



## 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.

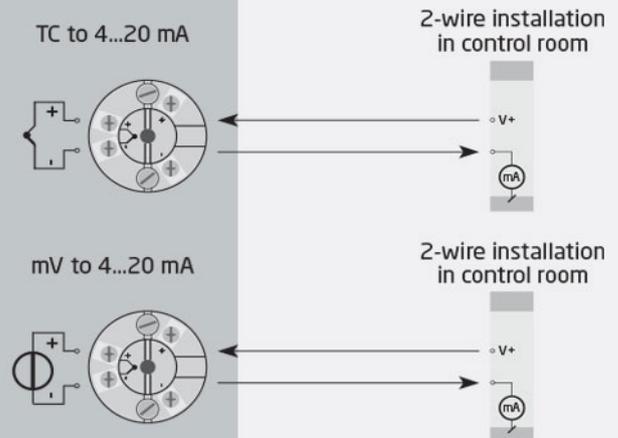
#### Technical characteristics

- 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.

#### Applications



## Order

Type	Version	Ambient temperature	Galvanic isolation
5334	Zone 0, 1, 2, 21, 22, M1 : B	-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...30 VDC
Internal power dissipation.....	25 mW...0.8 W

#### Isolation voltage

Isolation voltage, test / working.....	1.5 kVAC / 50 VAC
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#### 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.....	PR 5909 Loop Link communications interface
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
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#### 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 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 Db, Ex ia I Ma

### 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

ATEX.....	DEKRA 20ATEX0095X
IECEx.....	DEK 20.0059X
INMETRO.....	DEKRA 23.0009X
EAC Ex.....	EAEU KZ 7500361.01.01.08756
DNV Marine.....	TAA0000101