

## NPEXA-C21T1

Single input, double outputs

Input: RTD  
Output: 4~20mA, RS485

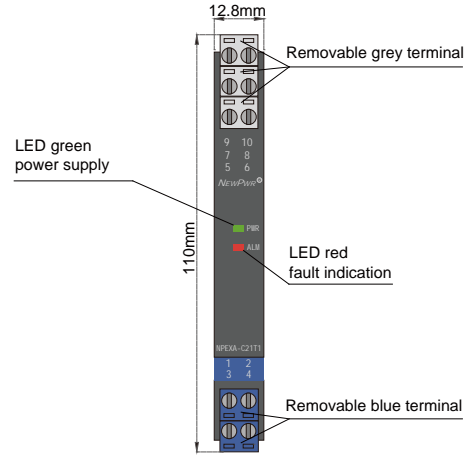
Temperature input isolated barrier, it converts the resistance signals from a hazardous area into 4~20mA and RS485 signals to a safe area by isolation. It needs an independent power supply. The input, output, and power supply are galvanically isolated from each other. Calibrate the apparatus or modify parameters by using a handheld programmer.

### Parameters

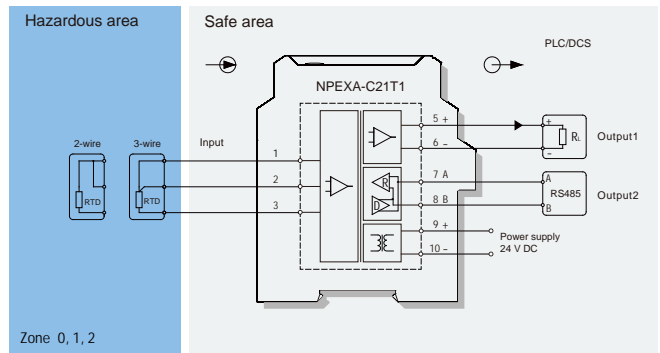
Power supply:	18V DC ~ 60V DC (Reverse power protection)
Power dissipation:	1.3W
Input signal:	Pt100, Cu100, Cu50, BA1, BA2, etc.
Line resistance:	≤ 20Ω per line (RTD)
Output signal:	Output1: 4 ~ 20mA Output2: RS485
Load resistance:	$R_L \leq 550\Omega$
Communication parameters:	MODBUS-RTU, distance ≤ 1000m
Baud rate:	≤ 19.2kbps
Temperature drift:	40ppm/°C
Response time:	≤ 500ms
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	≥ 3000V AC (intrinsically safe side / non-intrinsically safe side) ≥ 1500V AC (Power supply /non-intrinsically safe side)
Insulation resistance:	≥ 100MΩ (Input /Output/Power supply)
Operation temperature:	-20°C ~ +60°C
Storage temperature:	-40°C ~ +80°C
Dimension:	12.8mm (W) × 110mm (H) × 117mm (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 ~ 20mA, the minimum output value may be 0mA, the maximum output value would not exceed 22mA)

### 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



### Explosive-proof parameters

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

Ex marking: [Ex ia Ga] IIC

Um: 250V

Certified parameters (Terminals 1, 2, 3):

$U_o=8.7V$ ,  $I_o=33mA$ ,  $P_o=72mW$

II C:  $C_o=5\mu F$ ,  $L_o=28mH$

II B:  $C_o=35\mu F$ ,  $L_o=84mH$

II A:  $C_o=700\mu F$ ,  $L_o=224mH$

### Model rules

NPEXA-C21T1

PB: BUS powered  
Default: Terminals powered

The first output signal<sup>note1</sup>

note1: output signal

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