

NPEXA-C11T1

Single input, double output

Input: TC

Output: 4 ~ 20 mA , RS485

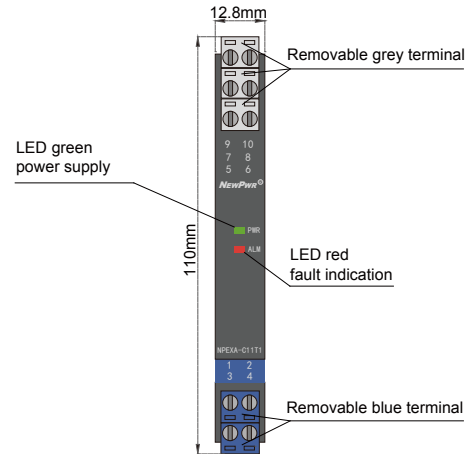
Temperature input safety barrier, it converts the thermocouple signals from a hazardous area into current and RS485 signals to a safe area by isolation. It needs an independent power supply. The input, output, and power supply are galvanically isolated from each other. You can use PC or handheld programmer to modify parameters.

Parameters

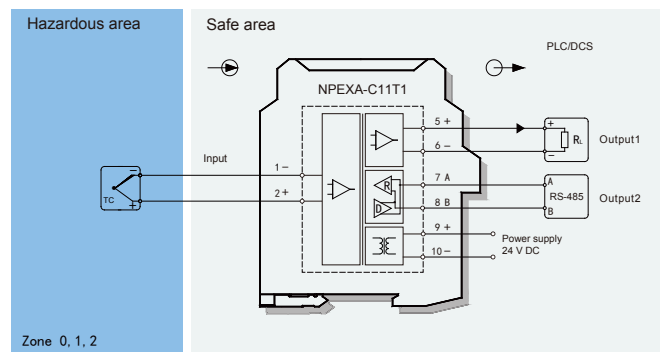
Power supply:	18V DC ~ 60V DC (Reverse power protection)
Power dissipation:	0.9W
Input signal:	K, E, S, B, J, T, R, N, etc
Output signal:	Output1: 4 ~ 20mA Output2: RS485
Load resistance:	$R_L \leq 550\Omega$
Communication parameters:	MODBUS-RTU, distance $\leq 1000m$
Baud rate:	$\leq 19.2kbps$
Compensation accuracy:	1°C (Temperature compensation range: -20°C ~ +60°C)
Temperature drift:	40ppm/°C
Response time:	$\leq 500ms$
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	$\geq 3000V$ AC (intrinsically safe side / non-intrinsically safe side) $\geq 1500V$ AC (non-intrinsically safe side / non-intrinsically safe side)
Insulation resistance:	$\geq 100M\Omega$ (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	
K	-200°C ~ +1372°C	< 300°C, $\pm 0.3^\circ C$	$\geq 300^\circ C, \pm 0.1\% F.S.$
E	-100°C ~ +1000°C	< 300°C, $\pm 0.3^\circ C$	$\geq 300^\circ C, \pm 0.1\% F.S.$
J	-100°C ~ +1200°C	< 300°C, $\pm 0.3^\circ C$	$\geq 300^\circ C, \pm 0.1\% F.S.$
N	-200°C ~ +1300°C	< 300°C, $\pm 0.3^\circ C$	$\geq 300^\circ C, \pm 0.1\% F.S.$
S	-50°C ~ +1768°C	< 500°C, $\pm 0.5^\circ C$	$\geq 500^\circ C, \pm 0.1\% F.S.$
R	-50°C ~ +1768°C	< 500°C, $\pm 0.5^\circ C$	$\geq 500^\circ C, \pm 0.1\% F.S.$
T	-20°C ~ +400°C	< 300°C, $\pm 0.3^\circ C$	$\geq 300^\circ C, \pm 0.1\% F.S.$
B	+400°C ~ +1820°C	< 500°C, $\pm 0.5^\circ C$	$\geq 500^\circ C, \pm 0.1\% F.S.$



Wiring diagram



Explosive-proof parameters

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

Explosive-proof grade: [Ex ia Ga] II C

Um: 250V

Certified parameters (Terminals 1, 2):

Uo=8.7V, Io=33mA, Po=72mW

II C : Co=5μF, Lo=28mH

II B : Co=35μF, Lo=84mH

II A : Co=700μF, Lo=224mH

Model rules

NPEXA-C1 T1

PB : BUS powered
Default: Terminals powered

The first output signal^{note1}

note1 : output signal

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