2-Wire Programmable Transmitter

Model 5333A

- RTD or Ohm Input
- High Measurement Accuracy
- 3-Wire Connection
- Programmable Sensor Error Value

Application:

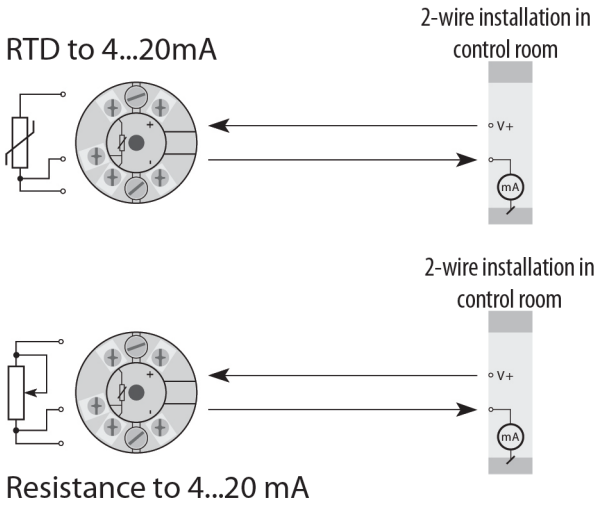
- Linearized temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analog current signal.

Technical Characteristics:

- Within seconds the user can program a 5333A to measure temperatures within all standard RTD sensor ranges.
- The RTD and resistance inputs have cable compensation for 3-wire connections.

Mounting/Installation:

- DIN Form B sensor head compatible.
- Supplied with 2 x M4 screws on a 33 mm (1.3") BC (optional 6-32 screws available).



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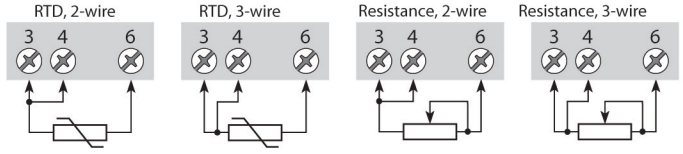
Specifications

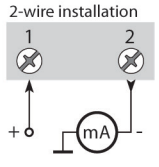
Order: 5333A

Connections:

Input:



Output:



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...60s
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 1.5mm²(16 AWG) 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 selected 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.....≤ (Vsupply- 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

Marine Approval*:

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

Observed Authority Requirements: **Standard:**
EMC 2004/108/EC

Emission and immunity .....EN 61326

Of Span = Of the presently selected range
Loop Link = PC compatible programming software

*The transmitter is manufactured by PR electronics. All approvals listed are recognized under the PR name.

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