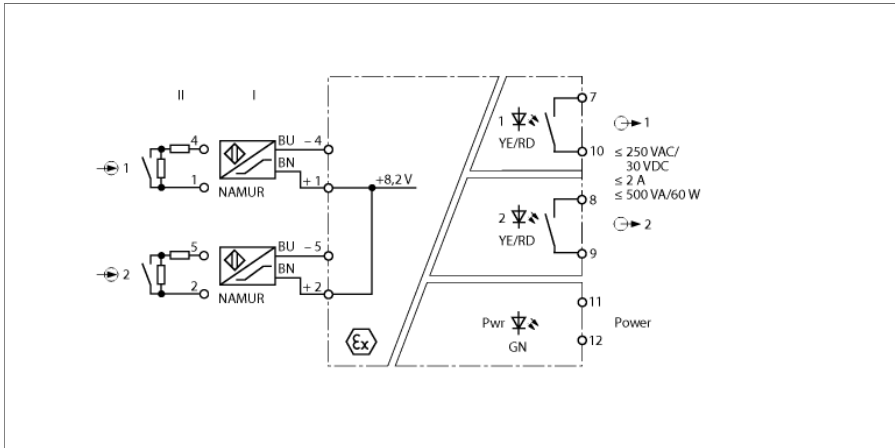


**Isolating switching amplifier
2-channel
IM1-22EX-R**



The dual-channel isolating switching amplifier IM1-22EX-R is equipped with an intrinsically safe input circuit.

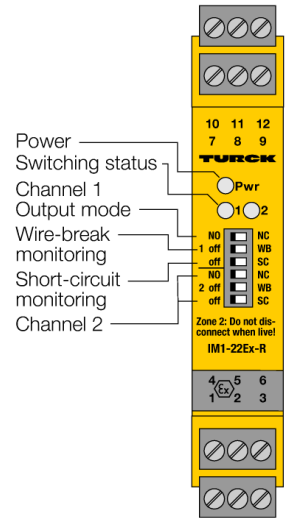
Sensors according to EN 60947-5-6 (NAMUR) can be connected to the device or potential-free contactors.

The output circuits feature 2 relays, each with NO contact.

Six front panel switches are available to set the output mode separately for each channel (NO/NC mode), as well as to enable/disable wire-break (WB) and short-circuit (SC) monitoring separately.

When using mechanical contacts, wire-break and short-circuit monitoring must be switched off or the contact must be wired with resistors (II) (see circuit diagram).

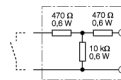
The green LED indicates operational readiness. The switching status of the corresponding output is indicated yellow by the two color LED. In the event of input circuit errors the dual color LED changes to red, provided the input circuit monitoring function is activated. Thereupon the correspondent output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



- Intrinsically safe input circuits Ex ia
- Installation in zone 2
- FM, NEPSI
- SIL2
- Application area acc. to ATEX: II (1) G, II (1) D; II G 3
- 2 relay outputs (NO)
- Adjustable signal flow direction (NO/NC)
- Input circuit monitoring of wire-break/short-circuit (ON/OFF switchable)
- Removable terminal blocks
- Galvanic separation of input circuits, output circuits and power supply

Isolating switching amplifier
2-channel
IM1-22EX-R

Type	IM1-22EX-R
Ident-No.	7541231
Ident-No (TUSA)	M7541231
Nominal voltage	Universal voltage supply unit
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage range	20...125 VDC
Power consumption	≤ 3 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	2.5 kV
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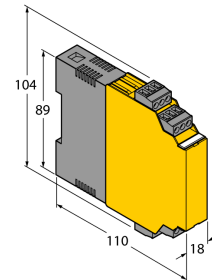
Ex approval acc. to conformity certificate	TÜV 04 ATEX 2553
Application area	II (1) G, II (1) D
Protection type	[Ex ia Ga] IIC; [Ex ia Da] IIIC
Max. output voltage U _o	≤ 9.6 V
Max. output current I _o	≤ 11 mA
Max. output power P _o	≤ 26 mW
Rated voltage	250 V
Characteristic	linear
Internal inductance/capacitance L/C _i	Ci vernachlässigbar klein, Li= 65μH
External inductance/capacitance L _e /C _e	

Ex ia	IIC			IIB		
Lo [mH]	1	5	10	2	10	20
Co [μF]	1,1	0,83	0,74	5,2	3,8	3,4

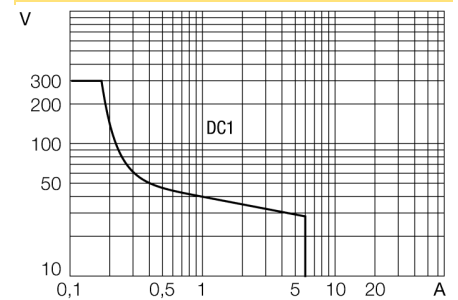
Ex approval acc. to conformity certificate	TÜV 06 ATEX 552968 X
Application area	II 3 G
Protection class for belonging equipment	Ex nA nC [ic Gc] IIC/IIB T4
Max. output voltage U _o	≤ 9.6 V
Max. output current I _o	≤ 11 mA
Max. output power P _o	≤ 26 mW
Characteristic	linear
External inductance/capacitance L _e /C _e	Ci vernachlässigbar klein, Li= 65 μH
External inductance/capacitance L _e /C _e	

Ex ia	IIC			IIB		
Lo [mH]	1	5	10	2	10	20
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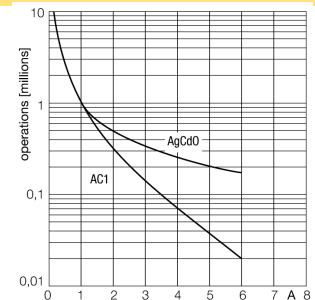
Dimensions



Load curve



Output relay electrical lifetime



Isolating switching amplifier
2-channel
IM1-22EX-R

Approval	SIL 2
Approval	

Indication	
Operational readiness	green
Switching state	yellow
Error indication	red

Mechanical Data	
Protection class	IP20
Ambient temperature	-25...+70 °C
Storage temperature	-40...80°C
Dimensions	104 x 18 x 110 mm
Weight	156 g
Mounting instruction	For mounting on DIN rail or mounting panel
Housing material	Polycarbonate/ABS
Electrical connection	4 x 3-pole removable terminal blocks, reverse polarity protected, screw connection
Terminal cross-section	1 x 2.5 mm ² / 2 x 1.5 mm ²

**Isolating switching amplifier
2-channel
IM1-22EX-R**

Accessories

Type code	Ident-No.	Short text	Dimension drawing
IM-CC-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex devices; width 18 mm); 2 blue/2 black, 3-pin, included in delivery.	