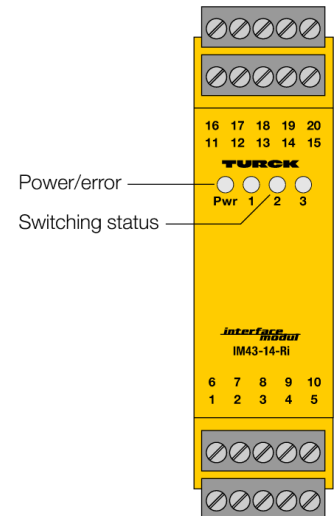
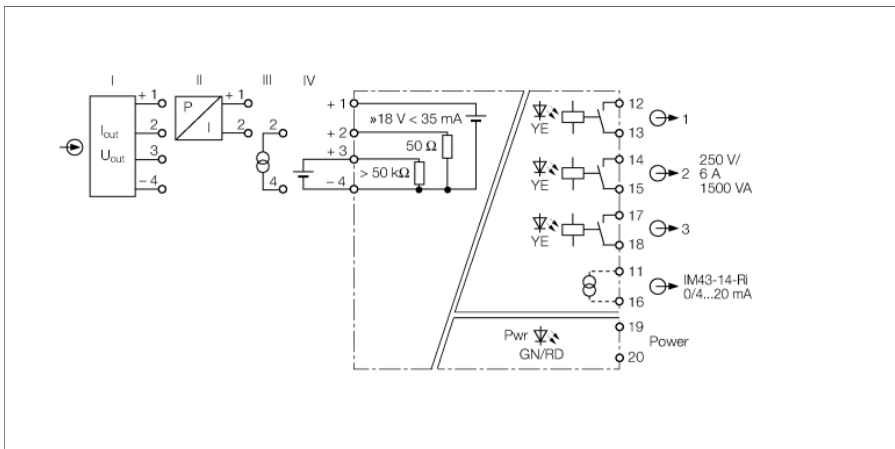


**Trip amplifier  
1-channel  
IM43-14-RI**



The 1-channel IM43-14-RI trip amplifier monitors 0/4...20 mA currents or 0/2...10 V voltages for overshoot and undershoot of limit values.

The three limit values are set via the lateral rotary coding switches.

Additionally 18 V (at max. 35 mA) are provided for transmitters or sensors.

The measured values are transmitted via a galvanically isolated analog output to other devices.

The green LED indicates operational readiness. Three yellow LEDs indicate the switching status of the corresponding output.

The output mode of the relays and the hysteresis are set via DIP switches.

Live-zero signals are converted into dead-zero signals via DIP switches. In live-zero mode the range between 4...20 mA is monitored.

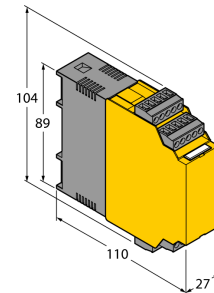
Any state outside this range (< 3.6 mA or > 24 mA) is signalled with an error message. In this case the power LED will illuminate red, the relays drop off and a fault current is output. If a faulty transmitter causes a short circuit, the relays drop off and a fault current is also output. The fault current can be 0 mA or > 22 mA, depending on the DIP switch activated.

- **FM<sub>us</sub> TR CU**
- **Monitors 3 limit values at a current or voltage input**
- **Power supply of 2-wire or 3-wire transmitters/sensors**
- **Input circuit: 0/4...20 mA; 0/2...10 V**
- **Output circuit: 0/4...20 mA, 3 independent limit value relays**
- **Limit value relay adjusted via rotary coding switches**
- **Hysteresis and relay outputs adjusted via DIP switch**
- **Universal operating voltage**
- **Complete galvanic isolation**
- **Input reverse-polarity protected**

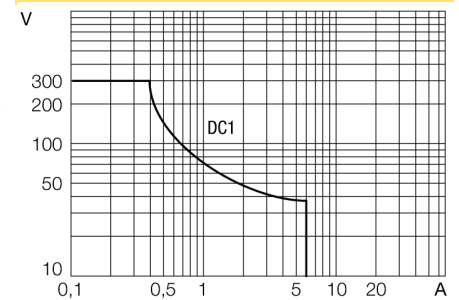
**Trip amplifier  
1-channel  
IM43-14-RI**

|   |   |
|---|---|
| <b>Type designation</b>   | IM43-14-RI  |
| Ident-No.   | 7540042   |
| <b>Nominal voltage</b>  | Universal voltage supply unit   |
| Operating voltage   | 20...250 VAC  |
| Frequency   | 40...70 Hz  |
| Operating voltage range   | 20...250 VDC  |
| Power consumption   | ≤ 5 W   |
| <b>Transmitter connection</b>   |   |
| Supply voltage  | ≥ 17 V / 20 mA  |
| Current   | 35 mA   |
| Voltage input   | 0/2...10 VDC  |
| Input resistance (voltage)  | ≥ 50 kΩ   |
| Input current   | 0/4...20 mA   |
| Input resistance (current)  | ≤ 50 Ω  |
| <b>Output circuits</b>  |   |
| Output current  | 0/4...20 mA   |
| Load resistance, current output   | ≤ 0.6 kΩ  |
| Output circuits (digital)   | 3 x relays (NO)   |
| Output switching voltage relay  | ≤ 30 VDC / ≤ 250 VAC  |
| Switching current per output  | ≤ 6 A   |
| Switching capacity per output   | ≤ 1500 VA   |
| Switching frequency   | ≤ 10 Hz   |
| Contact quality   | AgNi, 3μ Au   |
| <b>Measuring accuracy (including linearity, hysteresis and repeatability)</b> | ≤ 0.1 % of full scale   |
| Reference temperature   | 23 °C   |
| Temperature drift   | ≤ 0.00075 % of full scale/K   |
| <b>Galvanic isolation</b>   |   |
| Test voltage  | 2.5 kV  |
| <b>Indication</b>   |   |
| Operational readiness   | green   |
| Switching state   | Yellow  |
| Error indication  | red   |
| <b>Protection class</b>   | IP20  |
| Flammability class acc. to UL 94  | V-0   |
| Ambient temperature   | -25...+70 °C  |
| Storage temperature   | -40...+80 °C  |
| Dimensions  | 104 x 27 x 110 mm   |
| Weight  | 186 g   |
| Mounting instructions   | DIN rail (NS35) or panel  |
| Housing material  | Polycarbonate/ABS   |
| Electrical connection   | 4 × 5-pin removable terminal blocks, reverse polarity protected, screw terminal |
| Terminal cross-section  | 1 x 2.5 mm <sup>2</sup> / 2 x 1.5 mm <sup>2</sup>                               |
| Tightening torque   | 0.5 Nm  |

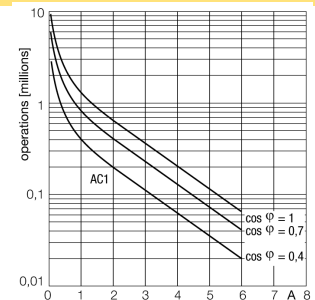
**Dimensions**



**Output relay – Load curve**

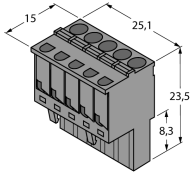


**Output relay – Electrical lifetime**



**Trip amplifier  
1-channel  
IM43-14-RI**

**Accessories**

| Type code       | Ident-No. | Description   | Dimension drawing   |
|-----------------|-----------|---|---|
| IM-CC-5X2BK/2BK | 7541219   | Cage clamp terminals for IM modules ( Ex-devices with 27 mm overall width); includes: 4 pcs. of 5-pin black terminals |  |