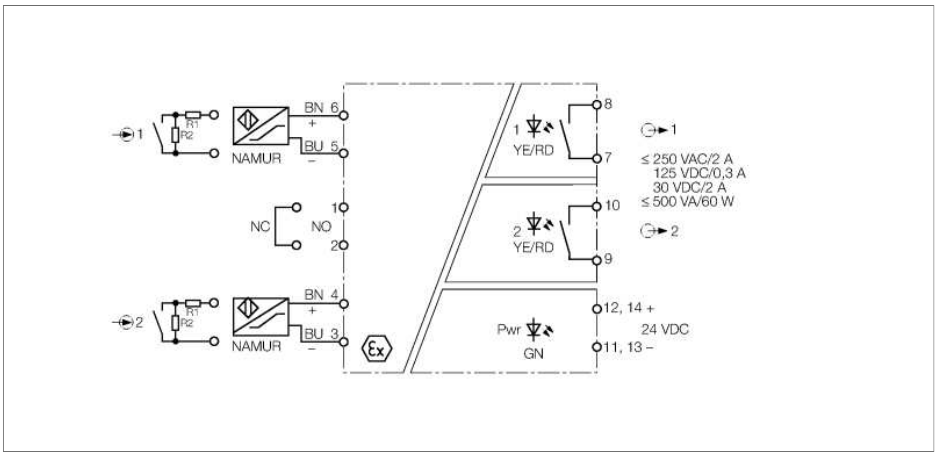
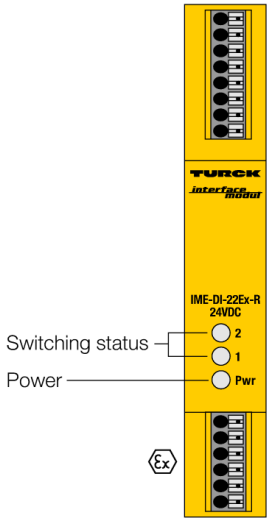
interface modul

Isolating switching amplifier
2-channel
IME-DI-22Ex-R/24VDC

TURCK
Industrial Automation





The dual-channel isolating switching amplifier IME-DI-22EX-R/24VDC is equipped with intrinsically safe input circuits. Sensors according to EN 60947-5-6 (NAMUR) or potential-free contactors can be connected to the device.

The output circuits each feature a relay with NO contact. The output mode (NO/NC) can be adjusted for both channels via a wire jumper.

When using mechanical contacts, resistors must be wired to the contacts (see circuit diagram) for wire-break and short-circuit monitoring (II). Particularly suitable is resistor module WM1, ident. no. 092101.

The green LED indicates operational readiness.

The switching status of the corresponding output is indicated yellow by the two color LED. In the event of input circuit errors the dual color LED changes to red, provided the input circuit monitoring function is activated. Thereupon the correspondent output relay is de-energized.

- **Intrinsically safe inputs circuit Ex ia**
- **Application area acc. to ATEX: II (1) GD, II 3G**
- **SIL 2**
- **Isolating switching amplifier, 2-channel**
- **Relay output**
- **Input circuit monitored for wire-break/ short-circuit**
- **Galvanic separation of input circuits, output circuits and supply voltage**

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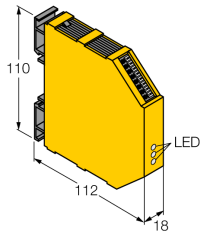
Isolating switching amplifier
2-channel
IME-DI-22Ex-R/24VDC

Dimensions



Type code	IME-DI-22Ex-R/24VDC
Ident no.	7541191
Nominal voltage	24 VDC
Operating voltage range	20…30 VDC
Power consumption	≤ 1.7 W
Power loss, typical	≤ 1.28 W
NAMUR	EN 60947-5-6
No-load voltage	8.2 VDC
Short-circuit current	8.2 mA
Input resistance	1 kΩ
Cable resistance	≤ 50 Ω
Switch-on threshold:	1.55 mA
Switch-off threshold:	1.75 mA
Wire breakage threshold	≤ 0.1 mA
Short-circuit threshold	≥ 6 mA
Output circuits (digital)	2 x relays (NO)
Relay switching voltage	≤ 250 VAC/120 VDC
Switching current per output	≤ 2 A
Switching capacity per output	≤ 500 VA/60 W
Switching frequency	≤ 10 Hz
Contact quality	AgNi, 3µ Au
Galvanic separation	
Test voltage	2.5 kV
Ex approval acc. to conformity certificate	TÜV 07 ATEX 553234
Application area	II (1) GD
Protection type	[Ex ia] IIC/IIB
Max.output voltage U_o	≤ 9.6 V
Max. output current I_o	≤ 10 mA
Max. output power P_o	≤ 24 mW
Rated voltage	250 V
Characteristic	linear
Internal inductance/capacitance L_i/C_i	Ci negligibly small; Li= 150µH

External inductance/capacitance L_o/C_o

Ex ia	IIC		IIB	
Lo [mH]	10	0.85	20	1.85
Co [µF]	0.75	1.1	3.4	5.3

Ex approval acc. to conformity certificate	TÜV 07 ATEX 554299 X
Application area	II 3 G
Protection class for belonging equipment	Ex nA nC [nL] IIC/IIB T4
Max.output voltage U_o	≤ 9.6 V
Max. output current I_o	≤ 10 mA
Max. output power P_o	≤ 24 mW
Rated voltage	250 V
Characteristic	linear
Internal inductance/capacitance L_i/C_i	Li = 150 µH, Ci = negligibly small

External inductance/capacitance L_o/C_o

Ex nL	IIC		IIB	
Lo [mH]	5	0.85	10	0.85
Co [µF]	1.4	1.9	6.6	11

Approval	SIL 2
MTTF	350 years acc. to SN 29500 (Ed. 99) 40 °C
Indication	
Operational readiness	green
Switching state	yellow
Error indication	red

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Isolating switching amplifier
2-channel
IME-DI-22Ex-R/24VDC

Protection class	IP20
Ambient temperature	-25…+70 °C
Storage temperature	-40…+80°C
Dimensions	112x 18x 110 mm
Weight	129 g
Mounting instruction	For mounting on DIN rail
Housing material	Polycarbonate/ABS
Electrical connection	cage clamp terminals made of Beryllium-Bronze
Terminal cross-section	1.5 mm^2

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