

2-Wire Programmable Transmitter

Model 5334A

- TC or mV Input
- Extremely High Measurement Accuracy
- 1.5 kVAC Galvanic Isolation
- Programmable Sensor Error Value



Application:

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

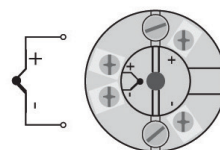
Technical Characteristics:

- Within seconds the user can program a 5334A to measure temperatures within all standard TC ranges.
- Cold junction compensation (CJC) with a built-in temperature sensor.
- Continuous check of vital stored data.

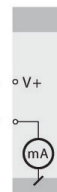
Mounting/Installation:

- DIN Form B sensor head compatible.
- Supplied with 2 x M4 screws on a 33 mm(1.3") BC (optional 6-32 screws available).

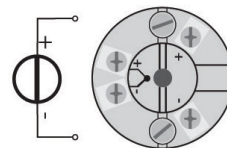
TC to 4...20mA



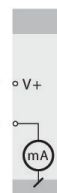
2-wire installation in control room



Voltage to 4...20 mA



2-wire installation in control room



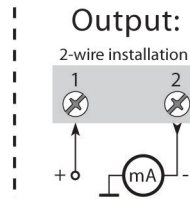
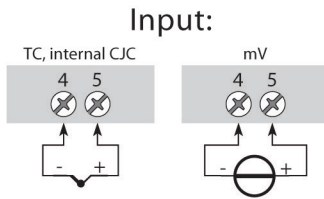
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Electrical Specifications

Specifications Range:

-40°C to +85°C

Common Specifications:

- Supply voltage, DC.....7.2...35 VDC
- Internal consumption25 mW...0.8 W
- Voltage drop7.2 VDC
- Isolation voltage, test /operation.....1.5 kVAC / 50 VAC
- Warm-up time.....5 min.
- Communications interface Loop Link
- Signal / noise ratio.....Min. 60 dB
- Response time (programmable).....1...60s
- EEPROM error check.....3.5 s
- Signal dynamics, input.....18 bit
- Signal dynamics, output.....16 bit
- Calibration temperature20...28°C

Accuracy, the greater of general and basic values:

General Values		
Input Type	Absolute Accuracy	Temperature Coefficient
All	≤ ±0.05% of span	≤ ±0.01% of span / °C

Basic Values		
Input Type	Basic Accuracy	Temperature Coefficient
Volt	≤ ±10 μV	≤ ±1 μV/°C
TC type: E, J, K, L, N, T, U	≤ ±1°C	≤ ±0.05°C/°C
TC type: B, R, S, W3, W5, LR	≤ ±2°C	≤ ±0.2°C/°C

EMC immunity influence < ±0.5% of span
Extended EMC immunity: NAMUR NE 21, A criterion, burst < ±1% of span

- Effect of supply voltage variation < 0.005% of span / VDC
- Vibration..... IEC 60068-2-6 Test FC
- Lloyd's specification no. 1..... 4 g / 2...100 Hz
- Max. wire size1 x 1.5 mm²(16 AWG)
stranded wire
- Humidity < 95% RH (non-cond.)
- Dimensions Ø 44 x 20.2 mm
- Protection degree (encl. / terminal)..... IP68 / IP00
- Weight.....50 g

Electrical Specifications, Input:

Max. offset50% of selected max. value

TC Input:

Type	Min. Temperature	Max. Temperature	Min. Span	Standard
B	+400°C	+1820°C	200°C	IEC584
E	-100°C	+1000°C	50°C	IEC584
J	-100°C	+1200°C	50°C	IEC584
K	-180°C	+1372°C	50°C	IEC584
L	-100°C	+900°C	50°C	DIN 43710
N	-180°C	+1300°C	100°C	IEC584
R	-50°C	+1760°C	200°C	IEC584
S	-50°C	+1760°C	200°C	IEC584
T	-200°C	+400°C	50°C	IEC584
U	-200°C	+600°C	75°C	DIN 43710
W3	0°C	+2300°C	200°C	ASTM E988-90
W5	0°C	+2300°C	200°C	ASTM E988-90
LR	-200°C	+800°C	50°C	GOST 3044-84

Cold junction compensation..... < ±1.0°C

Voltage Input:

- Measurement range -12...150 mV
- Min. span5 mV
- Input resistance.....10 M Ω

Current Output:

- Signal range4...20 mA
- Min. signal range.....16 mA
- Updating time440 ms
- Load resistance ≤ (Vsupply- 7.2) / 0.023 [Ω]

Sensor Error Detection:

- Programmable3.5...23 mA
- NAMUR NE43 Upscale.....23 mA
- NAMUR NE43 Downscale.....3.5 mA

Marine Approval*:

Det Norske Veritas, Ships & Offshore... Stand. for Certific. No. 2.4

Observed Authority Requirements: Standard:

EMC 2004/108/EC EN 61326-1

Of Span = Of the presently selected range

Loop Link = PC compatible programming software.

*The transmitter is manufactured by PR electronics. All approvals listed are recognized under the PR name.