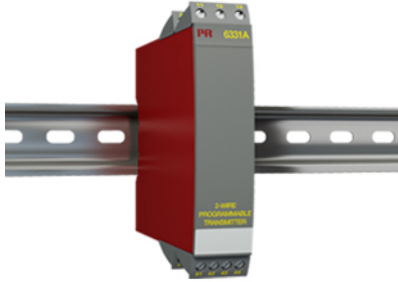


## 2-wire programmable transmitter



### 6331A

- RTD, TC, Ohm, or mV input
- Extremely high measurement accuracy
- Galvanic isolation
- Programmable sensor error value
- 1- or 2-channel version



#### Application

- Linearized temperature measurement with Pt100...Pt1000, Ni100...Ni1000, or TC sensor.
- Conversion of linear resistance variation to a standard analog current signal, for instance from valves or Ohmic level sensors.
- Amplification of a bipolar mV signal to a standard 4...20 mA current signal.

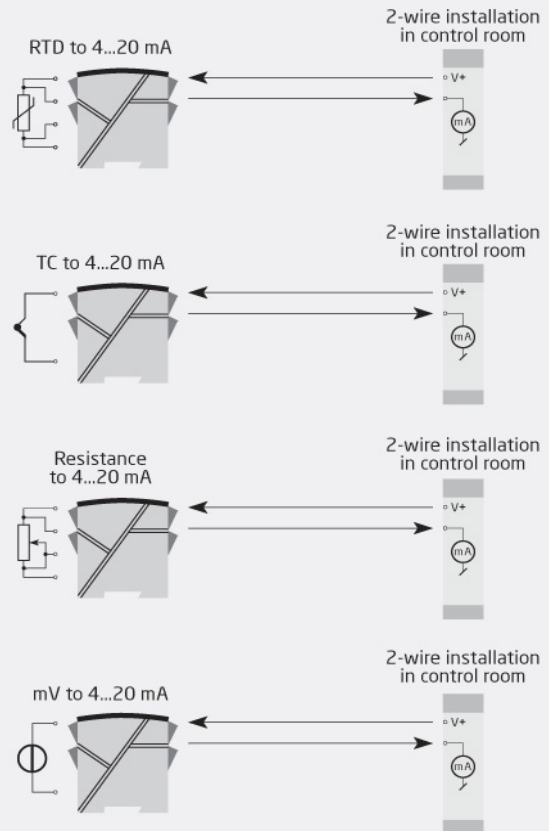
#### Technical characteristics

- Within a few seconds the user can program PR6331A to measure temperatures within all ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 2-, 3- and 4-wire connection.
- A limit can be programmed on the output signal.
- Continuous check of vital stored data for safety reasons.

#### Mounting / installation

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

#### Connections



**Order:**

Type	Galvanic isolation	Channels
6331A	1500 VAC : 2	Single : A Double : B

\*NB! Please remember to order CJC connectors type 5910 (channel 1) and 5913 (channel 2) for TC inputs with an internal CJC.

**Environmental Conditions**

Specifications range..... -40°C to +60°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<sub>2</sub>  
 Wire size..... 1 x 1.5 mm<sup>2</sup> stranded wire

**Common specifications**

Supply voltage..... 7.2...35 VDC  
 Internal consumption, per channel..... 0.17...0.8 W  
 Voltage drop..... 7.2 VDC  
 Isolation voltage, test / working..... 1.5 kVAC / 50 VAC  
 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)..... 1...60 s  
 EEPROM error check..... < 3.5 s  
 Signal dynamics, input..... 20 bit  
 Signal dynamics, output..... 16 bit  
 Effect of supply voltage change..... < 0.005% of span / VDC  
 EMC immunity influence..... < ±0.5% of span  
 Extended EMC immunity: NAMUR NE 21, A criterion, burst..... < ±1% of span

**Input specifications**

Max. offset..... 50% of selected max. value  
 RTD input..... Pt100, Ni100, lin. R  
 Cable resistance per wire (max.), RTD..... 5 Ω  
 Sensor current, RTD..... Nom. 0.2 mA  
 Effect of sensor cable resistance (3-/4-wire), RTD..... < 0.002 Ω / Ω  
 Sensor error detection, RTD..... Yes  
 TC input: Thermocouple type..... B, E, J, K, L, N, R, S, T, U, W3, W5, LR  
 Cold junction compensation (CJC)..... < ±1.0°C  
 Sensor error detection, TC..... Yes  
 Sensor error current: When detecting / else..... Nom. 33 μA / 0 μA  
 Voltage input: Measurement range..... -12...800 mV  
 Min. measurement range (span), voltage input..... 5 mV  
 Input resistance, voltage input..... 10 MΩ

**Output specifications**

Current output: Signal range..... 4...20 mA  
 Min. signal range..... 16 mA  
 Updating time..... 440 ms  
 Load resistance, current output..... ≤ (Vsupply - 7.2) / 0.023 [Ω]  
 Load stability, current output..... ≤0.01% of span/100 Ω  
 Sensor error indication, 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 10ATEX0005 X  
 GOST R..... Yes  
 GOST Ex..... Yes