

2-WIRE PROGRAMMABLE TRANSMITTER



- RTD or Ohm input
- High measurement accuracy
- 3-wire connection
- Programmable sensor error value
- 1- or 2-channel version



Application:

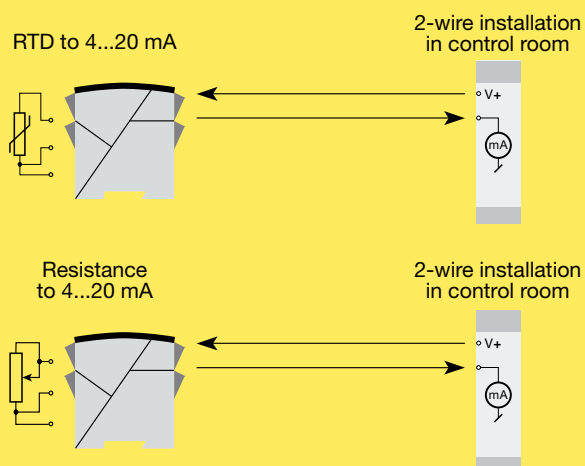
- Linearised temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analogue current signal, for instance from valves or Ohmic level sensors.

Technical characteristics:

- Within a few seconds the user can program PR6333A to measure temperatures within all RTD ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 3-wire connection.
- A limit can be programmed on the output signal.

Mounting / installation:

- Mounted vertically or horizontally on a DIN rail. Using the 2-channel version up to 84 channels per metre can be mounted.

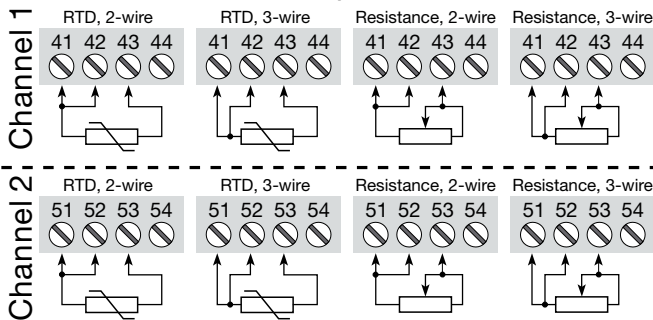


Order: 6333A

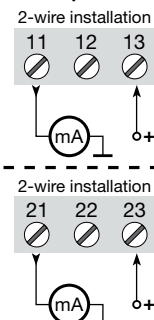
Type	Galvanic Isolation	Channels
6333A	None : 1	Single : A Double : B

Connections:

Inputs:



Outputs:



Electrical specifications:

Specifications range:

-40°C to +60°C

Common specifications:

Supply voltage, DC 8.0...35 VDC
Internal consumption..... 0.19...0.8 W
Voltage drop 8 VDC
Isolation voltage, ch. 1 / ch. 2 3.75 kVAC
Warm-up time..... 5 min.
Communications interface Loop Link
Signal / noise ratio..... Min. 60 dB
Response time (programmable) 0.33...60 s
Signal dynamics, input 19 bit
Signal dynamics, output..... 16 bit
Calibration temperature..... 20...28°C
Accuracy, the greater of general and basic values:

General values		
Input type	Absolute accuracy	Temperature coefficient
All	$\leq \pm 0.1\%$ of span	$\leq \pm 0.01\%$ of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
RTD	$\leq \pm 0.3^\circ\text{C}$	$\leq \pm 0.01^\circ\text{C}/^\circ\text{C}$
Lin. R	$\leq \pm 0.2 \Omega$	$\leq \pm 20 \text{ m}\Omega / ^\circ\text{C}$

EMC immunity influence $< \pm 0.5\%$ of span
Effect of supply voltage variation $< 0.005\%$ of span / VDC
Max. wire size..... 1 x 1.5 mm² stranded wire
Humidity $< 95\%$ RH (non-cond.)
Dimensions (H x W x D)..... 109 x 23.5 x 104 mm
Protection degree..... IP20
Weight (1 / 2 channels) 145 / 185 g

Electrical specifications, input:

Max. offset..... 50% of selec. max. value

RTD and linear resistance input:

RTD type	Min. value	Max. value	Min. span	Standard
Pt100	-200°C	+850°C	25°C	IEC 60751
Ni100	-60°C	+250°C	25°C	DIN 43760
Lin. R	0 Ω	10000 Ω	30 Ω	-----

Cable resistance per wire (max.) 10 Ω
Sensor current..... $> 0.2 \text{ mA}$, $< 0.4 \text{ mA}$
Effect of sensor cable resistance (3-wire)..... $< 0.002 \Omega / \Omega$
Sensor error detection..... Yes

Output:

Current output:

Signal range 4...20 mA
Min. signal range 16 mA
Updating time..... 135 ms
Load resistance..... $\leq (V_{\text{supply}} - 8) / 0.023 [\Omega]$
Load stability $< \pm 0.01\%$ of span/100 Ω

Sensor error detection:

Programmable..... 3.5...23 mA
NAMUR NE43 Upscale..... 23 mA
NAMUR NE43 Downscale..... 3.5 mA

Ex approval:

KEMA 10ATEX0007 X..... II 3 G Ex nA [nL] IIC
T4...T6 or
II 3 G Ex nL IIC
T4...T6 or
II 3 G Ex nA [ic] IIC
T4...T6 or
II 3 G Ex ic IIC
T4...T6

ATEX Installation Drawing No..... 6333QA02

GOST R approval:

VNIIM, Cert. No. www.prelectronics.com

Observed authority requirements: Standard:

EMC 2004/108/EC EN 61326-1
ATEX 94/9/EC EN 60079-0, -11, -15

Of span = Of the presently selected range