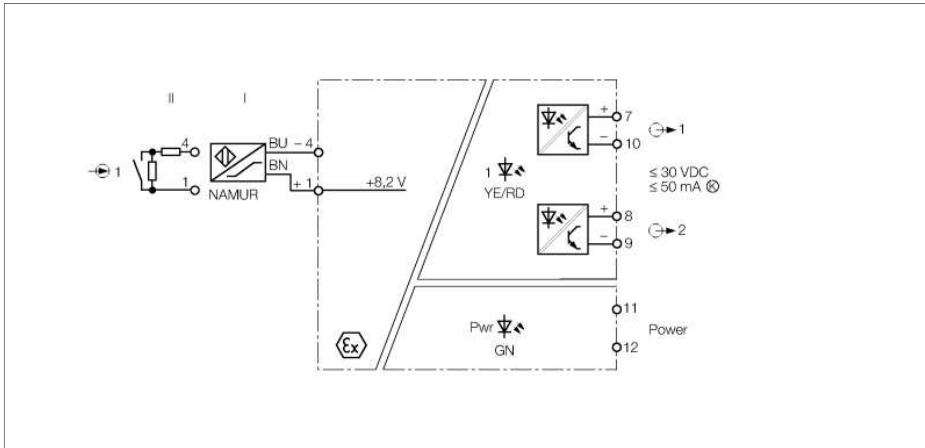


**Isolating switching amplifier
1-channel
IM1-12EX-T**



The 1-channel isolating switching amplifier IM1-12EX-T 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.

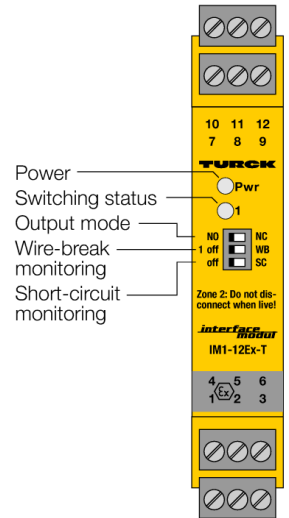
The output circuits feature two potential-free and short-circuit protected transistors.

Three front panel switches are available to set the output mode separately for each channel (NO or 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).

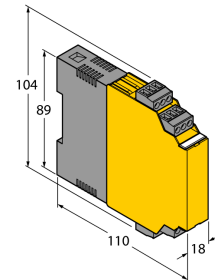
The green LED indicates operational readiness. The two-color LED lights yellow to indicate the output switching status. In the event of input circuit errors the two-color LED changes to red, provided the monitoring function of the input circuit is activated. Thereupon the output transistors are inhibited.

- 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
- Two transistor outputs, short-circuit proof, potential-free and reverse-polarity protected
- Adjustable signal flow direction (NO/NC)
- Input circuit monitoring of wire-break/short-circuit (ON/OFF switchable)
- Removable terminal blocks
- Complete galvanic separation



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

Dimensions



Type code	IM1-12EX-T																					
Ident no.	7541227																					
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 transistor (potential-free, short-circuit protected)																					
Switching voltage	≤ 30 VDC																					
Switching current per output	≤ 50 mA																					
Switching frequency	≤ 5000 Hz																					
Voltage drop	≤ 2.5 V																					
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	$L_i = 65 \mu\text{H}$, C_i negligibly small																					
External inductance/capacitance L_e/C_e																						
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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 [jc Gc] IIC/IIB T4 Gc																					
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Approval	SIL 2																					
Indication																						
Operational readiness	green																					
Switching state	yellow																					
Error indication	red																					

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

Mechanical Data

Protection class	IP20
Ambient temperature	-25...+70 °C
Storage temperature	-40...+80 °C
Relative humidity	≤ 95%
Dimensions	104x 18x 110 mm
Weight	145 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
Tightening torque	0.5 Nm

Accessories

Type code	Ident no.	Description	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.	