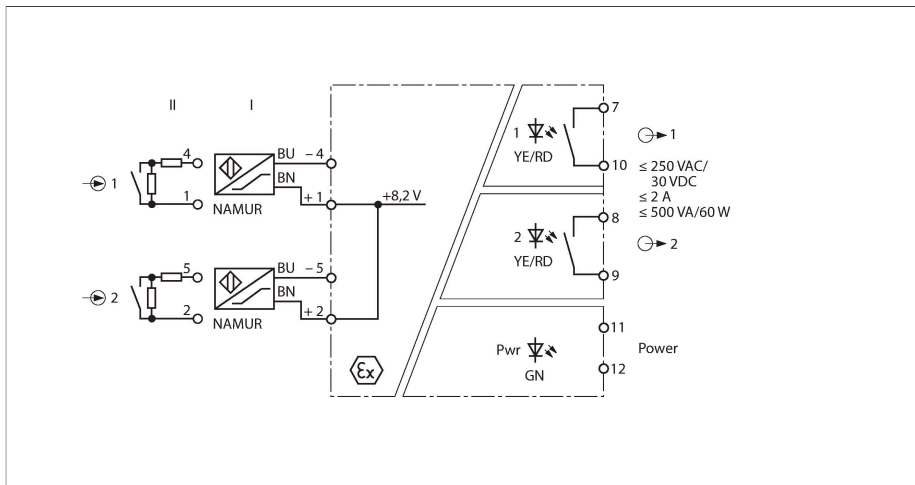


IM1-22EX-R

Isolating switching amplifier – 2-channel



The 2-channel IM1-22EX-R isolating switching amplifier is equipped with intrinsically safe input circuits.

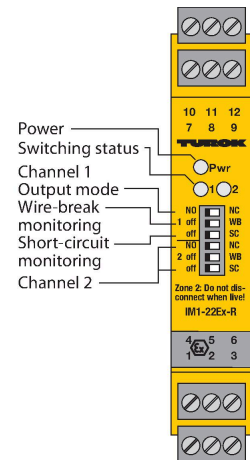
Sensors according to EN 60947-5-6 (NAMUR) or potential-free contact transmitters can be connected to the device.

The output circuits feature 2 relays, each with 1 NO contact.

Via six switches on the front, you can set the operating behaviour for each channel separately (work or quiescent current behavior, i.e. NO/NC) as well as switch wire-break (WB) and short-circuit monitoring (SC) on and off.

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

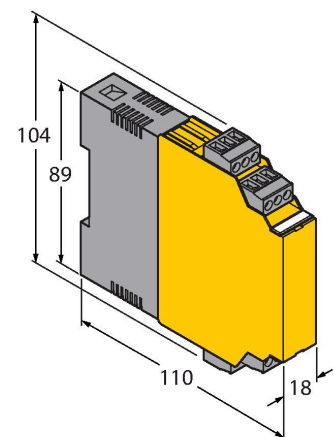
The Pwr LED lights green to indicate operational readiness. The 2-color LEDs 1 and 2 light yellow to indicate the switching status of the associated output. In the event of an input circuit error, the 2-color LED of the assigned faulty input turns red, with the input circuit monitoring switched on. Thereupon the output relay drops out.



Features

- 2 relay outputs (NO)
- Output mode adjustable (NO/NC mode)
- Input circuits monitored for wire-break/short-circuit (ON/OFF switchable)
- SIL 2
- Complete galvanic isolation
- Input reverse-polarity protected
- ATEX, IECEx, UL, cFM_{US}, CSA, TR CU, NEPSI, KOSHA, TIIS, CCOE, INMETRO
- Installation in zone 2

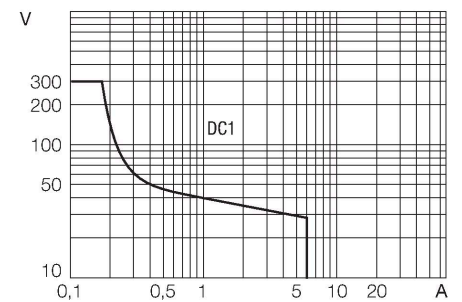
Dimensions



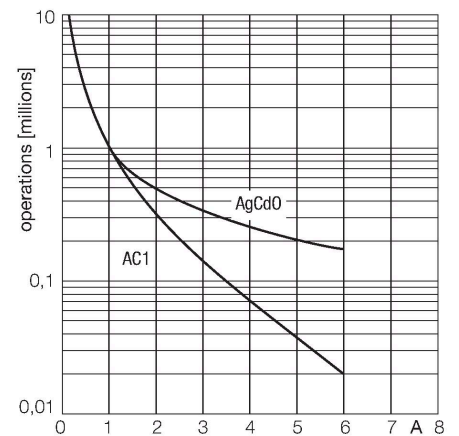
Technical data

| | |
|--|---|
| Type | IM1-22EX-R |
| ID | 7541231 |
| Nominal voltage | Universal voltage supply unit |
| Operating voltage | 20...250 VAC |
| Frequency | 40...70 Hz |
| Operating voltage | 20...125 VDC |
| Power consumption | ≤ 3 W |
| Power dissipation, typical | ≤ 0.98 W |
| NAMUR input | |
| NAMUR | EN 60947-5-6 |
| Input circuit monitoring | on/off switchable |
| No-load voltage | 8.2 VDC |
| Short-circuit current | 8.2 mA |
| Input resistance | 1 kΩ |
| Cable resistance | ≤ 50 Ω |
| Switch-on threshold | 1.75 mA |
| Switch-off threshold | 1.55 mA |
| Wire breakage threshold | ≤ 0.06 mA |
| Short-circuit threshold | ≥ 6.4 mA |
| Output circuits (digital) | 2 x relays (NO) |
| Output switching voltage relay | ≤ 30 VDC / ≤ 250 VAC |
| Switching current per output | ≤ 2 A |
| Switching capacity per output | ≤ 500 VA/60 W |
| Switching frequency | ≤ 10 Hz |
| Galvanic isolation | |
| Test voltage | 2.5 kV RMS |
| Important note | For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply. |
| Ex approval acc. to conformity certificate | TÜV 04 ATEX 2553 |
| Application area | II (1) G, II (1) D |
| Ignition protection category | [Ex ia Ga] IIC; [Ex ia Da] IIIC |
| Ex approval acc. to conformity certificate | TÜV 06 ATEX 552968 X |
| Application area | II 3 G |
| Ignition protection type | Ex nA nC [ic Gc] IIC/IIB T4 Gc |
| Characteristic | linear |
| Important note | If the device is used in applications to achieve functional safety according to IEC 61508, the safety manual must be used. Information in the data sheet are not valid for functional safety. |
| Approval | SIL 2 acc. to EXIDA FMEDA |
| Use in SIL safety circuits | SIL 2 |

Output relay – Load curve



Output relay – Electrical lifetime



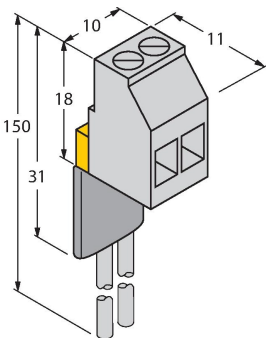
Technical data

| | |
|----------------------------------|---|
| Indication | |
| Power on display | Green |
| Switching state | Yellow |
| State/ Fault | 2 × yellow/red |
| Error indication | red |
| Mechanical data | |
| Protection class | IP20 |
| Flammability class acc. to UL 94 | V-0 |
| Ambient temperature (min.) | -25 |
| Ambient temperature (max.) | 70 |
| | -25 ... +60 °C für UL, FM, TIIS |
| Storage temperature | -40...+80 °C |
| Dimensions | 104 x 18 x 110 mm |
| Weight | 173 g |
| Mounting instructions | DIN rail (NS35) or panel |
| Housing material | Polycarbonate/ABS |
| Electrical connection | 4 × 3-pin removable terminal blocks, reverse polarity protected, screw terminal |
| Terminal cross-section | 1 x 2.5 mm ² / 2 x 1.5 mm ² |
| Tightening torque | 0.5 Nm |

Accessories

WM1 WIDERSTANDSMODUL

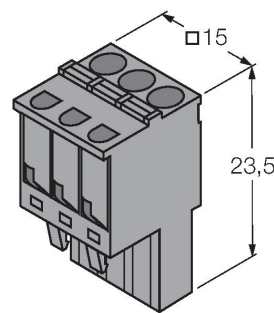
0912101



The resistor module WM1 meets the requirements for line monitoring between a mechanical contact and a TURCK signal processor. The input circuit of the signal processor is designed for sensors acc. to EN60947-5-6 (NAMUR) and equipped with a wire-break and short-circuit monitoring function.

IM-CC-3X2BU/2BK

6900475



Cage clamp terminals for IM modules (Ex-devices with 18 mm overall width); includes: 2 pcs. 3-pin blue terminals and 2 pcs. 3-pin black terminals.