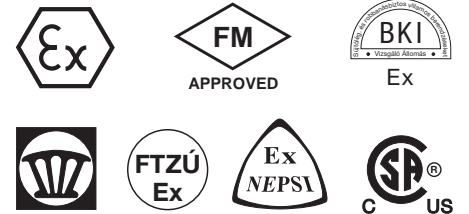
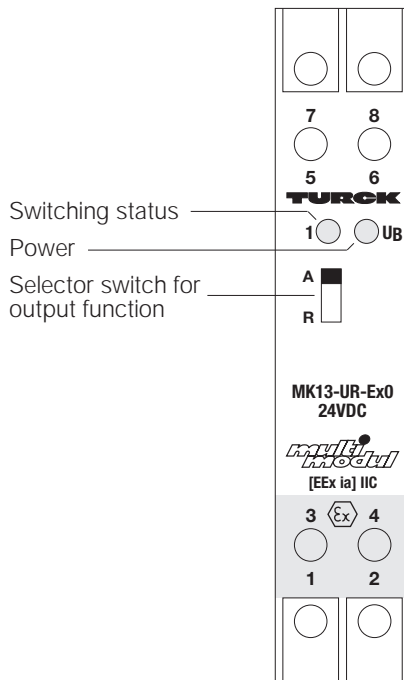


Isolating Switching Amplifier MK13-UR-Ex0 1 channel



- **Single channel switching amplifier**
- **Intrinsically safe input circuit [EEx ia] IIC**
- **Galvanic isolation between input circuit, output circuit and supply voltage**
- **Input circuit monitoring for wire-break and short-circuit (can be disabled)**
- **Relay output with one NO contact**
- **Selectable NO/NC output function**

The MK13-UR-Ex0 is a single channel switching amplifier with an intrinsically safe input circuit. It can be used in conjunction with sensors conforming to EN 50227 (NAMUR), variable resistors or potential-free contacts.

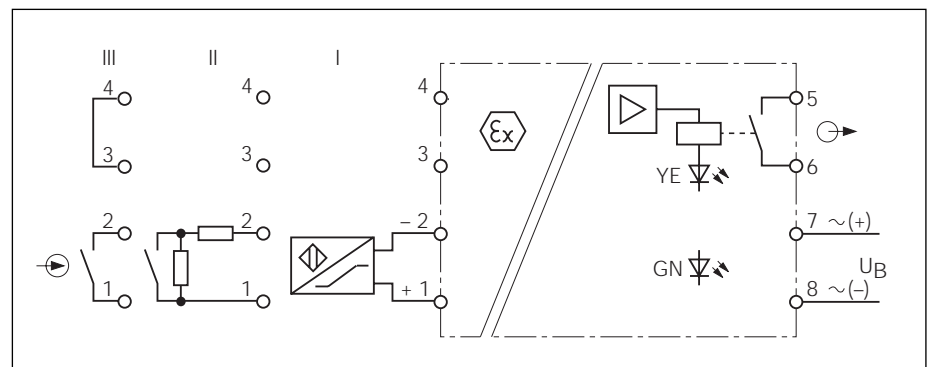
The device is provided with a relay output with one NO contact.

The output function is selected by a switch located on the front cover. Positions A and R represent normally open (NO) and normally closed (NC) modes, respectively.

The input circuit is monitored for short-circuit and wire-break. The input circuit monitoring function can be disabled by jumpering terminals 3 and 4.

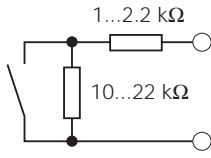
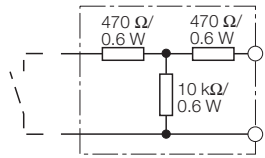
When using mechanical contacts as the input device, the input circuit monitoring function must be disabled (III), or shunt-resistors must be connected to the contacts (II).

Should an input circuit error occur, the output will be de-energised and the green LED (operational readiness) will turn off.



Isolating Switching Amplifiers



Type	MK13-UR-Ex0/24VDC	MK13-UR-Ex0/230VAC
Ident-No.	75 053	75 053 03
Supply Voltage U_B	19...29 VDC	184...276 VAC
Ripple W_{PP}	$\leq 10\%$	-
Current consumption	approx. 20 mA	approx. 20 mA
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 50227 (NAMUR), intrinsically safe according to EN 50020	according to EN 50227 (NAMUR), intrinsically safe according to EN 50020
Operating characteristics		
- Voltage	8.5 V	8.5 V
- Current	5 mA	5 mA
Switching threshold	1.55 mA	1.55 mA
Hysteresis	typ. 0.4 mA	typ. 0.4 mA
Wire-break threshold	≤ 0.1 mA	≤ 0.1 mA
Short-circuit threshold	≥ 6 mA	≥ 6 mA
Contact Configuration		
Of mechanical switches with active input circuit monitoring function		 resistor module WM1, ident-no. 09 121 01
Output Circuits		
Switching voltage	250 VAC/120 VDC	250 VAC/120 VDC
Switching current	≤ 2 A	≤ 2 A
Switching capacity	500 VA/120 W	500 VA/120 W
Switching frequency	≤ 10 Hz	≤ 10 Hz
Contact material	silver-alloy + 3 μ m Au	silver-alloy + 3 μ m Au
Ex-Approval acc. to Certificate of Conformity	BVS 89.C.2010	BVS 89.C.2010
Maximum nominal values		
- No load voltage U_0	10.5 V	10.5 V
- Short-circuit current I_k	31.3 mA	31.3 mA
Maximum external inductances/capacitances		
- [EEx ia] IIC	5 mH/510 nF	5 mH/510 nF
- [EEx ib] IIC	36 mH/3 μ F	36 mH/3 μ F
LED Indications		
- Status indication	yellow	yellow
- Power "ON"	green	green
Terminal Housing		
Mounting	8-pole, 18 mm wide, Polycarbonate/ABS, flammability class V-0 per UL 94	
Connection	snap-on clamps for top-hat rail (DIN 50022) or screw terminals for panel mounting	
Connection profile	via flat terminals with self-lifting pressure plates	
Degree of protection (IEC 60529/EN 60529)	$\leq 2 \times 2.5$ mm ² or 2×1.5 mm ²	
Operating temperature	with wire sleeves	
	$\leq 2 \times 2.5$ mm ² or 2×1.5 mm ²	
	IP20	
	-25...+60 °C	

