

# RTD Temperature Transmitter

## NPWD-C18D.RTD

Single input, dual output

Input: RTD

Output: 4 ~ 20 mA, RS485

This temperature transmitter converts the thermal resistance signals to current signals. It has RS485 interface. By using the MODBUS-RTU protocol, it can communicate with the other devices. 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.

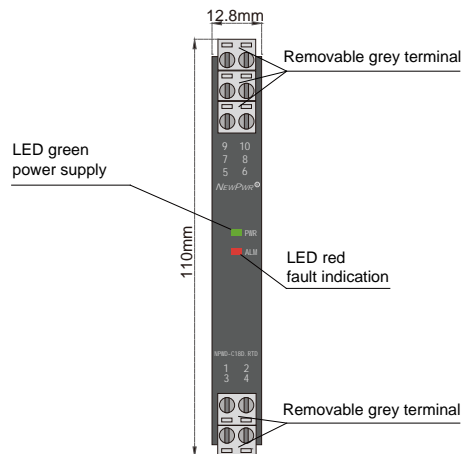


### Parameters

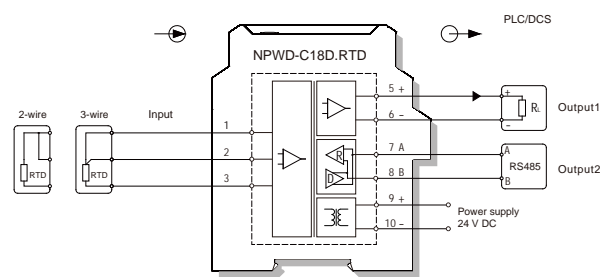
Power supply:	18 V DC ~ 60 V DC (Reverse power protection)
Power dissipation:	0.9 W
Input signal:	Pt100, Cu100, Cu50, BA1, BA2, etc
Line resistance:	≤ 20 Ω per line (RTD)
Output signal:	Output1: 4 ~ 20 mA Output2: RS485
Load resistance:	$R_L \leq 550 \Omega$
Communication parameters:	MODBUS-RTU, distance ≤ 1000 m, nodes number ≤ 32
Baud rate:	≤ 19.2 kbps
Temperature drift:	40 ppm/°C
Response time:	≤ 500 ms
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	≥ 1500 V AC (Input/Output/Power supply)
Insulation resistance:	≥ 100 MΩ (Input/Output/Power supply)
Operation temperature:	-20°C ~ +60°C
Storage temperature:	-40°C ~ +80°C
Dimension:	12.8 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	
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.



### Wiring diagram



### Model rules

NPWD-C~~X~~8D~~X~~.RTD

PB : BUS powered  
Default: Terminals powered

The first output signal<sup>note1</sup>  
Default: null

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