



With the MODEX 4 x digital out Ex i/8 x Ex i digital in, it is possible to control 4 Ex i valves while simultaneously importing NAMUR limit switches via 8 digital intrinsically safe inputs. The statuses of the control and end position signals are displayed using LEDs. The output on the short-circuit proof outputs will be switched off automatically by temperature monitoring in the event of a short-circuit (short-circuit proof). The controlled actuators can be switched off by an emergency stop via a second power supply connection on the module on terminals U- and U+. The module is connected to the process control system via the PROFIBUS-DP. Coding rotary switches are available for addressing the module. Diagnostics data indicating the status of the outputs with respect to a disconnection or short-circuit can also be transmitted in addition to the user data. This is also displayed on the module itself using LEDs.

**Explosion protection**

Marking ATEX	 
Certification	PTB 97 ATEX 1066 U TÜV 98 ATEX 1355 X
Marking IECEx	Ex db e [ia Ga] IIC Gb Ex db e [ia Ma] I Mb
Certification	IECEx PTB 11.0082U IECEx TUN 11.0024X
Marking CSA	Class I Zone 1 IIC A/Ex d e [ia] IIC Gb
Certification	CSA 2011-2484303U
Other approvals and certificates, see <a href="http://www.bartec.de">www.bartec.de</a>	
Installation	Type 17-6583-.51./....  [Ex ia Ga] IIC [Ex ia Da] IIIC For further data see test certificates.
Safety data (in)	$U_0 = 11.8 \text{ V}$ $I_0 = 31 \text{ mA}$ $P_0 = 90 \text{ mW}$ $U_m = 253 \text{ V}$ $L_0 = 34 \text{ mH (IIC)}/130 \text{ mH (IIB)}$ $C_0 = 1.5 \text{ }\mu\text{F (IIC)}/9.9 \text{ }\mu\text{F (IIB)}$
Safety data (out)	$U_0 = 26.8 \text{ V}$ $I_0 = 97 \text{ mA}$ $U_m = 253 \text{ V}$ $R_i = 301 \text{ }\Omega$ $P_0 = 650 \text{ mW}$ $L_0 = 3.9 \text{ mH (IIC)}/15 \text{ mH (IIB)}$ $C_0 = 92 \text{ nF (IIC)}/720 \text{ nF (IIB)}$

**Technical data**

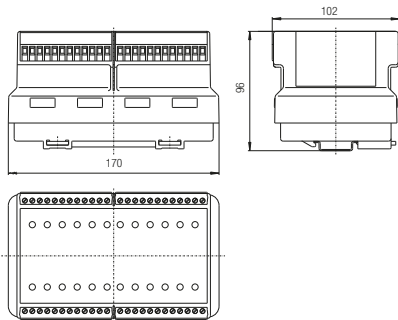
Construction	Flameproof, clip-on enclosure for TS 35 rail
Enclosure material	High-quality thermoplastics
Protection class	Electronic assembly IP 66 EN/IEC 60529 Terminals IP 20 EN/IEC 60529 Terminals with cover IP 30 EN/IEC 60529
Terminals	2.5 mm <sup>2</sup> , fine stranded
Device designation	Front plate for labelling
Displays	LEDs on front panel
Storage temperature	-40 °C to +60 °C
Ambient temperature	-25 °C to +60 °C at T4
Weight	2.1 kg

**Electrical data**

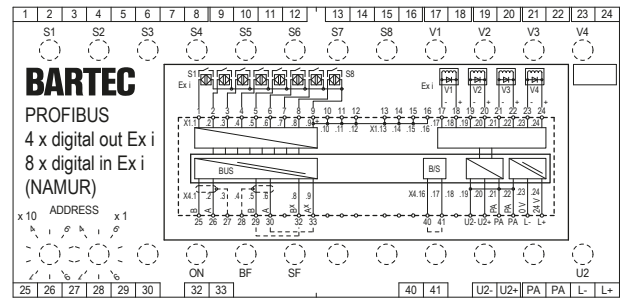
Supply voltage electronics (L +, L-)	DC 24 V (20 to 30 V)
Power consumption (L +, L-)	P = 6.5 W
Supply voltage Outputs (U +, U-) suitable for emergency stop	DC 24 V (20 to 30 V)
Reverse polarity protection (L +, L-, U2+, U2-)	Yes
Power dissipation	max. 4.5 W (Module)
Galvanic isolation	Power supply//bus//circuitry//outputs//NAMUR inputs
Bus interface	RS485 with screw terminals
Displays	Status ON, BF, SF, U2 Inputs 8 x LEDs LED yellow, damped LED red, open circuit/short circuit Outputs 4 x double LED LED yellow, active LED red, short circuit
<b>Inputs/outputs</b>	
Sensors	8 NAMUR sensors, mechanical contacts or others (EN 60947-5-6)
Function	damped/undamped open circuit/short circuit detection
Characteristics Input	$U_N = 8.2 \text{ V}$
Output voltage per Channel	DC 22 V (at U2 ≥ 24 V)
Internal resistance per Channel	301 Ω
Line monitoring	Group error message via bus and relay contact AC 230 V/3 A/100 V



Dimensions/mounting positions



Wiring diagram/terminal assignment



Status chart

Input	Data bit	Diagnostics bit	
		Jumper Open circuit/short circuit removed	Jumper Open circuit/short circuit connected
damped	1	0	0
undamped	0	0	0
open circuit	1	1	0
short circuit	0	1	0

Notes

Bridge open circuit/short circuit terminals 40 and 41 to disable open/short circuit monitoring

Use a 1kΩ/10KΩ resistive coupling element type 17-9Z62-0002 for open/short circuit monitoring during contact scan

GSD file: BARX2305.gsd  
 Download: <http://automation.bartec.de>

Ordering information

PROFIBUS Interface 4 x digital out Ex i/8 x Ex i digital in (NAMUR) **07-7331-2305/1000**

Technical data subject to change without notice.

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