



or



Compact Remote IO modules for Ex Zone 1/21 or Zone 2/22 with Profinet or Modbus TCP/IP.

The modules include busnode, isolating amplifier and 32 intrinsically safe analog and digital IO channels on smallest space.

BEx1 module can be installed in Zone 1/21 with certified Ex e enclosure and connects sensors and actuators from Zone 0/20.

BEx2 module can be installed in Zone 2/22, in a suitable housing according EN 60079-7:2018 with a protection degree of at least IP 54 and connects sensors and actuators from Zone 0/20.

Feature

- Fully potted → extreme robust
- IO variations
 - 16xDI Namur / 16xDO
 - 32xDI Namur
 - 8xDI Namur / 8xDO / 8xAI / 8xAO
 - 8xDI Namur / 16xDO / 8xAI
 - 8xDI Namur / 8xDO / 8xSwitch Mode
- None configuration on module required
- Separate power supply for sensor and actuator
- Comprehensive diagnostics for each channel
 - open load detection
 - pre-fault detection
 - short circuit detection
- Galvanic separation between channel and system
- Internal temperature monitoring
- Operating hour counter

BEx1 Explosion protection

EPS 19 ATEX 1 219 X

II 2(1) G Ex eb mb [ia Ga] IIC T4 Gb

II (1) D [Ex ia Da] IIIC

IECEx EPS 19.0093X

Ex eb mb [ia Ga] IIC T4 Gb
[Ex ia Da] IIIC

BEx2 Explosion protection

EPS 19 ATEX 1 248 X

II 3(1) G Ex ec mc [ia Ga] IIC T4 Gc

II (1) D [Ex ia Da] IIIC

IECEx EPS 19.0111X

Ex ec mc [ia Ga] IIC T4 Gc
[Ex ia Da] IIIC

Power supply

Operation voltage U_A/U_S	DC 18...30V
Current module and sensor supply I_S	DC 450 mA
Current actuator supply I_A	DC 300 mA
Power dissipation	max. 15 W
Reverse polarity protection	Yes
LED Voltage > 18V	Green
LED Undervoltage	Red

Fieldbus data

Addressing Profinet	via DCP
Addressing Modbus TCP/IP	DHCP or fix
Transfer Rate	10/100 MBit/s
Delay in signal change	< 10ms
LED Ethernet status LINK	Green
LED Ethernet status ACT	Yellow
LED Modul status	Green / Red
LED digital output on	Yellow
LED error detection	Red

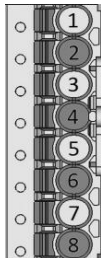
Ambient conditions

Range of the service temperature after installation inside	
additional enclosure	-40°C ... +70°C
Storage temperature	-40°C ... +80°C
Enclosure type (EN 60529)	IP 20

Mechanical data

Dimensions (LxWxH)	214 x 132 x 65 mm
Mounting holes	Ø 5,2
Mounting space	200 mm
Mounting position	any position
Weight	approx. 2700 g
Housing material	Aluminium (electroplated)
Housing marking	laser engraving


IO variations (X1-X8)

	8xDI / 8xDO / 8xAI / 8xAO 8xDI / 16xDO / 8xAI 8xDI / 8xDO / 8xSwitch Mode	16DI / 16DO 16DI / 8DO / 8AIO 16xDI / 8xDO / 8xSwitch Mode	32DI
	Zone 1 Type : 14200*00 Zone 2 Type : 24200*00	Zone 1 Type : 14200*01 Zone 2 Type : 24200*01	Zone 1 Type : 14200*02 Zone 2 Type : 24200*02
	1 AI / Switch Mode(-)	DO / AO / AI / Switch Mode(+)	DI
	2 GND	GND / Switch Mode(-)	GND
	3 AO / DO / Switch Mode(+)	DI	DI
	4 GND	GND	GND
	5 DI	DI	DI
	6 GND	GND	GND
	7 DO	DO	DI
	8 GND	GND	GND

IO funktion

DI Namur	8,2V (I<1,2mA = on) (I>2,1mA = off)
DO (can also be used as power supply)	24V (I _{max} = 25mA)
AI and AO	24V 4..20mA (0..25mA)
Resolution AI und AO	16 Bit
Measurement deviation (at +25°C)	± 0,1%
Ambient temperature influence	± 0,01%/K
AO to DO	24V (I _{max} = 25mA)
Switch Mode	24V (I _{max} = 4mA)

Electrical connection

 Earthing / Equipotential bonding via M4 screw and eyelet	Cable cross-section min. 4,0 mm ²
CAGE CLAMP® connection technology	
X1-X8 (pluggable) Inputs / Outputs (Ex i)	Cable cross-section max. 1,5 mm ²
X9 Power supply (Ex e)	Cable cross-section max. 2,5 mm ²
X10 Bus (Ex e)	Cable cross-section max. 2,5 mm ²

Commercial data

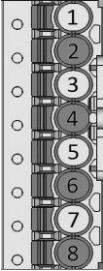
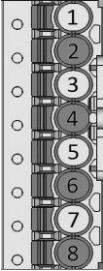
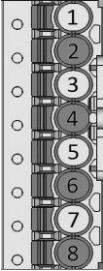
Zone 1/21	
BEx1(8AI/8AO/8DI/8DO)	
Profinet Order No.	14200100
Modbus Order No.	14200300
BEx1(16DI/16DO)	
Profinet Order No.	14200101
Modbus Order No.	14200301
BEx1(32DI)	
Profinet Order No.	14200102
Modbus Order No.	14200302
Zone 2 /22	
BEx2(8AI/8AO/8DI/8DO)	
Profinet Order No.	24200100
Modbus Order No.	24200300
BEx2(16DI/16DO)	
Profinet Order No.	24200101
Modbus Order No.	24200301
BEx2(32DI)	
Profinet Order No.	24200102
Modbus Order No.	24200302
Country of origin	DE
Packaging unit	1
Customs tariff number	85176200

Further information see certificate and manual.

Approval data

Max. U_m X9 / X10

DC 30 V

Terminals	Parameter																																												
Terminal block X1 to X8	(Output parameters of each clamp, clamps are not allowed to be combined)																																												
Clamp _{26V}	$U_0 = 26 \text{ V d.c.}$ $I_0 = 82 \text{ mA}$ $P_0 = 533 \text{ mW}$																																												
IIC																																													
L_0	3 mH 1 mH 0,5 mH 0 mH																																												
C_0	42 nF 62 nF 78 nF 99 nF																																												
Group IIB / III																																													
L_0	20 mH 2 mH 0,5 mH 0 mH																																												
C_0	350 nF 350 nF 490 nF 770 nF																																												
Clamp _{9,6V}	$U_0 = 9,6 \text{ V d.c.}$ $I_0 = 31 \text{ mA}$ $P_0 = 75 \text{ mW}$																																												
IIC																																													
L_0	49 mH 10 mH 1 mH 0 mH																																												
C_0	310 nF 640 nF 1.1 μF 3.6 μF																																												
Group IIB / III																																													
L_0	100 mH 10 mH 1 mH 0 mH																																												
C_0	2 μF 3.6 μF 6.1 μF 26 μF																																												
Clamp _{GND}	galvanically separated from input GND																																												
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