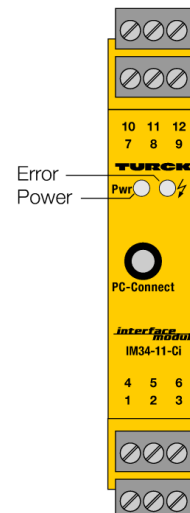
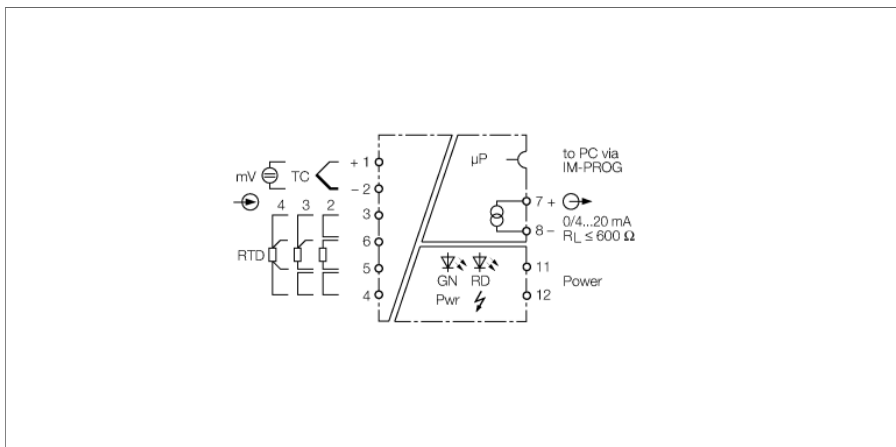


Temperature measuring amplifier

1-channel

IM34-11-CI



The 1-channel temperature measuring amplifier IM34-11-CI 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 linear temperature current signals.

With the software tool Device Type Manager (DTM), the device can be configured and parameterised via PC. 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). Use the DTM of the IM34-11EX-CI for the device.

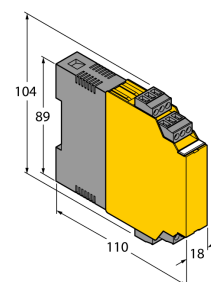
The following settings are available:

- 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 or external cold junction compensation
- Output current (0/4...20 mA)
- Temperature (°C or °K)
- Mode (resistor, thermocouple, low voltage, line compensation)
- Input for Pt100/ Ni100 resistors, thermocouples and millivolt signals in 2, 3 or 4-wire technology
- Output circuit: 0/4...20 mA
- Parameterized via PC (FDT / DTM)
- Complete galvanic isolation
- Input reverse-polarity protected
- TR CU

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.

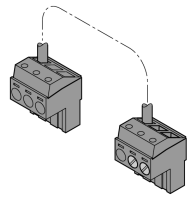
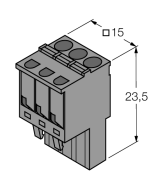
Dimensions

Type	IM34-11-CI
ID	7506638
Nominal voltage	Universal voltage supply unit
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage U_s	20...125 VDC
Power consumption	$\leq 3 \text{ W}$
Input circuits	Thermocouple Ni100 Pt100 mV signals
Pt100	(IEC 751), 2, 3 and 4-wire technology
Ni100	(DIN 43760), 2, 3 and 4-wire technology
Probe current	$\leq 0.2 \text{ mA}$
Thermocouples	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	$\leq 0.6 \text{ k}\Omega$
Fault current	0 / 22 mA adjustable
Response characteristic	
Rise time (10...90 %)	$\leq 1000 \text{ ms}$
Fall time (90...10 %)	$\leq 1000 \text{ ms}$
Reference temperature	23 °C
Measuring accuracy current output (including linearity, hysteresis and repeatability)	$\pm 5 \mu\text{A}$
Temperature drift analog output	0.0025 %/K
Measuring accuracy RTD input (including linearity, hysteresis and repeatability)	$\pm 50 \text{ m}\Omega$
Temperature drift RTD input	$\pm 3 \text{ m}\Omega/\text{K}$
Measuring accuracy TC input (including linearity, hysteresis and repeatability)	$\pm 15 \mu\text{V}$
Temperature drift TC input	$\pm 3.2 \mu\text{V}/\text{K}$ (of 320 mV)
Cold junction compensation error	2-wire < 100m Ω after line compensation 3-wire < 100m Ω with asymmetrical wiring 4-wire < 50m Ω with cold junction compensation < 2 K with IM-3-CJT < 1K
Galvanic isolation	
Test voltage	2.5 kV RMS
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	165 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 ² /2 × 1.5 mm ²
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-3X2BK/2BK	7541218	Cage clamp terminals for IM modules (Ex-devices with 18 mm overall width); includes: 4 pcs. of 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	