

# 2-WIRE PROGRAMMABLE TRANSMITTER



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

### Application:

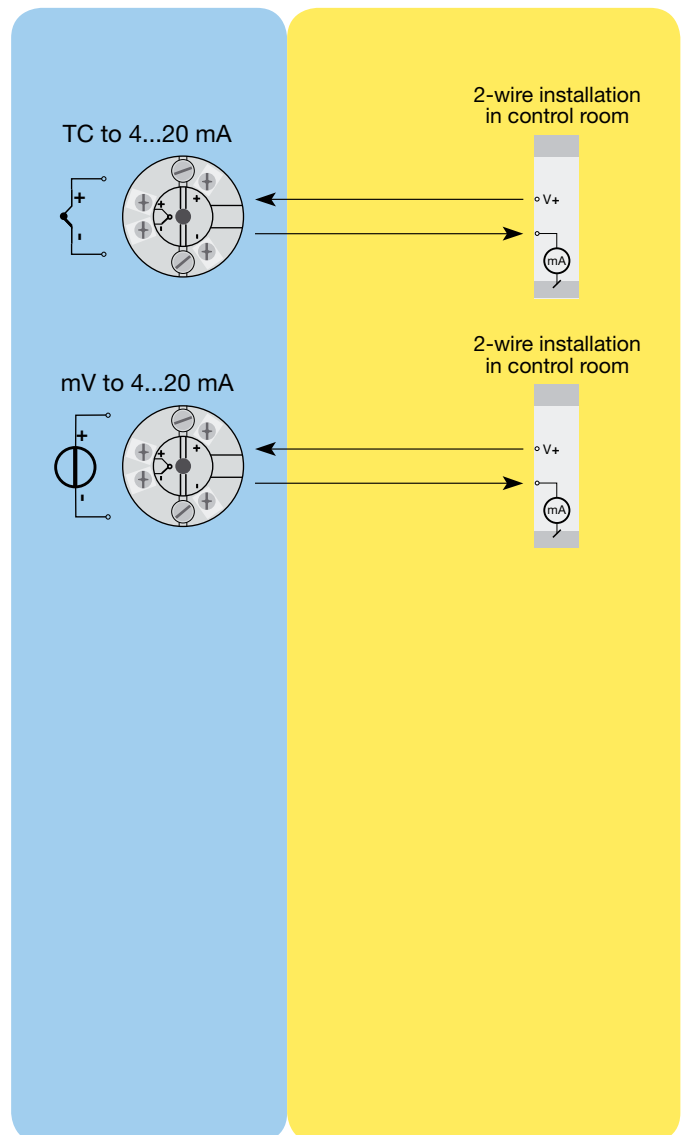
- Linearised temperature measurement with TC sensor.
- Amplification of bipolar mV signals to a 4...20 mA signal, optionally linearised according to a defined linearisation function.

### Technical characteristics:

- Within a few seconds the user can program IET134 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:

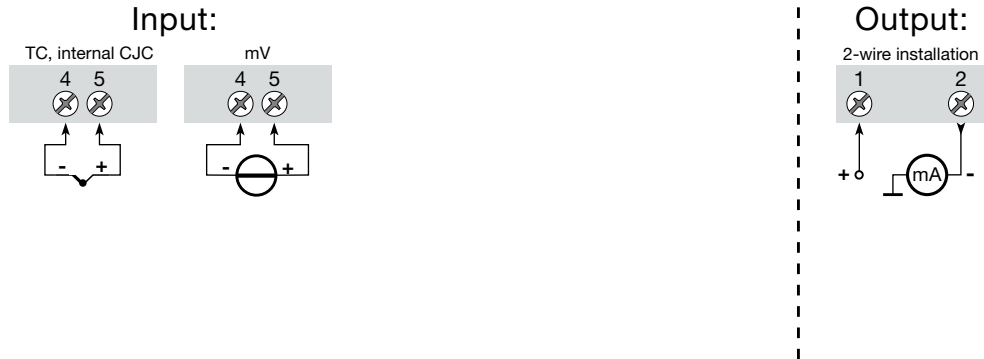
- For DIN form B sensor head mounting.



Order: IET134

Type	Version
IET	134

**Connections:**



**Electrical specifications:**

**Specifications range:**

-40°C to +85°C

**Common specifications:**

- Supply voltage, DC ..... 7.2...30 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
  - 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:

**TC input:**

Type	Min. temperature	Max. temperature	Min. span	Standard
B	+400°C	+1820°C	100°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	50°C	IEC584
R	-50°C	+1760°C	100°C	IEC584
S	-50°C	+1760°C	100°C	IEC584
T	-200°C	+400°C	50°C	IEC584
U	-200°C	+600°C	50°C	DIN 43710
W3	0°C	+2300°C	100°C	ASTM E988-90
W5	0°C	+2300°C	100°C	ASTM E988-90
LR	-200°C	+800°C	50°C	GOST 3044-84

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

**Current output:**

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

**Sensor error detection:**

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

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 size..... 1 x 1.5 mm<sup>2</sup> 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. offset..... 50% of selec. max. value

**Voltage input:**

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

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