



2-wire programmable transmitter

5334B

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



Application

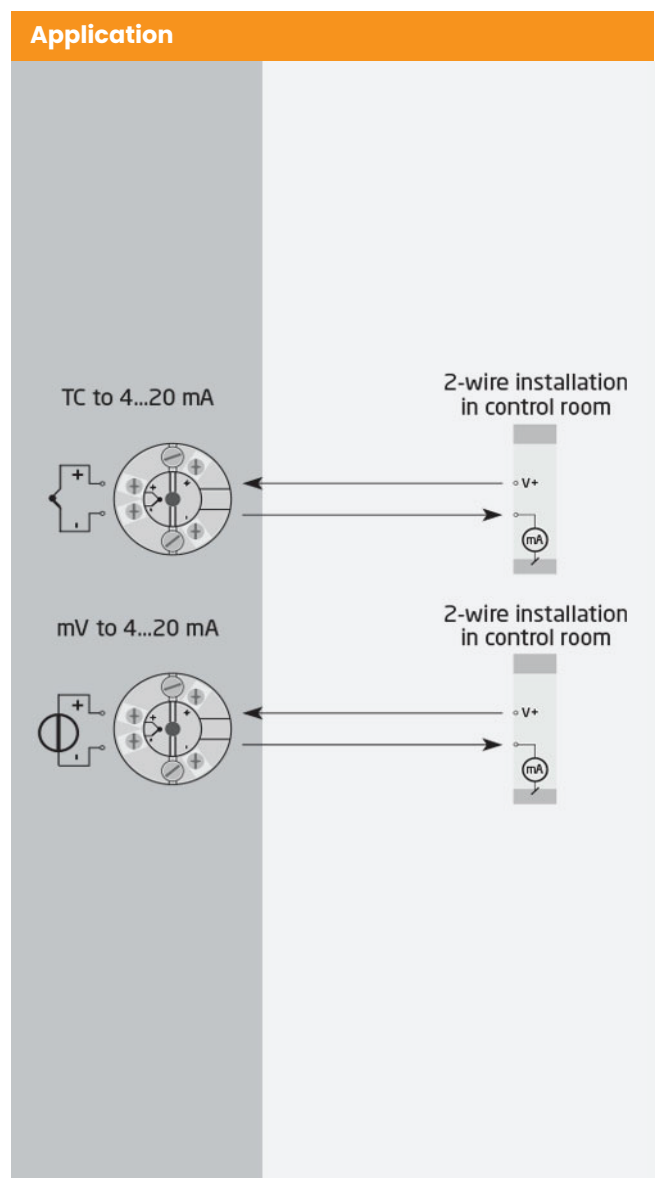
- Linearized temperature measurement with TC sensor.
- Amplification of bipolar mV signals to a 4...20 mA signal, optionally linearized according to a defined linearization function.

Technical characteristics

- Within a few seconds the user can program PR5334B 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 mounting.



Order

Type	Version	Ambient temperature	Galvanic isolation
5334	Zone 0, 1, 2, 2I, 22, MI :B	-40°C...+85°C :3	1500 VAC :B

Environmental Conditions

Operating temperatur : -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 mm² 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...30 VDC
 Internal power dissipation : 25 mW...0.7 W

Isolation voltage

Isolation voltage, test / workin : 1.5 kVAC / 50 VAC

Response time

Response time (programmable) : 1...60 s
 Voltage drop : 7.2 VDC
 Warm-up time : 5 min.
 Power on to stable output : 4.5 s
 Programming : Loop Link
 Signal / noise ratio : Min. 60 dB
 EProm 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 detecting / else. : When
 : 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) : $\leq (V_{supply} - 7.2) / 0.023 [\Omega]$
 Load stability : $\leq 0.01\%$ 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 of span : 440 ms
 : = of the presently selected range

I.S. / Ex marking

ATEX : II 1 G Ex ia IIC T6...T4 Ga, II 2 D Ex ia IIIC Db, I M1 Ex ia I Ma
 IECEx : Ex ia IIC T6...T4 Ga, Ex ia IIIC Db, Ex ia I Ma
 INMETRO : Ex ia IIC T6...T4 Ga, Ex ia IIIC Da, Ex ia I Ma

Observed authority requirements

EMC : 2014/30/EU & UK SI 2016/1091
 ATEX : 2014/34/EU & UK SI 2016/1107
 RoHS : 2011/65/EU & UK SI 2012/3032
 EAC : TR-CU 020/2011
 EAC Ex : TR-CU 012/2011

Approvals

ATEX : DEKRA 20ATEX0095X
 IECEx : DEK 20.0059X
 CSA : 1125003
 INMETRO : DEKRA 16.0013 X
 DNV Marine : TAA0000101
 EAC Ex : RU C-DK.HA65.B.00355/19