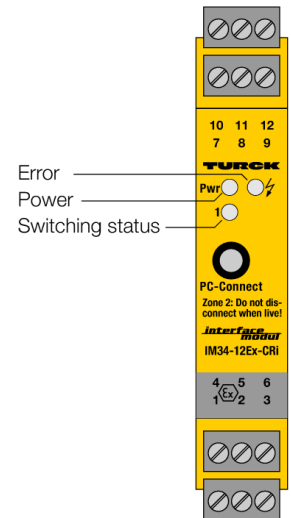
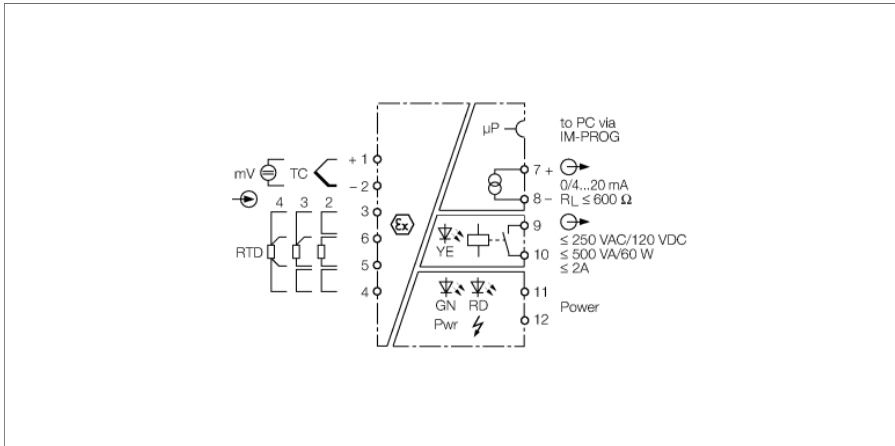


**Ex-Temperature measuring amplifier
1-channel
IM34-12EX-CRI**



The 1-channel Ex-temperature measuring amplifier IM34-12EX-CRI 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 0/4...20 mA.

Alternatively, Ni100/Pt100 RTDs in 2, 3 or 4-wire technology can also be operated at the input circuit of the measuring amplifier. The Ni100/Pt100 input can either be used as external cold junction compensation for the thermocouple or as independent measuring input.

The device has an additional relay output to monitor over or underrange of a limit value.

The device can be configured and parametrized via PC with the software tool Device Type Manager (DTM). For this, connect the device 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
- Limit value
- Input circuit monitoring for wire-break
- Current output behaviour in the event of input circuit errors: 0 resp. > 22 mA
- Internal or external cold junction compensation
- Output current (0/4...20 mA)
- Temperature (°C or °K)
- Mode (resistor, thermocouples, low voltage, line compensation)

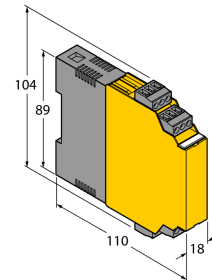
The signals are transformed according to ITS 90/IEC 584 for thermocouples and IEC 751 for Pt100 RTDs and provided as temperature-linear signals at the current output.

- ATEX, IECEx, FM, UL, GOST
- Installation in zone 2
- Input for Pt100/ Ni100 resistors, thermocouples and millivolt signals in 2, 3 or 4-wire technology
- Output circuit: 0/4...20 mA, limit value relay
- Parametrized via PC (FDT / DTM)
- Complete galvanic isolation

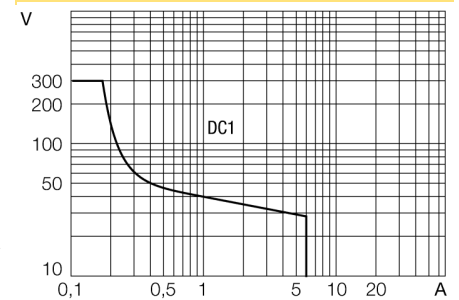
**Ex-Temperature measuring amplifier
1-channel
IM34-12EX-CRI**

Type code	IM34-12EX-CRI
Ident no.	7506632
Flammability class acc. to UL 94	V-0
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage range	20...125 VDC
Power consumption	≤ 3 W
Input circuits	intrinsically safe acc. to EN 60079 thermocouple Pt100 Ni100 mV signals (IEC 751), 2, 3 and 4-wire technology (DIN 43760), 2, 3 and 4-wire technology ≤ 0.2 mA B, E, J, K, N, R, S, T (ITS 90/IEC 584), L (DIN 43710) Voltage input -0.160...+0.160 VDC
Output circuits	0/4...20 mA Load resistance current output ≤ 0.6 kΩ Fault current 0 / 22 mA adjustable Output circuits (digital) 1 x relays (NO) Relay switching voltage ≤ 250 VAC/120 VDC Switching current per output ≤ 2 A Switching capacity per output ≤ 500 VA/60 W Switching frequency ≤ 10 Hz Contact quality AgNi, 3μ Au Output adjustable output mode
Rise time (10-90%)	≤ 1000 ms
Dropout time (90...10%)	≤ 1000 ms
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 3-wire < 100mΩ with asymmetrical wiring 4-wire < 50mΩ with cold junction compensation with IM-3-CJT < 1K
Galvanic isolation	
Test voltage	2.5 kV

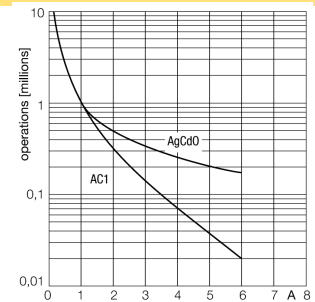
Dimensions



Load curve



Output relay electrical lifetime



Ex-Temperature measuring amplifier
1-channel
IM34-12EX-CRI

Ex approval acc. to conformity certificate	TÜV 02 ATEX 1898
Application area	II (1) G, II (1) D
Protection type	[Ex ia Ga] IIC ; [Ex ia Da] IIC ;
Max. values:	terminal connection: 1...6
Max. output voltage U_o	≤ 5 V
Max. output current I_o	≤ 2.5 mA
Max. output power P_o	≤ 3 mW
Characteristic	linear
Rated voltage	250 V
Internal inductance/capacitance L/C _i	negligibly small
External inductance/capacitance L _e /C _e	

	EEx ia IIC	EEx ia IIB
Lo [mH]	1000	1000
Co [μ F]	100	1000

Ex approval acc. to conformity certificate	TÜV 06 ATEX 552978 X
Application area	II 3 G
Protection type	Ex nA nC [ic Gc] IIC T4
Max. values:	terminal connection: 1...6
Max. output voltage U_o	≤ 5 V
Max. output current I_o	≤ 2.5 mA
Max. output power P_o	≤ 3 mW
Characteristic	linear
Internal inductance/capacitance L/C _i	negligibly small
External inductance/capacitance L _e /C _e	

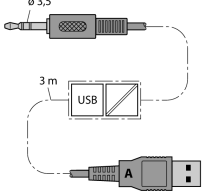
Ex ic	IIC	IIB
Lo [mH]	100	100
Co [μ F]	3.6	18

MTTF 200 years acc. to SN 29500 (Ed. 99) 40 °C

Indication	
Operational readiness	green
Switching state	yellow

Protection class	IP20
Ambient temperature	-25...+70 °C
Storage temperature	-40...+80 °C
Dimensions	104 x 18 x 110 mm
Weight	152 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

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-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex devices; width 18 mm): 2 blue/2 black, 3-pin, included in delivery.	