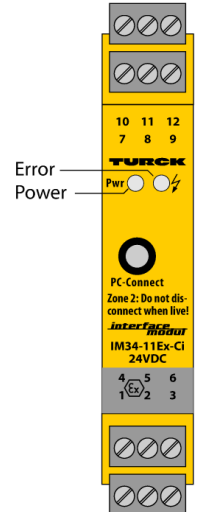
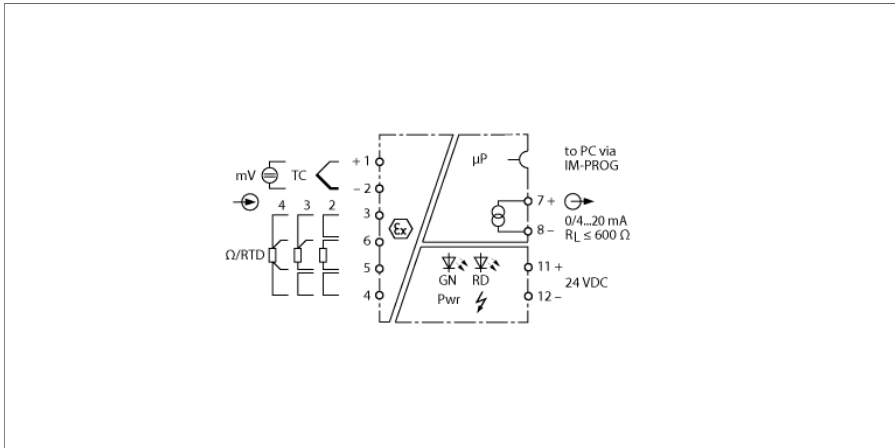


# Temperature measuring amplifier 1-channel IM34-11EX-CI/24VDC



The temperature measuring amplifier IM34-11Ex-Ci/24VDC is designed to evaluate the temperature-dependent changes of Ni100/ Pt100 RTDs, thermocouples 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 temperature-linear current signals.

The devices are parametrized and configured via PC with the software tool "Device Type Manager" (DTM). For this, connect the temperature measuring amplifier to the PC with the 3.5 mm jack plug on the front. The ready-made transmission cable can be ordered from TURCK under the type name IM-PROG III (ident no. 7525111).

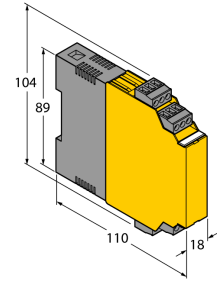
The following settings can be made via DTM:

- Connection mode (2, 3 and 4-wire technology)
- Measuring range, start
- Measuring range, end
- Input circuit monitoring for wire-break
- Behaviour of the current output in case of errors in the input circuit: 0 or > 22 mA
- Internal, external or fixed cold junction compensation
- Output current (0/4...20 mA)
- Temperature (°C or °K)
- Mode (resistor, thermocouple, low voltage, line compensation)

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

- Input for Pt100/ Ni100 resistors, thermocouples and millivolt signals in 2, 3 or 4-wire technology
- Parametrization via PACTware™
- Output: 0/4...20 mA
- Complete galvanic isolation
- Input reverse-polarity protected
- ATEX, IECEx, TR CU, INMETRO, CCOE, NEPSI
- Installation in zone 2

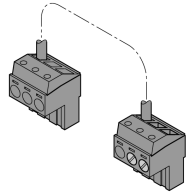
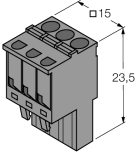
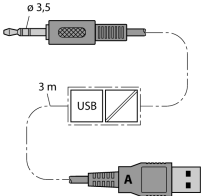
## Dimensions



|   |   |
|---|---|
| ID  | 7506637   |
| Nominal voltage   | 24 VDC  |
| Operating voltage $U_s$   | 20...30 VDC   |
| Power consumption   | $\leq 1.5$ W  |
| Input circuits  | Intrinsically safe acc. to EN 60079<br>Thermocouple<br>Ni100<br>Pt100<br>mV signals   |
| RTD   | Pt100 (IEC 751), Ni100 (DIN 43760), 2-,3- und 4-Leiter-Technik, nach Gost: Pt100, Cu50, Cu53, Cu100, CuZn100  |
| Ni100   | (DIN 43760), 2, 3 and 4-wire technology   |
| Probe current   | $\leq 0.2$ mA   |
| Thermocouples   | B, E, J, K, N, R, S, T (ITS 90/IEC 584), L (DIN 43710), acc. to Gost: L, M, A1, A2, A3  |
| Voltage input   | -0.160...+0.160 VDC   |
| Output circuits   |   |
| Output current  | 0/4...20 mA   |
| Load resistance current output  | $\leq 0.6$ k $\Omega$   |
| Fault current   | 0 / 22 mA adjustable  |
| Output  | Adjustable output mode  |
| Response characteristic   |   |
| Rise time (10...90 %)   | $\leq 1000$ ms  |
| Fall time (90...10 %)   | $\leq 1000$ ms  |
| Reference temperature   | 23 °C   |
| Measuring accuracy current output (including linearity, hysteresis and repeatability) | $\pm 20$ $\mu$ A  |
| Temperature drift analog output   | 0.0025 %/K  |
| Measuring accuracy RTD input (including linearity, hysteresis and repeatability)      | $\pm 50$ m $\Omega$   |
| Temperature drift RTD input   | $\pm 3$ m $\Omega$ /K   |
| Measuring accuracy TC input (including linearity, hysteresis and repeatability)       | $\pm 15$ $\mu$ V  |
| Temperature drift TC input  | $\pm 3.2$ $\mu$ V/K (of 320 mV)   |
| Cold junction compensation error  | 2-wire < 100m $\Omega$ after line compensation<br>3-wire < 100m $\Omega$ with asymmetrical wiring<br>4-wire < 50m $\Omega$<br>with cold junction compensation < 2 K<br>with IM-3-CJT < 1K |
| Galvanic isolation  |   |
| Test voltage  | 2.5 kV RMS  |
| Important note  | The values provided below indicate the relevant markings associated with the product's Ex certificates.   |
| Ex approval acc. to conformity certificate  | TÜV 02 ATEX 1898  |
| 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 552978 X  |
| Application area  | II 3 G  |
| Ignition protection type  | Ex nA [ic Gc] IIC T4  |
| Characteristic  | linear  |

| Displays/Operating elements      |   |
|----------------------------------|---|
| Operational readiness            | Green   |
| Error indication                 | red   |
|                                  |   |
| 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 18 x 110 mm   |
| Weight                           | 137 g   |
| Mounting instructions            | DIN rail (NS35) or panel  |
| Housing material                 | Plastic, Polycarbonate/ABS  |
| Electrical connection            | 4 × 3-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-3-CJT        | 6900524   | Cold junction compensation module for IM 34 temperature measuring amplifiers, width 18 mm  |   |
| 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.                           |   |
| 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 |  |