

The 1-channel temperature measuring amplifier IM34-12EX-CRI 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.

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

Parameterization and configuration are implemented with the software tool „Device Type Manager“ (DTM). For this purpose the temperature measuring amplifier is connected to the PC with a 3.5-mm front panel jack. The premoulded transmission cable can be ordered with TURCK under the type name IM-PROG (ident no. 6890422).

The following settings can be made via DTM:

- Connection mode (2, 3, or 4-wire technology)
- Lower measuring range
- Upper measuring range
- Limit value
- Input circuit monitoring for wire-break
- Current output performance 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 unit (°C or °K)
- Mode (resistance thermo detectors (RTD), thermoelement, low voltage, line compensation)

- **Intrinsically safe input circuits EEx ia**
- **Application area according to ATEX : II (1) GD**
- **Input for Pt100/ Ni100 resistors, thermoelements and millivolt signals in 2-, 3- or 4-wire technology**
- **Parameterization via PC PACTware™**
- **Outputs: 0/4...20 mA, limit value relay**
- **Selectable line monitoring for wire-break/short-circuit (ON/OFF mode)**
- **Removable terminal blocks**
- **Universal operating voltage (20...250VAC/ 20...125VDC)**
- **Galvanic isolation of input circuits to output circuits and supply voltage**

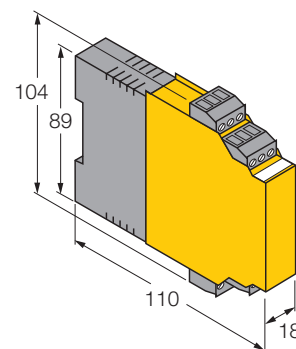
# temperature measuring amplifier

## IM34-12EX-CRI

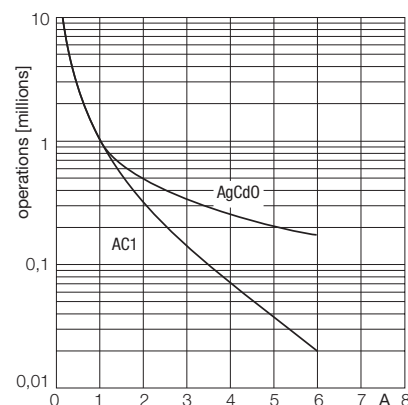
<b>Type</b>	IM34-12EX-CRI	
Ident-No.	7506632	
<b>Operational voltage range:</b>	20 ... 250 VAC	
Frequency	≥ 40 ... ≤ 70 Hz	
Operational voltage range:	20 ... 125 VDC	
<b>Input circuits</b>	Thermoelement Pt100	
Pt100	(IEC 751), 2, 3 and 4-wire technology	
Ni100	(IEC 751), 2, 3 and 4-wire technology	
Thermoelements	B, E, J, K, N, R, S, T (ITS 90/IEC 584), L (DIN 43710)	
Probe current	≤ 0,2 mA	
Voltage	-0,160...+0,160 VDC	
<b>Output current</b>	0/4...20 mA	
Output circuits (digital)	1 x relay (NO)	
Relay switching voltage	≤ 250 VAC/120 VDC	
Switching current per output	≤ 2 A	
Switching capacity per output	≤ 500 VA/60 W	
Switching frequency	≤ 1 Hz	
Contact quality	AgNi, 3μ Au	
Output	adjustable output mode	
<b>Ex approval acc. to conformity certificate</b>		
Ex approval acc. to conformity certificate	TÜV 02 ATEX 1898	
Application area	II (1) GD	
Protection type	[Ex ia] IIC	
Max. output voltage $U_o$	≤ 5 V	
Max. output current $I_o$	≤ 2 mA	
Max. output power $P_o$	≤ 2.6 mW	
Characteristic	Linear	
External inductance/capacitance $L_i/C_i$		
External inductance/capacitance $L_o/C_o$		
	EEx ia IIC	EEx ia IIB
$L_o$ [mH]	1000	1000
$C_o$ [μF]	100	1000
Ex approval acc. to conformity certificate	TÜV 06 ATEX 552978 X	
Application area	II 3 G	
Max. output voltage $U_o$	≤ 5 V	
Max. output current $I_o$	≤ 2 mA	
Max. output power $P_o$	≤ 2.6	
External inductance/capacitance $L_o/C_o$		
	EEx ia IIC	EEx ia IIB
$L_o$ [mH]	1000	1000
$C_o$ [μF]	100	1000
Ex approval acc. to conformity certificate	IS-1.106	
Ex approval acc. to conformity certificate	IECEx TUN 06.0010 X	
Application area	II 3 G	
max. Output voltage $U_o$	≤ 5 V	
max. Output current $I_o$	≤ 2 mA	
max. Output power $P_o$	≤ 2.6 mW	

**Indication**

Switching status yellow



**Output relay electrical lifetime**



**temperature measuring amplifier****IM34-12EX-CRI**

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<b>Degree of protection</b>	IP20
Ambient temperature	-25 ...+ 70 °C
Housing length	104 mm
Housing width	18 mm
Housing height	110 mm
Weight	144 g
Mounting instruction	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 <sup>2</sup> / 2 x 1.5 mm <sup>2</sup>