



## Temperature transmitter

### NTM 300.Ex

- RTD, TC, Ohm or mV input
- HART protocol, FDT and DTM support
- High accuracy
- Excellent EMC performance
- 1500V AC dielectric strength
- DIN B Head mount and field mount transmitters
- Configurable input types and ranges



## Technical data

|                  |                                                                                                                                  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Power supply:    | 12 V DC~28 V DC (Reverse power protection)                                                                                       |
| Input signal:    | K, E, S, B, J, T, R, N, etc<br>Pt100, Cu100, Cu50, BA1, BA2, etc<br>millivolt signal (-10mV~120mV)<br>resistance signal (0~400Ω) |
| Line resistance: | ≤ 20 Ω per line (RTD)                                                                                                            |
| Output signal:   | 4~20mA                                                                                                                           |
| Load resistance: | $RL \leq [(U-12)/0.022]\Omega$ ; U is loop powered<br>voltage                                                                    |

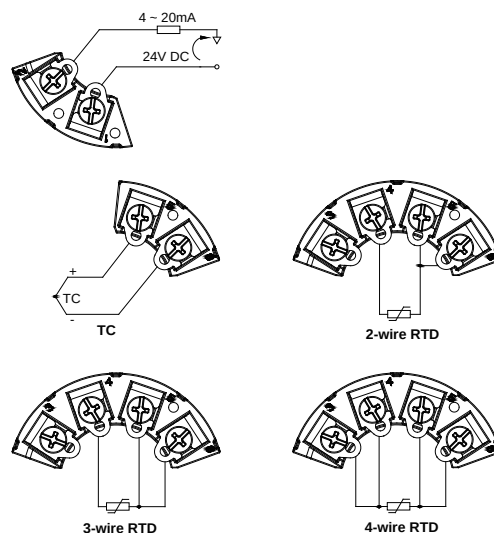
Range and Conversion accuracy list (25°C±2°C, not contain cold junction compensation) :

| Type  | Range          | Min.span/Accuracy |                    |
|-------|----------------|-------------------|--------------------|
| K     | -200°C~+1372°C | <300°C, ±0.3°C    | ≥300°C, ±0.1% F.S. |
| E     | -100°C~+1000°C | <300°C, ±0.3°C    | ≥300°C, ±0.1% F.S. |
| J     | -100°C~+1200°C | <300°C, ±0.3°C    | ≥300°C, ±0.1% F.S. |
| N     | -200°C~+1300°C | <300°C, ±0.3°C    | ≥300°C, ±0.1% F.S. |
| S     | -50°C~+1768°C  | <500°C, ±0.5°C    | ≥500°C, ±0.1% F.S. |
| R     | -50°C~+1768°C  | <500°C, ±0.5°C    | ≥500°C, ±0.1% F.S. |
| T     | -20°C~+400°C   | <300°C, ±0.3°C    | ≥300°C, ±0.1% F.S. |
| B     | +400°C~+1820°C | <500°C, ±0.5°C    | ≥500°C, ±0.1% F.S. |
| Pt100 | -200°C~+850°C  | <100°C, ±0.1°C    | ≥100°C, ±0.1% F.S. |
| Cu50  | -50°C~+150°C   | <100°C, ±0.1°C    | ≥100°C, ±0.1% F.S. |
| Cu100 | -50°C~+150°C   | <100°C, ±0.1°C    | ≥100°C, ±0.1% F.S. |
| mv    | -10mV~120mV    | <10mV, 0.01mV     | >10mV, ±0.1% F.S.  |
| Ohm   | 0~400Ω         | <50Ω, 0.05Ω       | >50Ω, ±0.1% F.S.   |

Compensation accuracy: 1°C (Temperature compensation range:  
-40°C ~ +85°C)

|                                |                           |
|--------------------------------|---------------------------|
| Temperature drift:             | 25ppm/°C                  |
| Response time:                 | ≤ 1s                      |
| Electromagnetic compatibility: | IEC 61326-1               |
| Dielectric strength:           | ≥ 1500V AC (Input/Output) |
| Insulation resistance:         | ≥ 100MΩ (Input/Output)    |
| Operation temperature:         | -40°C ~ +85°C             |
| Storage temperature:           | -40°C ~ +85°C             |
| Dimension:                     | Ø 44×25.5mm               |
| Wire size:                     | 1.5mm²                    |
| Screw terminal torque:         | 0.5Nm                     |

## Wiring diagram



## Explosive-proof parameters

National Supervision and Inspection Center for Explosion  
Protection and Safety of Instrumentation (NEPSI)

Explosive-proof grade: Ex ia IIC T4 ~ T6 Ga

T4: -40°C ~ +60°C

T5: -40°C ~ +55°C

T6: -40°C ~ +50°C

Certified parameters (Terminals 3, 4, 5, 6):

$U_o=5.4V$   $I_o=13.4mA$   $P_o=18mW$

$C_o=63\mu F$   $L_o=198mH$

Certified parameters (Terminals 1, 2):

$U_i=28V$   $I_i=93mA$   $P_i=670mW$

$C_i=0\mu F$   $L_i=0mH$