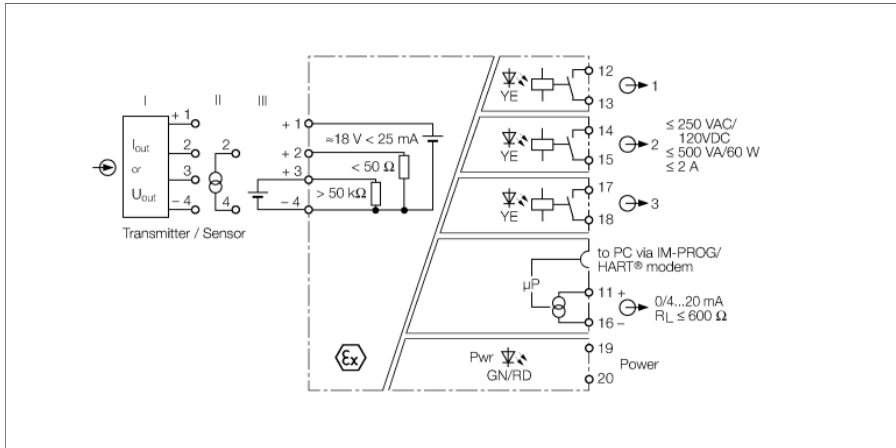


# Isolating transducer 1-channel IM33-14EX-CDRI

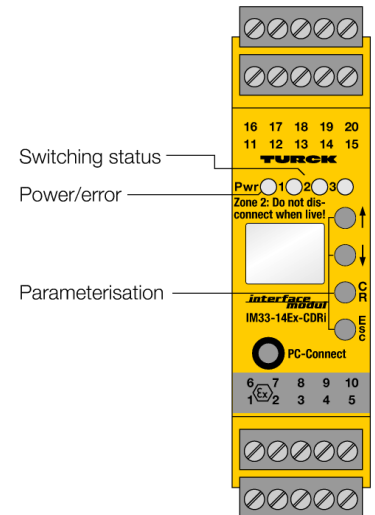


The 1-channel isolating transducer IM33-14EX-CDRI is designed to operate intrinsically safe transmitters in the Ex area and to transmit the measured signals to the non-Ex area.

The device is equipped with an analog output of 0/4...20 mA; In addition, three relay outputs for limit values are available. The measured value can be viewed on a 2-line display. A green LED indicates operational readiness, 3 yellow LEDs indicate the switching status of the individual channels.

The measured value is permanently written to a ring buffer with space for 8000 values. The writing process is stopped with a predefined trigger event, like for example "excess of limit value". After that, the stored signal sequence can be read out.

The device can be parametrized and configured via PC (FDT / DTM). For this, connect the device to the PC via the 3.5 mm jack on the front (the matching transmission cable IM-PROG III can be ordered separately from TURCK). In addition, a basic scope of parameters can be set via buttons and display on the front as well as via the HART® capable power interface



- Monitoring of analog values and ranges according to over and underrange
- Line monitoring
- Parameterized via PC (FDT/DTM), front-panel switch or HART
- Ring buffer for up to 8000 measured values
- Display
- Power supply of 2 and 3-wire measuring transducers
- Suited for active and passive signals
- Output circuit: 0/4...20 mA, reversible
- 3 relay outputs
- Universal operating voltage
- Complete galvanic isolation
- Input reverse-polarity protected
- ATEX, IECEx, TR CU, KOSHA
- Installation in zone 2

|                            |                               |
|----------------------------|-------------------------------|
| Type                       | IM33-14EX-CDRI                |
| ID                         | 7560015                       |
| 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 | ≤ 1.7 W                       |
| Residual ripple            | ≤ 10 mV <sub>ss</sub>         |

|                               |                |
|-------------------------------|----------------|
| <b>Transmitter connection</b> |                |
| Supply voltage                | ≥ 17 V / 20 mA |
| Current                       | 25 mA          |
| Voltage input                 | 0/2...10 VDC   |
| Input current                 | 0/4...20 mA    |

|                                |                      |
|--------------------------------|----------------------|
| <b>Output circuits</b>         |                      |
| Output current                 | 0/4...20 mA          |
| Load resistance current output | ≤ 0.6 kΩ             |
| Fault current                  | 0 / 22 mA adjustable |
| Output circuits (digital)      | 3 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              |

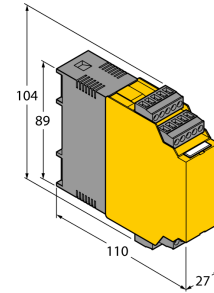
|  |                        |
|--|------------------------|
| <b>Response characteristic</b>   |                        |
| Measuring accuracy (including linearity, hysteresis and repeatability) | ≤ 0.05 % of full scale |
| Reference temperature  | 23 °C                  |
| Temperature drift analog output  | 0.0025 %/K             |

|                           |            |
|---------------------------|------------|
| <b>Galvanic isolation</b> |            |
| Test voltage              | 2.5 kV RMS |

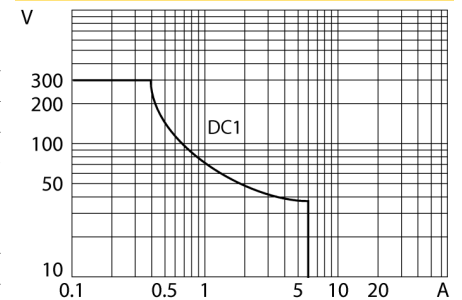
|  |  |
|--|--|
| <b>Important note</b>                      | For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply. |
| Ex approval acc. to conformity certificate | IBExU 07 ATEX 1156   |
| Application area                           | II (1) G, II (1) D   |
| Ignition protection category               | [Ex ia Ga] IIC; [Ex ia Da] IIIC  |
| Ex approval acc. to conformity certificate | IBExU 07 ATEX B015 X   |
| Application area                           | II 3 G   |
| Ignition protection type                   | Ex nA nC [ic Gc] IIC T4 Gc   |
| Characteristic                             | trapezoidal  |

|                                    |        |
|------------------------------------|--------|
| <b>Displays/Operating elements</b> |        |
| Operational readiness              | Green  |
| Switching state                    | Yellow |
| Error indication                   | red    |

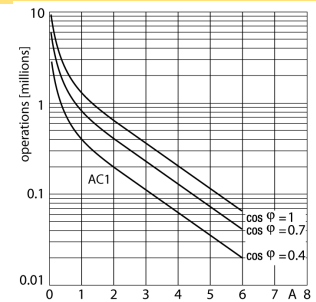
## Dimensions



## Output relay – Load curve

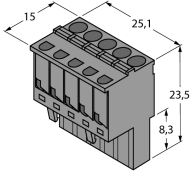
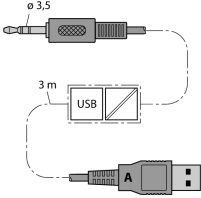


## Output relay – Electrical lifetime



| Mechanical data                  |   |
|----------------------------------|---|
| Protection class                 | 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                           | 249 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 × 2.5 mm <sup>2</sup> /2 × 1.5 mm <sup>2</sup>                                |
| Tightening torque                | 0.5 Nm  |

## Accessories

| Type code       | Ident no. |  | Dimension drawing   |
|-----------------|-----------|--|---|
| IM-CC-5X2BU/2BK | 7504031   | Cage clamp terminals for IM modules (Ex-devices with 27 mm overall width); includes: 2 pcs. 5-pin blue terminals and 2 pcs. 5-pin black terminals.                           |  |
| IM-PROG III     | 7525111   | USB-compatible programming adapter for the FDT/DTM-based parametrization of HART-capable Turck devices; galvanic separation between the device to be parametrized and the PC |  |