2-wire programmable transmitter

5334A

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

ATEX · IECEx · Segurança INMETRO · DNV-GL · CCOE · EHC · CE

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

TC to 4...20 mA — 2-wire installation in control room

mV to 4...20 mA — 2-wire installation in control room
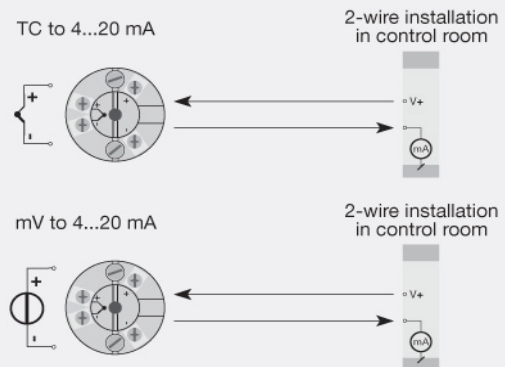
Type	Ambient temperature		Galvanic isolation	
5334A	-40°C…+85°C	: 3	1500 VAC	: B

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

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 13.0001 X
CCOE.. P337392/1

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