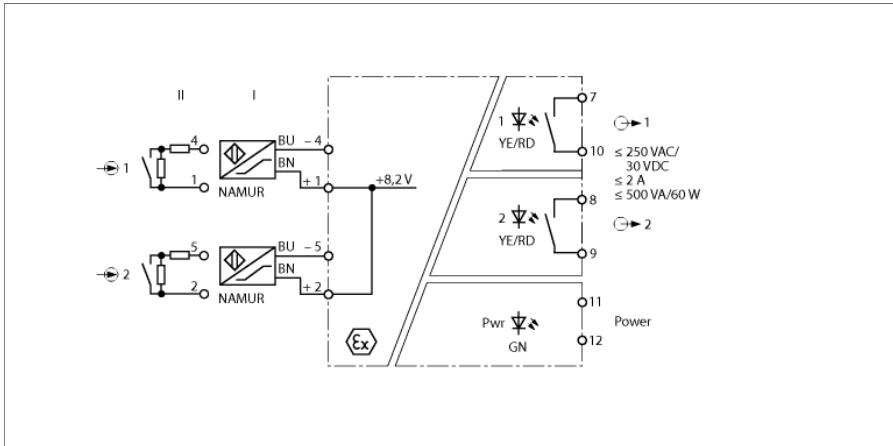


## Isolating switching amplifier 2-channel IM1-22EX-R/230VAC



The 2-channel IM1-22EX-R/230VAC 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.

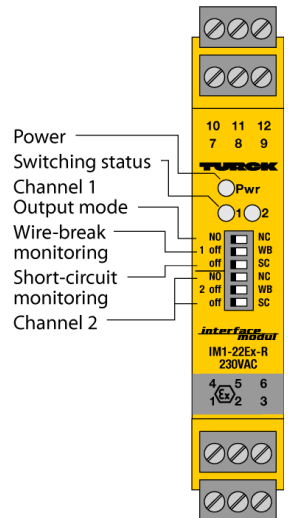
The output circuits feature 2 relays, each with 1 NO contact.

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.

- **ATEX, TR CU**
- **Installation in zone 2**
- **Adjustable output mode (NO/NC)**
- **Input circuits monitored for wire-break/short-circuit (ON/OFF switchable)**
- **Complete galvanic isolation**



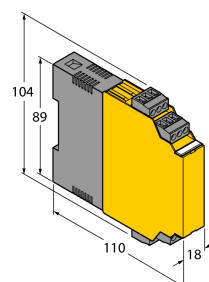
# Isolating switching amplifier

## 2-channel

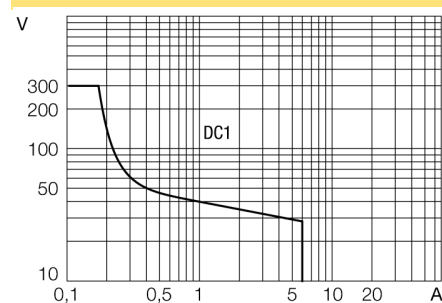
### IM1-22EX-R/230VAC

|                                            |                                                                                                              |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Type designation</b>                    | IM1-22EX-R/230VAC                                                                                            |
| Ident-No.                                  | 7541211                                                                                                      |
| <b>Nominal voltage</b>                     | 230 VAC                                                                                                      |
| Operating voltage                          | 196...253 VAC                                                                                                |
| Frequency                                  | 48...62 Hz                                                                                                   |
| Power consumption                          | ≤ 2 VA                                                                                                       |
| <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 (digital)</b>           | 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                                                                                                      |
| Contact quality                            | AgNi, 3μ Au                                                                                                  |
| <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>Indication</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                                                                                                 |
| Storage temperature                        | -40...+80 °C                                                                                                 |
| Relative humidity                          | ≤ 95 %                                                                                                       |
| Dimensions                                 | 104 x 18 x 110 mm                                                                                            |
| Weight                                     | 148 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 <sup>2</sup> / 2 x 1.5 mm <sup>2</sup>                                                            |
| Tightening torque                          | 0.5 Nm                                                                                                       |

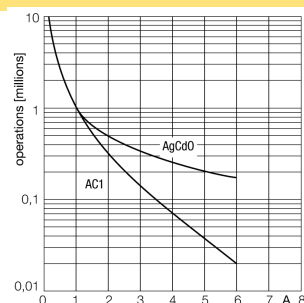
#### Dimensions



#### Output relay – Load curve

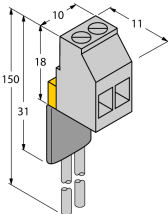
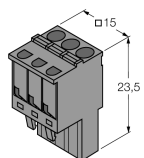


#### Output relay – Electrical lifetime



**Isolating switching amplifier**  
**2-channel**  
**IM1-22EX-R/230VAC**

**Accessories**

| Type code       | Ident-No. | Description                                                                                                                                                                                                                                                                                       | Dimension drawing                                                                   |
|-----------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| WM1             | 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.                                                                                                                                                |  |