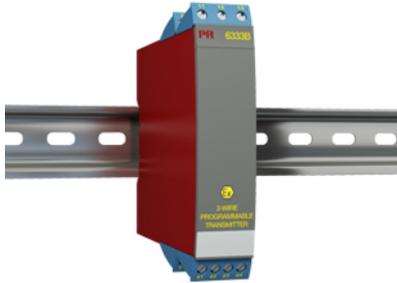


## 2-wire programmable transmitter



### 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

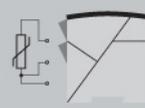
- Within a few seconds the user can program PR6333B to measure temperatures within all RTD ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 3-wire connection.
- A limit can be programmed on the output signal.

#### 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

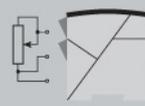
RTD to 4...20 mA



2-wire installation  
in control room



Resistance  
to 4...20 mA



2-wire installation  
in control room



**Order:**

| Type  | Galvanic Isolation | Channels                 |
|-------|--------------------|--------------------------|
| 6333B | None : 1           | Single : A<br>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 <sup>2</sup> AWG 26...14<br>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<br>(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<br>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 |