

2-WIRE PROGRAMMABLE TRANSMITTER



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



Application:

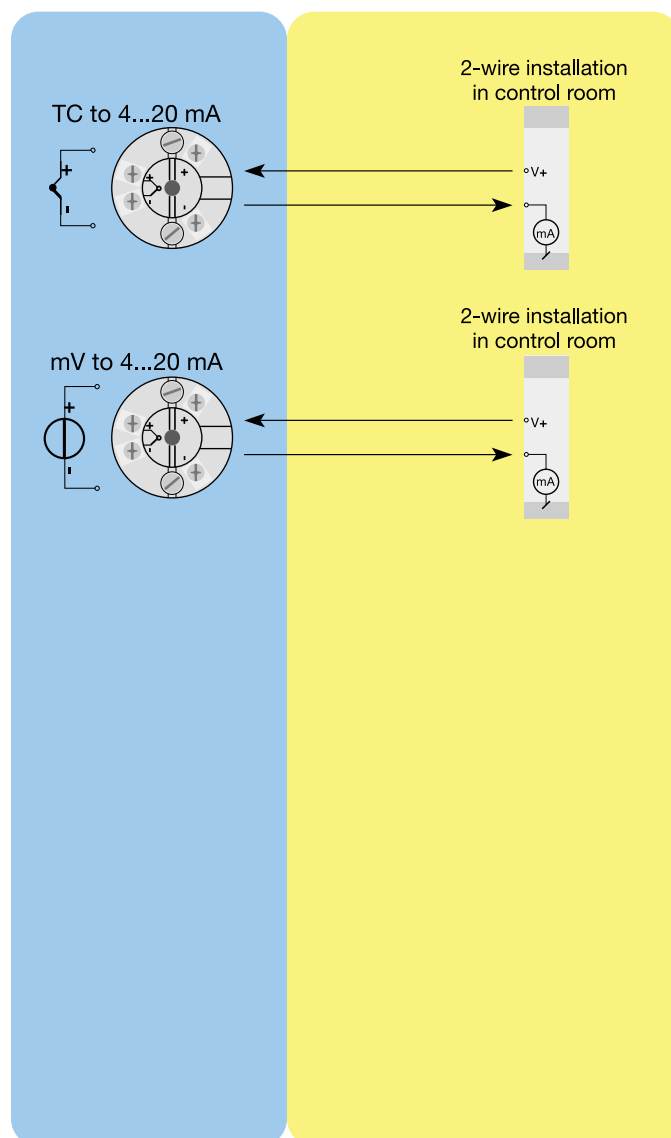
- Linearised temperature measurement with TC sensor.
- Amplification of bipolar mV signals to a 4...20 mA signal, optionally linearised according to a defined linearisation function.

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 or DIN rail mounting with a special fitting.
- **NB:** As Ex barrier we recommend 5104B, 5111B, or 5114B.

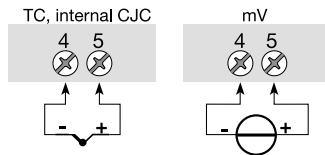


Order: 5334B

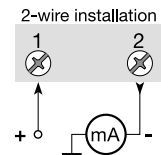
Type	Ambient temperature	Galvanic isolation
5334B	-40°C...+85°C : 3	1500 VAC : B

Connexions:

Input:



Output:



Electrical specifications:

Specifications range:

-40°C to +85°C

Common specifications:

Supply voltage, DC	7.2...28 VDC
Internal consumption	25 mW...0.8 W
Voltage drop	7.2 VDC
Isolation voltage, test / operation	1.5 kVAC / 50 VAC
Warm-up time	5 min.
Communications interface	Loop Link 5905
Signal / noise ratio	Min. 60 dB
Response time (programmable)	1...60 s
EEProm error check	< 3.5 s
Signal dynamics, input	18 bit
Signal dynamics, output	16 bit
Calibration temperature	20...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	≤ ±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 68-2-6 Test FC
Lloyd's specification no. 1	4 g / 2...100 Hz
Max. wire size	1 x 1.5 mm ²
Humidity	< 95% RH (non-cond.)
Dimensions	Ø 44 x 20.2 mm
Tightness (enclosure / terminal)	IP68 / IP00
Weight	50 g

Electrical specifications, input:

Max. offset..... 50% of selec. max. value

TC input:

Type	Min. temperature	Max. temperature	Min. span	Norm
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

Cold junction compensation < ±1.0°C

Voltage input:

Measurement range	-12...150 mV
Min. span	5 mV
Input resistance	10 MΩ

Current output:

Signal range	4...20 mA
Min. signal range	16 mA
Updating time	440 ms
Load resistance	≤ (V _{supply} - 7.2) / 0.023 [Ω]

Sensor error detection:

Programmable	3.5...23 mA
NAMUR NE43 Upscale	23 mA
NAMUR NE43 Downscale	3.5 mA

Ex data:

U _i	28 VDC
I _i	120 mADC
P _i	0.84 W
L _i	≤ 10 µH
C _i	≤ 1 nF

EEx approval CENELEC:

DEMKO 99 ATEX 126 963

ATEX 0539 Ex II 1 G
EEx ia IIC T1...T4

Max. amb. temperature for T1...T4 ... 85°C

Max. amb. temperature for T5 and T6 ... 60°C

Applicable in zone 0, 1 or 2

Observed authority requirements: Standard:

EMC 89/336/EEC, Emission	EN 50 081-1, EN 50 081-2
Immunity	EN 50 082-2, EN 50 082-1
ATEX 94/9/EC	EN 50 014 and EN 50 020

Of span = Of the presently selected range



thermo-electra

measurement and control technics

P.O. box 73
2640 AB Pijnacker, The Netherlands
Phone: +31 15 362 12 00
Fax: +31 15 369 40 82
E-mail: mail@thermo.nl
Internet: www.thermo-electra.com

5334BY101-UK (0040)