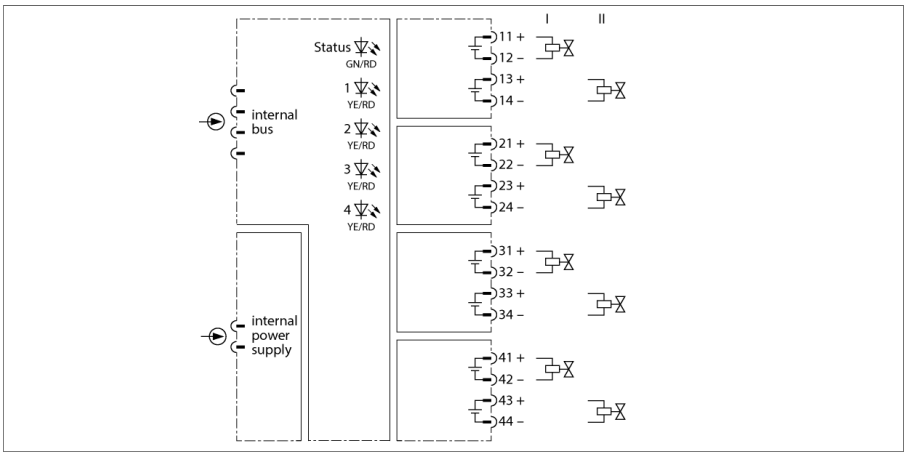
excom I/O System
Output Module, Digital, 4-channel
DO401EX



The output module DO401Ex is used for the connection of intrinsically safe actuators such as valves or indicator lights.

The module features protection class Ex ib IIC and can be used in zone 1 in combination with the excom system. The explosion protection category of the outputs is Ex ia IIC. The outputs are galvanically isolated from each other.

One actuator per channel can be connected. The choice of connection enables two intrinsically safe circuits with different Ex-data per channel.

Please see the load curve for the valve control values. Please refer to the Ex-approval of the valve manufacturer for the admissible limit values. The following values are supported for example:

- 22.5 V / 5 mA
- 19.0 V / 15 mA
- 16.0 V / 25 mA
- 14.0 V / 35 mA
- 12.0 V / 45 mA

The no-load voltage is 24 VDC or 17.5 VDC. To measure the voltage, use an approx. 32-kΩ resistor.

- Output module for intrinsically safe actuators
- Complete galvanic isolation

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Type	DO401EX
ID	6884203
Supply voltage	Via module rack, central power supply module
Power consumption	≤ 4.5 W
Galvanic isolation	Complete galvanic isolation acc. to EN 60079-11
Number of channels	4

Output circuits	for intrinsically safe actuators
Switching frequency	≤ 50 Hz
Short circuit	≥ 50 mA
Wire break	< 1 mA

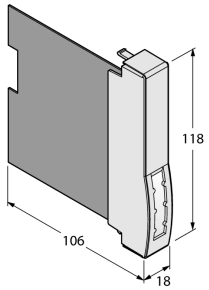
Ex approval acc. to conformity certificate	IECEx PTB 12.0016
Ex approval acc. to conformity certificate	PTB 10 ATEX 2024
Device designation	Ⓔx II 2 (1) G Ex ib [ia] IIC T4
Device marking	Ⓔx II (1) D [Ex ia] IIIC

Displays/Operating elements	
Operational readiness	1 × green/red
State/ Fault	4 × yellow/red

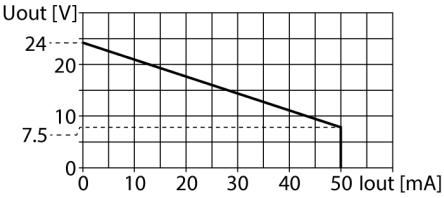
Housing material	Plastic
Connection mode	module, plugged on rack
Protection class	IP20
Ambient temperature	-20…+70 °C
Relative humidity	≤ 93 % at 40 °C acc. to IEC 60068-2-78
Vibration test	Acc. to IEC 60068-2-6
Shock test	Acc. to IEC 60068-2-27
EMC	Acc. to EN 61326-1 Acc. to Namur NE21
MTTF	79 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm

Approvals	ATEX cFMus cFM IECEx CCC INMETRO KOSHA EAC Ex DNV GL BV LR KR KCC UKCA CE

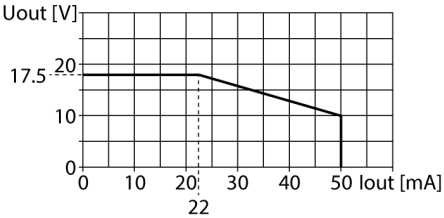
Dimensions



Load curve terminal connection 1+2



Load curve terminal connection 3+4



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