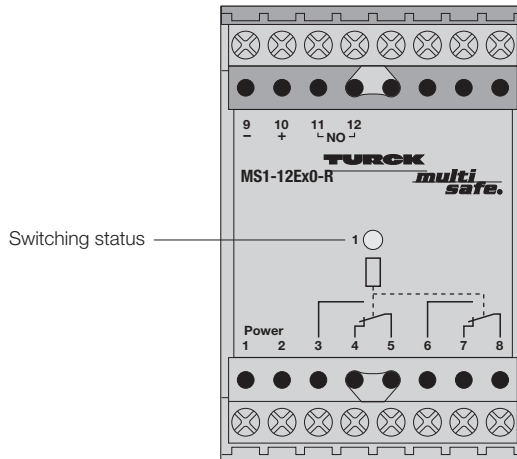


## Isolating Switching Amplifier MS1-12Ex0-R 1-channel

1



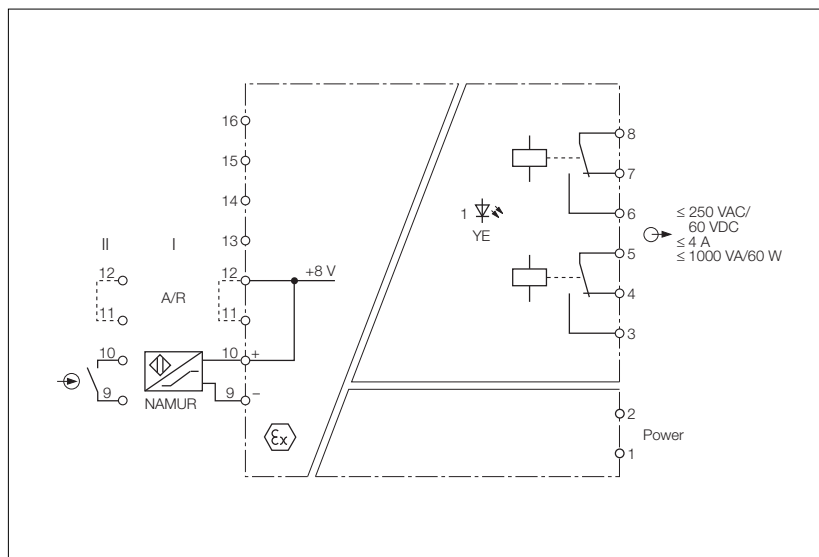
- **1-channel isolating switching amplifier**
- **Intrinsically safe input circuit EEx ia**
- **Area of application according to ATEX: II (1) GD, I (M1)**
- **Galvanic isolation between input circuit, output circuit and supply voltage**
- **2 relay outputs, each with one SPDT contact**
- **Selectable NO/NC output function**
- **Universal supply voltage (20...250 VAC/20...125 VDC)**

The MS1-12Ex0-R is a single channel switching amplifier with an intrinsically safe input circuit. It can be connected to sensors according to EN 60947-5-6 (NAMUR), variable resistors or potential-free contacts. The output circuit has two relays with one SPDT contact each.

The output function is jumper programmable by linking terminals 11/12 for normally open mode (NO/A) or by leaving terminals 11/12 open for normally closed mode (NC/R).

This unit does not have input circuit monitoring. Therefore this device provides an inexpensive alternative in systems which use NAMUR sensors (I) or mechanical contacts (II).

The yellow LED indicates the status of the output.



## Isolating Switching Amplifier MS1-12Ex0-R

<b>Type</b>	MS1-12Ex0-R
Ident-no.	5311103
<b>Supply voltage</b> $U_B$	20...250 VAC/20...125 VDC
Line frequency (AC)	40...70 Hz
Power consumption	$\leq 3$ W
Galvanic isolation	between input circuit, output circuit and supply voltage for 250 V <sub>rms</sub> test voltage 2.5 kV <sub>rms</sub>
<b>Input circuits</b>	according to EN 60947-5-6 (NAMUR), intrinsically safe according to EN 50020
Operating characteristics	
– Voltage	8 V
– Current	8 mA
Switching threshold	1.55 mA
Hysteresis	0.2 mA
<b>Output circuits</b>	2 relay outputs
Contacts	1 SPDT contact, silver-alloy + 3 $\mu$ m Au
Switching voltage	$\leq 250$ VAC/60 VDC
Switching current	$\leq 4$ A
Switching capacity	$\leq 1000$ VA/60 W
Switching frequency	$\leq 10$ Hz
<b>Ex-Approval acc. to certificate of conformity</b>	DMT 01 ATEX E 119
Maximum nominal values	
– No load voltage $U_0$	11.0 V
– Short-circuit current $I_0$	55 mA
– Power $P_0$	150 mW
– Safety voltage $U_m$	250 VAC/125VDC
Max. external inductances/capacitances $L_0/C_0$	
– [EEx ia] IIC	1 mH/500 nF
– [EEx ia] IIB	3 mH/2500 nF
– [EEx ia] I	10 mH/10 $\mu$ F
Marking of device	Ⓔ II (1) GD [EEx ia] IIC I (M1) [EEx ia] I
<b>LED indications</b>	
– Switching status	yellow
<b>Housing</b>	50 mm wide, Polycarbonate/ABS
Mounting	panel mounting or snap-on clamps for top-hat rail (DIN 50022)
Connection	2 x 8 self-lifting pressure plates
Connection profile	$\leq 2 \times 2.5$ mm <sup>2</sup> or $2 \times 1.5$ mm <sup>2</sup> with wire sleeves
Degree of protection (IEC 60529/EN 60529)	IP20
Operating temperature	-25...+60 °C

