

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)

$\alpha=0.00385$, 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): <600 Ω

Operating temperature: -40 to 85°C

Humidity: 0 ~ 90% RH

Common mode rejection ration (COMRR): > 80dB



Flow

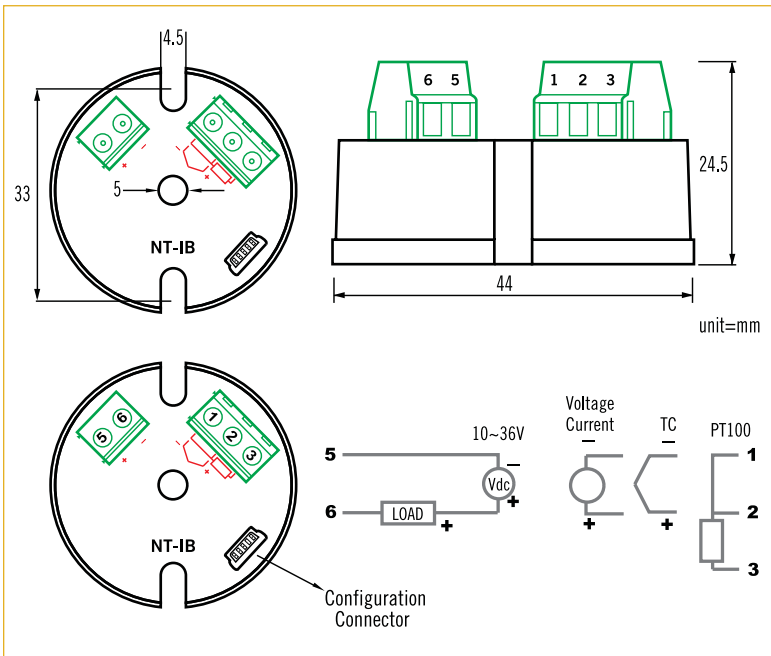
Level

Temperature

Pressure

Valve

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 - 1 - 0-100

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

Measurement Span
Please fill in the requested measurement range.

Ordering code example:

NT-IB-1-0-100°C

→ NT-IB = Model

→ 1 = Thermocouple K

→ 0-100°C = Measurement span: 0-100°C