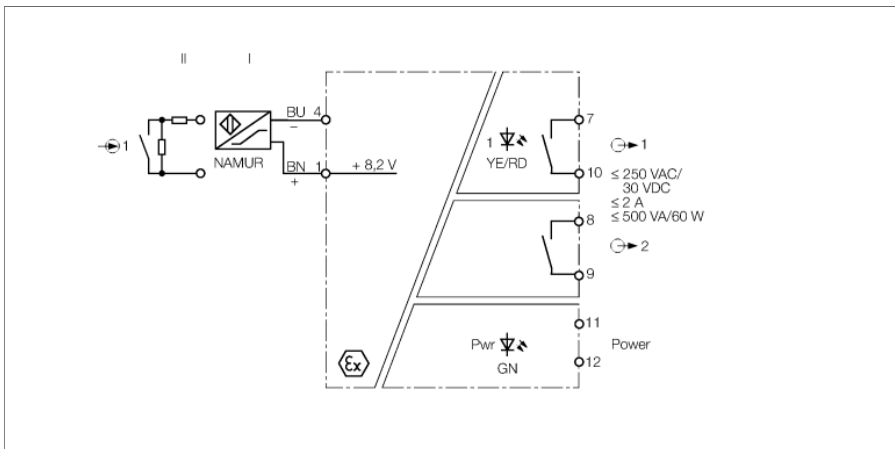


**Isolating switching amplifier
1-channel
IM1-12EX-R**



The 1-channel isolating switching amplifier IM1-12EX-R is equipped with an intrinsically safe input circuit.

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

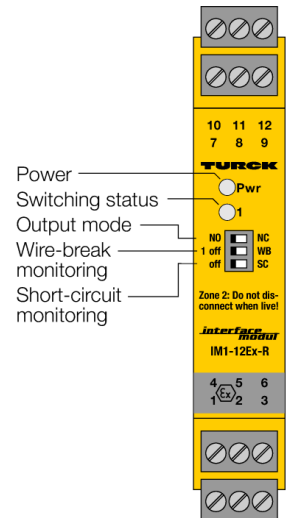
The output circuit features 2 relays, each with NO contact.

You can toggle between working or closed current, resp. NO or NC mode via three switches at the front. The switching state of channel 1 is thereby transmitted to the outputs 1 and 2.

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

The Pwr LED lights green to indicate operational readiness. The 2-color LED 1 lights yellow to indicate the switching status of the associated output. In the event of an input circuit error, the associated 2-color LED turns red, provided the input circuit monitoring function is activated. Thereupon the output relays drop out.

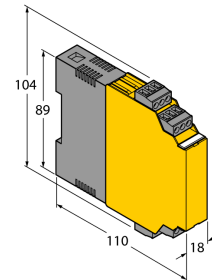
- ATEX, IECEx, UL, FM_{us}, CSA, TR CU, NEPSI, KOSHA, TIIS, CCOE, INMETRO
- Installation in zone 2
- 2 relay outputs (NO)
- Output mode adjustable (NO/NC mode)
- Input circuits monitored for wire-break/short-circuit (ON/OFF switchable)
- SIL 2
- Complete galvanic isolation



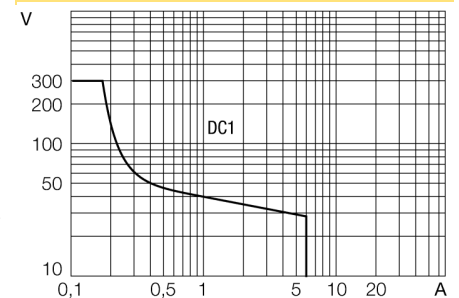
**Isolating switching amplifier
1-channel
IM1-12EX-R**

Type code	IM1-12EX-R																					
Ident no.	7541226																					
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 input																						
NAMUR	EN 60947-5-6																					
Input circuit monitoring	on/off switchable																					
No-load voltage	8.2 VDC																					
Short-circuit current	8.2 mA																					
Input resistance	1 kΩ																					
Cable resistance	≤ 50 Ω																					
Switch-on threshold	1.75 mA																					
Switch-off threshold	1.55 mA																					
Wire breakage threshold	≤ 0.06 mA																					
Short-circuit threshold	≥ 6.4 mA																					
Output circuits (digital)																						
Relay switching voltage	2 x relays (NO) ≤ 250 VAC/30 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 isolation																						
Test voltage	2.5 kV																					
Important note	For safety applications the values specified in the safety manual or the relevant Ex certificates (ATEX, IECEx, UL, etc.) apply.																					
Ex approval acc. to conformity certificate	TÜV 04 ATEX 2553																					
Application area	II (1) G, II (1) D																					
ignition protection category	[Ex ia Ga] IIC; [Ex ia Da] IIIC																					
Max. values:	Terminal connection: 1+4																					
Max. output voltage U_o	≤ 9.6 V																					
Max. output current I_o	≤ 11 mA																					
Max. output power P_o	≤ 26 mW																					
Characteristic	linear																					
Internal inductance/capacitance L/C,	$L_i = 65 \mu\text{H}$, C_i negligibly small																					
External inductance/capacitance L/C,																						
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Application area	II 3 G																					
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Approval	SIL 2 acc. to EXIDA FMEDA																					
MTTF	272 years acc. to SN 29500 (Ed. 99) 40 °C																					

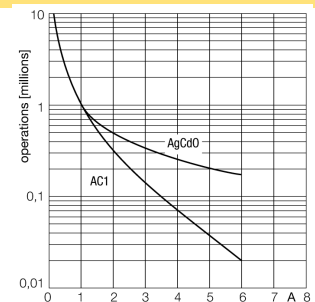
Dimensions



Output relay – Load curve



Output relay – Electrical lifetime



Isolating switching amplifier
1-channel
IM1-12EX-R

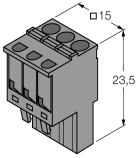
Indication

Operational readiness	green
Switching state	yellow
Error indication	red

Mechanical Data

IP Rating	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature	-25 ... +70 °C
	-25 ... +60 °C für UL, FM, TIIS
Storage temperature	-40...+80°C
Relative humidity	≤ 95 %
Dimensions	104 x 18 x 110 mm
Weight	154 g
Mounting instruction	for DIN rail / panel
Housing material	polycarbonate/ABS
Electrical connection	4 x 3-pin removable terminal blocks, reverse polarity protected, screw connection
Terminal cross-section	1 x 2.5 mm ² / 2 x 1.5 mm ²
Tightening torque	0.5 Nm

Accessories

Type code	Ident no.	Description	Design
IM-CC-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex-devices with 18 mm overall width); includes: 2 pcs. 3-pin blue terminals and 2 pcs. 3-pin black terminals.	
WM1 WIDER-STANDSMODUL	0912101	The resistor module WM1 meets the requirements for line monitoring between a mechanical contact and a TURCK signal processor. The input circuit of the signal processor is designed for sensors acc. to EN60947-5-6 (NAMUR) and equipped with a wire-break and short-circuit monitoring function.	