

RTD Isolated Barrier

NPEXA-C2D11

Double inputs, double outputs

Input: RTD

Output: 4 ~ 20 mA



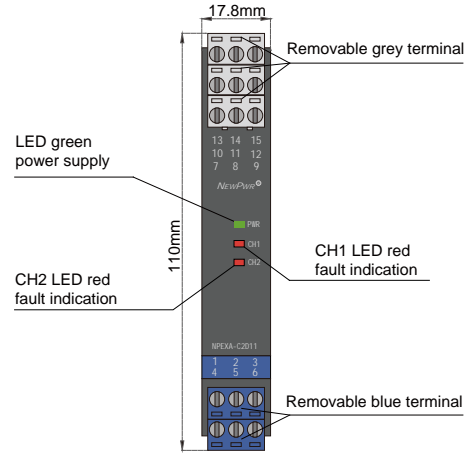
Temperature input isolated barrier, it converts the thermal resistance signals from a hazardous area into 4~20mA signals to a safe area by isolation. It needs an independent power supply. The input, output, and power supply are galvanically isolated from each other. The self-test function is also available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

Parameters

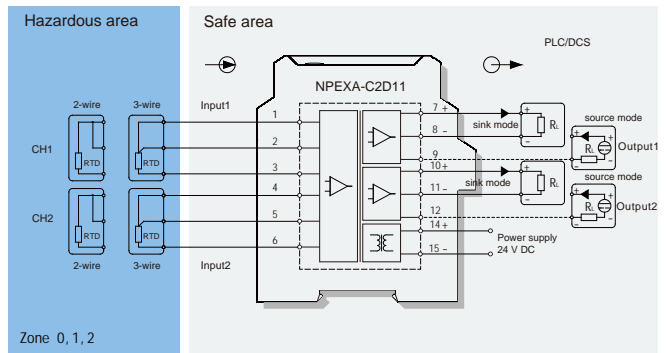
- Power supply: 18V DC ~ 60V DC (Reverse power protection)
- Power dissipation: 1.2W
- Input signal: Pt100, Cu100, Cu50, BA1, BA2, etc.
- Line resistance: ≤ 20Ω per line (RTD)
- Output signal: 4 ~ 20mA (sink/source)
- Load resistance: source: $R_L \leq 550\Omega$ sink: $R_L < [(U-3)/0.02]\Omega$;
U: Loop power supply
- 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 ~ 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.



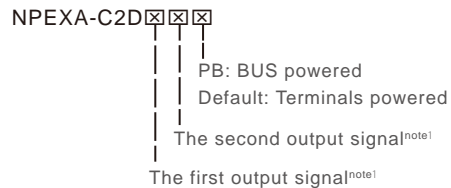
Wiring diagram



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; 4, 5, 6):
 $U_o=8.7V$, $I_o=33mA$, $P_o=72mW$
 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



note1: output signal

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