

TC Isolated Safety Barrier

NPEXA-H111 single input, double output

Input: TC
Output: 4 ~ 20 mA



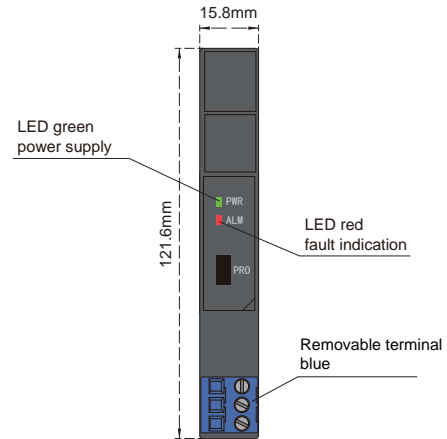
Temperature input safety barrier, it converts the thermocouple signals from a hazardous area into current signals to a safe area by isolation. It has external cold junction compensation terminals. The input, output, and power supply are galvanically isolated from each other. A self-test feature is also available on this device. You can use PC or handheld programmer to modify parameters.

Technical data

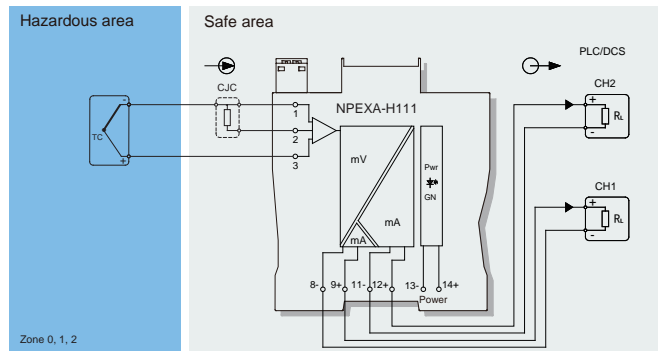
- Power supply: 18 V DC~32 V DC (Reverse power protection)
- Power dissipation: 1.5 W (24V DC, double output)
- Input signal: K, E, S, B, J, T, R, N, etc.
- Output signal: 4 ~ 20 mA
- Load resistance: $R_L \leq 500 \Omega$
- Compensation accuracy: 1°C (Temperature compensation range: -20°C ~ +60°C)
- Temperature drift: 0.01%F.S./°C
- Response time: $\leq 1s$
- Electromagnetic compatibility: IEC 61326-3-1
- Dielectric strength: ≥ 2500 V AC (intrinsically safe side / non-intrinsically safe side)
 ≥ 500 V AC (Power supply side /non-intrinsically safe side)
- Insulation resistance: ≥ 100 M Ω (Input /Output/Power supply)
- Operation temperature: -20°C ~ +60°C
- Storage temperature: -40°C ~ +80°C
- Dimension: 15.8 mm (W) x 121.6 mm (H) x 104.8 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 (25°C±2°C, not contain cold junction compensation):

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.



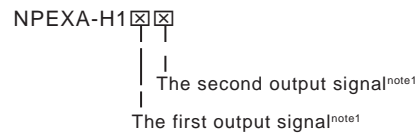
Wiring diagram



Explosive-proof parameters

National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI)
Explosive-proof grade: [Ex ia Ga] II C
Um: 250 V
Certified parameters (Terminals 1, 3):
Uo=7.3V, Io=27mA, Po=50mW
II C : Co=12μF , Lo=28mH
II B : Co=151μF , Lo=84mH
II A : Co=700μF , Lo=224mH

Model rules



note1 : Output signal

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