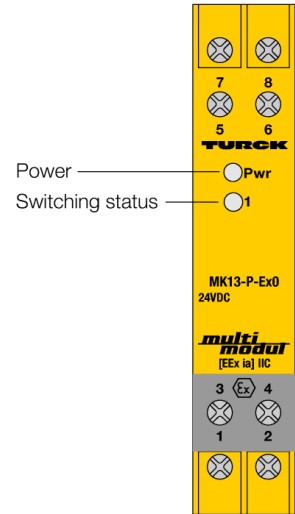
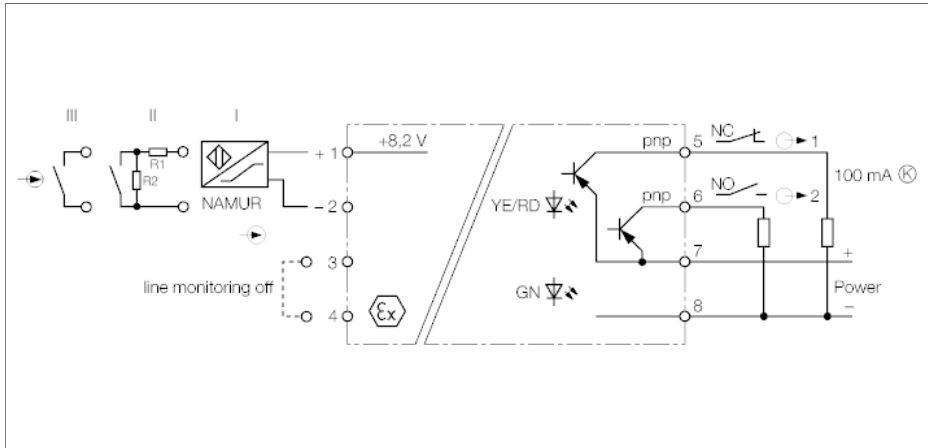


**Isolating switching amplifier  
single-channel  
MK13-P-EX0/24VDC**



The single-channel isolating switching amplifier MK13-P-EX0/24VDC is equipped with an intrinsically safe input circuit.

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

The coupler features short-circuit protected pnp transistor outputs.

The input circuit is monitored according to wire-break and short circuit. Monitoring can be disabled by bridging terminals 3 and 4.

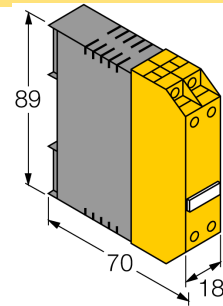
When using mechanical contacts, the wire-break and short-circuit monitoring must be switched off or the contact must be connected to resistors (II) (see circuit diagram).

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 outputs are inhibited.

- Intrinsically safe input circuits EEx ia
- Application area according to ATEX : II (1) GD
- Adjustable output mode (NO/NC)
- Line monitoring for wire-break/short-circuit (ON/OFF mode)
- Short-circuit protected complementary pnp transistor outputs
- Galvanically separated input and output circuits

**Isolating switching amplifier  
single-channel  
MK13-P-EX0/24VDC**

**Dimensions**



<b>Type</b>	MK13-P-EX0/24VDC																					
Ident-No.	7542116																					
<b>Nominal voltage</b>	24 VDC																					
Operating voltage range	10...30 VDC																					
Power consumption	≤ 0.5 W																					
<b>NAMUR</b>	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																					
<b>Voltage drop</b>	≤ 2.5 V																					
Semiconductor output circuit(s)																						
Output circuits (digital)	2 x transistors (pnp, short-circuit proof)																					
Switching voltage	≤ 30 VDC																					
Switching current per output	≤ 100 mA																					
Switching frequency	≤ 3000 Hz																					
<b>Galvanic isolation</b>																						
Test voltage	2.5 kV																					
<b>Ex approval acc. to conformity certificate</b>	TÜV 03 ATEX 2235																					
Application area	II (1) GD																					
Protection type	[EEx ia] IIC																					
Max. output voltage U <sub>o</sub>	≤ 9.9 V																					
Max. output current I <sub>o</sub>	≤ 12 mA																					
Max. output power P <sub>o</sub>	≤ 30 mW																					
Rated voltage	250 V																					
Characteristic	linear																					
External inductance/capacitance L <sub>o</sub> /C <sub>o</sub>	<table border="1"> <thead> <tr> <th></th> <th colspan="3">Ex IIC</th> <th colspan="3">Ex IIB</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td>1</td> <td>5,0</td> <td>10,0</td> <td>2,0</td> <td>10,0</td> <td>20,0</td> </tr> <tr> <td>Co [μF]</td> <td>1,1</td> <td>0,79</td> <td>0,7</td> <td>5</td> <td>6,6</td> <td>3,2</td> </tr> </tbody> </table>		Ex IIC			Ex IIB			Lo [mH]	1	5,0	10,0	2,0	10,0	20,0	Co [μF]	1,1	0,79	0,7	5	6,6	3,2
	Ex IIC			Ex IIB																		
Lo [mH]	1	5,0	10,0	2,0	10,0	20,0																
Co [μF]	1,1	0,79	0,7	5	6,6	3,2																
<b>Indication</b>																						
Operational readiness	green																					
Switching state	yellow																					
Error indication	red																					
<b>Protection class</b>	IP20																					
Ambient temperature	-25...+70 °C																					
Storage temperature	-40...+80 °C																					
Dimensions	89 x 18 x 70 mm																					
Weight	96 g																					
Mounting instruction	Mounting on DIN rail or mounting panel																					
Housing material	Polycarbonate/ABS																					
Electrical connection	4 x 2-pole flat terminals with self-lifting pressure plates																					
Terminal cross-section	1 x 2.5 mm <sup>2</sup> / 2 x 1.5 mm <sup>2</sup>																					