DATA PANEL
POWERED BY MURRELEKTRONIK

Quickstart Guide xDB -1-200

Prerequisites:

- IFM control / display control
- CODESYS 3.5 with necessary packages
- DATA PANEL xtremeDB (DP-34044-1-200) module + accessories
- DC 12 / 24 V supply

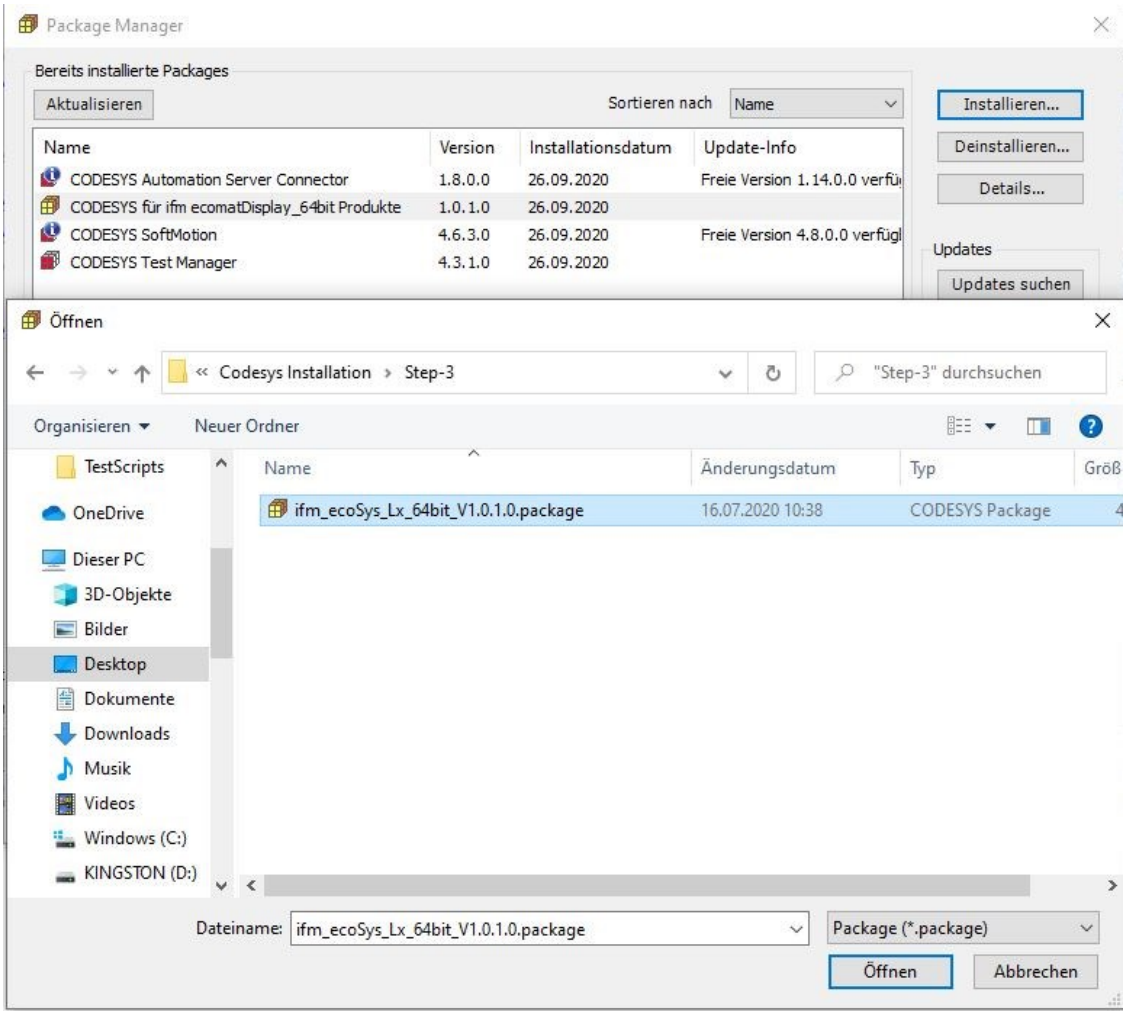
CODESYS PREPARE

Prepare CODESYS

Depending on the type of controller you are working with, the corresponding packages must be installed in CODESYS.

The packages for the respective controller are supplied or you can obtain them from the manufacturer's website or the CODESYS Store. A login may be required for the download.

- Open CODESYS
- In the taskbar at the top via "**Tools -> Package Manager... "** open the package manager
- Right click on **"Install..."** and install the corresponding package
- In the following example the integration of an ifm display control is described



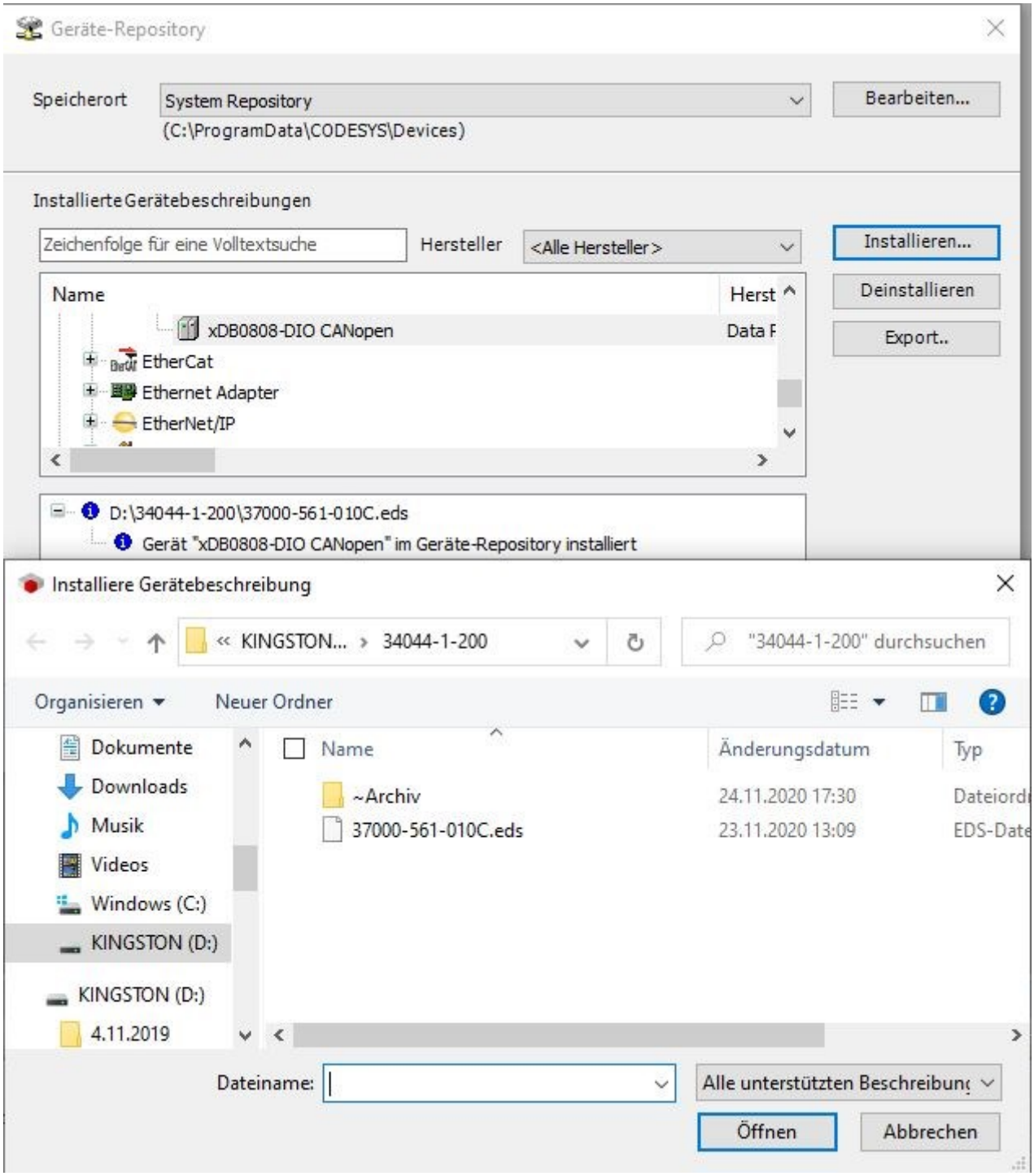
- Double-click or "Open" to install the package (this may take a moment)
- If the installation was successful, a corresponding message appears

CODESYS PREPARE

Install EDS device file

- Open the device repository via **"Tools->Device Repository" in the** taskbar at the top.
- A new device can be installed via the **"Install..."** button
- **Double click** on the desired file, alternatively select and **open** the ***. eds file** manually **.** The device appears in the list of added devices

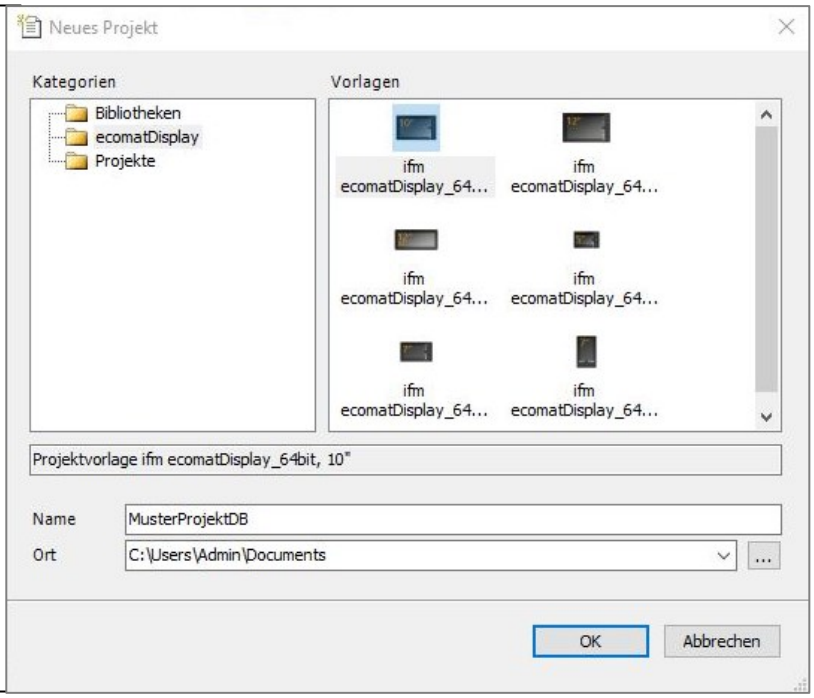
The permalink below always leads to the latest firmware and *. eds file:
https://drive.google.com/file/d/13cXGUYYZOG3lUt_rOJ86NG2fMGVgUtkJ/view



CODESYS PREPARE

CODESYS project

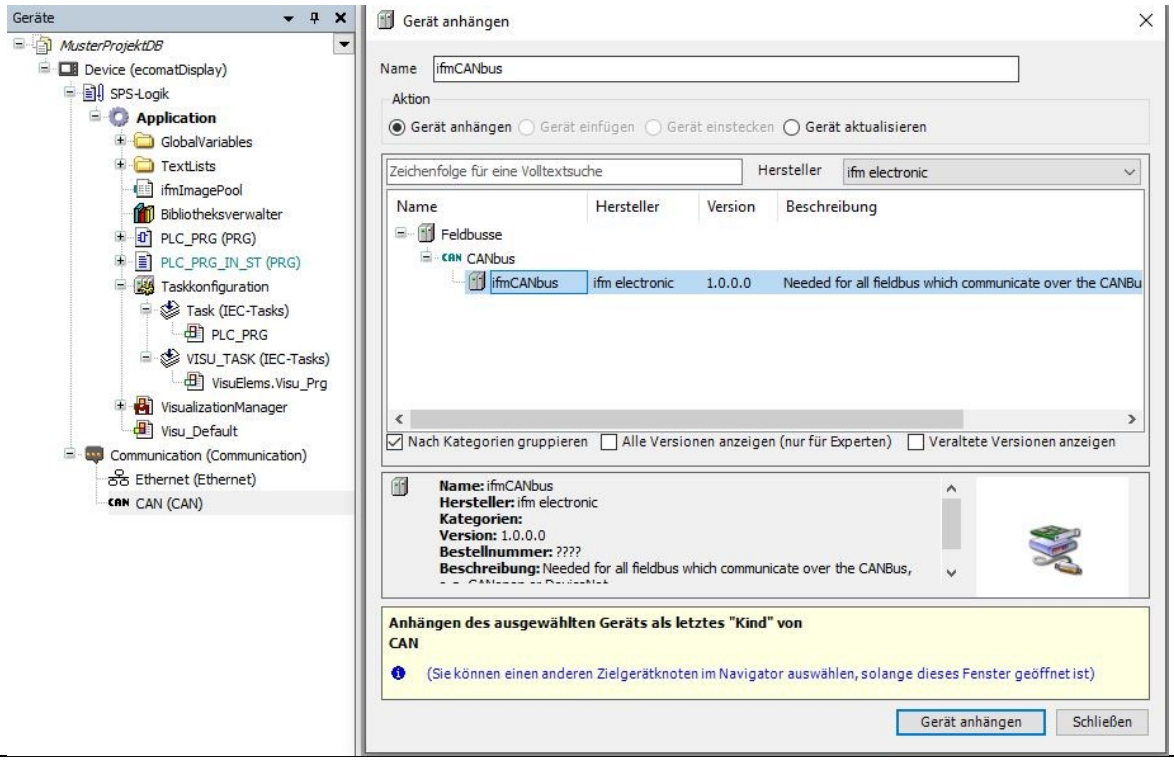
- Open CODESYS
- Create a new project via **File -> New** project
- Select the corresponding control via the library and confirm with **OK.** The action may take some time.



CAN communication

- Open the "Communication" node and right-click on "CAN -> Attach device".
- Select "ifm" as manufacturer and append the "ifmCANbus
- Close this window

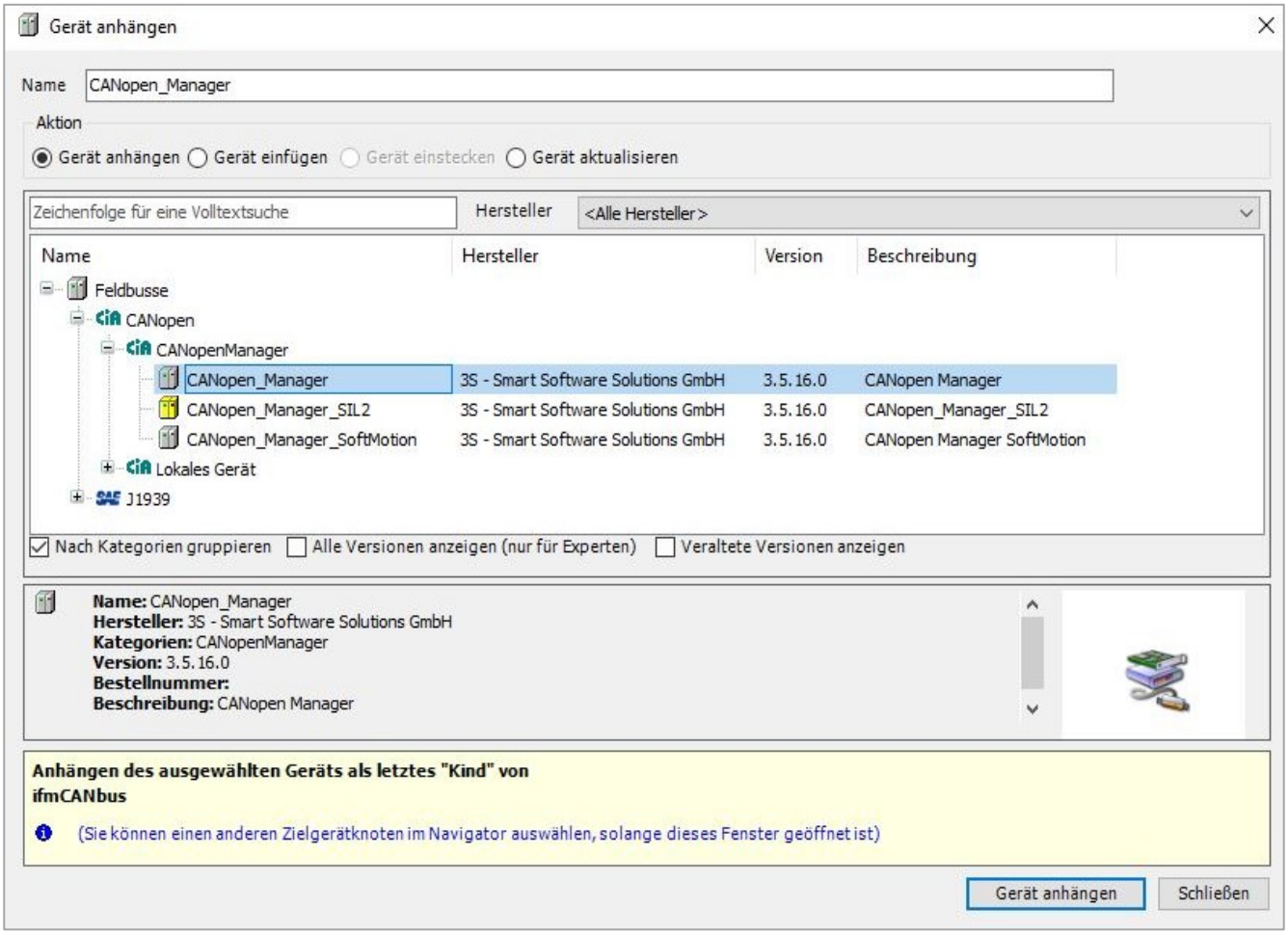
The controller must be CANopen capable. If you want to work with SAE J1939, you can find a CODESYS function block for our modules under the following links:
V2.3: https://www.data-panel.eu/media/archive/CODESYS-23-Demo-DP-34044-x-000.zip
V3.5: https://www.data-panel.eu/media/archive/CODESYS-35-Demo-DP-34044-x-000.zip



CODESYS PREPARE

CANopen Manager

- Right click on the just inserted **"ifmCANbus -> Attach device".**
- Change manufacturer filter to **<all manufacturers>.**
- Select the device via **"CANopen -> CANopenManager -> CANopenManager"** and attach it.



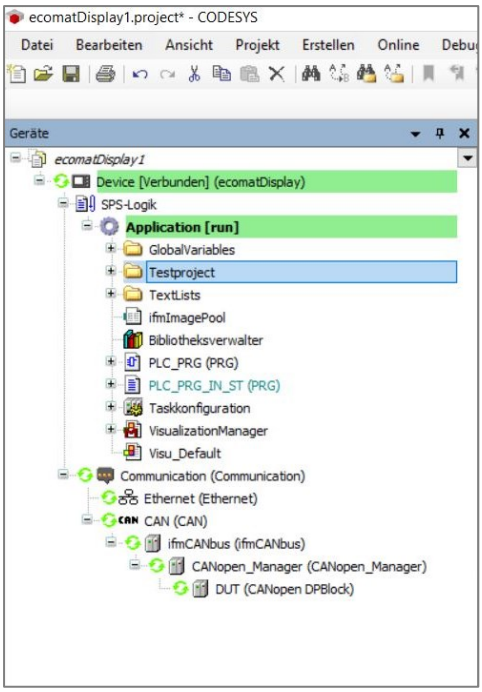
CODESYS PREPARE

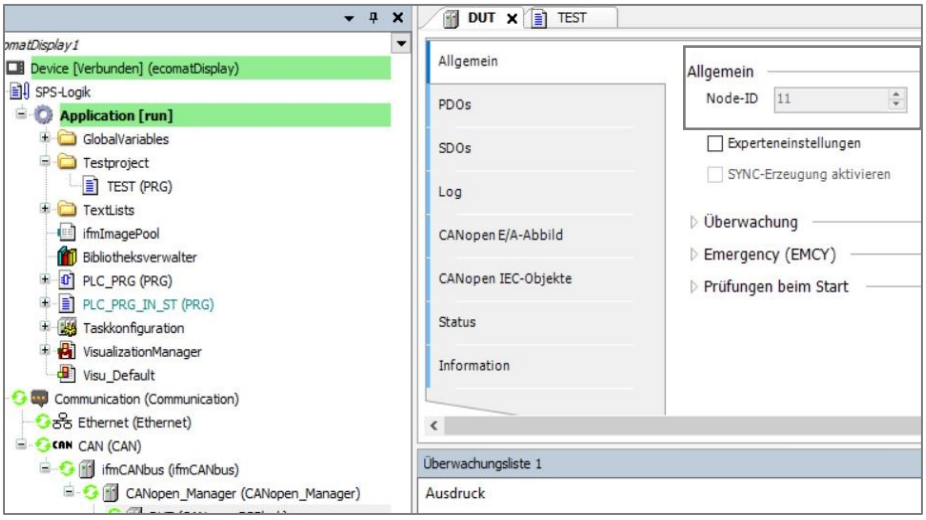
STEP 1

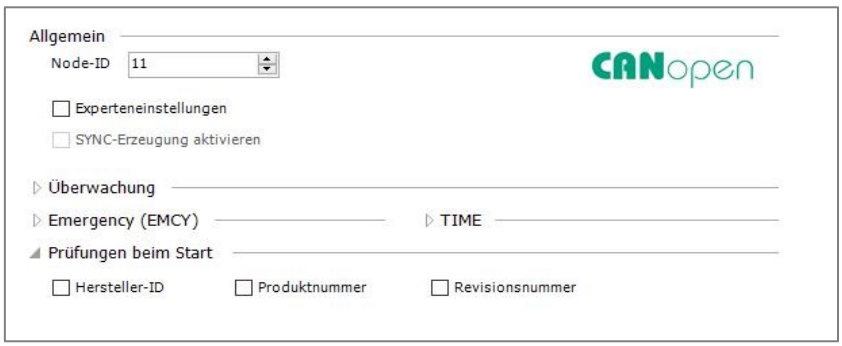
- Append a new device to the CANopen_Manager (right click -> Append device)
- Select the correct module based on the *. eds file and close it

STEP 2

- Open the configuration of the new device and set the node ID.
- Then go online, no errors should be displayed in CODESYS and the **COM LED** on the module should be permanently green.







Node ID	Jumper Config1 A (Pin2) -> B (Pin8)	Jumper Config2 A (Pin3) -> B (Pin9)	Jumper Config3 A (Pin4) -> B (Pin10)	Jumper Config4 A (Pin5) -> B (Pin11)
1				
2	X			
3		X		
4	X	X		
8	X	X	X	
9				X
...				
16	X	X	X	X

ADDRESS

- xtremeDB CANopen modules have the base node ID 1 preset
- The offset set by means of wire jumpers on the module is added to the base node ID. E.g. If the node ID 2 is set in CODESYS, the offset 1 must therefore be jumpered on the module.

VENDOR ID

For the first series modules, the vendor ID was not stored in the firmware. In this case please either update the firmware of the module or deactivate the check of the vendor ID.

OUTPUT SDO GLOBAL / INDIVIDUAL

There are two possibilities to configure the signal pins of the module. The **global** configuration as DI or DO by means of index **2000:3** or alternatively the **individual** configuration by means of index **2001**.

Example of global configuration:
If a 1 is stored in index **2000:3**, all signal pins are configured as digital outputs (DO).

2000		Spare			5,6	Spare
		Spare			7,8	Spare
	3	Output Mode	Byte	3	-	Sets the global configuration of ALL the outputs. Overrides Index 2001. 0=Mode 1 Not Used, 1=ON/OFF, 2=Data 0-4000, 3=Percent 0-100.0% (0-1000) (4=Amps (0-4000 mA) cannot be used in this mode)

Only digital outputs can be parameterized via the global configuration. For all other signal types (PWM, PWMi etc.) the individual configuration must be used.

Individual configuration:

The index **2001:x is** used for the individual configuration per signal pin. The configuration for port 1, for example, is done via subindex **2001:1**. The configuration values are identical to the values in index 2000. The parameterization is done in hex code, the first digit is valid for port 1, pin 2 (signal B) and the second digit for port 1, pin 4 (signal A).

The first digit configures pin 2 (signal B), the second digit the pin 4 (signal A) of the respective port. For an individual configuration the index 2000:3 must be written with a "0".

Element aus dem Objektverzeichnis auswählen

Global configuration

Individual Output configuration

Index:Subindex	Name	Zugriffstyp	Datenty
16#2000	Module Global Configuration		
:16#00	Highest sub-index supported	RW	USINT
:16#01	d1 - d8_Enable	RW	USINT
:16#02	d9 - d16_Enable	RW	USINT
:16#03	Output_Mode	RW	USINT
:16#04	Input_Mode	RW	USINT
:16#05	ID	RW	USINT
16#2001	Module I/O Configuration		
:16#00	Highest sub-index supported	RW	USINT
:16#01	OUTMODE_1	RW	USINT
:16#02	OUTMODE_2	RW	USINT
:16#03	OUTMODE_3	RW	USINT
:16#04	OUTMODE_4	RW	USINT
:16#05	INMODE_5	RW	USINT
:16#06	INMODE_6	RW	USINT
:16#07	INMODE_7	RW	USINT
:16#08	INMODE_8	RW	USINT
16#2002	Module PWMi PID Configuration		

OUTPUT DO - GLOBAL

For the global configuration of all outputs as DO (black and white) normally no configuration steps in the SDO are necessary. If the entire module is to be configured as DO, it is necessary to write the value 11 to index 2000:3. This configures all signal pins as digital output.

55	16#180B:16#05	Set event time	16#0000	16	☐	☐	
56	16#180B:16#01	Set and enable COB-ID	16#000003C1	32	☐	☐	
57	16#2000:16#03	Output_Mode	16#11	8	☐	☐	

The CANopen I/O image can be used to declare and activate the variables for ports 1 to 4.

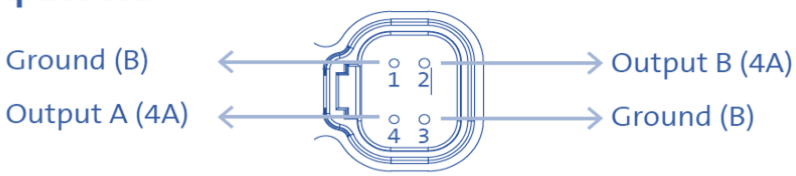
Either the entire integer variable **Output_1** can be used for this, alternatively the individual bits can also be declared.

Find | Filter Show all | Add FB for IO

Variable	Mapping	Channel	Address	Type	Current Value
		Output_1	%QB0	USINT	1
D1Output1B0		Bit0	%QX0.0	BOOL	TRUE
D1Output1B1		Bit1	%QX0.1	BOOL	FALSE
		Bit2	%QX0.2	BOOL	FALSE
		Bit3	%QX0.3	BOOL	FALSE
		Bit4	%QX0.4	BOOL	FALSE
		Bit5	%QX0.5	BOOL	FALSE
		Bit6	%QX0.6	BOOL	FALSE
		Bit7	%QX0.7	BOOL	FALSE
		Output_2	%QB1	USINT	0

Go online with the controller and download the program. Force the variable **D1OutputB0** to "True". Alternatively, store a value in the **Dash1Output2** variable.

Output Ports



Port / Signal	Value	Port / Signal	Value
P1A	00 00 00 01	P3A	00 01 00 00
P1B	00 00 00 10	P3B	00 10 00 00
P2A	00 00 01 00	P4A	01 00 00 00
P2B	00 00 10 00	P4B	10 00 00 00

OUTPUT PWMI EXAMPLE PORT 1 A & PORT 1 B - INDIVIDUAL

To use the module with PWM outputs it is necessary that the signal pins are configured individually. For this purpose the global configuration index **2000:3** must be set to **0.**

For each subindex there are two values for configuration. See also SDO global / individual. Example: For the configuration of signals 1B and 2AB as PWMi output, index **2001:1** must be written with **"40"** and **2000:2** with **"44".** Further configuration possibilities can be taken from the manual.

61	16#2000:16#03	Output_Mode	16#0	8	☐	☐	0
62	16#2001:16#01	OUTMODE_1	16#44	8	☐	☐	0

Afterwards the different signals can be activated via the CANopen I/O image. For this purpose assign a value between 0-4000 (0 - 4 A) e.g. Port_1B.

If a value greater than 4000 is sent, the maximum value of 4000 is set

Filter Show all

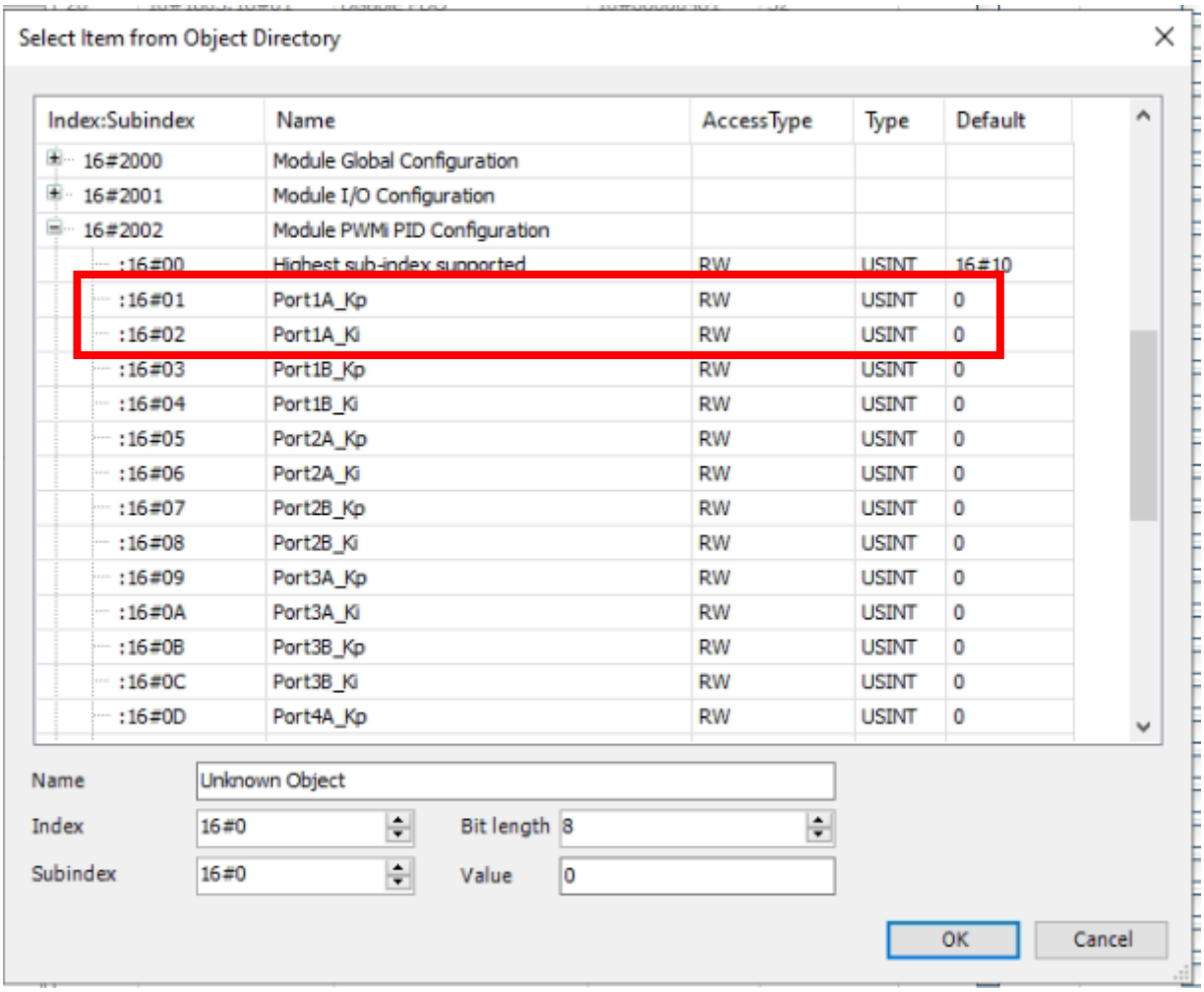
ariable	Mapping	Channel	Address	Type	
		Output_1	%QB0	USINT	0
		Output_2	%QB1	USINT	0
		Sensor_1	%QB2	USINT	0
		Port_1A	%QW2	INT	2500
		Port_1B	%QW3	INT	2500
		Port_2B	%QW5	INT	0
		Port_3A	%QW6	INT	0
		Port_3B	%QW7	INT	0
		Port_4A	%QW8	INT	0

OUTPUT PWMI PORT 1 A KP & KI CONTROL RESPONSE

A PI controller is integrated in the module. The individual PWMi outputs can be adjusted in their control behavior. For each pin (4 (A) or 2 (B)) the control behavior can be configured individually.

For a control behavior at **port 1 A the** index **2002:01 & 2002:02** should be set. Values between 0 and 250 are possible (0 - 2.5)

If no value is stored in the respective index, the default value of 100 (1.0) applies



DIAGNOSTICS PORT 1 A & B AMP FEEDBACK

If now e.g. a **current value** is set on the channel **Port_1A** (below declared as variable **D1OutputP1A**), the applied **current** on the channel **Port_1A** (below declared as variable **D1OutputP1A_FB**) can be read back.

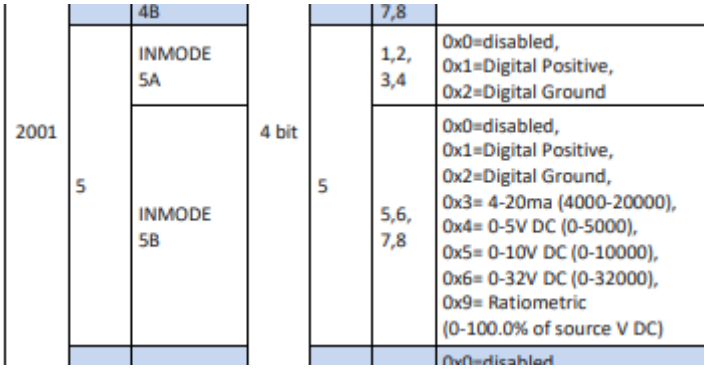
Both channels have the same channel name, the actual values are returned to the variable with the higher address and the _FB (feedback) appendix.

	Sensor_1	%QB2	USINT	0
D1OutputP1A	Port_1A	%QW	INT	2500
D1OutputP1B	Port_1B	%QW3	INT	2500
	Port_2A	%QW4	INT	0
	Port_2B	%QW5	INT	0
	Port_3A	%QW6	INT	0
	Port_3B	%QW7	INT	0
	Port_4A	%QW8	INT	0
	Port_4B	%QW9	INT	0
	Input_1	%IB0	USINT	0
	Port 5A	%IW1	INT	0
	Port 5B	%IW2	INT	0
	Port 6A	%IW3	INT	0
	Port 6B	%IW4	INT	0
	Port 7A	%IW5	INT	0
	Port 7B	%IW6	INT	0
	Port 8A	%IW7	INT	0
	Port 8B	%IW8	INT	0
	FREQ_1	%IW9	INT	0
	FREQ_2	%IW10	INT	0
	FREQ_3	%IW11	INT	0
	FREQ_4	%IW12	INT	0
	d1-d8	%IB26	USINT	0
	d9-d16	%IB27	USINT	0
	Active_Fault_Code	%IB28	USINT	0
	Configuration_ID	%IB29	USINT	0
	d1-d8_Message	%IB30	USINT	0
	d9-d16_Message	%IB31	USINT	0
	Status_Output1-2	%IB32	USINT	0
	Status_Output3-4	%IB33	USINT	0
	Sensor_Power5-6	%IB34	USINT	0
	Sensor_Power7-8	%IB35	USINT	0
	Power	%IB36	USINT	0
	Save_Counter	%IB37	USINT	0
	VBAT	%IW19	UINT	0
	TEMP	%IW20	UINT	0
	CNFG1	%IW21	UINT	0
	CNFG2	%IW22	UINT	0
D1OutputP1A_FB	Port_1A	%IW2	UINT	2470
D1OutputP1B_FB	Port_1B	%IW24	UINT	2447

INPUT SDO GLOBAL / INDIVIDUAL

There are two possibilities to configure the signal pins of the module. The **global** configuration as DI by means of index **2000:3** or alternatively the **individual** configuration by means of index **2001**.

Example global configuration:
If a 1 is stored in index **2000:4**, all signal pins are configured as digital PNP inputs (DI).



		4B				7,8	
2001	5	INMODE 5A		4 bit	5	1,2, 3,4	0x0=disabled, 0x1=Digital Positive, 0x2=Digital Ground
		INMODE 5B				5,6, 7,8	0x0=disabled, 0x1=Digital Positive, 0x2=Digital Ground, 0x3= 4-20ma (4000-20000), 0x4= 0-5V DC (0-5000), 0x5= 0-10V DC (0-10000), 0x6= 0-32V DC (0-32000), 0x9= Ratiometric (0-100.0% of source V DC)
							0x0=disabled

Only digital inputs (PNP or NPN) can be parameterized via the global configuration. For all other signal types (analog, ratiometric, etc.) the individual configuration must be used.

Individual configuration:

The index **2001:x is** used for the individual configuration. E.g. the subindex **2001:5 is used** for the individual configuration of port 5 (A & B). The configuration values are identical to index 2000. The parameterization is done in hex code, the first digit is valid for port 1 pin 2 (signal B) and the second digit for port 1 pin 4 (signal A).

The first digit configures pin 2 (signal B), the second digit pin 4 (signal A) of the respective port. For an individual configuration it is important to ensure, that the index 2000:4 is set to"0".

Element aus dem Objektverzeichnis auswählen

Index:Subindex	Name	Zugriffstyp	Datenty
16#2000	Module Global Configuration		
:16#00	Highest sub-index supported	RW	USINT
:16#01	d1 - d8_Enable	RW	USINT
:16#02	d9 - d16_Enable	RW	USINT
:16#03	Output_Mode	RW	USINT
:16#04	Input_Mode	RW	USINT
:16#05	ID	RW	USINT
16#2001	Module I/O Configuration		
:16#00	Highest sub-index supported	RW	USINT
:16#01	OUTMODE_1	RW	USINT
:16#02	OUTMODE_2	RW	USINT
:16#03	OUTMODE_3	RW	USINT
:16#04	OUTMODE_4	RW	USINT
:16#05	INMODE_5	RW	USINT
:16#06	INMODE_6	RW	USINT
:16#07	INMODE_7	RW	USINT
:16#08	INMODE_8	RW	USINT
16#2002	Module PWMi PID Configuration		

Global configuration

Individual Input configuration

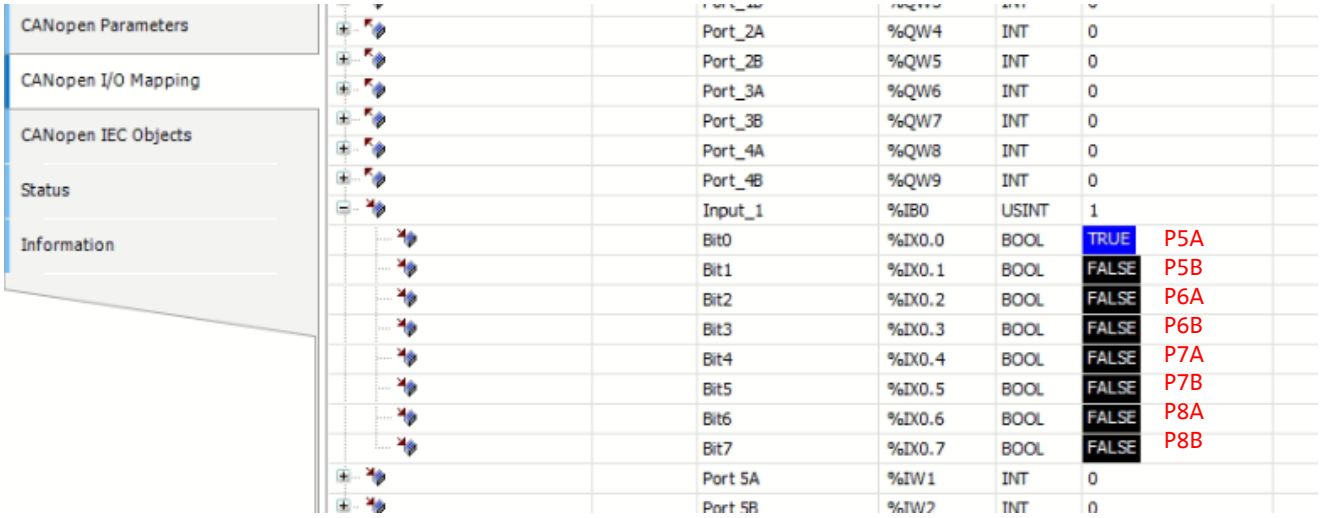
INPUT DI - GLOBAL

For the global configuration of all inputs as DI (black and white) normally no configuration steps in the SDO are necessary. If the entire module is to be configured as DI PNP, it is necessary to write the value **"11" to** index **2000:4.** This configures all signal pins as digital input.

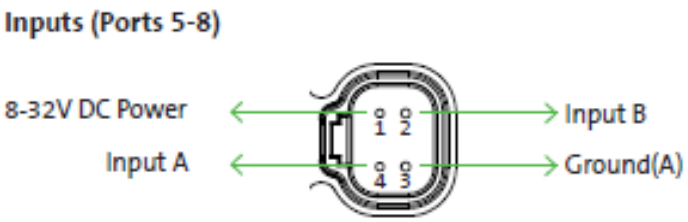
59	16#1809:16#05	Set event time	16#0000	16	☐	☐	0
60	16#1809:16#01	Set and enable COB-ID	16#000002E1	32	☐	☐	0
61	16#2000:16#04	Input_Mode	16#11	8	☐	☐	0

The CANopen I/O image can be used to declare and activate the variables for ports 5-8.

Either the entire integer variable **Input_1** can be used for this, alternatively the individual bits can be declared.



Go online with the controller and download the program. Then a sensor can be connected to the corresponding port. If this is attenuated, the signal arrives in the CANopen I/O image.



Port / Pin	Value	Port /Pin	Value
P5A	00 00 00 01	P7A	00 01 00 00
P5B	00 00 00 10	P7B	00 10 00 00
P6A	00 00 01 00	P8A	01 00 00 00
P6B	00 00 10 00	P8B	10 00 00 00

INPUT AI 0-10V PORT 5B - INDIVIDUAL

To read in analog signals with the inputs, it is necessary to configure the signal pins individually. For this it is necessary that the global configuration index **2000:4 is** written with a **"0".** For the configuration of port 5 pin 2 it is necessary to describe the index **2001:5** with a **"5"** or if pin 4 is not to be used **"50".**

Analog inputs can only be configured for pin 2 (signal B) of each port

60	16#1809:16#01	Set and enable COB-ID	16#000002E1	32	☐	☐	0
61	16#2000:16#04	Input_Mode	16#0	8	☐	☐	0
62	16#2001:16#05	INMODE_5	16#50	8	☐	☐	0

Afterwards the input value can be read in the CANopen I/O image.

Should the sensor act outside the measuring range, the respective maximum value is returned

	Port 5B	%IW2	INT	1697
	Bit0	%IX4.0	BOOL	TRUE
	Bit1	%IX4.1	BOOL	FALSE
	Bit2	%IX4.2	BOOL	FALSE
	Bit3	%IX4.3	BOOL	FALSE
	Bit4	%IX4.4	BOOL	FALSE
	Bit5	%IX4.5	BOOL	TRUE
	Bit6	%IX4.6	BOOL	FALSE
	Bit7	%IX4.7	BOOL	TRUE
	Bit8	%IX5.0	BOOL	FALSE
	Bit9	%IX5.1	BOOL	TRUE
	Bit10	%IX5.2	BOOL	TRUE
	Bit11	%IX5.3	BOOL	FALSE
	Bit12	%IX5.4	BOOL	FALSE
	Bit13	%IX5.5	BOOL	FALSE
	Bit14	%IX5.6	BOOL	FALSE
	Bit15	%IX5.7	BOOL	FALSE

INPUT AI 4-20MA PORT 6B - INDIVIDUAL

To use analog inputs it is necessary to configure the signal pins individually. For this it is necessary that the global configuration index **2000:4 is** written with a **"0".** For the individual configuration of port 6 pin 2 (signal B) it is necessary to describe the index **2001:6** with a **"3"** or if pin 4 is not to be used **"30".**

Analog inputs can only be configured for pin 2 (signal B) of each port

61	16#2000:16#04	Input_Mode	16#0	8	☐	☐	0
62	16#2001:16#05	INMODE_5	16#50	8	☐	☐	0
63	16#2001:16#06	INMODE_6	16#30	8	☐	☐	0

Afterwards the read back values can be read in the CANopen I/O image.

Should the sensor act outside its range, the respective maximum value is returned

ıriable	Mapping	Channel	Address	Type	
		Port 5A	%IW1	INT	0
		Port 5B	%IW2	INT	10030
		Port 6A	%IW3	INT	0
		Port 6B	%IW4	INT	10354
		Bit0	%IX8.0	BOOL	FALSE
		Bit1	%IX8.1	BOOL	TRUE
		Bit2	%IX8.2	BOOL	FALSE
		Bit3	%IX8.3	BOOL	FALSE
		Bit4	%IX8.4	BOOL	TRUE
		Bit5	%IX8.5	BOOL	TRUE
		Bit6	%IX8.6	BOOL	TRUE
		Bit7	%IX8.7	BOOL	FALSE
		Bit8	%IX9.0	BOOL	FALSE
		Bit9	%IX9.1	BOOL	FALSE
		Bit10	%IX9.2	BOOL	FALSE
		Bit11	%IX9.3	BOOL	TRUE
		Bit12	%IX9.4	BOOL	FALSE
		Bit13	%IX9.5	BOOL	TRUE
		Bit14	%IX9.6	BOOL	FALSE
		Bit15	%IX9.7	BOOL	FALSE
		Port 7A	%IW5	INT	0
		Port 7B	%IW6	INT	0
		Port 8A	%IW7	INT	0

DIAGNOSTICS PORT 1 PIN A & B STATUS / ERROR

In addition to the returned current values, the status of the individual pins can also be queried. Index **5001** must be activated for this purpose.

Then the status of the outputs on port 5 and 6 can be queried via the variable **Status_Output5-6.** If an output is activated, the first bit is set. If an error occurs at the output, the second bit is set.

If no value is displayed, the index 1805:5 must be written with "C0". This SDO takes care of the cyclic data exchange

61	16#2004:16#01	Port_1A	16#55	8	☐	☐	
62	16#1809:16#05	Event Timer	16#FF	16	☐	☐	
63	16#5003:16#00	Highest sub-index supported	16#10	8	☐	☐	
64	16#5001:16#00	Highest sub-index supported	16#8	8	☐	☐	
65	16#5002:16#00	Highest sub-index supported	16#5	8	☐	☐	

D1OutputP1A	Port_1A	%QW2	INT	2500
D1OutputP1B	Port_1B	%QW3	INT	0
	Port_2A	%QW4	INT	0
	Port_2B	%QW5	INT	0
	Port_3A	%QW6	INT	0
	Port_3B	%QW7	INT	0
	Port_4A	%QW8	INT	0
	Port_4B	%QW9	INT	0
	Input_1	%IB0	USINT	0
	Port 5A	%IW1	INT	0
	Port 5B	%IW2	INT	0
	Port 6A	%IW3	INT	0
	Port 6B	%IW4	INT	0
	Port 7A	%IW5	INT	0
	Port 7B	%IW6	INT	0
	Port 8A	%IW7	INT	0
	Port 8B	%IW8	INT	0
	FREQ_1	%IW9	INT	0
	FREQ_2	%IW10	INT	0
	FREQ_3	%IW11	INT	0
	FREQ_4	%IW12	INT	0
	d1-d8	%IB26	USINT	0
	d9-d16	%IB27	USINT	0
	Active_Fault_Code	%IB28	USINT	0
	Configuration_ID	%IB29	USINT	0
	d1-d8_Message	%IB30	USINT	0
	d9-d16_Message	%IB31	USINT	252
	Status_Output1-2	%IB32	USINT	1
	Bit0	%IX32.0	BOOL	TRUE
	Bit1	%IX32.1	BOOL	FALSE

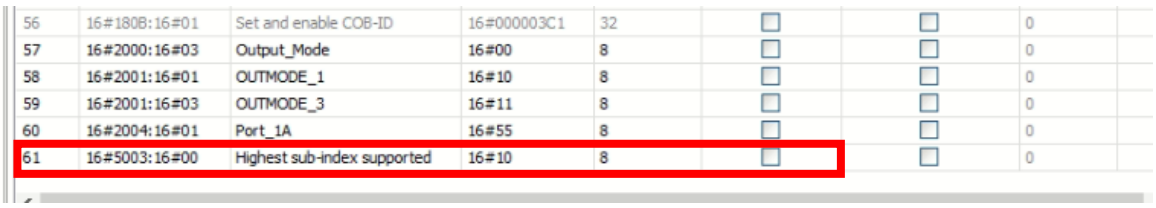
DIAGNOSTICS PORT 1 A & B AMP FEEDBACK

For every single signal pin (A or B) the actual current can be read back. To use the function, it is necessary to activate the diagnosis via SDO:

For this the index **5003:1** should be written with **"8"** (default value), then the current applied can be read back via the channel

If no value is displayed it is necessary to write "C0" to index 1807 / 1808:5 to switch on the cyclic data exchange.

If a constant load is used, the applied current is governed by Ohm's law. If PWMi is used, the control behavior of the output can additionally be influenced by the proportional and integral component (see p. 16).



56	16#180B:16#01	Set and enable COB-ID	16#000003C1	32	☐	☐	0
57	16#2000:16#03	Output_Mode	16#00	8	☐	☐	0
58	16#2001:16#01	OUTMODE_1	16#10	8	☐	☐	0
59	16#2001:16#03	OUTMODE_3	16#11	8	☐	☐	0
60	16#2004:16#01	Port_1A	16#55	8	☐	☐	0
61	16#5003:16#00	Highest sub-index supported	16#10	8	☐	☐	0

DIAGNOSIS TEMP & VOLTAGE

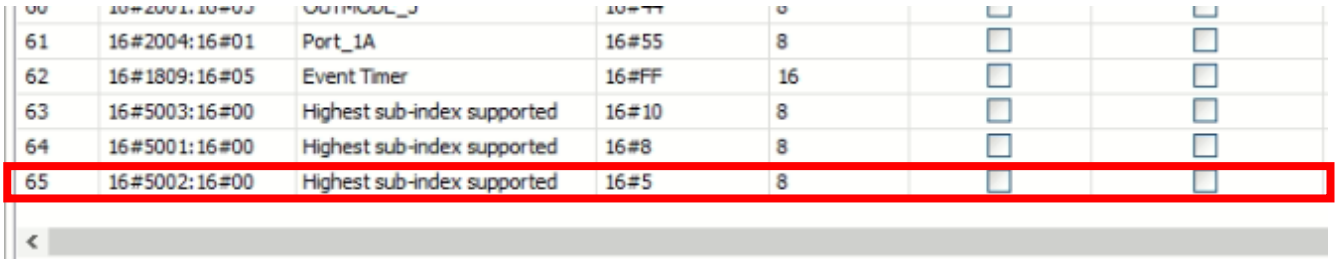
Further diagnostic data like e.g. the temperature of the module or the bus voltage may be read out. For this the index **5002** must be activated.

Afterwards the voltage or the module temperature can be read back in the variable **VBAT or TEMP.**

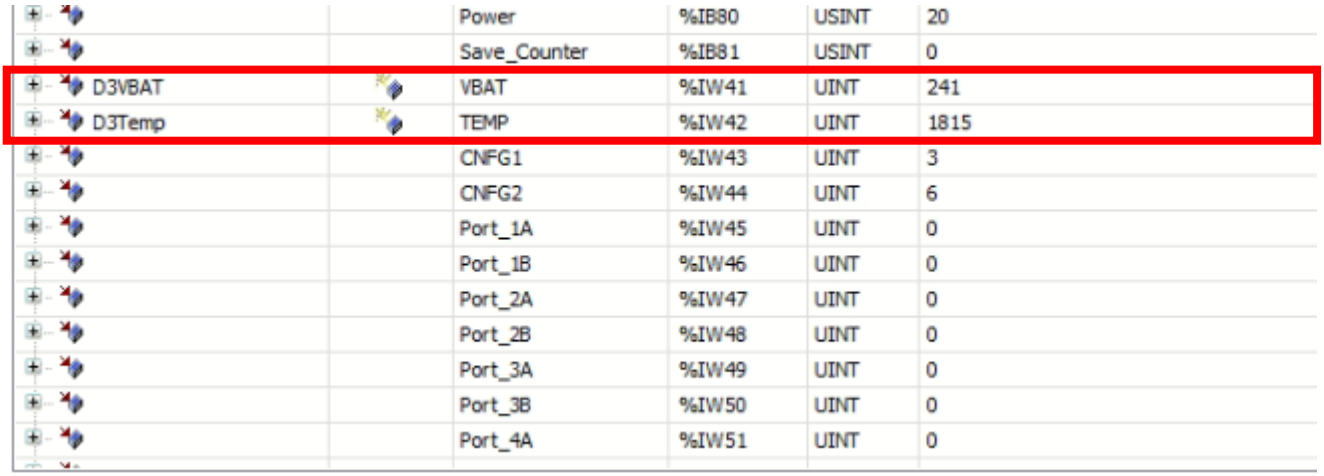
The voltage is displayed decimally with a resolution of 0.1 V.

The temperature has the resolution -100 °F to 300 °F which is displayed in 0-4000 bit (factor 10). To display the temperature in , this value must still be converted from Fahrenheit to Celsius. E.g. ((1815 / 10) – 100) = 81,5 °F – 32 × 5/9 = 27,5 °C

If no value is displayed, the index 1805:5 must be written with "C0". This SDO takes care of the cyclic data exchange



61	16#2004:16#01	Port_1A	16#55	8			
62	16#1809:16#05	Event Timer	16#FF	16			
63	16#5003:16#00	Highest sub-index supported	16#10	8			
64	16#5001:16#00	Highest sub-index supported	16#8	8			
65	16#5002:16#00	Highest sub-index supported	16#5	8			



		Power	%IB80	USINT	20
		Save_Counter	%IB81	USINT	0
D3VBAT		VBAT	%IW41	UINT	241
D3Temp		TEMP	%IW42	UINT	1815
		CNFG1	%IW43	UINT	3
		CNFG2	%IW44	UINT	6
		Port_1A	%IW45	UINT	0
		Port_1B	%IW46	UINT	0
		Port_2A	%IW47	UINT	0
		Port_2B	%IW48	UINT	0
		Port_3A	%IW49	UINT	0
		Port_3B	%IW50	UINT	0
		Port_4A	%IW51	UINT	0

DIAGNOSIS OUTPUT VOLTAGE P1 / P2 / P3 / P4

In addition, the status of the output voltage supply can be queried. Index **5001** must be activated for this purpose.

Subsequently, the status of the individual supply circuits P1 to P4 can be queried in the **Power** variable.

Bit 0 / 1 = P 4

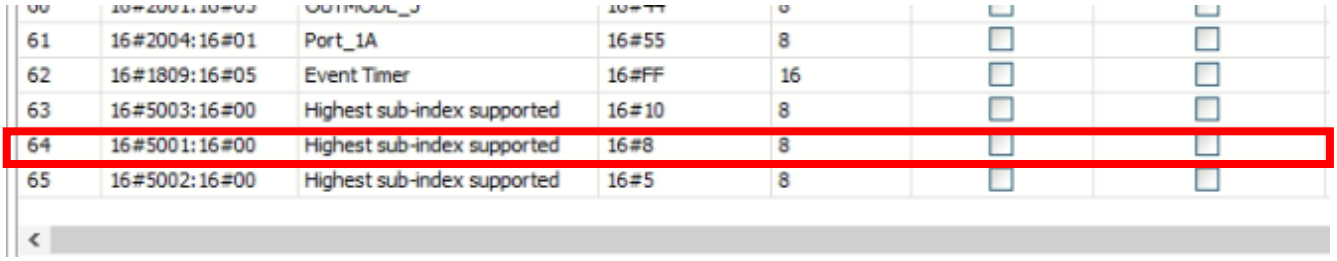
Bit 2 / 3 = P 3

Bit 4 / 5 = P 2

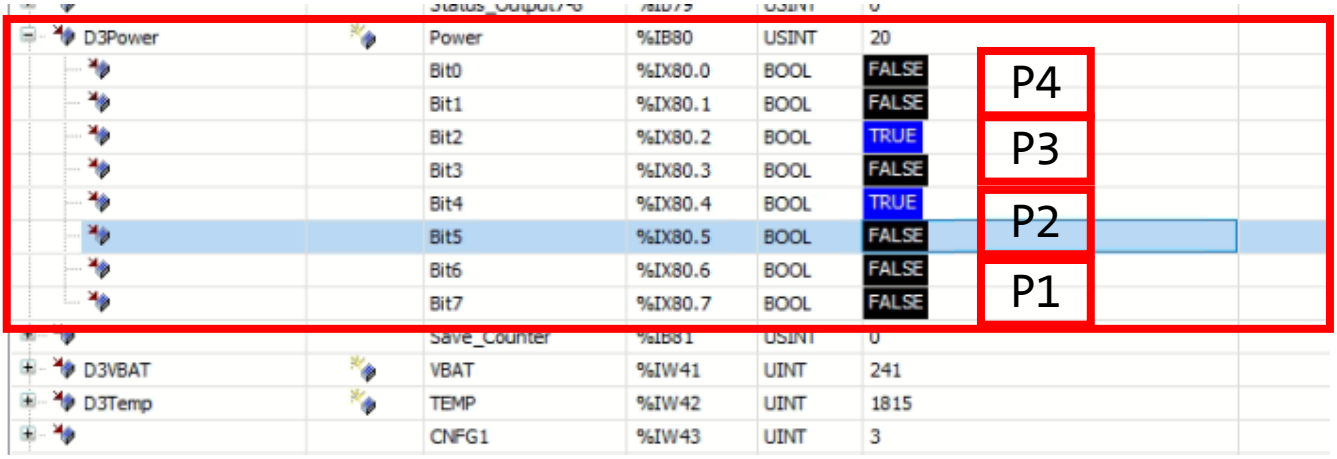
Bit 6 / 7 = P 1

If no value is displayed, the index 1805:5 must be written with "C0". This SDO takes care of the cyclic data exchange.

In the example, only two of the four actuator circuits are supplied with voltage



61	16#2004:16#01	Port_1A	16#55	8	☐	☐
62	16#1809:16#05	Event Timer	16#FF	16	☐	☐
63	16#5003:16#00	Highest sub-index supported	16#10	8	☐	☐
64	16#5001:16#00	Highest sub-index supported	16#8	8	☐	☐
65	16#5002:16#00	Highest sub-index supported	16#5	8	☐	☐



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