C Series
Resistance Input, Resistance Output Isolated Safety Barrier

Nanjing New Power Electric Co., Ltd.

➔ Introductions

This isolated safety barrier converts the resistance signals to 1:1 resistance signals.

The input, output, and power supply are galvanically isolated from each other. It can be interfaced with all kinds of device, such as DCS, PLC and other systems.

➔ Parameters

Power supply:

Connection type: Terminals (14+, 15-) or DIN rail connector

Rated voltage: 18 V DC ~ 60 V DC (Recommended voltage: 24 V DC)

Input (1, 2, 3; 4, 5, 6):

Input signal: 2/3-wire resistance signal

Signal range: 18 Ω ~ 400 Ω

Line resistance: ≤ 20 Ω per line

Output (7, 8, 9; 10, 11, 12):

Output signal: 1:1 input resistance signal

Output drive current: 0.1 ~ 10 mA

Transmission characteristics:

Output drive current	Accuracy
0.5 ~ 10 mA	± 0.1% F.S. or < 0.2 Ω (Choose the maximum value)

NOTE: The transmission accuracy of resistance decreases with the decrease of drive current.

Response time: ≤ 0.5 s

Temperature drift: 30 ppm/℃

Electromagnetic compatibility: Accordance to IEC 61326-3-1

Dielectric strength (1 mA leakage current, 1 minute test time):

≥ 3000 V AC (intrinsically safe side / non-intrinsically safe side)

≥ 1500 V AC (non-intrinsically safe side /non-intrinsically safe side)

Insulation resistance: ≥ 100 MΩ (Input /Output/Power supply)

Parameters certified by China National Quality Supervision and Test Centre for Explosion Protected Electrical Products (CQST):

U_m: 250 V

Terminals 1, 3; 2, 3; 4, 6; 5, 6 :

U_o: 8.7 V I_o: 33 mA P_o: 72 mW C_o: 5.0 μF L_o: 3.0 mH

Ambient conditions:

Operation temperature: −20 ℃ ~ +60 ℃

Relative humidity: 10% RH ~ 90% RH (40 ℃)

Atmosphere pressure: 80 kPa ~ 106 kPa

Storage temperature: −40 ℃ ~ +80 ℃

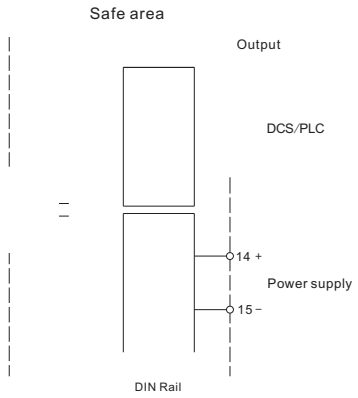
Power dissipation: 0.4 W

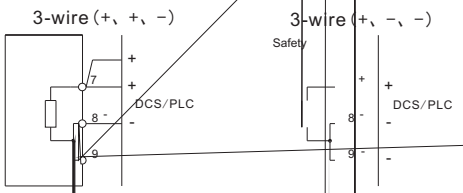
➔ Support model type

Model number		Output1	Output2	Power supply	
		1:1resistance signal	1:1resistance signal	Terminals	DIN rail
Single input, single output	NPEXA-C27	■		■	
	NPEXA-C27PB	■		■	■
Single input, double output	NPEXA-C277	■	■	■	
	NPEXA-C277PB	■	■	■	■
Double input, double output	NPEXA-C2D77	■	■	■	
	NPEXA-C2D77PB	■	■	■	■

➔ Wiring diagram

Single input, single output



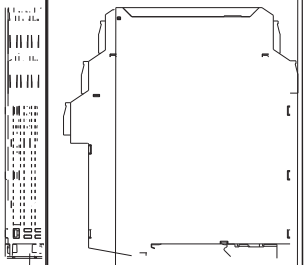


❍ Follow mode: Whatever input fault status (except breakage, approx. 16 Ω at breakage), the output follows the input within measuring range. And the maximum value would not exceed 430 Ω.

❍ DIN rail power supply function is selectable at ordering.

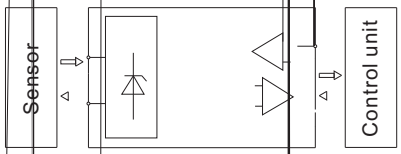
➔ Dimension

Width × Height × Depth: 17.8 mm × 110 mm × 117 mm



➔ Applications

This apparatus is used for transmitting signals



➔ BUS Specification

➔ Installation

❍ The apparatus can be installed on the DIN 35 mm standard rail which is corresponding to DIN IEC 60715. The must be snapped onto the rail, and never slanted or tipped to the side.

❍ Installation and disassembly steps are shown in following figures:

A. Snap the BUS socket on the DIN 35 rail, as figure A;

B. Snap metal lock onto mounting rail, then rotate the safety barrier, as figure B, press down the safety barrier onto mounting rail, make sure that the BUS connector pins of safety barrier and BUS socket are in close contact.

Website: http://www.anpe.cn
Service Tel: +86(25)-84459479
Address: New Power industrial Park, Luhe Economic Development Zone, Nanjing, China
Postcode: 211500