

Worldwide first decentralized compact Remote IO System with Modbus TCP/IP for hazardous area Zone 1/21.

BEx1 includes busnode, isolating amplifier and 32 intrinsically safe IO channels with four different functions on smallest space.

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

## Feature

- Fully potted → extreme robust
- 32 channel for sensors and actuators
  - 16 digital (8x Input und 8x Output)
  - 16 analog (8x Input und 8x Output)
- 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
- Easy rail mounting TH35 or via mounting holes
- Operating hour counter
- Unique serial number
- Made for Namur Sensors

## Explosion protection

Sira 17ATEX5286X

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

II (1) D [Ex ia Da] IIIC

IECEx SIR 17.0071X

Ex eb mb [ja Ga] IIC T4 Gb

[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

## Ambient conditions

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

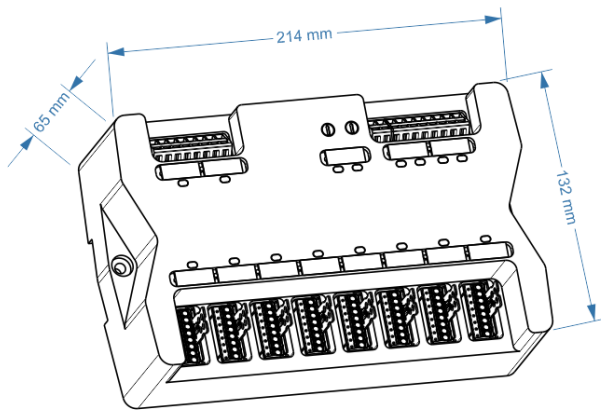
## Fieldbus data

Transfer protocol	Modbus TCP/IP
Transfer rate	10/100 MBit/s
Addressing	DHCP or fix
Delay time for signal change	< 10ms
LED Ethernet status LINK	Green
LED Ethernet status ACT	Yellow
LED Module status	Green / Red

## IO - Function

1	Analog Input	4...20mA (0...25mA)
2	GND	
3	Analog Output	4...20mA (0...25mA)
4	GND	
5	Digital Input	8,2V Namur
6	GND	
7	Digital Output	24V ( $I_{max} = 25mA$ )
8	GND	

Resolution	16 Bit
Measurement deviation (at +25°C)	± 0,1%
Ambient temperature influence	± 0,01%/K



## Mechanical data

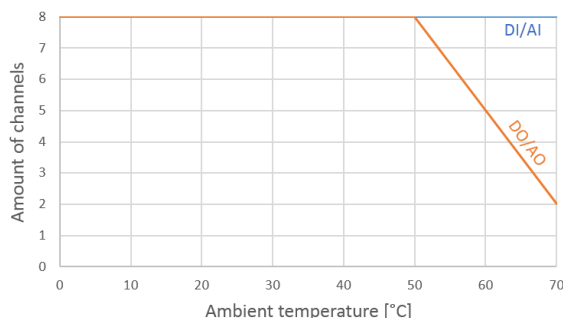
Dimensions (LxWxH)	214 x 132 x 65 mm
Mounting holes	Ø 5,2
Mounting space	200 mm
Mounting position	any position
Weight	approx. 2500 g
Housing material	Aluminium (electroplated)
Housing marking	laser engraving

## Diagnoses

Open load detection	Yes, per pin
Prefault detection	Yes, per pin
Short circuit detection	Yes, per pin
Operating hour counter	24 Bit
LED channel on	Yellow
LED error detection	Red



## Temperature Derating



## Electrical connection

⊕ Earthing / Equipotential bonding via M4 screw and eyelet  
Cable cross-section min. 4,0 mm<sup>2</sup>

CAGE CLAMP® connection technology

X1-X8 (pluggable) Inputs / Outputs (Ex i)  
Cable cross-section max. 1,5 mm<sup>2</sup>

X9 Power supply (Ex e)  
Cable cross-section max. 2,5 mm<sup>2</sup>

X10 Bus (Ex e)  
Cable cross-section max. 2,5 mm<sup>2</sup>

## Approval data

Max. U<sub>m</sub> X9 / X10 DC 30 V

Maximum values for Zone 0 connection

Terminal block X1 to X8

Clamp 1,3,7

U<sub>o</sub> = DC 26 V

I<sub>o</sub> = 82 mA

P<sub>o</sub> = 533 mW

IIC	L <sub>o</sub> [mH]	3	1	0,5	0
	C <sub>o</sub> [nF]	42	62	78	99
IIB III	L <sub>o</sub> [mH]	20	2	0,5	0
	C <sub>o</sub> [nF]	350	350	490	770

Clamp 5

U<sub>o</sub> = DC 9.6 V

I<sub>o</sub> = 31 mA

P<sub>o</sub> = 75 mW

IIC	L <sub>o</sub> [mH]	49	10	1	0
	C <sub>o</sub> [µF]	0,31	0,64	1,1	3,6
IIB III	L <sub>o</sub> [mH]	100	10	1	0
	C <sub>o</sub> [µF]	2	3,6	6,1	26

## Commercial data

Order No.	14200300
Country of origin	DE
Packaging unit	1
Customs tariff number	85176200

Further information see certificate and manual.

[www.bex-solution.com/en-gb/downloads](http://www.bex-solution.com/en-gb/downloads)