



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.

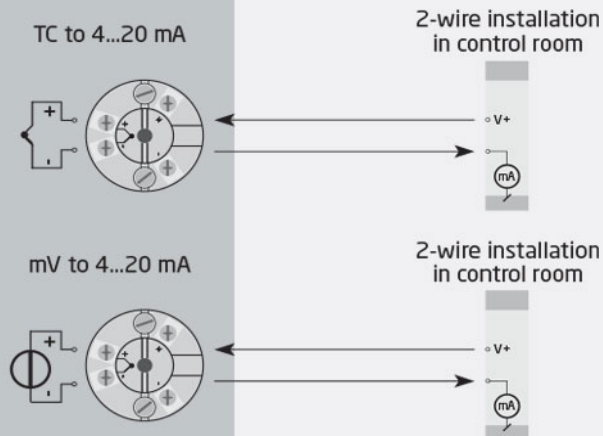
Technical characteristics

- 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.
- NB: As Ex barrier we recommend 5104B, 5114B, or 5116B.

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 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...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.....	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
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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 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
INMETRO.....	DEKRA 16.0013 X
EAC Ex.....	RU C-DK.HA65.B.00355/19
DNV Marine.....	TAA0000101