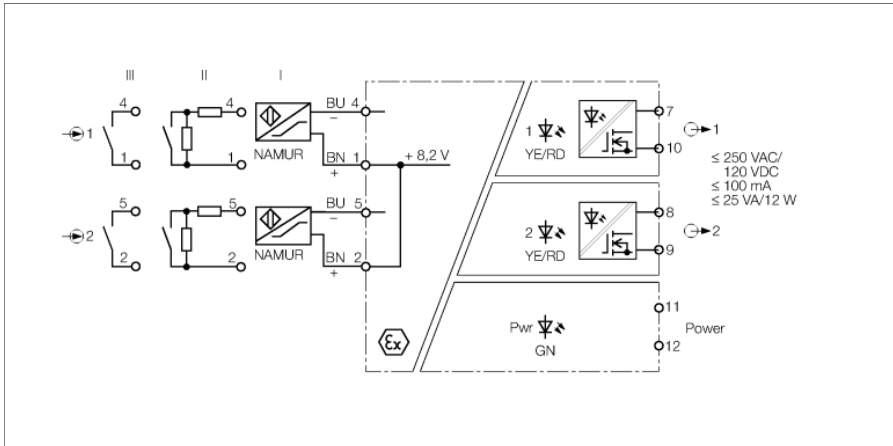


Isolating switching amplifier 2-channel IM1-22EX-MT



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

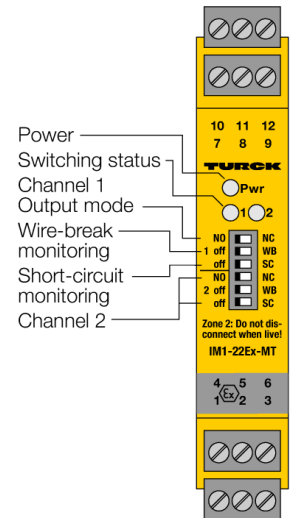
Sensors according to EN 60947-5-6 (NAMUR) can be connected to the device or potential-free contactors.

The output circuits feature two potential-free MOSFET transistors.

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 related output transistor is de-energized.



- Intrinsically safe input circuits Ex ia
- Installation in zone 2
- FM, NEPSI
- Application area acc. to ATEX: II (1) G, II (1) D; II G 3
- Two transistor outputs (MOSFET)
- 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

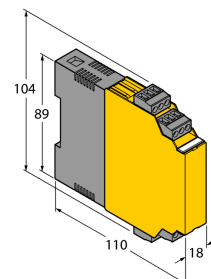
Isolating switching amplifier

2-channel

IM1-22EX-MT

Type	IM1-22EX-MT																																			
Ident-No.	7541213																																			
Ident-No (TUSA)	M7541213																																			
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																																			
Semiconductor output circuit(s)																																				
Output circuits (digital)	2 x MOSFET (potential-free, short-circuit protected)																																			
Switching voltage	≤ 250 VAC/120 VDC																																			
Switching current per output	≤ 100 mA																																			
Switching frequency	≤ 1000 Hz																																			
Galvanic separation																																				
Test voltage	2.5 kV																																			
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 _i /C _i	Ci vernachlässigbar klein, Li= 65µH																																			
External inductance/capacitance L _e /C _e																																				
	<table><tr><td>Ex ia</td><td colspan="3">IIC</td><td colspan="3">IIB</td></tr><tr><td>Lo</td><td>1</td><td>5</td><td>10</td><td>2</td><td>10</td><td>20</td></tr><tr><td>[mH]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Co</td><td>1,1</td><td>0,83</td><td>0,74</td><td>5,2</td><td>3,8</td><td>3,4</td></tr><tr><td>[µF]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Ex ia	IIC			IIB			Lo	1	5	10	2	10	20	[mH]							Co	1,1	0,83	0,74	5,2	3,8	3,4	[µF]						
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Ex approval acc. to conformity certificate	TÜV 06 ATEX 552968 X																																			
Application area	II 3 G																																			
Protection class for belonging equipment	Ex nA [ic Gc] IIC/IIB T4																																			
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Indication																																				
Operational readiness	green																																			
Switching state	yellow																																			
Error indication	red																																			

Dimensions



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

Mechanical Data

Protection class	IP20
Ambient temperature	-25...+70 °C
Storage temperature	-40...80°C
Dimensions	104 x 18 x 110 mm
Weight	129 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-MT

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.	