

# RTD Isolated Safety Barrier

## NPEXA-H211

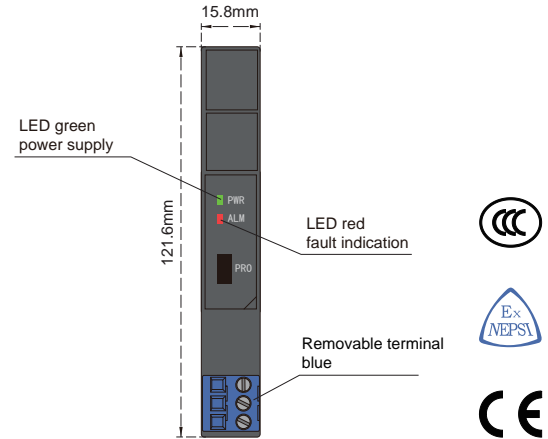
single input, double output

Input: RTD

Output: 4 ~ 20 mA



Temperature input safety barrier, it converts the thermal resistance signals from a hazardous area into current signals to a safe area by isolation. 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.



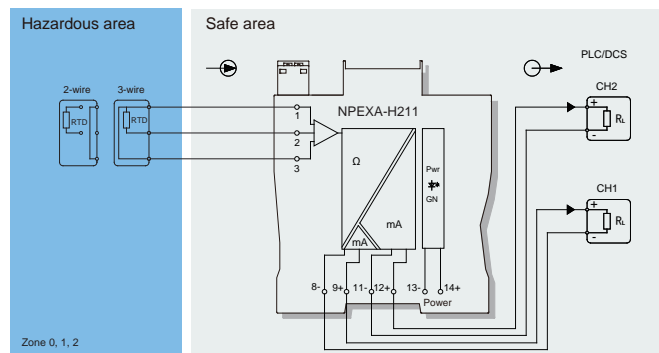
### Technical data

- Power supply: 18 V DC~32 V DC (Reverse power protection)
- Power dissipation: 1.5 W (24V DC, double output)
- Input signal: Pt100, Cu100, Cu50, BA1, BA2, etc.
- Line resistance:  $\leq 20 \Omega$  per line (RTD)
- Output signal: 4 ~ 20 mA
- Load resistance:  $R_L \leq 500 \Omega$
- Temperature drift: 0.01%F.S./°C
- Response time:  $\leq 1s$
- Electromagnetic compatibility: IEC 61326-3-1
- Dielectric strength:  $\geq 2500$  V AC (intrinsically safe side / non-intrinsically safe side)  
 $\geq 500$  V AC (Power supply side /non-intrinsically safe side)
- Insulation resistance:  $\geq 100$  M $\Omega$  ( 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

Type	Range	Min.span/Accuracy	
Pt100	-200°C~+850°C	<100°C, $\pm 0.1^\circ\text{C}$	$\geq 100^\circ\text{C}$ , $\pm 0.1\%$ F.S.
Cu50	-50°C~+150°C	<100°C, $\pm 0.1^\circ\text{C}$	$\geq 100^\circ\text{C}$ , $\pm 0.1\%$ F.S.
Cu100	-50°C~+150°C	<100°C, $\pm 0.1^\circ\text{C}$	$\geq 100^\circ\text{C}$ , $\pm 0.1\%$ F.S.

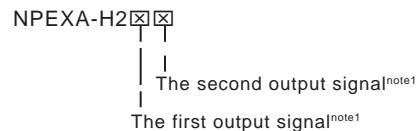
### Wiring diagram



### 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: 250 V
- Certified parameters (Terminals 1, 2, 3):  
 $U_o=7.3V$ ,  $I_o=27mA$ ,  $P_o=50mW$
- II C :  $C_o=12\mu F$ ,  $L_o=28mH$
- II B :  $C_o=151\mu F$ ,  $L_o=84mH$
- II A :  $C_o=700\mu F$ ,  $L_o=224mH$

### 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