

RTD (loop powered) Isolated Barrier

NPEXA-C21L

Single input, single output

Input: RTD
Output: 4~20mA



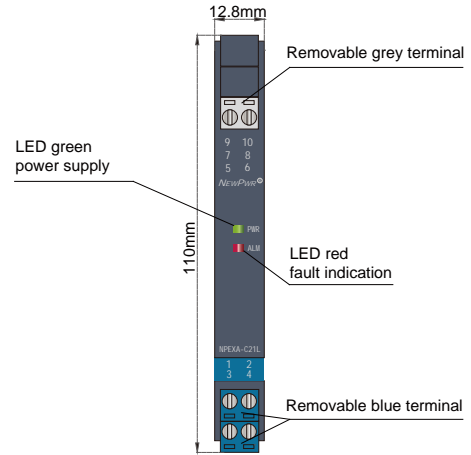
Temperature input isolated barrier, it converts the resistance signals from a hazardous area into 4~20mA signals to a safe area by isolation. It has loop powered. The input and output is galvanically isolated from each other. Calibrate the apparatus or modify parameters by using a handheld programmer.

Parameters

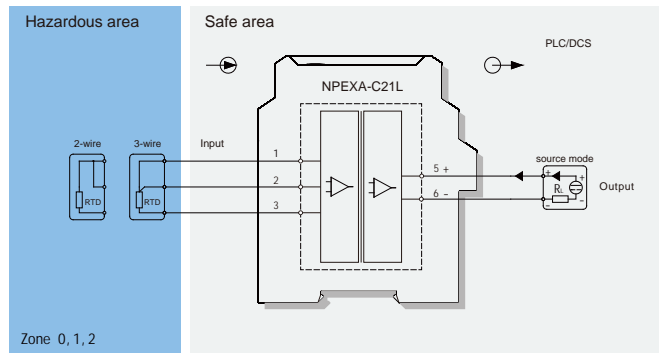
Loop Powered:	12V DC ~ 30V DC (Reverse power protection)
Input signal:	Pt100, Cu100, Cu50, BA1, BA2, etc.
Line resistance:	≤ 20Ω per line (RTD)
Output signal:	4 ~ 20mA
Load resistance:	$R_L < [(U-12)/0.02]\Omega$; U is loop powered voltage
Temperature drift:	30ppm/°C
Response time:	≤ 500ms
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	≥ 3000V AC (intrinsically safe side / non-intrinsically safe side)
Insulation resistance:	≥ 100MΩ (Input /Output)
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 is 3.5mA), the output follows the input within measuring range. And the maximum value would not exceed 22mA, the maximum output value would not less than 3.5mA

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
[Ex ia Da] IIIC

Um: 250V

Certified parameters (Terminals 1, 2, 3):

Uo=6.2V, Io=22mA, Po=35mW

IIC: Co=30μF, Lo=40mH

IIIC(IIB): Co=780μF, Lo=120mH