



## 2-wire programmable transmitter

### 5333D

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



#### Application

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

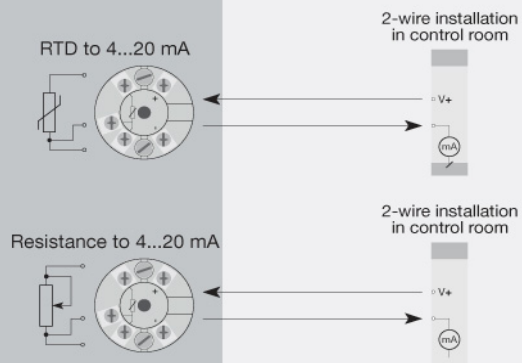
#### Technical characteristics

- Within a few seconds the user can program PR5333D 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 mounting.
- NB: As Ex barrier we recommend 5104B, 5114B, or 5116B.

#### Connections



**Order:**

Type
5333D

**Environmental Conditions**

Specifications range.....	-40°C to +85°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree (encl./terminal).....	IP68 / IP00

**Mechanical specifications**

Dimensions.....	Ø 44 x 20.2 mm
Weight approx.....	50 g
Wire size.....	1 x 1.5 mm <sup>2</sup> stranded wire
Screw terminal torque.....	0.4 Nm
Vibration.....	IEC 60068-2-6 Test FC
Lloyd's specification no.	
1.....	4 g / 2...100 Hz

**Common specifications**

Supply voltage.....	8.0...30 VDC
Internal consumption.....	25 mW...0.8 W
Voltage drop.....	8.0 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
Effect of supply voltage change.....	< 0.005% of span / VDC
EMC immunity influence.....	< ±0.5% of span

**Input specifications**

Max. offset.....	50% of selected max. value
RTD input.....	Pt100, Ni100, lin. R
Cable resistance per wire (max.), RTD.....	10 Ω
Sensor current, RTD.....	> 0.2 mA, < 0.4 mA
Effect of sensor cable resistance (3-wire), RTD.....	< 0.002 Ω / Ω
Sensor error detection, RTD.....	Yes

**Output specifications**

Current output: Signal range.....	4...20 mA
Min. signal range.....	16 mA
Updating time.....	135 ms
Load resistance, current output.....	≤ (Vsupply - 8) / 0.023 [Ω]
Load stability, current output.....	≤0.01% of span/100 Ω
Sensor error detection, current output.....	Programmable 3.5...23 mA
NAMUR NE 43 Upscale/Downscale.....	23 mA / 3.5 mA
*of span.....	= of the presently selected range

**Approvals**

EMC.....	EN 61326-1
ATEX.....	KEMA 03ATEX1535 X
IECEX.....	DEK 13.0036X
FM.....	2D5A7
CSA.....	1125003
INMETRO.....	DEKRA 13.0002 X
GOST R.....	Yes
GOST Ex.....	Yes
DNV Marine.....	Stand. f. Certific. No. 2.4