

2-WIRE PROGRAMMABLE TRANSMITTER



- RTD or Ohm input
- High measurement accuracy
- 3-wire connection
- Can be installed in Ex zone 0
- 1- or 2-channel version



Application:

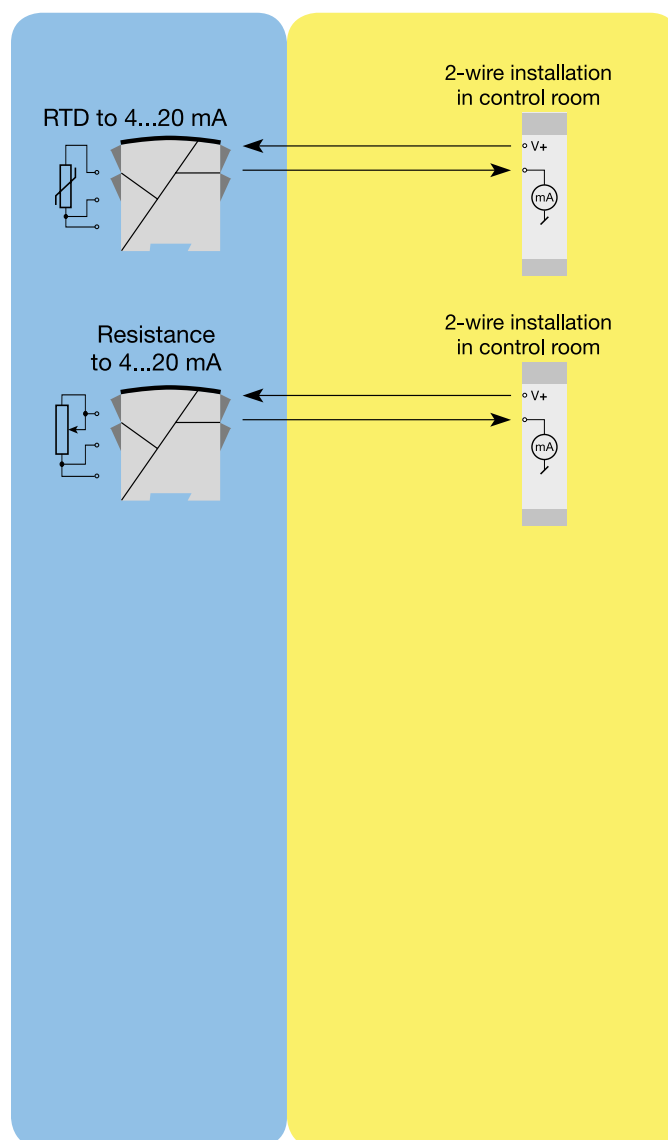
- Linearised temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analogue current signal, for instance from valves or Ohmic level sensors.

Technical characteristics:

- Within a few seconds the user can program PR6333B 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 can be mounted per metre.
- **NB:** As Ex barrier we recommend 5104B, 5111B, or 5114B.

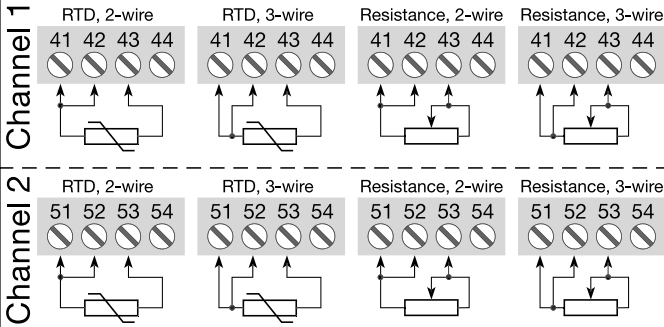


Order: 6333B

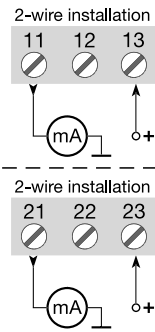
Type	Galvanic isolation	Channels
6333B	None : 1	Single : A Double : B

Connections:

Inputs:



Outputs:



Electrical specifications:

Specifications range:

-40°C to +60°C

Common specifications:

- Supply voltage, DC 8.0...28 VDC
- Internal consumption..... 0.19...0.8 W
- Voltage drop 8 VDC
- Isolation voltage, channel 1 / channel 2. 1500 VAC
- Warm-up time..... 5 min.
- Communications interface Loop Link 5905A
- 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 mm²
- Humidity < 95% RH (non-cond.)
- Dimensions (H x W x D)..... 109 x 23.5 x 104 mm
- Tightness (enclosure / terminal) IP50 / 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
Pt100	-200°C	+850°C	25°C
Ni100	-60°C	+250°C	25°C
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_{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 data:

Output, terminal 11...13, (21...23):

- U_i..... : 28 VDC
- I_i..... : 20 mADC
- P_i..... : 0.84 W
- L_i..... : 10 μH
- C_i..... : 1.0 nF
- Input, terminal 41...44, (51...54):
- L_o..... : 500 mH
- C_o..... : 80 nF

EEx approval CENELEC:

- DEMKO 99 ATEX 126959
- ATEX 0539 (Ex) II 1 G
- EEx ia IIC T1...T6
- Max. amb. temperature for T1...T6 ... 60°C
- Applicable in zone 0, 1, or 2

Observed authority requirements: Standard:

- EMC 89/336/EEC, Emission EN 50 081-1, EN 50 081-2
- Immunity EN 50 082-2, EN 50 082-1
- Emission and immunity EN 61 326
- ATEX 94/9/EC..... EN 50 014 and EN 50 020

Of span = Of the presently selected range