



## 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.

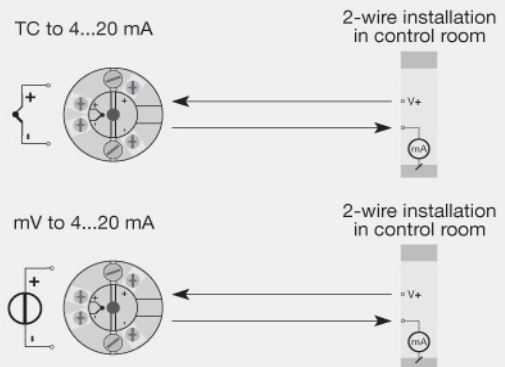
#### Technical characteristics

- 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 <sup>2</sup> 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 |

**Observed authority requirements**

|          |                |
|----------|----------------|
| EMC..... | 2014/30/EU     |
| EAC..... | TR-CU 020/2011 |

**Approvals**

|                      |                   |
|----------------------|-------------------|
| ATEX 2014/34/EU..... | KEMA 10ATEX0002 X |
| IECEX.....           | DEK 13.0035X      |
| INMETRO.....         | DEKRA 16.0013 X   |
| CCOE.....            | P337392/1         |