

# 2-WIRE PROGRAMMABLE TRANSMITTER



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



**Application:**

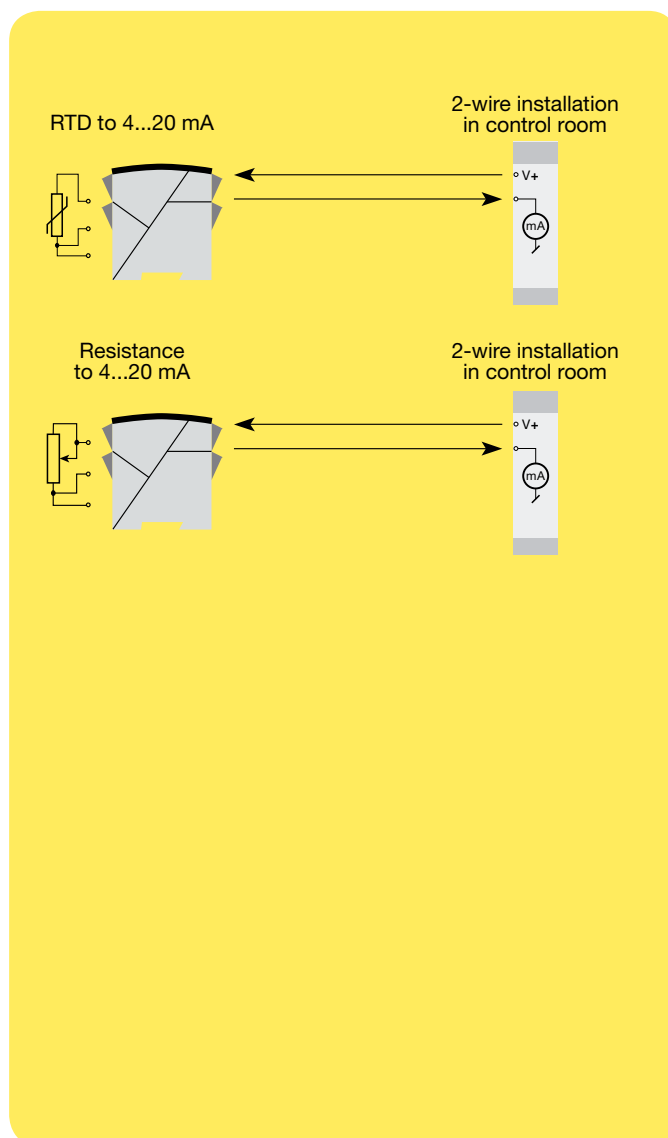
- Linearised temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analogue current signal, for instance from valves or Ohmic level sensors.

**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.

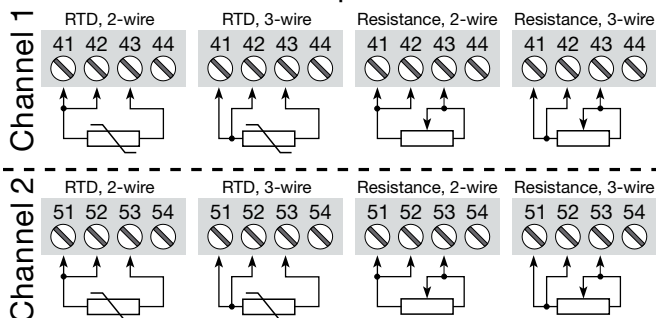


Order: 6333A

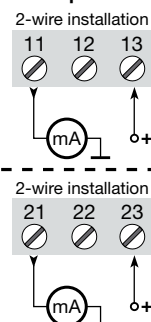
Type	Galvanic Isolation		Channels	
6333A	None	: 1	Single	: A
			Double	: B

**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	≤ ±0.1% of span	≤ ±0.01% of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
RTD	≤ ±0.3°C	≤ ±0.01°C/°C
Lin. R	≤ ±0.2 Ω	≤ ±20 mΩ / °C

EMC immunity influence ..... < ±0.5% of span  
 Effect of supply voltage variation ..... < 0.005% of span / VDC  
 Max. wire size..... 1 x 1.5 mm<sup>2</sup> 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 mA, < 0.4 mA  
 Effect of sensor cable resistance (3-wire)..... < 0.002 Ω / Ω  
 Sensor error detection..... Yes

**Output:**

**Current output:**

Signal range ..... 4...20 mA  
 Min. signal range ..... 16 mA  
 Updating time..... 135 ms  
 Load resistance ..... ≤ (V<sub>supply</sub> - 8) / 0.023 [Ω]  
 Load stability ..... < ±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