



2-wire programmable transmitter

5334A

- TC input
- High measurement accuracy
- Galvanic isolation
- Programmable sensor error value
- For DIN form B sensor head mounting



Application

- Linearized temperature measurement with TC sensor.
- Amplification of bipolar mV signals to a 4...20 mA signal, optionally linearized according to a defined linearization function.

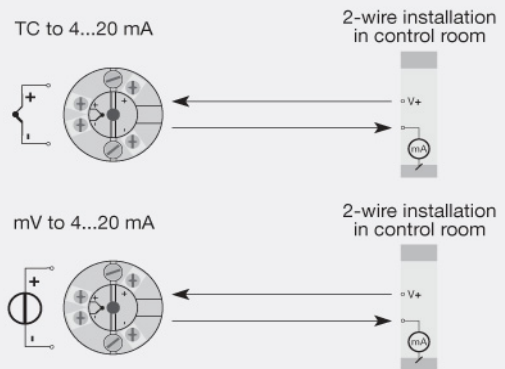
Technical characteristics

- Within a few seconds the user can program PR5334A to measure temperatures within all TC ranges defined by the norms.
- Cold junction compensation (CJC) with a built-in temperature sensor.
- 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 | Ambient temperature | Galvanic isolation |
|-------|---------------------|--------------------|
| 5334A | -40°C...+85°C : 3 | 1500 VAC : B |

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 |
| Vibration..... | IEC 60068-2-6 |
| 2...25 Hz..... | ±1.6 mm |
| 25...100 Hz..... | ±4 g |

Common specifications**Supply**

| | |
|---------------------------------|---------------|
| Supply voltage..... | 7.2...35 VDC |
| Internal power dissipation..... | 25 mW...0.8 W |

Isolation voltage

| | |
|--|-------------------|
| Isolation voltage, test / working..... | 1.5 kVAC / 50 VAC |
|--|-------------------|

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..... | 18 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 |
|------------------|----------------------------|

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..... | Yes |
| Sensor error current: When detecting / else..... | Nom. 33 µA / 0 µA |

Voltage input

| | |
|------------------------------------|--------------|
| Measurement range..... | -12...150 mV |
| Min. measurement range (span)..... | 5 mV |
| Input resistance..... | 10 MΩ |

Output specifications**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 |

Common output specifications

| | |
|--------------------|-----------------------------------|
| Updating time..... | 440 ms |
| 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 |
| INMETRO..... | Ex nA [ic] IIC T6...T4 Gc, Ex ic IIC T6...T4 Gc, Ex ic IIC Dc |

Observed authority requirements

| | |
|-------------|----------------|
| EMC..... | 2014/30/EU |
| ATEX..... | 2014/34/EU |
| RoHS..... | 2011/65/EU |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Approvals

| | |
|-----------------|-------------------------|
| DNV Marine..... | TAA0000101 |
| ATEX..... | KEMA 10ATEX0002 X |
| IECEx..... | DEK 13.0035X |
| INMETRO..... | DEKRA 16.0013 X |
| EAC Ex..... | RU C-DK.HA65.B.00355/19 |