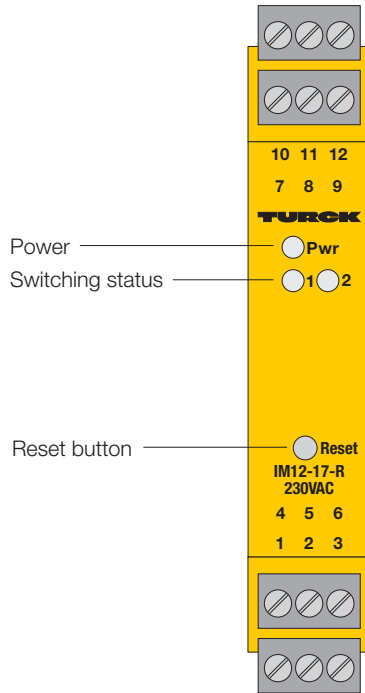


# Switching Amplifier IM12-17-R/24VDC IM12-17-R/230VAC 1-channel

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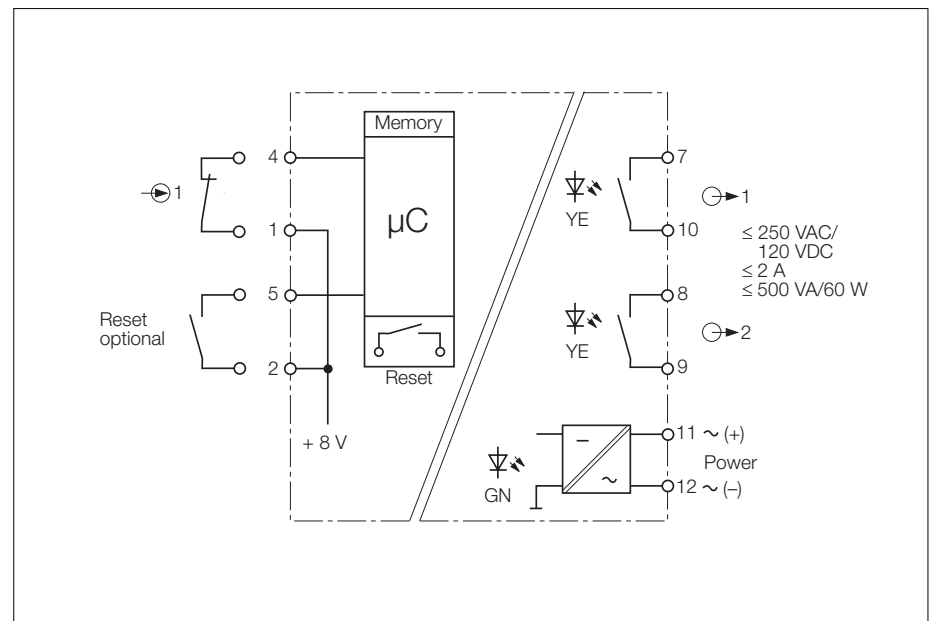


- **1-channel switching amplifier**
- **Latching of output state after tripping**
- **Switching status is retained during power failure**
- **Galvanic isolation between input circuit, output circuit and supply voltage**
- **2 complementary relay outputs with one NO contact each**
- **Removable terminal blocks**

The single channel switching amplifier IM12-17-R/... serves to monitor the switching status of mechanical NC contacts. The output is equipped with two complementary relays with one NO contact each. These NO contacts signal opening of the monitored mechanical contact which must be closed during normal operation. In this case, relay 1 is energised (NO contact closed) and relay 2 is de-energised (NO contact open). If the monitored mechanical contact opens, both relays change state and retain this switching state until the front panel reset button (or an externally connected reset button) is activated. The relays always have to be reset to return to their initial position (relay 1 energised, relay 2 de-energised).

If a power supply failure occurs, both relays de-energise. After re-applying power, the same switching status as before the power failure is restored. This enables retaining an error state during a power supply failure. The input circuit and external reset buttons are galvanically isolated from the output and the power supply.

The switching status of both relays is indicated via the yellow LEDs; the green LED signals that power is applied to the device.

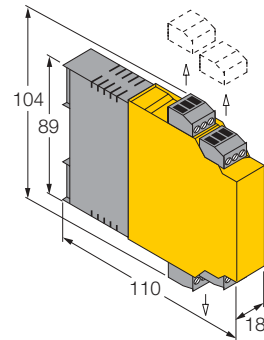


## Switching Amplifier IM12-17-R

### Use of bimetal switches for motor temperature monitoring

A bimetal switch, which is integrated in a motor for temperature control purposes, can be monitored by the IM12-17-R. The bimetal contact must open if the operating temperature is exceeded; consequently the relays will change their switching state. The relays retain this state (even if the motor cools off) until the internal or an optional external reset button is activated. If a power failure occurs both relays de-energise. If power is re-applied the relays return to the same switching status as before the power failure. This function prevents a defect motor from re-starting after a power failure.

<b>Galvanic isolation</b>	between input circuit and output circuit and supply voltage for 250 V <sub>rms</sub> , test voltage 2.5 kV <sub>rms</sub>
<b>Input circuits</b>	
Operating characteristics	
– Voltage	8 V
– Current	8 mA
Switching threshold	1.55 mA
Hysteresis	typ. 0.2 mA
<b>Output circuits</b>	
Switching voltage	2 relay outputs: 2 x SPDT ≤ 250 VAC/120 VDC
Switching current per output	≤ 2 A
Switching capacity per output	< 500 VA/60 W
Switching frequency	≤ 10 Hz
Contact material	silver-alloy + 3 μm Au
<b>LED indications</b>	
– Switching status	2 x yellow
– Power	green
<b>Housing</b>	12-pole, 18 mm wide, Polycarbonate/ABS flammability class V-0 per UL 94
Mounting	snap-on clamps for top-hat rail (DIN 50022) or screw terminals for panel mounting
Connection	removable terminal blocks, reverse-polarity protected, screw connection, self-lifting
Connection profile	≤ 1 x 2.5 mm <sup>2</sup> or 2 x 1.5 mm <sup>2</sup> with wire sleeves
Degree of protection (IEC 60529/EN 60529)	IP20
Operating temperature	-25...+60 °C



Type	Ident-no.	Supply Voltage U <sub>B</sub>	Line frequency	Ripple W <sub>PP</sub>	Power-/Current consumption
IM12-17-R/230VAC	7540031	195...253 VAC	48...62 Hz	–	≤ 30 mA <sub>eff</sub>
IM12-17-R/24VDC	7540030	19...29 VDC	–	–	–