



Introduction:

MDT-02 Digital Thermometer based on 24-bit A/D converters and 16-bit MCU, features high precision, high stability, low power consumption, multiple input types, multiple measurement results, easy operation, etc. When suitable sensors are matched, it can be widely used for handheld precise temperature measurement and Ω /mV/mA precise measurement in production, scientific research and labs. Its main characteristics are as follows

Input Types:

Pt100, Pt1000, Cu50, Cu100, K, S, E, T, J, R, B, N. There are three compensation modes for thermocouples, including internal compensation, external compensation and manual (simulated) compensation.

Display Resolution and Units

The highest resolution is 0.1°C / 1°C (RTD-Resistance Temperature Detector) or 0.01°C (K/E/J/T/N thermocouple).

Units : Three display units for thermal resistances and thermocouples:
Switchable among $^{\circ}\text{C}$, $^{\circ}\text{F}$ and K.

Customized start-up display: Including math modes, resolution, display units and the reference junction compensation modes.



Specifications

tyPE Code	Type	Effective Measurement Range	1-year tolerance Δ (see the notes)
1	Pt100	(-200.000~+850.000)□	± 0.5 □)
13	K	(-200.00~+1372.00)□	± 1.50 □
14	S	(0.0~1768.0)□	± 2.4 □
15	E	(-200.00~+1000.00)□	± 1.2 □
16	T	(-200.00~+400.00)□	± 1.2 □
17	J	(-210.00~+1200.00)□	± 1.2 □
18	R	(0.0~1768.0)□	± 2.4 □
19	B	(300.0~+1820.0)□	± 2.4 □
20	N	(-200.00~+1300.00)□	± 1.8 □

Resolution

tyPE Code	tyPE	Celsius Degree □	Fahrenheit degree □	Kelvin K
1	Pt100	0 / 0.0	0 / 0.0	0 / 0.0
13	K			
14	S			
15	E			
16 T				
17	J			
18	R			
19 B				
20	N			

Sample Rate

Input signals	Sampling Rate
Thermocouple/ PT100 (MAN Compensation)	2.5 times/s
Thermocouple (INT/EXT Compensation)	2 times/s

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