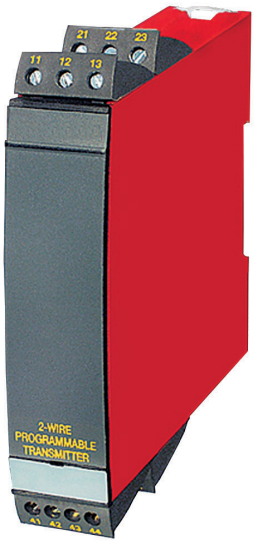
2-Wire Programmable Transmitter

Model 6333A

- RTD or Ohm Input
- High Measurement Accuracy
- 3-Wire Connection
- Programmable Sensor Error Value
- 1- or 2-Channel Version



Application:

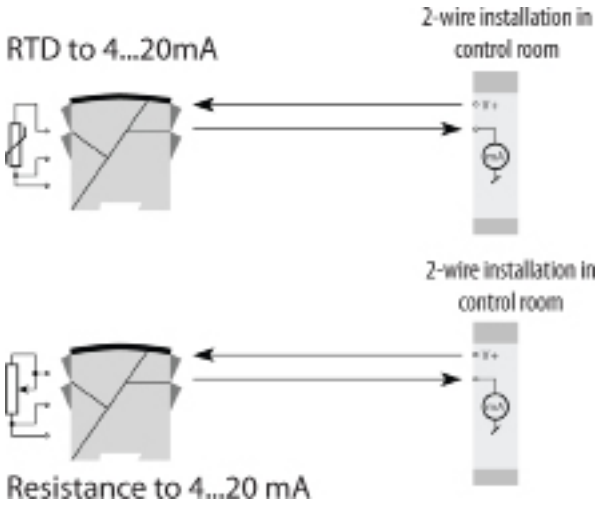
- Linearized temperature measurement with PT100...PT1000 or Ni100...NI1000 sensor.
- Conversion of linear resistance variation to a standard analog current signal.

Technical Characteristics:

- Within seconds the user can program a 6333A to measure temperatures within all RTD standard ranges.
- The RTD and resistance inputs have cable compensation for 3-wire connections.
- 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 per meter can be mounted.



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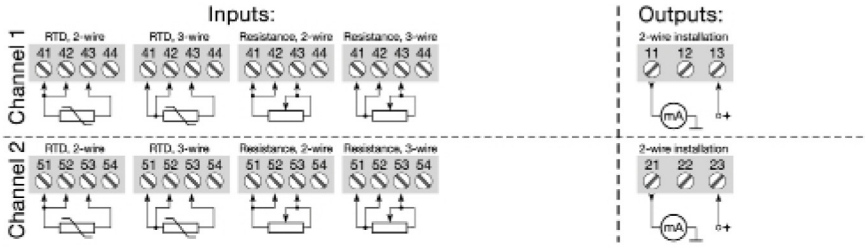
Specifications

Order: 6333A1A (Single Channel)
6333A1B (Dual Channel)



Electrical Specifications

Specifications Range:

-40°C to +60°C

Common Specifications:

Supply voltage, DC ..... 8.0...35 VDC
Internal consumption ..... 0.19...0.8 W
Voltage drop ..... 8 VDC
Isolation voltage, ch. 1 / ch. 2 ..... 3.75 kVAC
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	≤±0.2Ω	≤±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 (16 AWG) stranded wire
Humidity ..... < 95% RH (non-cond.)
Dimensions (H x W x D) ..... 109 x 23.5 x 104 mm
Protection degree IP20
Weight (1 / 2 channels) ..... 145 / 185 g

Electrical Specifications, Input:

Max. offset ..... 50% of selected max. value

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. Res.	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 ..... ≤ (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

Observed Authority Requirements: Standard:

EMC 2004/108/EC ..... EN 61326-1

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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