

NPEXA-C11H

Single input, single output

NPEXA-C111H

Single input, double outputs

Input: TC

Output: 4 ~ 20 mA

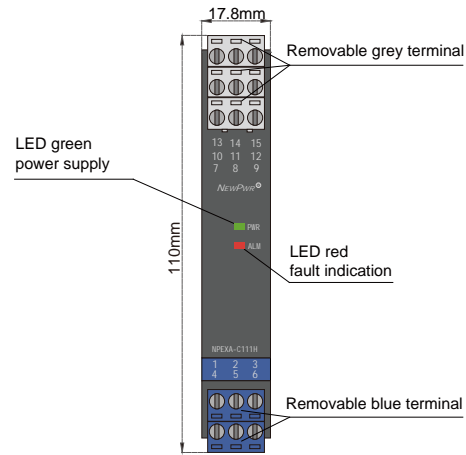
Temperature input isolated barrier, it converts the thermocouple signals from a hazardous area into 4~20mA signals to a safe area by isolation. It has external cold junction compensation terminals. It needs an independent power supply. The input, output, and power supply are galvanically isolated from each other. The self-test function is also available on this device. Calibrate the apparatus or modify parameters by using a handheld programmer.

Parameters

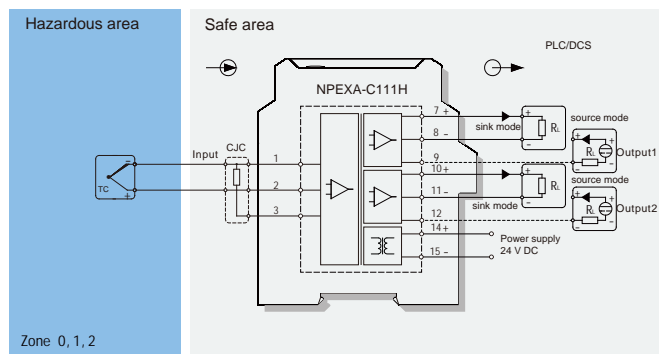
Power supply:	18V DC ~ 60V DC (Reverse power protection)
Power dissipation:	0.8W (single output) 1.2W (double outputs)
Input signal:	K, E, S, B, J, T, R, N, etc.
Output signal:	4 ~ 20mA (sink/source)
Load resistance:	source: $R_L \leq 550\Omega$ sink: $R_L < [(U-3)/0.02]\Omega$; U: Loop power supply
Compensation accuracy:	1°C (Temperature compensation range: -20°C ~ +60°C)
Temperature drift:	30ppm/°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:	17.8mm (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 ~ 20 mA, 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, ±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.



Wiring diagram



Explosive-proof parameters

China National Quality Supervision and Test Centre for Explosion Protected Electrical Products (CQST)
Ex marking: [Ex ia Ga] IIC
Um: 250V
Certified parameters (Terminals 1, 2):
Uo=8.7V, Io=33mA, Po=72mW
II C: Co=3.58μF, Lo=21mH
II B: Co=35μF, Lo=63mH
II A: Co=700μF, Lo=168mH

Model rules

NPEXA-C1 H
 PB: BUS powered
 Default: Terminals powered
 The second output signal^{note1}
 Default: null
 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