



2-wire programmable RTD transmitter

5332A

- 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.

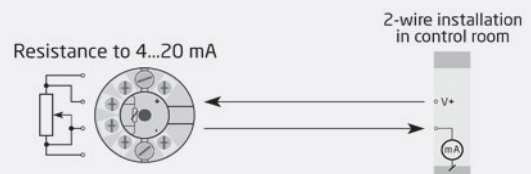
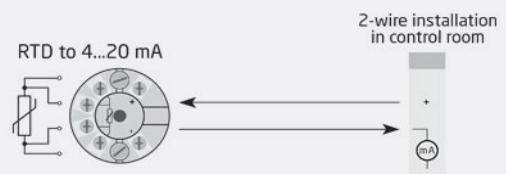
Technical characteristics

- Within a few seconds the user can program PR5332A 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 or DIN rail mounting with the PR fitting type 8421.

Applications



Order

| Type | Version | |
|------|--|------------|
| 5332 | Simple, no approvals General purpose, Zone 2, ATEX, IECEx | : N : A |

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 ² stranded wire |
| Screw terminal torque..... | 0.4 Nm |

Common specifications**Supply**

| | |
|---------------------------------|---------------|
| Supply voltage..... | 7.2...35 VDC |
| Internal power dissipation..... | 25 mW...0.8 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 3 G Ex nA [ic] IIC T4...T6 Gc, II 3 G Ex ic IIC T4...T6 Gc, II 3 D Ex ic IIC Dc |
| IECEx..... | Ex nA [ic] IIC T4...T6 Gc, Ex ic IIC T4...T6 Gc, Ex ic IIC Dc |

Observed authority requirements**Directives**

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

Approvals

| | |
|----------------------|-------------------|
| ATEX 2014/34/EU..... | KEMA 10ATEX0002 X |
| IECEx..... | DEK 13.0035X |