

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:

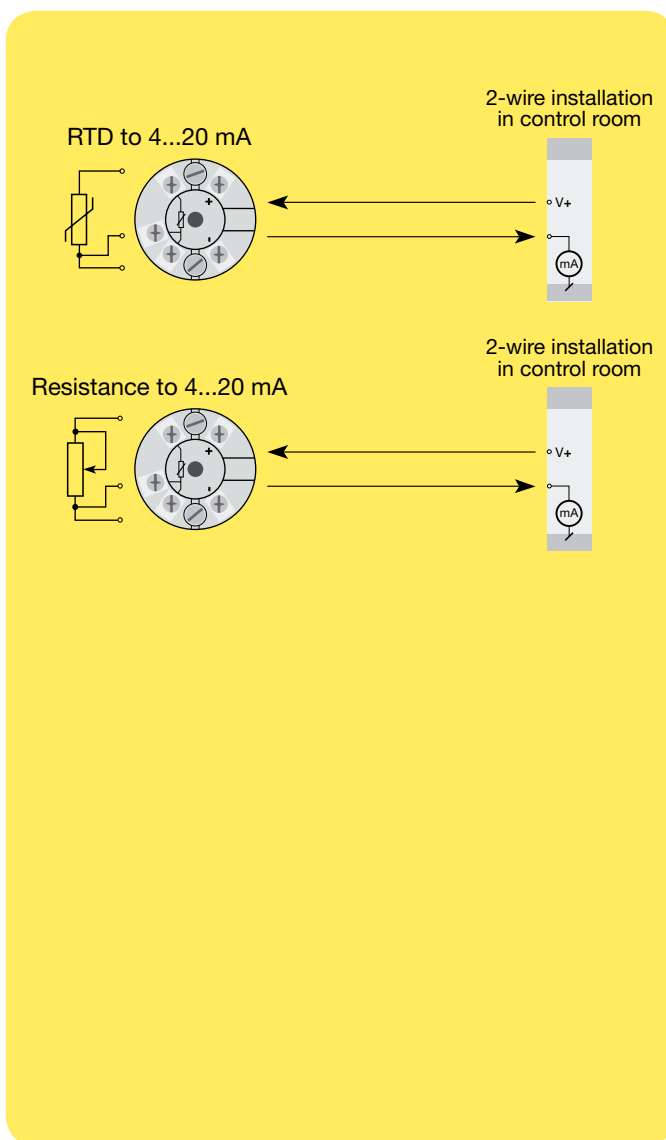
- Linearised temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analogue current signal, for instance from valves or Ohmic level sensors.

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:

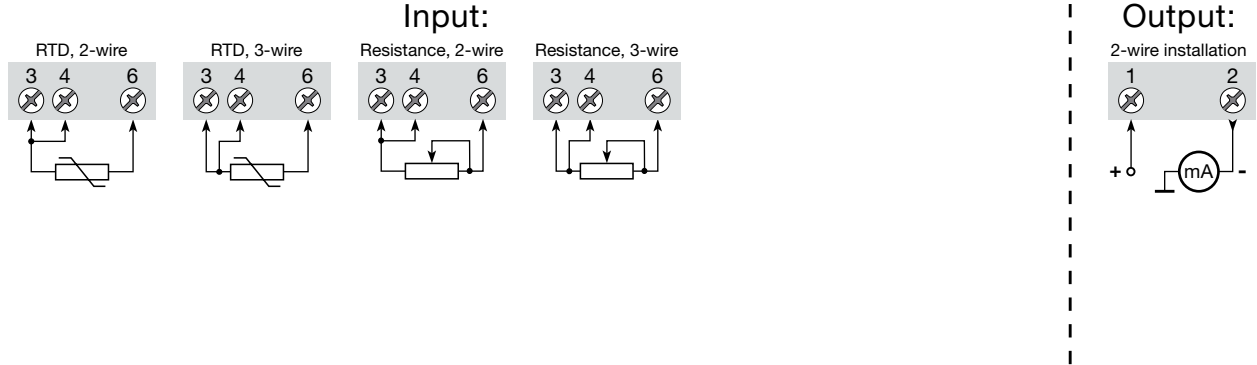
- For DIN form B sensor head or DIN rail mounting with the PR fitting type 8421.



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
- 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 T4...T6 or 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.preelectronics.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