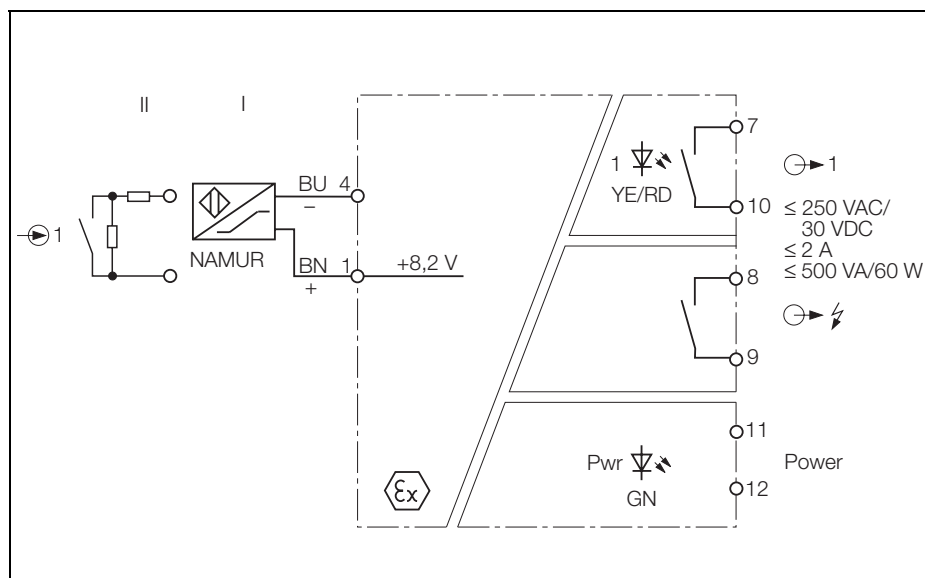


Isolating switching amplifier 1-channel IM1-121EX-R



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

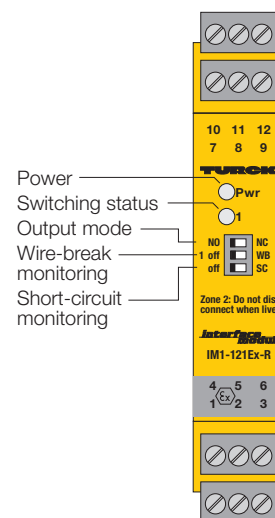
The device can be connected to sensors according to EN 60947-5-6 (NAMUR) or potential-free contacts.

The output circuits feature two relays, each with a normally open contact, one of which works as alarm output.

Three front panel programming switches select the output function (NO or NC mode) and enable separate activation and de-activation of wire-break (WB) and shortcircuit (SC) monitoring.

When using mechanical contacts as input devices, wire-break and short-circuit monitoring must be disabled or shunt resistors must be connected to the contacts (II) (see connection diagram).

The green LED indicates operational readiness. The output switching status 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 output and the alarm relay are de-energized.

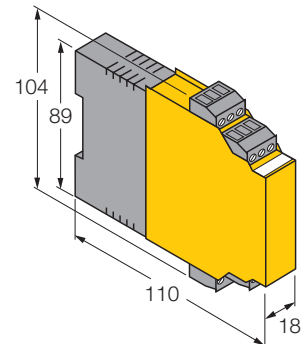


- Intrinsically safe input circuits EEx ia
- For application in zone 2
- FM, NEPSI
- SIL 2
- Application areas [Exia] IIC/IIB and Ex nA nC [nL] IIC/IIB T4
- Adjustable signal flow (N.O./ N.C.mode)
- Monitoring of input circuits for wire-break/short-circuit (ON/OFF mode)2
- two relay outputs with one normally-open contact each
- Common alarm output
- Removable terminal blocks
- Universal operating voltage (20...250VAC/ 20...125VDC)
- Galvanic isolation of input circuits to output circuits and supply voltage

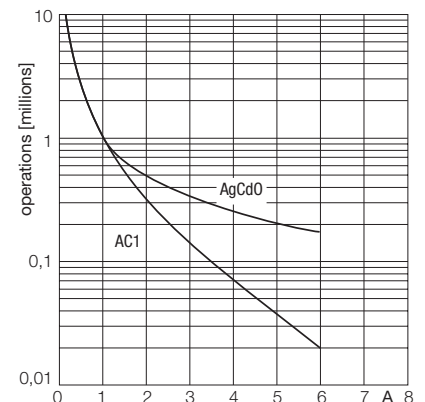
Isolating switching amplifier 1-channel IM1-121EX-R

Type	IM1-121EX-R						
Ident-No.	7541229						
Nominal voltage	Universal voltage supply unit						
Operational voltage range:	20 ... 250 VAC						
Frequency	≥ 40 ... ≤ 70 Hz						
Operational 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						
Output 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 relay (normally open)						
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						
Test voltage	2.5 kV						
Constant voltage supply	250 V						
Ex approval acc. to conformity certificate							
Ex approval acc. to conformity certificate	TÜV 04 ATEX 2553						
Application area	II (1) GD						
Protection type	[EEx ia] IIC						
Max.output voltage U _o	≤ 9.6 V						
Max. output current I _o	≤ 11 mA						
Max. output power P _o	≤ 26 mW						
Characteristic	Linear						
External inductance/capacitance L _o /C _o							
	EEx ia IIC			EEx ia IIB			
L _o [mH]	1,0	5,0	10,0	2,0	10,0	20,0	
C _o [μF]	1,1	0,83	0,74	5,2	3,8	3,4	
Ex approval acc. to conformity certificate	TÜV 06 ATEX 552968 X						
Application area	II 3 G						
Max.output voltage U _o	≤ 9.6 V						
Max. output current I _o	≤ 11 mA						
Max. output power P _o	≤ 26						
External inductance/capacitance L _o /C _o							
	Ex nL IIC			Ex nL IIB			
L _o [mH]	1,0	5,0	10,0	1,0	5,0	10,0	
C _o [μF]	1,9	1,4	1,2	11	7,5	6,6	
Ex approval acc. to conformity certificate	FM3019329						
Ex approval acc. to conformity certificate	IECEx TUN 06.0006 X						
Application area	[Ex ia] IIC/IIB , Ex nA nC [nL] //C/IIB T4						
Protection type	EEx nA nC [nL] IIC/IIB T4						
Ex approval acc. to conformity certificate	GYJ04436						
Approval	SIL 2						
Approval							

Dimensions



Output relay electrical lifetime



**Isolating switching amplifier
1-channel
IM1-121EX-R**

Indication

Operational readiness	green
Switching status	yellow
Error indication	red

Mechanical Data

Degree of protection	IP20
Ambient temperature	-25 ...+ 70 °C
Housing length	104 mm
Housing width	18 mm
Housing height	110 mm
Weight	142 g
Mounting instruction	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