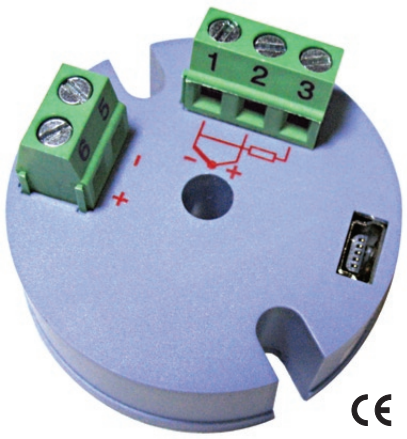
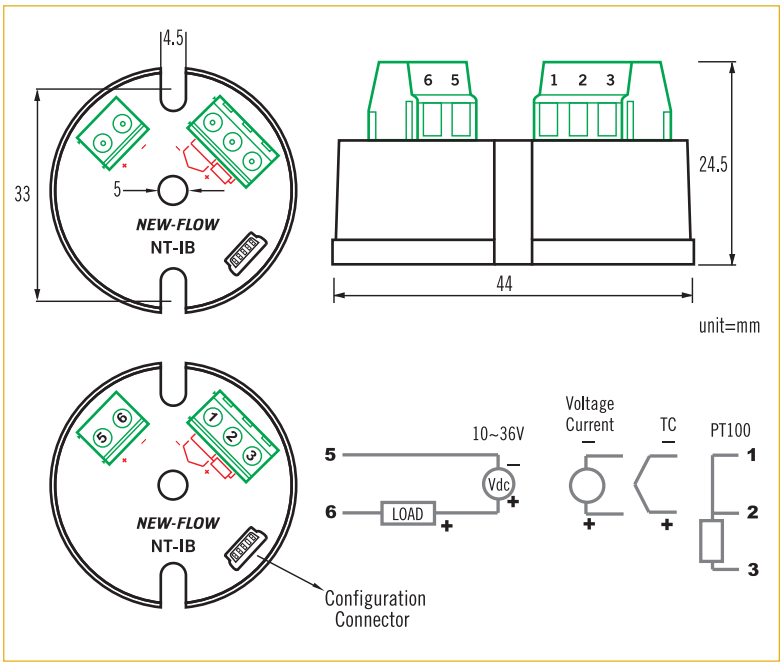
TEMPERATURE TRANSMITTER NT-IB



Technical Data

Microprocessor based
Housing: ABS plastic.
Dimensions: 44 mm(diameter)×24.5 mm(height), installed in thermocouple head
Input: MV, pt100Ω, thermocouple available
Isolation: 4K Vac for 1 minute between sensor input and the 4~20mA loop
Electromagnetic compatibility: According to EN 50081-2, EN 50082-2
Internal protection against polarity inversion
Cold junction compensation for thermocouples
Thermocouples: Types J,K,R,S,T,N, E and B, according to IEC 60584-1 (ITS-90), Impedance>>1MΩ
Pt100: Excitation: 180μA
2 or 3-wire connection (for 2-wire sensors, tie terminals 2 and 3 together)
α=0.00385, according to IEC 60751 (ITS-90)
Voltage: 0 – 50m Vdc; Impedance>>1MΩ
Total accuracy: better than 0.25% of the maximum range for thermocouples and 0.15% for Pt100 and voltage
Response time: ≤200 ms
Output: 2-wire 4-20mA, linear with respect to the measured temperature
Resolution: 0.001mA (16 bits)
Power supply: 10 to 35Vdc, across the transmitter
Maximum load(RL): <600Ω
Operating temperature: -40 to 85°C
Humidity: 0 ~ 90% RH
Common mode rejection ration (COMRR): >80dB

Dimensions



Range Table

Sensor Type	Range	Minimum Measurement Span	Accuracy
TC-K	-50~1370°C	50°C	±1°C
TC-J	-50~1000°C	50°C	±1°C
TC-R	-50~1750°C	100°C	±2°C
TC-S	-50~1750°C	100°C	±1°C
TC-T	-270~400°C	50°C	±1°C
TC-N	-50~1300°C	50°C	±2°C
TC-E	-50~960°C	50°C	±1°C
TC-B	0~1750°C	100°C	±2°C [1]
PT100	-200~600°C	20°C	±0.2°C
Voltage	-10~+10 Vdc	5mV	±1mV

NOTE
TC-Thermocouple
[1]: Accuracy is not guaranteed between 0 and 400°C for type B.

Ordering Information

NT-IB	Code	Input Sensor Type
		(1) Thermocouple K (2) Thermocouple J (3) Thermocouple R (4) Thermocouple S (5) Thermocouple T (6) Thermocouple N (7) Thermocouple E (8) Thermocouple B (9) PT100 (10) Voltage

Code	Measurement Span
	Please fill in the requested measurement range.

NT-IB			Complete Ordering Code

Ordering code example:
NT-IB-1-0-100°C
→ NT-IB = Model
→ 1 = Thermocouple K
→ 0-100°C = Measurement span: 0-100°C

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