

# TEMPERATURE TRANSMITTER

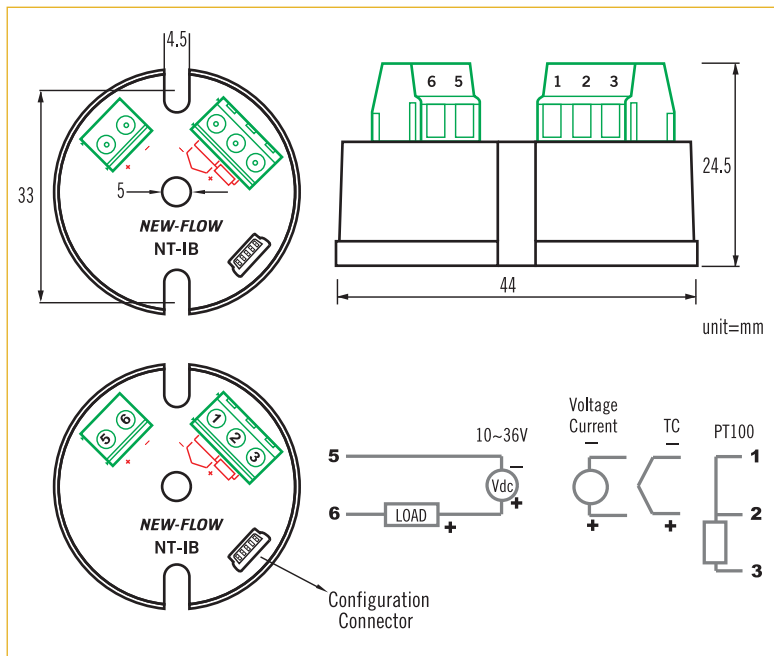
## NT-IB

### 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):** < 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	-150 to 1370°C	100°C	±1°C
*TC- J	-100 to 760°C	100°C	±1°C
*TC- R	-50 to 1760°C	400°C	±2°C
*TC- S	-50 to 1760°C	400°C	±2°C
*TC- T	-160 to 400°C	100°C	±1°C
*TC- N	-270 to 1300°C	100°C	±2°C
*TC- E	-50 to 700°C	100°C	±1°C
*TC- B	500 to 1820°C	400°C	±2°C **
PT100	-200 to 600°C	40°C	±0.2°C
Voltage	0 to 50mV	5mV	±1mV

\*TC=Thermocouple

\*\* Accuracy is note guaranteed between 0 and 400C 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
		<b>Code</b> <b>Measurement Span</b>
		Please fill in the requested measurement range.
<b>NT-IB</b>		<b>Complete Ordering Code</b>

Ordering code example:

**NT-IB-1-0-100°C**

→ NT-IB = Model

→ 1 = Thermocouple K

→ 0-100°C = Measurement span: 0-100°C