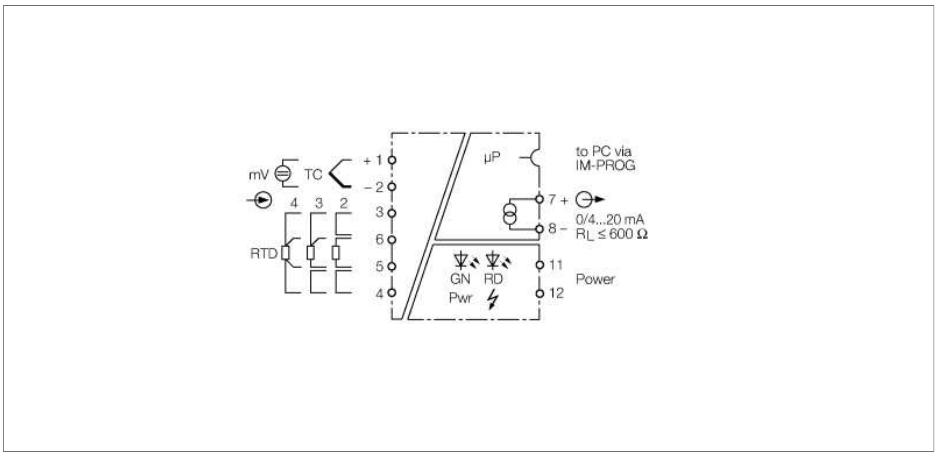
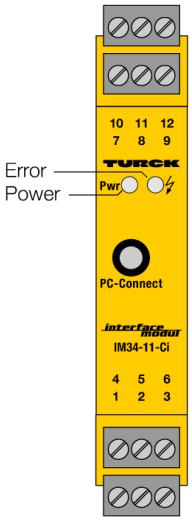
interface modul

# Temperature measuring amplifier
# 1-channel
# IM34-11-Ci

TURCK
Industrial Automation




The 1-channel temperature measuring amplifier IM34-11-Ci is designed to evaluate the temperature-dependent variations of resistance thermo detectors (RTD) Ni100/Pt100, thermoelement types B, E, J, K, L, N, R, S and T or low voltages in a range of -160…+160 mV and to output them as linear temperature current signals.

Resistance thermo detectors Ni100/Pt100 in 2, 3 or 4-wire-technology can be operated alternatively at the input circuit of the measuring amplifier. The Ni100/Pt100 input can either be used as external cold junction compensation for the thermoelement or as independent measuring input.

The device can be configured and parametrized via PC with the software tool Device Type Manager (DTM). For this, the device is connected to the PC via the 3.5 mm jack plug at the front (the matching transmission cable IM-PROG III can be ordered separately from TURCK).

The following settings are available:

- Connection mode (2, 3 and 4-wire technology)
- Lower limit
- Upper limit
- Input circuit monitoring for wire-break
- Current output adjustable in the event of input circuit errors: 0 resp. > 22 mA
- Internal or external cold junction compensation
- Output current (0/4…20 mA)
- Temperature indicated in °C or °K
- Mode (resistance, thermocouples, low voltage, line compensation)

The signals are transformed according to ITS 90/IEC 584 for thermoelements and IEC 751 for Pt100 RTDs and provided as temperature linear signals at the current output.

- **Input for Pt100/ Ni100 resistors, thermocouples and millivolt signals in 2, 3 or 4-wire technology**
- **Output circuit: 0/4…20 mA**
- **Parametrized via FDT/DTM**
- **HART®**
- **Removable terminal blocks**
- **Complete galvanic separation**

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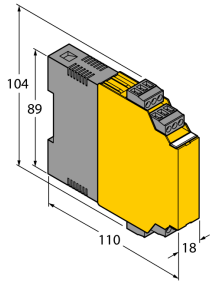
| | |
|---|---|
| **Type code** | IM34-11-Ci |
| Ident no. | 7506638 |
| **Nominal voltage** | Universal voltage supply unit |
| Operating voltage | 20…250 VAC |
| Frequency | 40…70 Hz |
| Operating voltage range | 20…125 VDC |
| Power consumption | ≤ 3 W |
| **Input circuits** | thermocouple<br>Pt100 |
| Pt100 | (IEC 751), 2, 3 and 4-wire technology |
| Ni100 | (DIN 43760), 2, 3 and 4-wire technology |
| Probe current | ≤ 0.2 mA |
| Thermoelements | B, E, J, K, N, R, S, T (ITS 90/IEC 584), L (DIN 43710) |
| Voltage input | -0.160…+0.160 VDC |
| **Output circuits** | |
| Output current | 0/4...20 mA |
| Load resistance current output | ≤ 0.6 kΩ |
| Fault current | 0 / 22 mA adjustable |
| **Reference temperature** | 23 °C |
| Accuracy current output | ± 5 µA |
| Temperature drift analogue output | 0.0025 %/K |
| Temperature drift RTD input | ± 3 mΩ/K |
| Temperature drift TC input | 3.2 µV / K (of 320mV) |
| Accuracy RTD input | ± 50 mΩ |
| Accuracy TC input | ± 15 µV |
| Cold junction compensation error | 2-wire < 100mΩ after line compensation<br>3-wire < 100mΩ with asymmetrical wiring<br>4-wire < 50mΩ<br>with cold junction compensation<br>with IM-3-CJT < 1K |
| **Galvanic separation** | |
| Test voltage | 2.5 kV |
| **MTTF** | 200 years acc. to SN 29500 (Ed. 99) 40 °C |
| **Indication** | |
| Operational readiness | green |
| Error indication | red |
| **Protection class** | IP20 |
| Ambient temperature | -25…+70 °C |
| Storage temperature | -40…+80°C |
| Dimensions | 104x 18x 110 mm |
| Weight | 130 g |
| Mounting instruction | For mounting on DIN rail or mounting panel |
| Housing material | Polycarbonate/ABS |
| Electrical connection | 4 x 3-pole removable terminal blocks, reverse polarity protected, screw connection |
| Terminal cross-section | 1 x 2.5 $mm^2$ / 2 x 1.5 $mm^2$ |
| Tightening torque | 0.5 Nm |

## Dimensions

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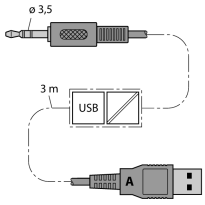
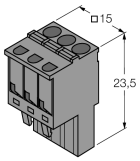
## Accessories

| Type code | Ident no. | Description | Dimension drawing |
|---|---|---|---|
| IM-PROG III | 7525111 | The programming adapter IM-PROG III is used for parametrization of TURCK IM and IMB devices via FDT/DTM and for galvanic separation. |  |
| IM-CC-3X2BK/2BK | 7541218 | Cage clamps for IM modules (non-Ex devices, width 18 mm): 4 black, 3-pin, included in delivery |  |

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