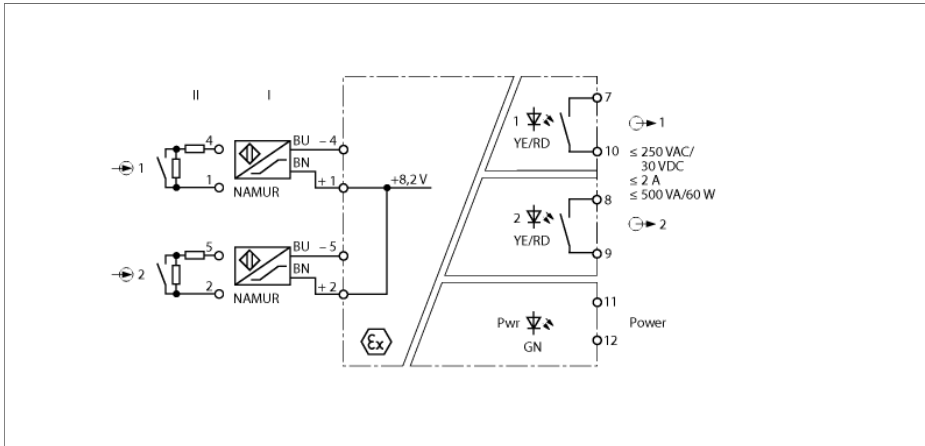


**Isolating switching amplifier
2-channel
IM1-22EX-R/24VDC**



The dual-channel isolating switching amplifier IM1-22EX-R/24VDC is equipped with intrinsically safe input circuits.

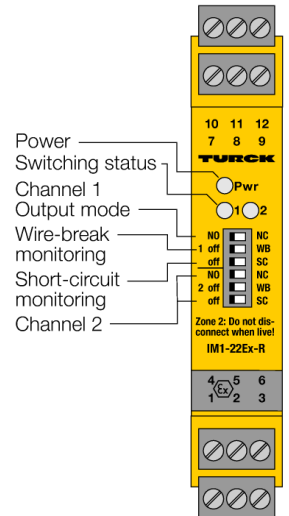
Sensors according to EN 60947-5-6 (NAMUR) can be connected to the device or potential-free contactors.

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

Six front panel switches are used 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).

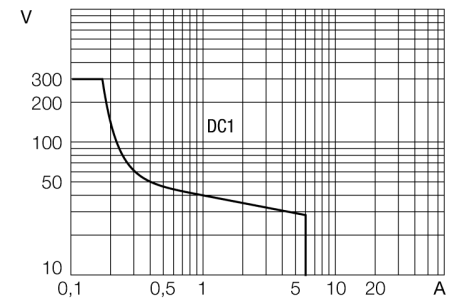
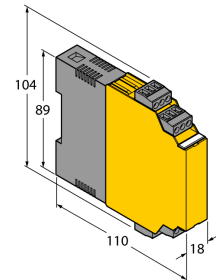
The green LED indicates operational readiness. The switching status of the corresponding output is indicated yellow by the two color LED. In the event of input circuit errors, the related dual color LED changes to red, provided the input circuit monitoring function is activated. Thereupon the correspondent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



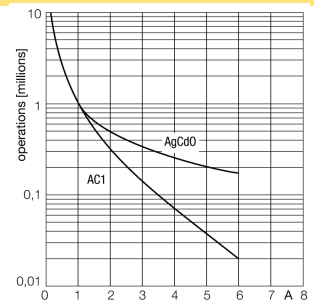
- Intrinsically safe input circuits Ex ia
- Application area acc. to ATEX: II (1) GD
- Signal flow direction adjustable (NO/NC)
- Input circuit monitoring of wire-break/short-circuit (ON/OFF switchable)
- Removable terminal blocks

**Isolating switching amplifier
2-channel
IM1-22EX-R/24VDC**

Dimensions



Output relay electrical lifetime



Type code	IM1-22EX-R/24VDC																				
Ident no.	7541210																				
Operating voltage range	10...30 VDC																				
Power loss, typical	≤ 0.99 W																				
NAMUR	EN 60947-5-6																				
No-load voltage	8 VDC																				
Short-circuit current	8 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																				
Ex approval acc. to conformity certificate	PTB 00 ATEX 2033																				
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	≤ 21.4 mA																				
Max. output power P _o	≤ 26 mW																				
Characteristic	linear																				
Internal inductance/capacitance L _i /C _i	C, negligibly small, L _i = negligibly small																				
External inductance/capacitance L _e /C _e																					
	<table border="1"> <thead> <tr> <th>Ex ia</th> <th colspan="2">IIC</th> <th colspan="2">IIIC</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td>1</td> <td>5</td> <td>1</td> <td>5</td> </tr> <tr> <td>Co [μF] (2 Klemmen)</td> <td>1,1</td> <td>0,84</td> <td>6,2</td> <td>4,4</td> </tr> <tr> <td>Co [μF] (3 Klemmen oder mehr)</td> <td>1,1</td> <td>0,8</td> <td>6,2</td> <td>4,3</td> </tr> </tbody> </table>	Ex ia	IIC		IIIC		Lo [mH]	1	5	1	5	Co [μF] (2 Klemmen)	1,1	0,84	6,2	4,4	Co [μF] (3 Klemmen oder mehr)	1,1	0,8	6,2	4,3
Ex ia	IIC		IIIC																		
Lo [mH]	1	5	1	5																	
Co [μF] (2 Klemmen)	1,1	0,84	6,2	4,4																	
Co [μF] (3 Klemmen oder mehr)	1,1	0,8	6,2	4,3																	
MTTF	400 years acc. to SN 29500 (Ed. 99) 40 °C																				
State/ Fault	2 x yellow / red																				
Mechanical Data																					
Protection class	IP20																				
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.	