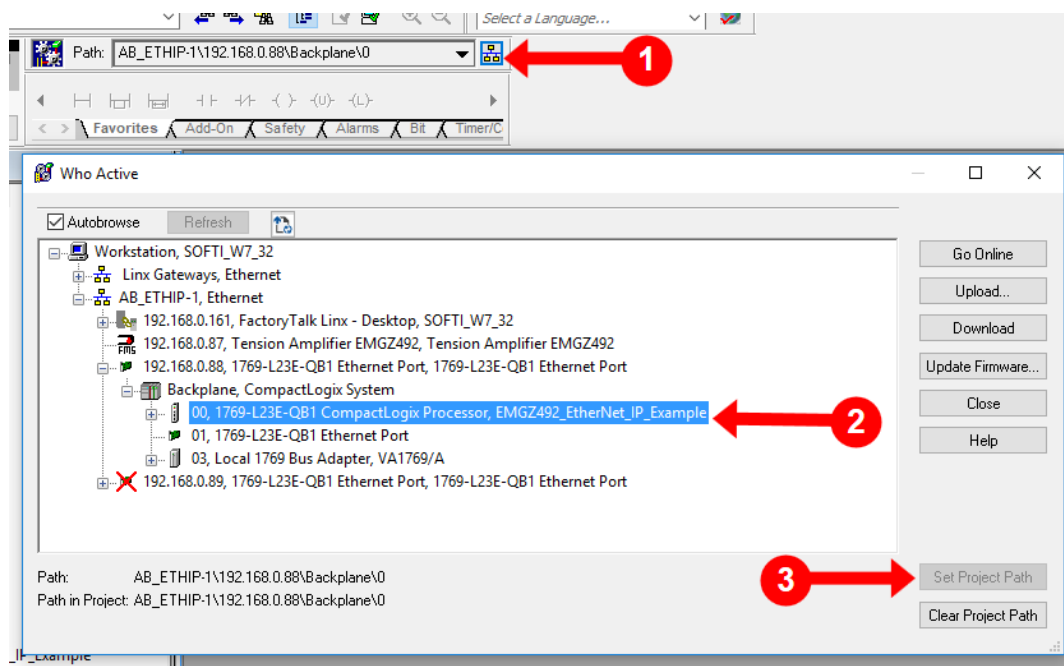
RSLogix 5000 EtherNet/IP

Setting up the project

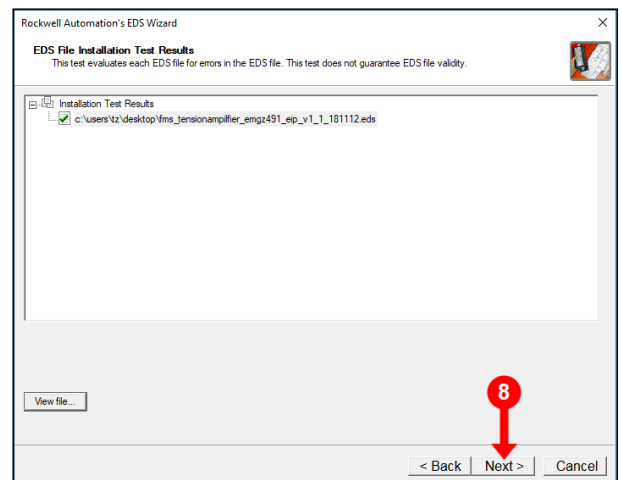
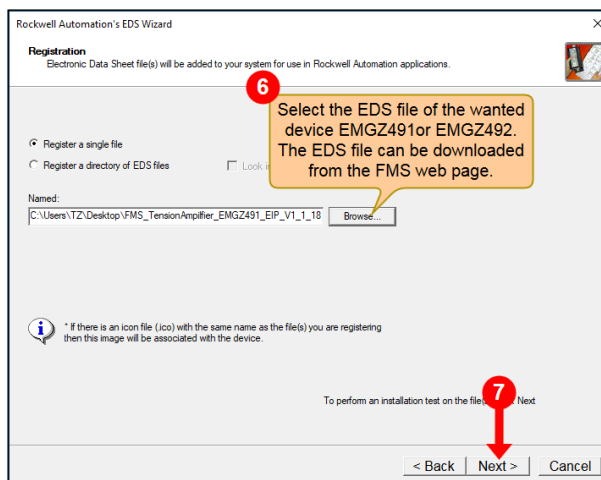
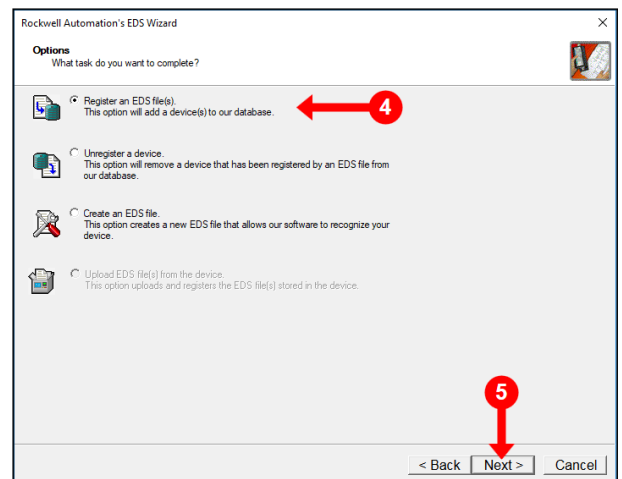
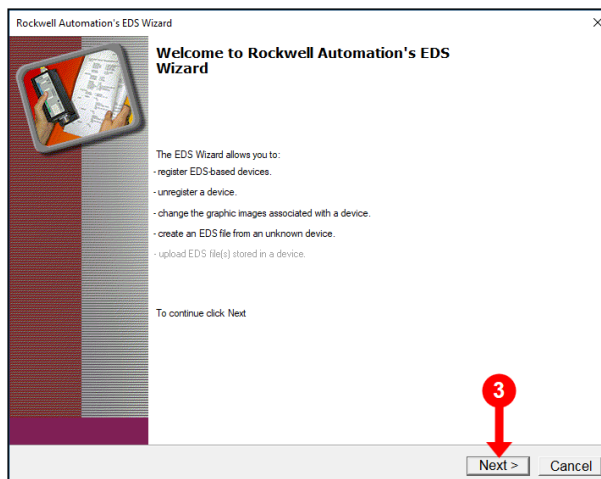
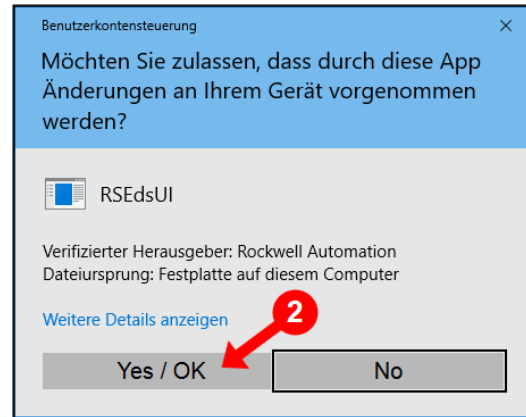
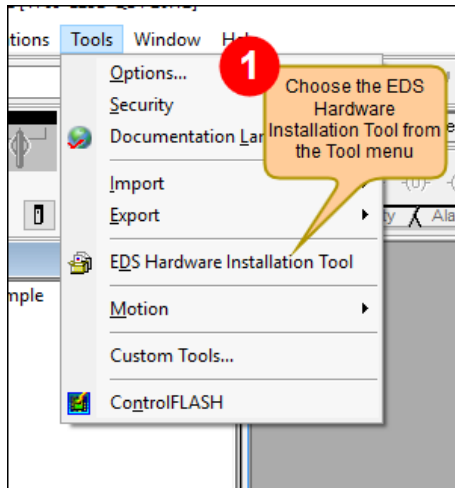
- Copy the project to the PC on which the RSLogix 5000 development software is installed.
- Open the example project EMGZ49x_EIP_Vy_y (x stands for the utilized device, y stands for the example program version).
- Change the controller that it matches your utilized controller.

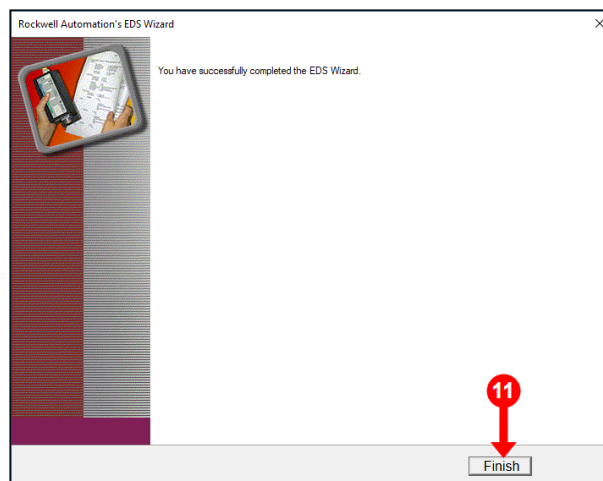
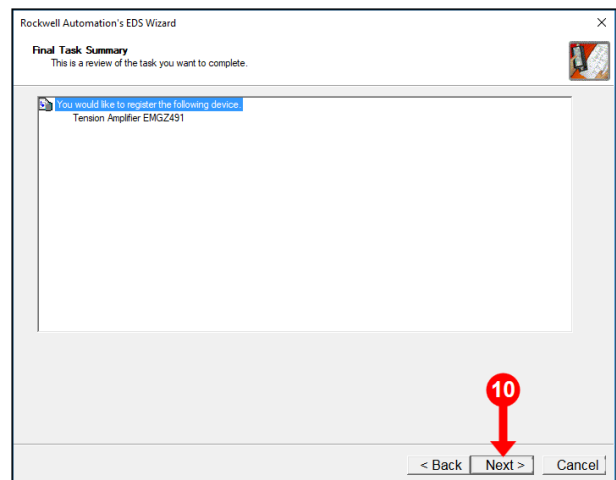
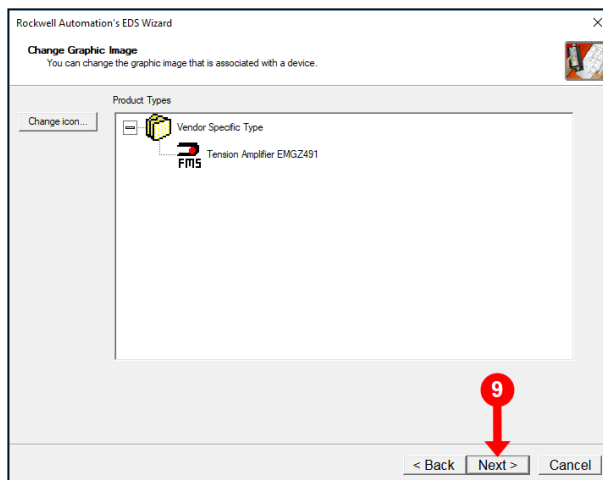


- Change the Path to the controller that you would like to use for the example program. If you have difficulty to change the path, use the Allen Bradley documentation for a further description.

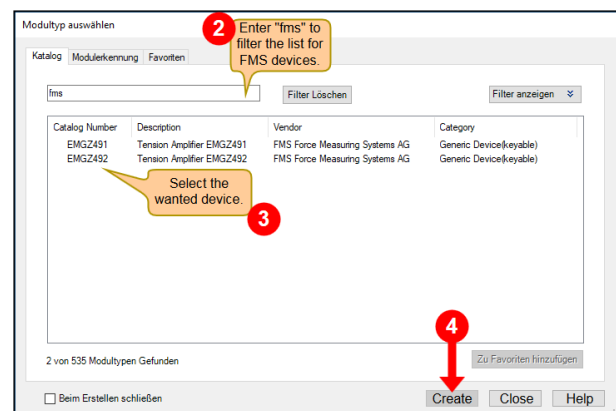
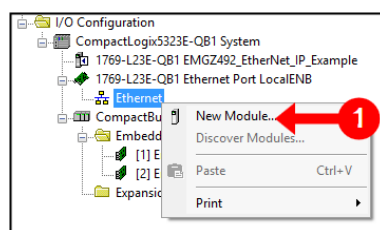


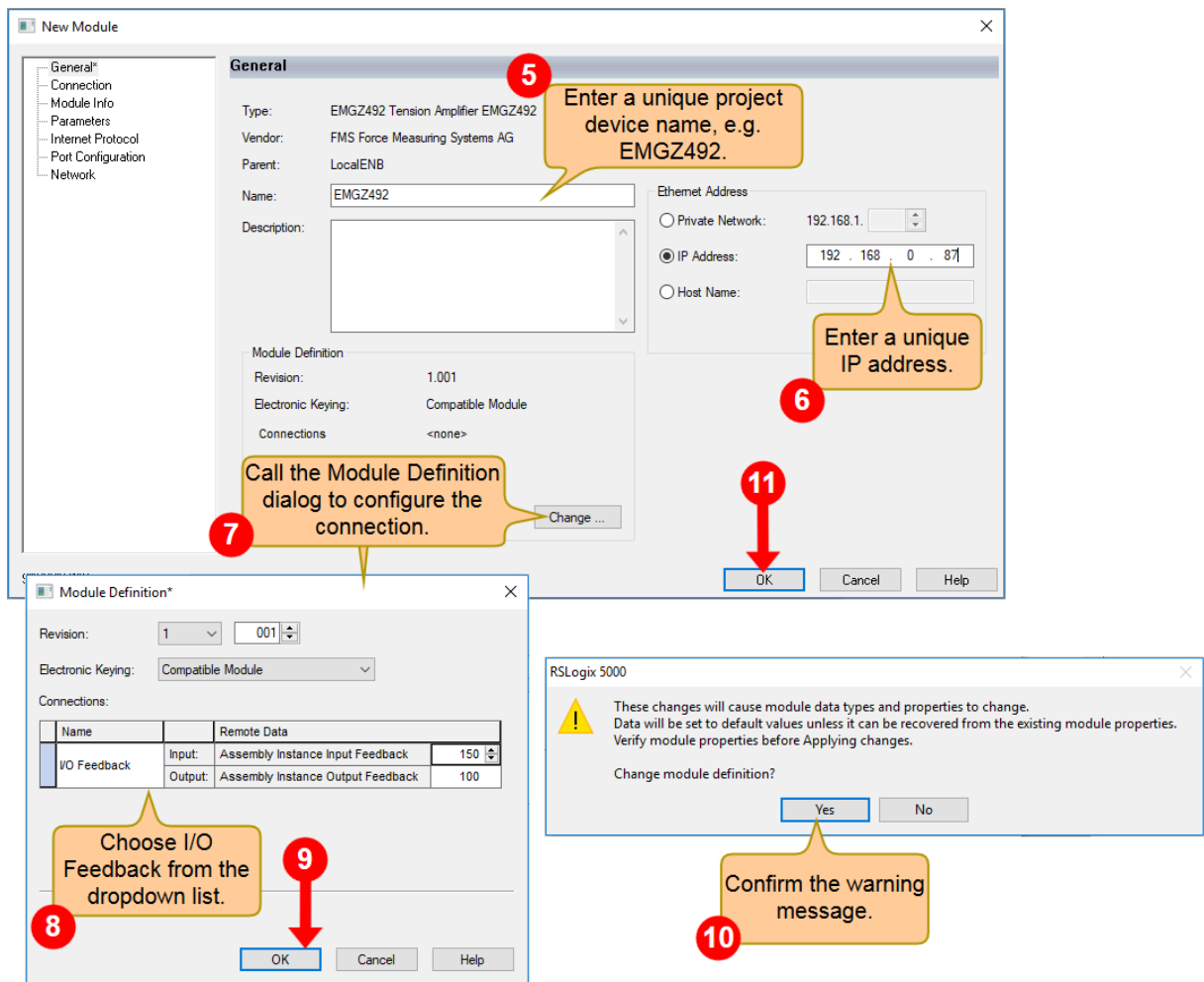
- To add the EMGZ491 or EMGZ492 to the project using the appropriate EDS file. Follow the steps on the below screenshots. After choosing the tool, there might appear a warning dialog to inform you about possible changes in the device configuration. Click on OK to accept changes. **2**





- 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.

1 Click on the dropdown list and choose "Go Online".

2 Every time a change has been made on the project, it must be downloaded to the PLC.

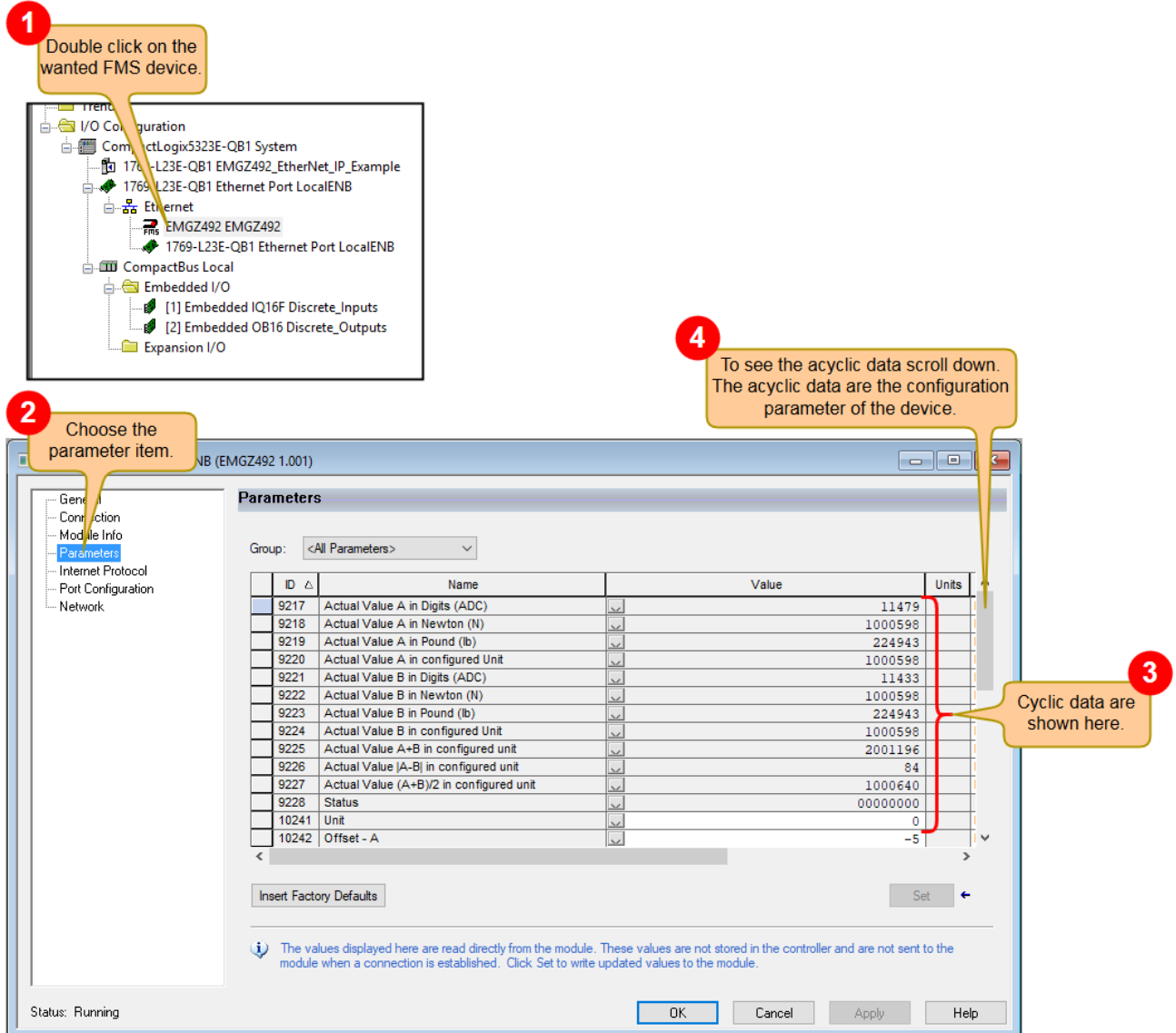
3 Confirm the download.

4

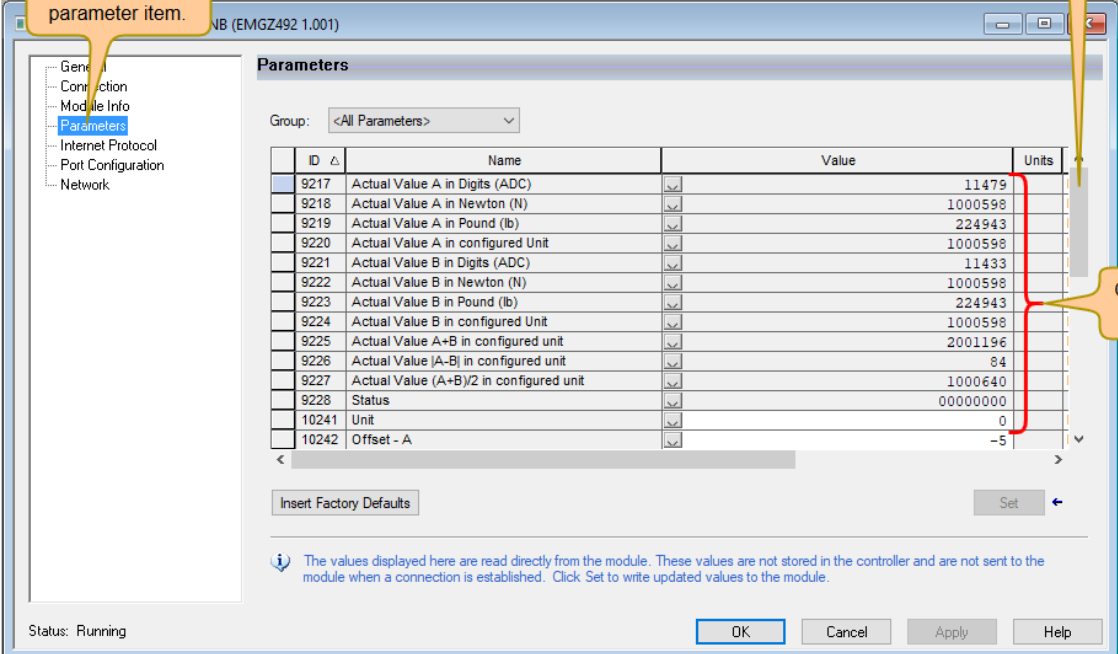
5 After a successful download, the controller goes online. The controller status must look like that.

- Open the Module Properties dialog.

1 Double click on the wanted FMS device.



2 Choose the parameter item.



4 To see the acyclic data scroll down. The acyclic data are the configuration parameter of the device.

3 Cyclic data are shown here.

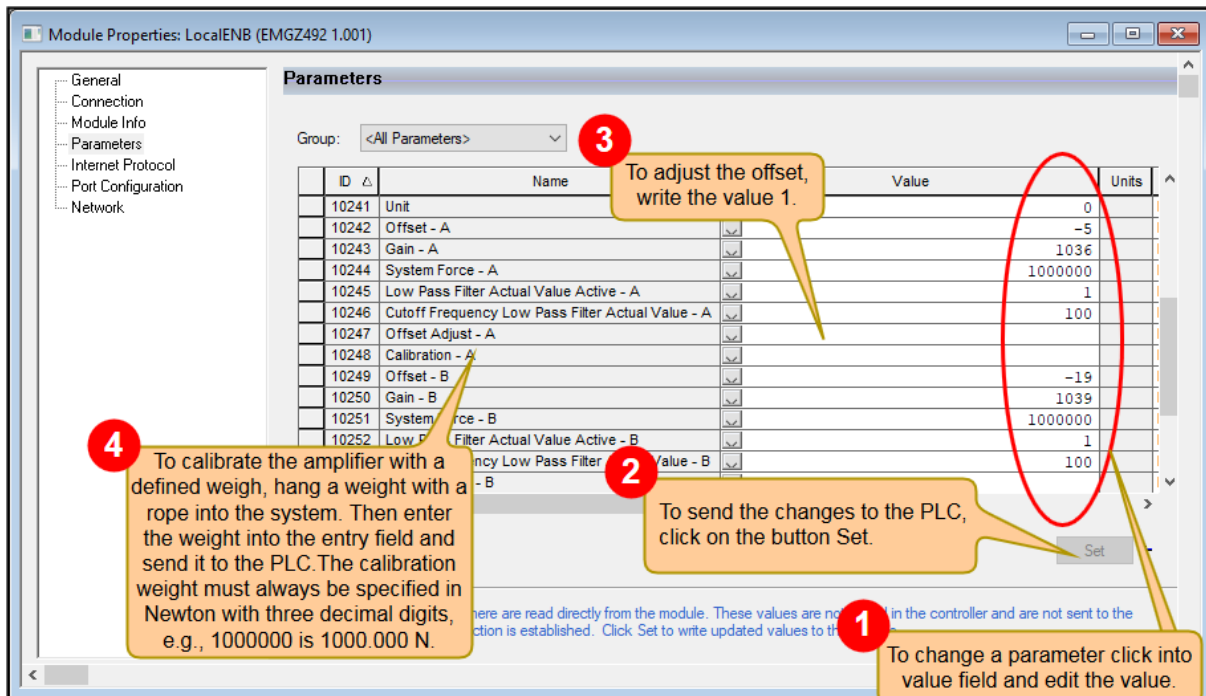
ID	Name	Value	Units
9217	Actual Value A in Digits (ADC)	11479	
9218	Actual Value A in Newton (N)	1000598	
9219	Actual Value A in Pound (lb)	224943	
9220	Actual Value A in configured Unit	1000598	
9221	Actual Value B in Digits (ADC)	11433	
9222	Actual Value B in Newton (N)	1000598	
9223	Actual Value B in Pound (lb)	224943	
9224	Actual Value B in configured Unit	1000598	
9225	Actual Value A+B in configured unit	2001196	
9226	Actual Value A-B in configured unit	84	
9227	Actual Value (A+B)/2 in configured unit	1000640	
9228	Status	00000000	
10241	Unit	0	
10242	Offset - A	-5	

The values displayed here are read directly from the module. These values are not stored in the controller and are not sent to the module when a connection is established. Click Set to write updated values to the module.

Status: Running

OK Cancel Apply Help

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



Module Properties: LocalENB (EMGZ492 1.001)

Parameters

Group: <All Parameters>

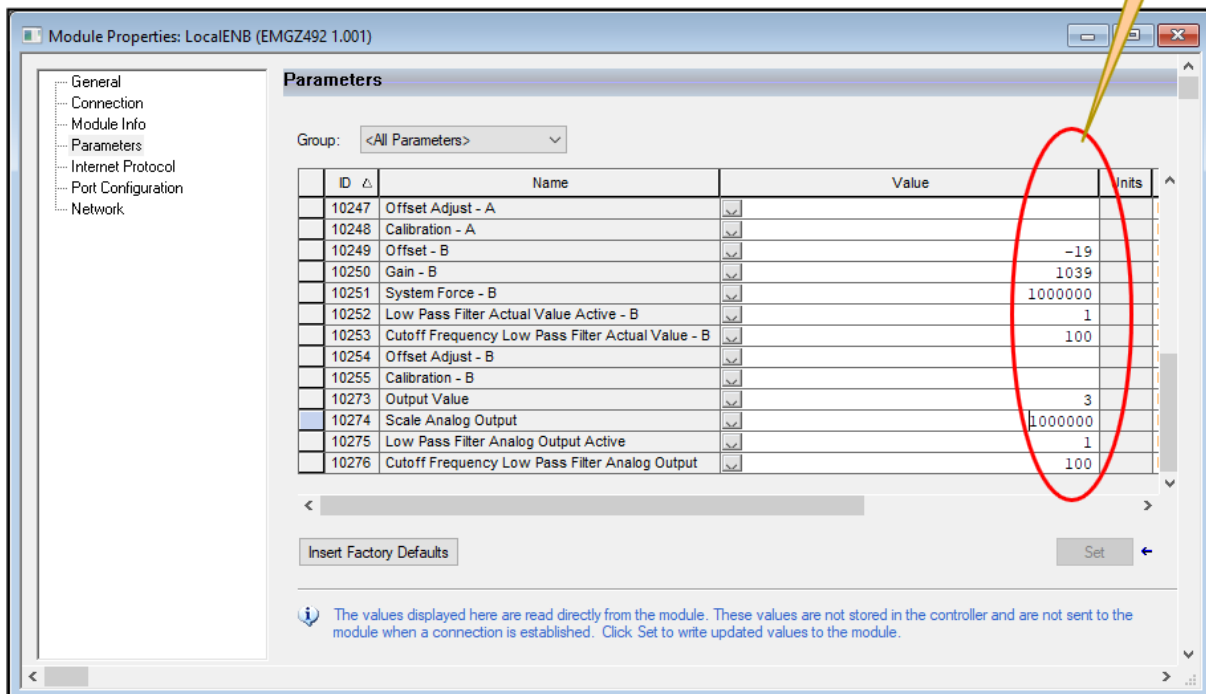
ID	Name	Value	Units
10241	Unit	0	
10242	Offset - A	-5	
10243	Gain - A	1036	
10244	System Force - A	1000000	
10245	Low Pass Filter Actual Value Active - A	1	
10246	Cutoff Frequency Low Pass Filter Actual Value - A	100	
10247	Offset Adjust - A		
10248	Calibration - A		
10249	Offset - B	-19	
10250	Gain - B	1039	
10251	System Force - B	1000000	
10252	Low Pass Filter Actual Value Active - B	1	
10253	Cutoff Frequency Low Pass Filter Actual Value - B	100	

Callout 1: To change a parameter click into value field and edit the value.

Callout 2: To send the changes to the PLC, click on the button Set.

Callout 3: To adjust the offset, write the value 1.

Callout 4: To calibrate the amplifier with a defined weigh, hang a weight with a rope into the system. Then enter the weight into the entry field and send it to the PLC. The calibration weight must always be specified in Newton with three decimal digits, e.g., 1000000 is 1000.000 N.



Module Properties: LocalENB (EMGZ492 1.001)

Parameters

Group: <All Parameters>

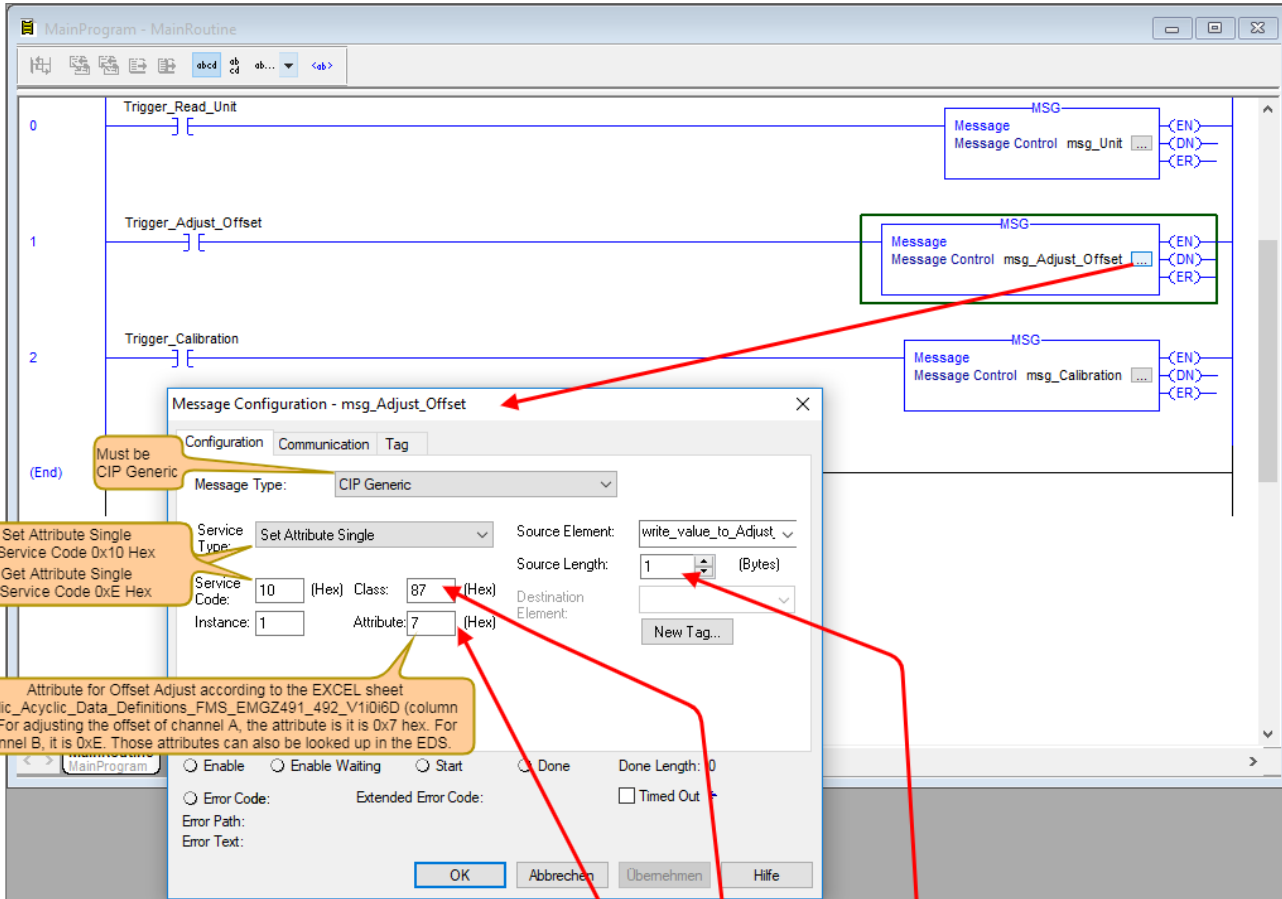
ID	Name	Value	Units
10247	Offset Adjust - A		
10248	Calibration - A		
10249	Offset - B	-19	
10250	Gain - B	1039	
10251	System Force - B	1000000	
10252	Low Pass Filter Actual Value Active - B	1	
10253	Cutoff Frequency Low Pass Filter Actual Value - B	100	
10254	Offset Adjust - B		
10255	Calibration - B		
10273	Output Value	3	
10274	Scale Analog Output	1000000	
10275	Low Pass Filter Analog Output Active	1	
10276	Cutoff Frequency Low Pass Filter Analog Output	100	

Callout 1: To send the changes to the PLC, click on the button Set.

Writing Parameters from a PLC Program

This chapter shows how to write parameters from a PLC program. It is an example of adjusting the offset of channel A. All other parameters are handled in the same manner.

In general, for reading and writing parameters, messages must be used.



Message Configuration - msg_Adjust_Offset

Configuration Communication Tag

Message Type: CIP Generic

Service Type: Set Attribute Single

Service Code: 10 (Hex) Class: 87 (Hex) Attribute: 7 (Hex)

Instance: 1

Source Element: write_value_to_Adjust

Source Length: 1 (Bytes)

Destination Element: New Tag...

Enable Enable Waiting Start Done Done Length: 0

Error Code: Extended Error Code: Timed Out

Error Path: Error Text:

OK Abbrechen Übernehmen Hilfe

Extract of the EDS file

```

404 Param10247 =
405 0, reserved, shall equal 0
406 6,"20 87 24 01 30 07", $ Link Path Size, Link Path
407 0x0000, $ Descriptor
408 0xC2, $ Data Type
409 1, $ Data Size in bytes
410 "Offset Adjust - A", $ name
411 "", $ units
412 "", $ help string
413 0,0x7F,0, $ min, max, default data values
414 ,,,, $ mult, div, base, offset scaling
415 ,,,, $ mult, div, base, offset links
416 ; $ decimal places
    
```

Annotations:

- Must be CIP Generic
- Set Attribute Single -> Service Code 0x10 Hex
- Get Attribute Single -> Service Code 0xE Hex
- Attribute for Offset Adjust according to the EXCEL sheet Cyclic_Acyclic_Data_Definitions_FMS_EMGZ491_492_V10i6D (column S). For adjusting the offset of channel A, the attribute is it is 0x7 hex. For channel B, it is 0xE. Those attributes can also be looked up in the EDS.

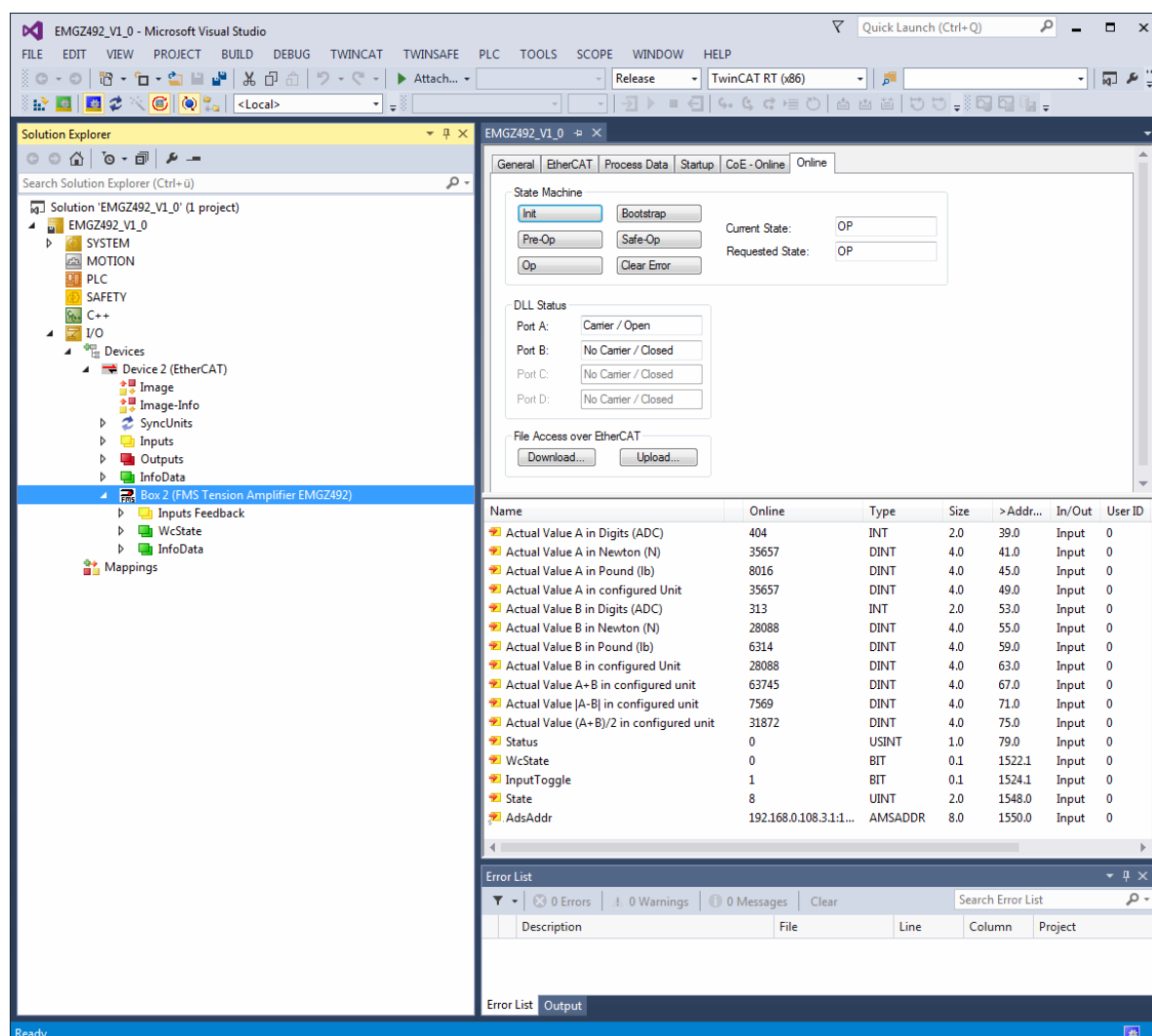
TwinCAT 3 - EtherCAT

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).

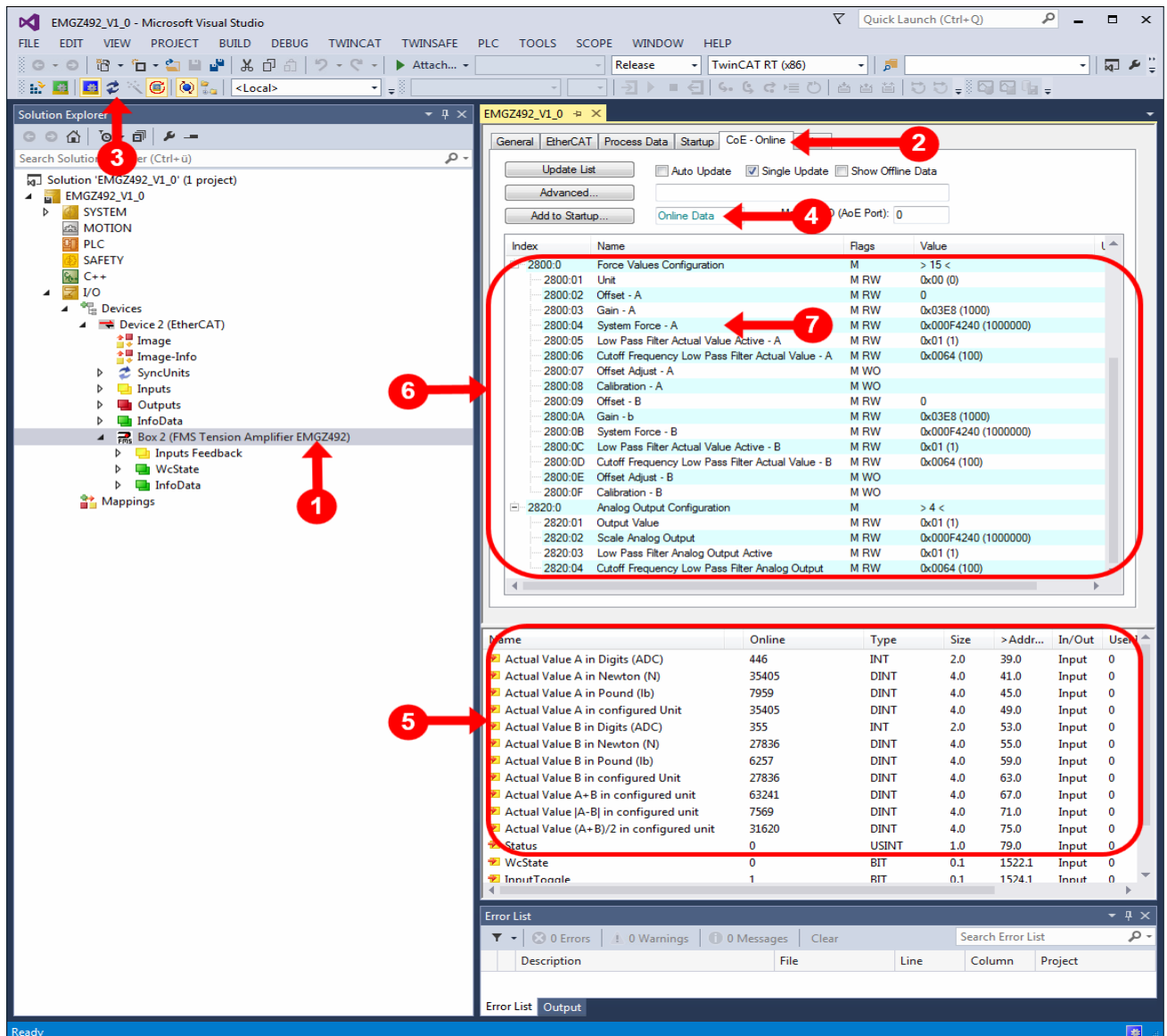
The screen should now show the project similar to the following picture.



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.



The screenshot shows the TwinCAT 3 interface with the following components and annotations:

- Annotation 1:** Points to the 'Box 2 (FMS Tension Amplifier EMGZ492)' in the Solution Explorer under the 'I/O' section.
- Annotation 2:** Points to the 'CoE - Online' tab in the main window.
- Annotation 3:** Points to the 'Reload Devices' button in the top toolbar.
- Annotation 4:** Points to the 'Online Data' button in the CoE-Online tab.
- Annotation 5:** Points to the 'Actual Value A in Digits (ADC)' entry in the 'Actual Value' table.
- Annotation 6:** Points to the 'Inputs' folder in the Solution Explorer.
- Annotation 7:** Points to the 'System Force - A' entry in the 'Force Values Configuration' table.

Force Values Configuration Table:

Index	Name	Flags	Value
2800:0	Force Values Configuration	M	> 15 <
2800:01	Unit	M RW	0x00 (0)
2800:02	Offset - A	M RW	0
2800:03	Gain - A	M RW	0x03E8 (1000)
2800:04	System Force - A	M RW	0x000F4240 (1000000)
2800:05	Low Pass Filter Actual Value Active - A	M RW	0x01 (1)
2800:06	Cutoff Frequency Low Pass Filter Actual Value - A	M RW	0x0064 (100)
2800:07	Offset Adjust - A	M WO	
2800:08	Calibration - A	M WO	
2800:09	Offset - B	M RW	0
2800:0A	Gain - b	M RW	0x03E8 (1000)
2800:0B	System Force - B	M RW	0x000F4240 (1000000)
2800:0C	Low Pass Filter Actual Value Active - B	M RW	0x01 (1)
2800:0D	Cutoff Frequency Low Pass Filter Actual Value - B	M RW	0x0064 (100)
2800:0E	Offset Adjust - B	M WO	
2800:0F	Calibration - B	M WO	

Actual Value Table:

Name	Online	Type	Size	>Addr...	In/Out	Used
Actual Value A in Digits (ADC)	446	INT	2.0	39.0	Input	0
Actual Value A in Newton (N)	35405	DINT	4.0	41.0	Input	0
Actual Value A in Pound (lb)	7959	DINT	4.0	45.0	Input	0
Actual Value A in configured Unit	35405	DINT	4.0	49.0	Input	0
Actual Value B in Digits (ADC)	355	INT	2.0	53.0	Input	0
Actual Value B in Newton (N)	27836	DINT	4.0	55.0	Input	0
Actual Value B in Pound (lb)	6257	DINT	4.0	59.0	Input	0
Actual Value B in configured Unit	27836	DINT	4.0	63.0	Input	0
Actual Value A+B in configured unit	63241	DINT	4.0	67.0	Input	0
Actual Value [A-B] in configured unit	7569	DINT	4.0	71.0	Input	0
Actual Value (A+B)/2 in configured unit	31620	DINT	4.0	75.0	Input	0
Status	0	USINT	1.0	79.0	Input	0
WcState	0	BIT	0.1	1522.1	Input	0
InputTenable	1	RIT	0.1	1574.1	Input	0

Change parameters

- The parameters can be changed here. Open the tree index 2800 and 2820. After that, all parameters will be visible.
- 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.

The 'Set Value Dialog' window is shown with the following fields and controls:

- Dec:** 1000000
- Hex:** 0x000F4240
- Float:** 1.4012985e-39
- Bool:** 0 (selected), 1
- Binary:** 40 42 0F 00
- Bit Size:** 1, 8, 16, 32 (selected), 64, ?
- Buttons:** OK, Cancel, Hex Edit...

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

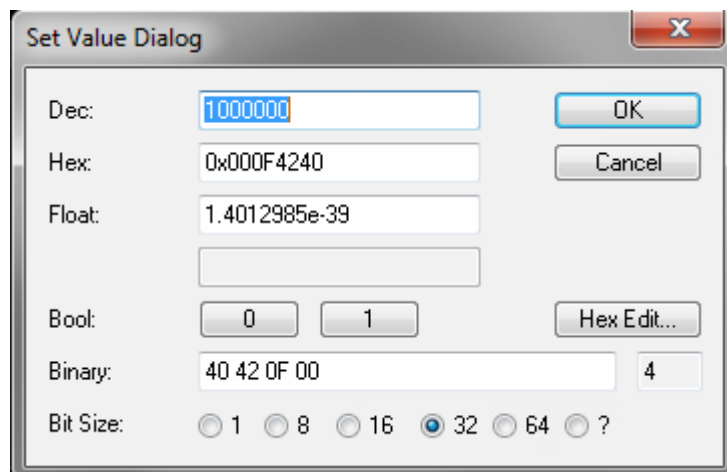
Double click on the parameter Offset Adjust. In the Set Value Dialog click on button 0 and OK. Be sure that the load call sensor is not loaded.

The 'Set Value Dialog' window is shown with the following fields and controls:

- Dec:** 0
- Hex:** 0x00
- Float:** (empty)
- Bool:** 0 (selected), 1
- Binary:** 00
- Bit Size:** 1, 8 (selected), 16, 32, 64, ?
- Buttons:** OK, Cancel, Hex Edit...

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).