



## 2-wire programmable RTD transmitter

### 5332D

- RTD or Ohm input
- Accuracy: Better than 0.05% of selected range
- Programmable sensor error value
- For DIN form B sensor head mounting



#### 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.

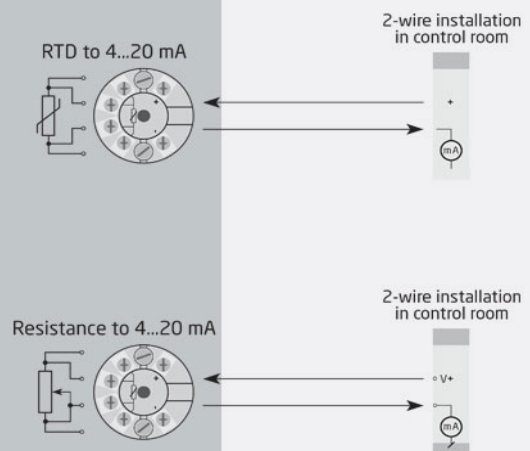
#### Technical characteristics

- Within a few seconds the user can program PR5332D to measure temperatures within all ranges defined by the norms.
- Dedicated programmable non-isolated 4-wire RTD transmitter.
- RTD and resistance inputs have cable compensation for 2-, 3- and 4-wire connection.
- Continuous check of vital stored data for safety reasons.

#### Mounting / installation

- For DIN form B sensor head mounting.

#### Applications



**Order**

| Type | Version                                                   |
|------|-----------------------------------------------------------|
| 5332 | Hazardous area, Zone 0 / Div. 0, ATEX, IECEx, FM, CSA : D |

**Environmental Conditions**

|                                         |                      |
|-----------------------------------------|----------------------|
| Operating temperature.....              | -40°C to +85°C       |
| Calibration temperature.....            | 20...28°C            |
| Relative humidity.....                  | < 95% RH (non-cond.) |
| Protection degree (encl./terminal)..... | IP68 / IP00          |

**Mechanical specifications**

|                            |                                       |
|----------------------------|---------------------------------------|
| Dimensions.....            | Ø 44 x 20.2 mm                        |
| Weight approx.....         | 50 g                                  |
| Wire size.....             | 1 x 1.5 mm <sup>2</sup> stranded wire |
| Screw terminal torque..... | 0.4 Nm                                |

**Common specifications****Supply**

|                                 |               |
|---------------------------------|---------------|
| Supply voltage.....             | 7.2...30 VDC  |
| Internal power dissipation..... | 25 mW...0.7 W |

**Response time**

|                                                            |                                     |
|------------------------------------------------------------|-------------------------------------|
| Response time (programmable).....                          | 1...60 s                            |
| Voltage drop.....                                          | 7.2 VDC                             |
| Warm-up time.....                                          | 5 min.                              |
| Programming.....                                           | Loop Link                           |
| Signal / noise ratio.....                                  | Min. 60 dB                          |
| EEPROM error check.....                                    | < 3.5 s                             |
| Accuracy.....                                              | Better than 0.05% of selected range |
| 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 NE21, A criterion, burst..... | < ±1% of span                       |

**Input specifications****Common input specifications**

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

**RTD input**

|                                                    |                      |
|----------------------------------------------------|----------------------|
| RTD type.....                                      | Pt100, Ni100, lin. R |
| Cable resistance per wire.....                     | 5 Ω (max.)           |
| Sensor current.....                                | Nom. 0.2 mA          |
| Effect of sensor cable resistance (3-/4-wire)..... | < 0.002 Ω / Ω        |
| Sensor error detection.....                        | Yes                  |

**Linear resistance input**

|                                   |              |
|-----------------------------------|--------------|
| Linear resistance min....max..... | 0 Ω...5000 Ω |
|-----------------------------------|--------------|

**Output specifications****Common output specifications**

|                    |        |
|--------------------|--------|
| Updating time..... | 440 ms |
|--------------------|--------|

**Current output**

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Signal range.....                 | 4...20 mA                         |
| Min. signal range.....            | 16 mA                             |
| Load (@ current output).....      | ≤ (Vsupply - 7.2) / 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                    |
| of span.....                      | = of the presently selected range |

**I.S. / Ex marking**

|             |                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------------|
| ATEX.....   | II 1 G Ex ia IIC T4...T6 Ga, II 1 D Ex ia IIIC Da, I M1 Ex ia Ma                                          |
| IECEx.....  | Ex ia IIC T4...T6 Ga, Ex ia IIIC Da, Ex ia I Ma                                                           |
| FM, US..... | Cl. I, Div. 1, Gp. A, B, C, D T4/T6; Cl. I Zone 0, AEx ia IIC T4/T6; Cl. 1, Div. 2, Gp. A, B, C, D, T4/T6 |
| CSA.....    | Cl. I, Div. 1, Gp. A, B, C, D Ex ia IIC, Ga                                                               |

**Observed authority requirements****Directives**

|           |            |
|-----------|------------|
| EMC.....  | 2014/30/EU |
| ATEX..... | 2014/34/EU |
| RoHS..... | 2011/65/EU |

**Approvals**

|                      |                  |
|----------------------|------------------|
| ATEX 2014/34/EU..... | KEMA 06ATEX0062X |
| IECEx.....           | DEK 13.0035X     |
| FM.....              | FM17US0013X      |
| CSA.....             | 1125003          |