

# 2-Wire Programmable Transmitter

## TT5334B



### Features:

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



### Application:

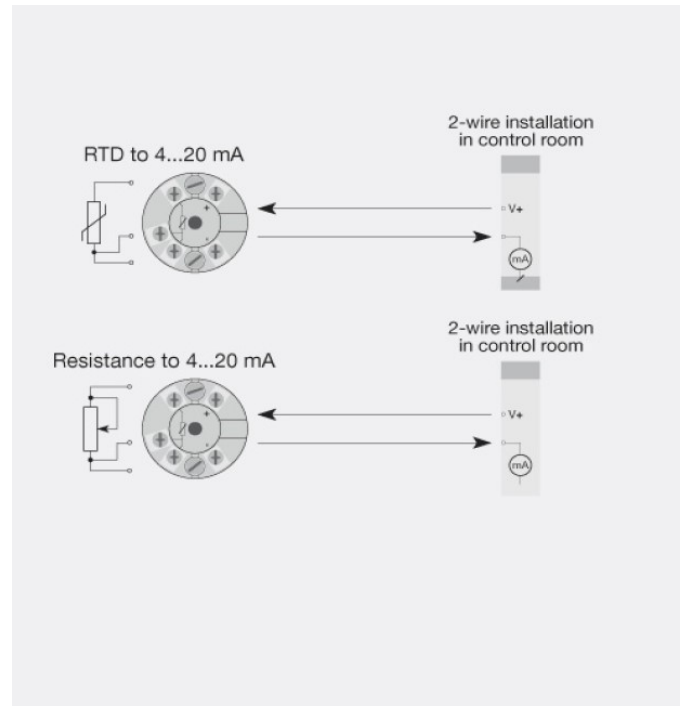
- Linearized temperature with TC sensor
- Amplification of bipolar mV signals to a 4...20 mA signal, optionally linearized according to a defined linearization function

### Technical characteristics

- Within a few seconds the user can program TT5334B 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



### Order:

Type	Ambient Temperature	Galvanic Isolation
TT5334B	-40°C... + 85°C : 3	1500 VAC : B

### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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## 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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### Common Specifications Continued

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	< $\pm 0.5\%$ of span
Extended EMC Immunity: NAMUR NE 21, A criterion burst	< $\pm 1\%$ 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)	< $\pm 1.0$ °C
Sensor error detection	Yes
Sensor error current: when detecting / else	Nom. 33 $\mu$ A / 0 $\mu$ A

### Input Specifications Continued

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)	$\leq (V_{\text{supply}} - 7.2) / 0.023 [\Omega]$
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	440 ms
* of span	= of the presently selected range

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## Observed authority requirements

EMC	2014/30/EU
EAC	TR-CU 020/2011

## Approvals

ATEX 2014/34/EU	KEMA 06ATEX0062 X
IECEX	DEK 13.0035X
INMETRO	DEKRA 16.0013 X
CCOE	P337392/2
EAC Ex TR-CU 012/2011	RU C-DK.GB08.V.00410
DNV-GL Marine	Stand. f. Certific. No. 2.4

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