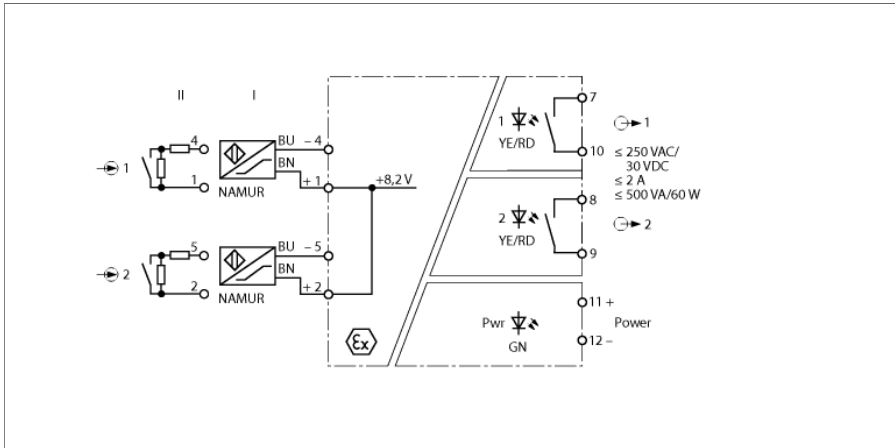


# Isolating switching amplifier 2-channel IM1-22EX-R/24VDC



The 2-channel IM1-22EX-R/24VDC isolating switching amplifier is equipped with intrinsically safe input circuits.

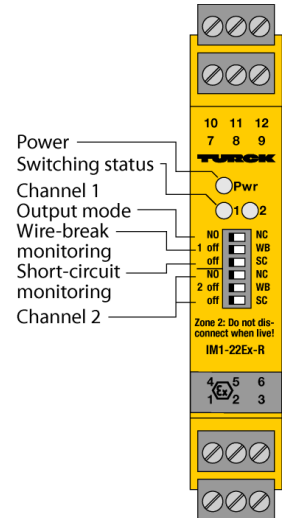
Sensors according to EN 60947-5-6 (NAMUR) or potential-free contact transmitters can be connected to the device.

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 below light yellow to indicate the switching status of the corresponding 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 being switched on. Thereupon the belonging output relay is de-energized.



- Adjustable output mode (NO/NC)
- Input circuits monitored for wire-break/short-circuit (ON/OFF switchable)
- Complete galvanic isolation
- ATEX, <sub>c</sub>FM<sub>US</sub>, TR CU

|                            |                  |
|----------------------------|------------------|
| Type                       | IM1-22EX-R/24VDC |
| ID                         | 7541210          |
| Nominal voltage            | 24 VDC           |
| Operating voltage          | 10...30 VDC      |
| Power dissipation, typical | ≤ 0.99 W         |

|                          |                   |
|--------------------------|-------------------|
| <b>NAMUR input</b>       |                   |
| NAMUR                    | EN 60947-5-6      |
| Input circuit monitoring | on/off switchable |
| No-load voltage          | 8 VDC             |
| Short-circuit current    | 8 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          |

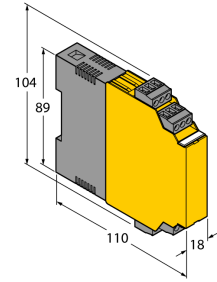
|                                |                      |
|--------------------------------|----------------------|
| <b>Output circuits</b>         |                      |
| Output circuits (digital)      | 2 x relays (NO)      |
| Output switching voltage relay | ≤ 30 VDC / ≤ 250 VAC |
| Switching current per output   | ≤ 2 A                |
| Switching capacity per output  | ≤ 500 VA/60 W        |
| Switching frequency            | ≤ 10 Hz              |

|  |  |
|--|--|
| <b>Important note</b>                      | For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply. |
| Ex approval acc. to conformity certificate | PTB 00 ATEX 2033   |
| Application area                           | II (1) G, II (1) D   |
| Ignition protection category               | [Ex ia Ga] IIC; [Ex ia Da] IIIC  |

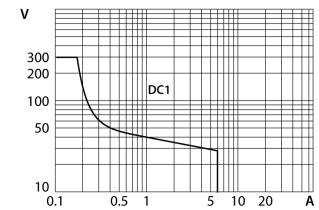
|                                    |                |
|------------------------------------|----------------|
| <b>Displays/Operating elements</b> |                |
| Operational readiness              | Green          |
| Switching state                    | Yellow         |
| State/ Fault                       | 2 x yellow/red |
| Error indication                   | red            |

|                                  |   |
|----------------------------------|---|
| <b>Mechanical data</b>           |   |
| Protection class                 | IP20  |
| Flammability class acc. to UL 94 | V-0   |
| Ambient temperature              | -25...+60 °C  |
|                                  | -25 ... +60 °C für FM   |
| Storage temperature              | -40...+80 °C  |
| Dimensions                       | 104 x 18 x 110 mm   |
| Weight                           | 151 g   |
| Mounting instructions            | DIN rail (NS35) or panel  |
| Housing material                 | Polycarbonate/ABS   |
| Electrical connection            | 4 x 3-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  |

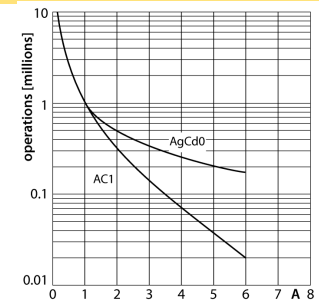
## Dimensions



## Output relay – Load curve



## Output relay – Electrical lifetime



## Accessories

| Type code                 | Ident-No. |   | Dimension drawing |
|---------------------------|-----------|---|-------------------|
| WM1 WIDER-<br>STANDSMODUL | 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.  |                   |