E direct

PC programmable temperature transmitter
iTEMP TMT80

- Universally programmable via ReadWin® 2000
- NAMUR NE 43
- Galvanic isolation

$ 78.00
11 – 35 pcs.

i Specs at a glance:

- **Input:**
  Pt100, Pt1000;
  TC type B, K, N, R, S
- **Accuracy:**
  deviation 0.5 K (Pt100)
- **Measuring range:**
  freely programmable,
  dependent of sensor
- **Installation:**
  suitable for sensor head (form B)

Complete product information:
www.e-direct.endress.com/tmt80

Application The iTEMP TMT80 head transmitter can be installed in the form B sensor head. It has a 4 to 20 mA analog output. The measuring range can be set up freely via ReadWin® 2000 configuration software. TMT80 can be used for resistance thermometers (RTD) as well as for most commonly used thermocouples.

Function The iTEMP TMT80 head transmitter converts the input signal into a linear 4 to 20 mA signal. It has measurement input for resistance thermometers (RTD) in 2-, 3- or 4-wire connection and thermocouples.
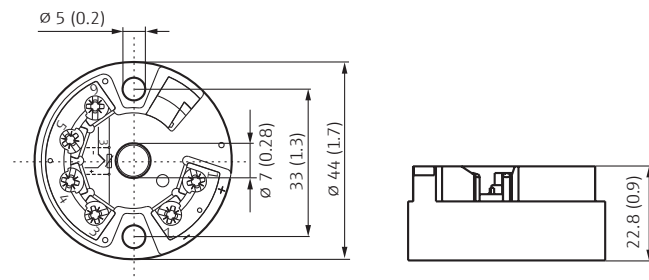
Endress+Hauser EH

People for Process Automation

Technical data

Input

Input signal	Resistance thermometer: Pt100, Pt1000 to IEC 60751 Thermocouples: type B, K, N, R, S
Measurement range	Dependent of applied sensor element

Output

Output signal	4 to 20 mA
Failure signal	To NAMUR NE 43
Max. load	$(V_{power\ supply} - 8\ V)/0.025\ A$
Input current required	≤3.5 mA
Current limit	≤25 mA
Switch on delay	4 s (during power up I_a ≈ 3.8 mA)
Response time	1 s

Signal on alarm

Underranging	Linear drop to 3.8 mA
Overranging	Linear rise to 20.5 mA
Sensor breakage; sensor short circuit [1]	<3.6 mA or >21 mA can be set up

Electrical connection

Power supply	U_b = 8 to 35 V DC
Galvanic isolation	Û = 0.5 kV
Allowable ripple	U_{ss} ≤3 V at U_b ≥15 V, f_{max} = 1 kHz
Reference conditions	Calibration temperature 25 ℃ ±5 K

Accuracy

Influence of power supply	≤ ±0.01 %/V deviation from 24 V
Load influence	≤ ±0.02 %/100 Ω
Temperature drift	Pt100: $T_d = \pm[(15\ ppm/K \times$ (measuring range end value − measuring range start value)) + (50 ppm/K × preset measurement range)] × Δθ
	TC: $T_d = \pm[(50\ ppm/K \times$ (Measurement range end value − measurement range start value)) + (50 ppm/K × preset measurement range)] × Δθ
	Δθ = Deviation of ambient temperature according to the reference condition +25 ℃ ± 5 K (77 ℉ ± 9 ℉)
Measurement accuracy	0.5 K (Pt100)

Application conditions

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Ambient temperature	−40 to +85 ℃ (−40 to 185 ℉)
Storage temperature	−40 to +100 ℃ (−40 to 212 ℉)
Climatic class	to EN 60654-1, Class C
Vibration resistance	4 g/2 to 150 Hz to IEC 60 068-2-6
EMC	Interference immunity and interference emission according to IEC 61326 and NAMUR NE 21
Housing	To DIN 50446 form B

[1] Not for thermocouple

Dimensions in mm (inches)

Installation according to operation instructions.

Electrical connection

Power supply and current output
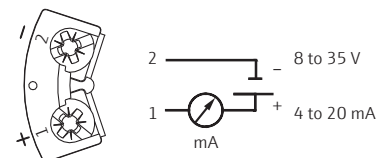
Sensor connection
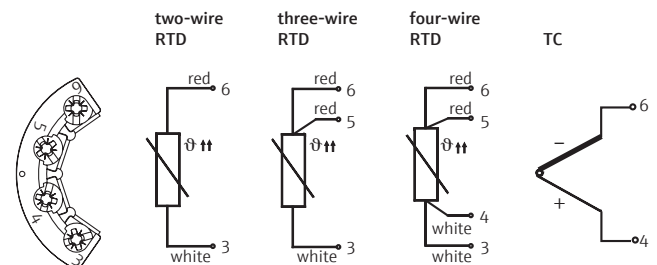
Price table

PCP head transmitter TMT80	Order no.	Price/pcs. in USD		
Connection		1 to 3	4 to 10	11 to 35
RTD 2-wire	TMT80-AA+D2	89.00	82.00	78.00
RTD 3-wire	TMT80-AA+D3	89.00	82.00	78.00
RTD 4-wire	TMT80-AA+D4	89.00	82.00	78.00

Accessories	Order no.	Price/pcs. in USD
Configuration kit TXU10- for PC-programmable devices. Set-up programme+interface cable for PC with USB-Port. 4 pin plug + ReadWin®2000	TXU10-AA	135.79

Prices valid until 09.30.2017 in U.S. dollars per unit (not including shipping and applicable sales tax).
See Endress+Hauser, Inc. Terms and Conditions of Sale for shipping, tax, and payment terms.

Complete product information:
www.e-direct.endress.com/tmt80

TD 00065E/24/EN/01.17

More products to complete your measuring point …

Point level switch Liquiphant FTL31

Temperature sensor Easytemp TMR31

Process transmitter RMA42