

The temperature measuring amplifier IM34-11EX-I is designed to evaluate the temperature-dependent variations of Ni100/Pt100 resistance temperature detectors, thermoelement types B, E, J, K, L, N, R, S and T or low voltages in a range of -100...+160 mV and to output them as linear temperature current signals.

The input circuit of the measuring amplifier is also suited for connection of 2, 3 or 4-wire Ni100/Pt100 resistors. The Ni100/Pt100 input may be used for external cold junction compensation for the thermoelements or as an independent measuring input.

The measuring range and the device functions are set via coded rotary switches or slide switches (on the right side of the device).

The following parameters may be set:

- type of measuring device
- connection of the Ni100/Pt100 resistance temperature detector in 2, 3 and 4-wire technology
- lower measuring range value -100...-1°C in increments of 1 K 0...990 °C in increments of 10 K
- upper measuring range value 0...1990 °C in increments of 10 K
- 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

The signals are transformed according to ITS90 IEC 584 for thermoelements and IEC 751 for PT100 and provided as temperature-linear signals at the current output.

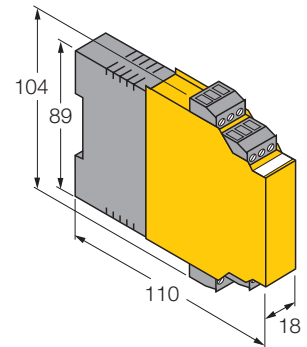
- **Intrinsically safe input circuits EEx ia**
- **Application area according to ATEX : II (1) GD**
- **Input for Pt100/ Ni100 resistors, thermoelements and millivolt signals in 2-, 3- or 4-wire technology**
- **Upper and lower measuring range limits adjustable via coded rotary switch**
- **Output: 0/4...20 mA**
- **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

## IM34-11EX-I

<b>Type</b>	IM34-11EX-I	
Ident-No.	7506630	
<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	
Input resistance	600 Ω	
<b>Output current</b>	0/4...20 mA	
Load resistance current output	≤ 0.6 kΩ	
Output	adjustable output mode	
<b>Rise time (10-90%)</b>	1000 ms	
Dropout time (90...10%)	1000 ms	
Linearity deviation	≤ 0.1 % of full scale	
Drift	< 0.05 % /annually	
<b>Test voltage</b>	2.5 kV	
Constant voltage supply	250 V	
<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	[EEEx 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 $L_o/C_i$		
	EEEx ia IIC	EEEx 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 $L_o/C_o$		
	EEEx ia IIC	EEEx 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	

### Dimensions



## temperature measuring amplifier

### IM34-11EX-I

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**Indication**

Operational readiness	green
Error indication	red

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**Degree of protection**

Ambient temperature	IP20
Ambient temperature	-25 ...+ 70 °C
Housing length	104 mm
Housing width	18 mm
Housing height	110 mm
Weight	142 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>