

2-WIRE PROGRAMMABLE TRANSMITTER



- RTD or Ohm input
- High measurement accuracy
- 3-wire connection
- Programmable sensor error value
- For DIN form B sensor head mounting



Application:

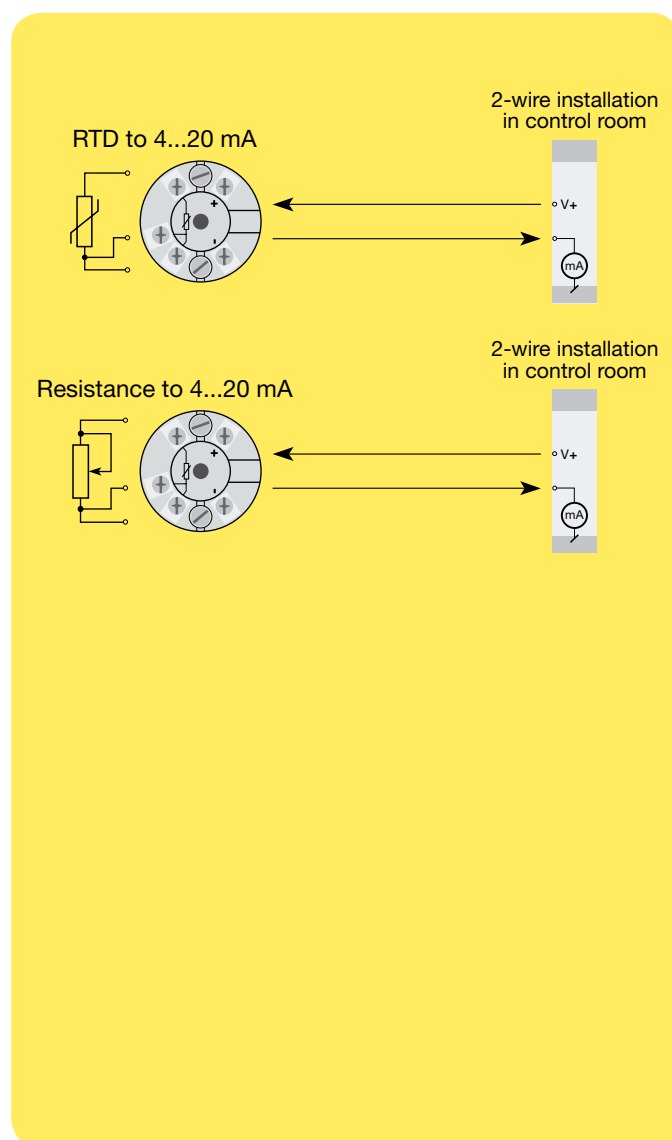
- Linearised temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analogue current signal, for instance from valves or Ohmic level sensors.

Technical characteristics:

- Within a few seconds the user can program PR5333A to measure temperatures within all RTD ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 3-wire connection.

Mounting / installation:

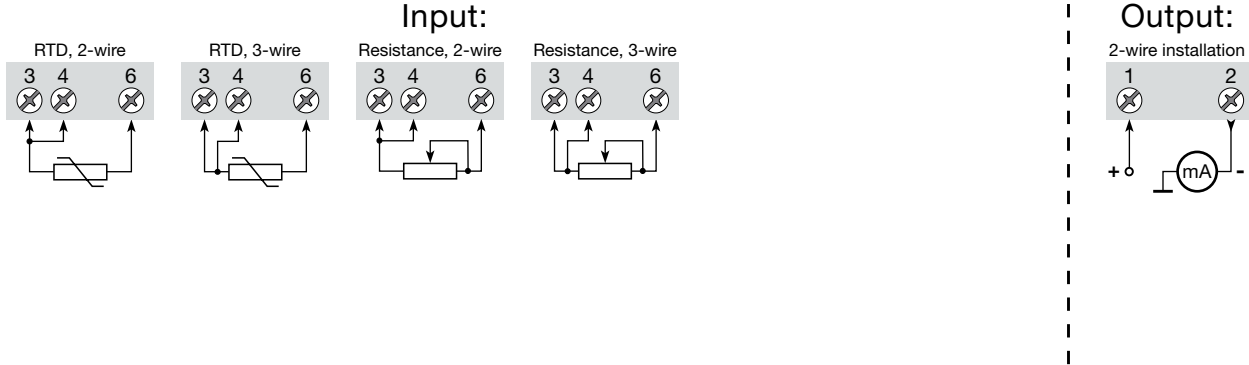
- For DIN form B sensor head or DIN rail mounting with the PR fitting type 8421.



Order: 5333A

Type
5333A

Connections:



Electrical specifications:

Specifications range:

-40°C to +85°C

Common specifications:

Supply voltage, DC 8.0...35 V
 Internal consumption..... 25 mW...0.8 W
 Voltage drop 8 VDC
 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
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Effect of supply voltage variation ≤ 0.005% of span / VDC
 Vibration IEC 60068-2-6 Test FC
 Lloyd's specification no. 1 4 g / 2...100 Hz
 Max. wire size..... 1 x 1.5 mm² stranded wire
 Humidity < 95% RH (non-cond.)
 Dimensions..... Ø 44 x 20.2 mm
 Protection degree (encl. / terminal) ... IP68 / IP00
 Weight 50 g

Electrical specifications, input:

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	-----

Max. offset..... 50% of selec. max. value
 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_{supply}- 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 10ATEX0003 X..... II 3 GD Ex nA [nL] IIC
 T4...T6 or
 II 3 GD Ex nL IIC
 Ex T4...T6 or
 II 3 GD Ex nA [ic] IIC
 T4...T6 or
 II 3 GD Ex ic IIC
 T4...T6

ATEX Installation Drawing No..... 5333QA02

Marine approval:

Det Norske Veritas, Ships & Offshore... Stand. for Certific. No. 2.4

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