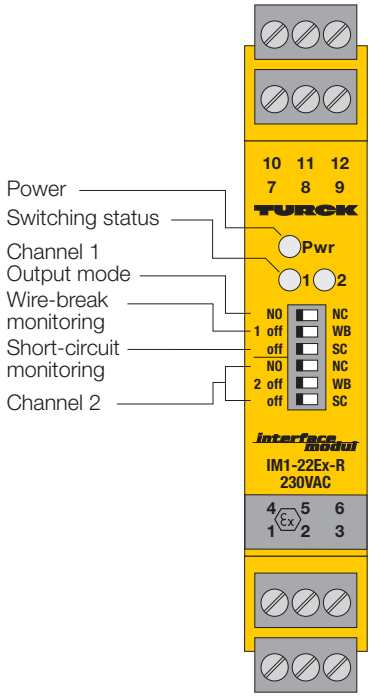


Isolating Switching Amplifier
IM1-22Ex-R/24VDC
IM1-22Ex-R/230VAC
2-channel

1

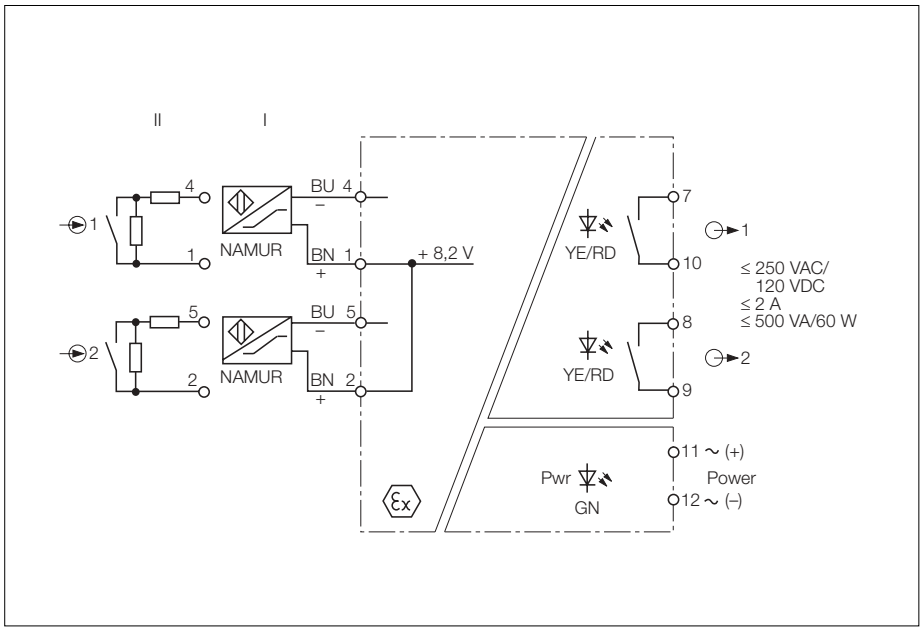
- **2-channel isolating switching amplifier with removable terminal blocks**
- **Intrinsically safe input circuits EEx ia**
- **Area of application according to ATEX: II (1) GD**
- **Galvanic isolation between input circuits, output circuits and supply voltage**
- **Input circuit monitoring for wire-break and short-circuit (can be disabled)**
- **2 relay outputs, each with one NO contact**
- **Selectable NO/NC output function**

The isolating switching amplifiers type IM1-22Ex0-R are dual channel devices featuring intrinsically safe input circuits. They can be connected to sensors according to EN 60947-5-6 (NAMUR), variable resistors or potential-free contacts. The output circuits each feature one relay with one NO contact each.

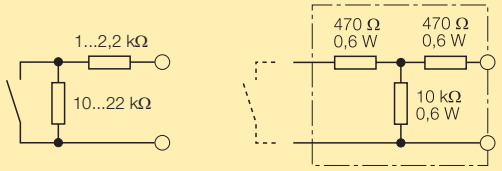
Six front panel programming switches select the output function of each channel (normally open mode = NO/or normally closed mode = NC) and enable separate activation and de-activation of wire-break (WB) and short-circuit (SC) monitoring of each channel.

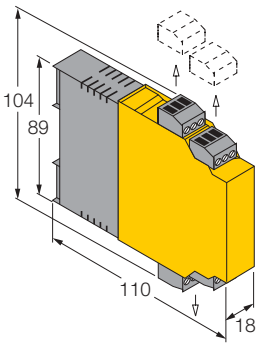
When using mechanical contacts as the input device, wire-break and short-circuit monitoring must be disabled or shunt resistors must be connected to the contacts (II). (See next page for contact configuration).

The green LED on the front cover indicates that the device is powered. The two dual colour LEDs indicate the switching status (yellow) as well as fault conditions (red). When the input circuit monitoring feature is activated, red illuminates to indicate a fault in the input circuit and the respective output relay is de-energised.



Isolating Switching Amplifier IM1-22Ex-R

Type	IM1-22Ex0-R/230VAC	IM1-22Ex0-R/24VDC
Ident-no.	7541211	7541210
Supply voltage U_B	196...253 VAC	10...30 VDC
Line frequency/ripple W_{PP}	48...62 Hz	≤ 10 %
Power/current consumption	≤ 30 mA_{rms}	≤ 1.5 W
Galvanic isolation	between input circuit, output circuit and supply voltage for 250 V_{rms}, test voltage 2.5 kV_{rms}	between input circuit, output circuit and supply voltage for 250 V_{rms}, test voltage 2.5 kV_{rms}
Input circuits	according to EN 60947-5-6 (NAMUR), intrinsically safe according to EN 50020	according to EN 60947-5-6 (NAMUR), intrinsically safe according to EN 50020
Operating characteristics		
– Voltage	8.2 V	8.2 V
– Current	8.2 mA	8.2 mA
Switching threshold	1.55 mA	1.55 mA
Hysteresis	typ. 0.2 mA	typ. 0.2 mA
Wire-break threshold	≤ 0.1 mA	≤ 0.1 mA
Short-circuit threshold	≥ 6.0 mA	≥ 6.0 mA
Contact configuration Of mechanical switches with active input circuit monitoring function	 resistor module WM1, ident-no. 0912101	
Output circuits	2 relay outputs with 1 NO contact each	2 relay outputs with 1 NO contact each
Switching voltage	≤ 250 VAC/120 VDC	≤ 250 VAC/120 VDC
Switching current per output	≤ 2 A	≤ 2 A
Switching capacity per output	≤ 500 VA/60 W	≤ 500 VA/60 W
Switching frequency	≤ 10 Hz	≤ 10 Hz
Contact material	silver-alloy + 3 µm Au	silver-alloy + 3 µm Au
Ex-approval acc. to certificate of conformity	PTB 00 ATEX 2033	PTB 00 ATEX 2033
Maximum nominal values		
– No load voltage U_0	≤ 9,6 V	≤ 9,6 V
– Short-circuit current I_k	≤ 21,4 mA	≤ 21,4 mA
Max. external inductances/capacitances L_0/C_0		
– [EEx ia] IIC	3,6 µF/300 mH	3,6 µF/300 mH
– [EEx ib] IIC	26 µF/1000 mH	26 µF/1000 mH
Marking of devices	II (1) GD [EEx ia] IIC	II (1) GD [EEx ia] IIC
LED indications		
– Power	green	green
– Switching status/fault indication	2 x yellow/red (2-colour LED)	2 x yellow/red (2-colour LED)
Housing	12-pole, 18 mm wide, Polycarbonate/ABS, flammability class V-0 per UL 94	
Mounting	snap-on clamps for top-hat rail (DIN 50022) or screw terminals for panel mounting	
Connection	removable terminal blocks, reverse-polarity protected, screw connection, self-lifting	
Connection profile	≤ 1 x 2.5 mm^2 or 2 x 1.5 mm^2 with wire sleeves	
Degree of protection (IEC 60529/EN 60529)	IP20	
Operating temperature	-25…+60 °C	



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