

TC Temperature Transmitter

NPWD-CD11D.TC

Dual input, dual output

Input: TC
Output: 4 ~ 20 mA



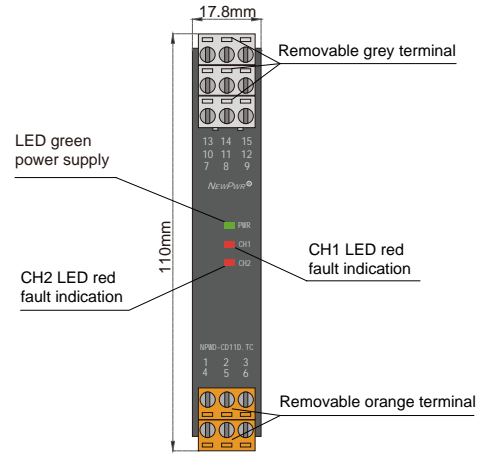
This temperature transmitter converts the thermocouple signals to current signals. It has external cold junction compensation terminals. It needs an independent power supply. The input, output, and power supply are galvanically isolated from each other. Modify parameters by using PC or a handheld programmer.

Parameters

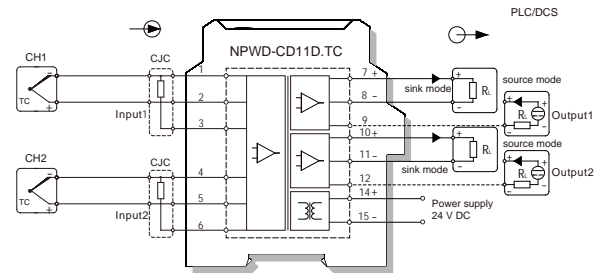
- Power supply: 18 V DC ~ 60 V DC (Reverse power protection)
- Power dissipation: 1.2 W
- Input signal: K, E, S, B, J, T, R, N, etc
- Output signal: 4 ~ 20mA (sink/source)
- Load resistance: source: $R_L \leq 550\Omega$ sink: $R_L < [(U-3)/0.02]\Omega$;
U: Loop power supply
- Compensation accuracy: 1°C (Temperature compensation range:
-20 °C ~ +60 °C)
- Temperature drift: 30 ppm/°C
- Response time: ≤ 500 ms
- Electromagnetic compatibility: IEC 61326-3-1
- Dielectric strength: ≥ 1500 V AC (Input/Output/Power supply)
- Insulation resistance: ≥ 100 M Ω (Input/Output/Power supply)
- Operation temperature: -20 °C ~ +60 °C
- Storage temperature: -40 °C ~ +80 °C
- Dimension: 17.8 mm (W) × 110 mm (H) × 117 mm (D)
- Output states: Whatever input fault status (except breakage), the output follows the input within measuring range. And the maximum value would not exceed the 110% of the upper limit of the measuring range (e.g. When the output signal type is 0 ~ 20 mA, the minimum output value may be 0 mA, the maximum output value would not exceed 22 mA)

Range and Conversion accuracy list

Type	Range	Min.span/Accuracy	
K	-200°C ~ +1372°C	< 300°C, $\pm 0.3^\circ\text{C}$	$\geq 300^\circ\text{C}$, $\pm 0.1\%$ F.S.
E	-100°C ~ +1000°C	< 300°C, $\pm 0.3^\circ\text{C}$	$\geq 300^\circ\text{C}$, $\pm 0.1\%$ F.S.
J	-100°C ~ +1200°C	< 300°C, $\pm 0.3^\circ\text{C}$	$\geq 300^\circ\text{C}$, $\pm 0.1\%$ F.S.
N	-200°C ~ +1300°C	< 300°C, $\pm 0.3^\circ\text{C}$	$\geq 300^\circ\text{C}$, $\pm 0.1\%$ F.S.
S	-50°C ~ +1768°C	< 500°C, $\pm 0.5^\circ\text{C}$	$\geq 500^\circ\text{C}$, $\pm 0.1\%$ F.S.
R	-50°C ~ +1768°C	< 500°C, $\pm 0.5^\circ\text{C}$	$\geq 500^\circ\text{C}$, $\pm 0.1\%$ F.S.
T	-20°C ~ +400°C	< 300°C, $\pm 0.3^\circ\text{C}$	$\geq 300^\circ\text{C}$, $\pm 0.1\%$ F.S.
B	+400°C ~ +1820°C	< 500°C, $\pm 0.5^\circ\text{C}$	$\geq 500^\circ\text{C}$, $\pm 0.1\%$ F.S.



Wiring diagram



Model rules

NPWD-CD \square \square \square \square .TC

PB : BUS powered
Default: Terminals powered

The second output signal^{note1}
The first output signal^{note1}

note1 : output signal

Number	Output signal
1	4 ~ 20 mA
2	1 ~ 5 V
3	0 ~ 10 mA
4	0 ~ 5 V
5	0 ~ 10 V
6	0 ~ 20 mA