PERFORMANCE MADE SMARTER



2-wire programmable transmitter

6333B

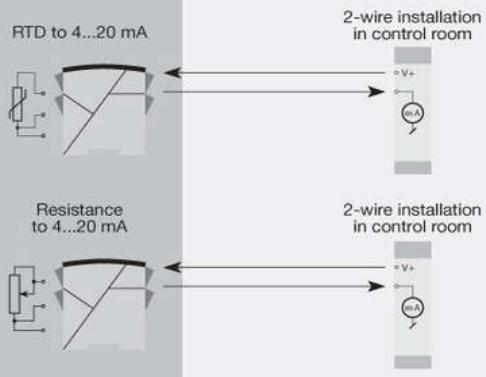
– RTD or Ohm input
– High measurement accuracy
– 3-wire connection
– Can be installed in Ex zone 0
– 1- or 2-channel version

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

Applications



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Order:

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

Environmental Conditions

Operating temperature..... -40°C to +85°C
Storage temperature..... -40°C to +85°C
Calibration temperature..... 20...28°C
Relative humidity..... < 95% RH (non-cond.)
Protection degree..... IP20

Mechanical specifications

Dimensions (HxWxD)..... 109 x 23.5 x 104 mm
Weight (1 / 2 channels)..... 145 / 185 g
DIN rail type..... DIN EN 60715/35 mm
Wire size..... 0.13...2.08 mm^2 AWG 26...14 stranded wire
Screw terminal torque..... 0.5 Nm

Common specifications

Supply
Supply voltage..... 8.0...30 VDC
Internal power dissipation..... 0.19...0.8 W

Response time
Response time (programmable)..... 0.33...60 s

Voltage drop..... 8.0 VDC
Warm-up time..... 5 min.
Programming..... Loop Link
Signal / noise ratio..... Min. 60 dB
Accuracy..... Better than 0.1% of sel. range
Signal dynamics, input..... 19 bit
Signal dynamics, output..... 16 bit
Effect of supply voltage change..... < 0.005% of span / VDC

Input specifications

Common input specifications
Max. offset..... 50% of selected max. value

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

Linear resistance input
Linear resistance min....max..... 0 Ω...10000 Ω

Output specifications

Current output
Signal range..... 4…20 mA
Min. signal range..... 16 mA
Load (@ current output)..... ≤ (Vsupply - 8) / 0.023 [Ω]
Load stability..... ≤ 0.01% of span / 100 Ω
Sensor error indication..... Programmable 3.5…23 mA
NAMUR NE43 Upscale/Downscale..... 23 mA / 3.5 mA

Common output specifications
Updating time..... 135 ms

of span..... = of the presently selected range

Observed authority requirements

EMC..... 2014/30/EU

Approvals

ATEX 2014/34/EU..... KEMA 09ATEX0147 X
IECEx..... DEK 14.0049 X
CSA..... 1125003
FM..... FM17US0013X
EAC Ex TR-CU 012/2011..... RU C-DK.GB08.V.00410