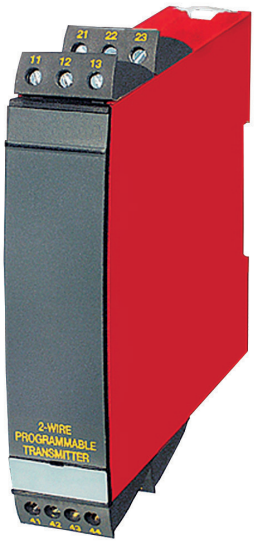
2-Wire Programmable Transmitter

Model 6333B

- RTD or Ohm Input
- High Measurement Accuracy
- 3-Wire Connection
- Complies with European ATEX Requirements for Hazardous Installation
- 1- or 2-Channel Version



Application:

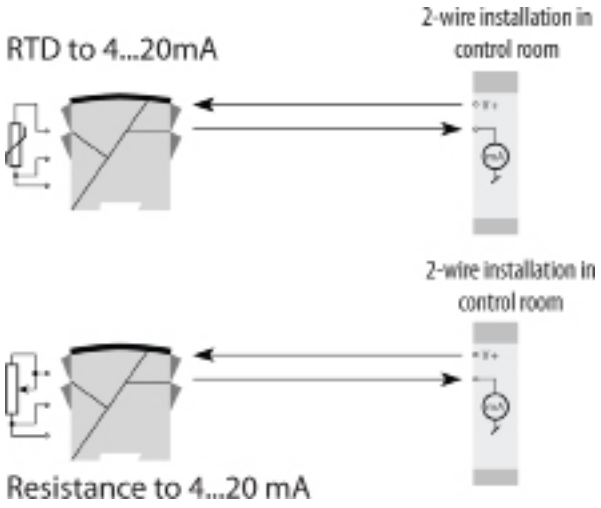
- Linearized temperature measurement with PT100...PT1000 or Ni100...Ni1000.
- Conversion of linear resistance variation to a standard analog current signal.

Technical Characteristics:

- Within seconds the user can program a 6333B to measure temperatures within all standard RTD ranges.
- The RTD and resistance inputs have cable compensation for 3-wire connections.
- A limit can be programmed on the output signal.
- Continuous check of vital stored data.

Mounting/Installation:

- Mounted vertically or horizontally on a DIN rail. Using the 2-channel version up to 84 channels per meter can be mounted.



ATEX

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+1 716 684 4500 | +1 800 223 2389 | Conax@ConaxTechnologies.com

Specifications

Order: 6333B1A (Single Channel)
6333B1B (Dual Channel)

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, ch. 1 / ch. 2 ..... 1500 VAC
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

EEx / I.S. approval*:

DEMKO 99ATEX 126959 ..... Ex II 1 G, EEx ia IIC T1...T6
Max. ambient temperture for T1...T6 ..... 60° C
Applicable in zone ..... 0, 1 or 2

Ex / I.S. data*:

Output, terminal 11...13, (21...23):
Ui ..... : 28 VDC
Ii ..... : 120 mADC
Pi ..... : 0.84 W
Li ..... : 10 µH
Ci ..... : 1.0 nF
Input, terminal 41...44, (51...54):
Lo ..... 500 mH
Co ..... 80 nF

GOST R approval*: Certificate available upon request.

Observed Authority Requirements:	Standard:
EMC 2004/108/EC	EN 61326-1
ATEX 94/9/EC	EN 50014 and EN 50020

Of span = Of the presently selected range

Loop Link = PC compatible programming software

IS = Intrinsically Safe

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

2300 Walden Avenue, Buffalo, New York 14225
+1 800 223 2389 (P) | **+1 716 684 7433** (F)
conax@conaxtechnologies.com
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