C Series
Single Channel
Frequency Isolated Safety Barrier

Nanjing New Power Electric Co., Ltd.

➔ Introductions

This isolated safety barrier converts the frequency signals from a hazardous area to a safe area. DIN rail power supply function can be selected in ordering.

The input, output, and power supply are galvanically isolated from each other. The main advantages of the isolated safety barrier are fast response, low dissipation and temperature stability.

➔ Parameters

Explosive-proof grade: [Ex ia Ga] IIC

Power supply:

Connection type: Terminals (9+, 0-) or DIN rail connector

Rated voltage: 8 V DC ~ 60 V DC (Recommended voltage: 24 V DC)

Input (1, 2): [redacted]

need to be ordered)

Frequency range: ≤ [redacted]

Pulse width: ≥ 5 μs

Input resistance: ≥ [redacted]

Resolution:

Input frequency < [redacted]

Input frequency ≥ [redacted]

Output (5, 6; 7, 8): op[redacted]itter follower/logic level

Open collector:

high level: V_{cc} (≤ 3[redacted]

low level: ≤ 2 V

drive current: ≤ 0 [redacted]

Emitter follower:

high level: V_{cc} – 2 [redacted]

low level: ≤ 0.5 V

drive current: ≤ 0 [redacted]

Logic level:

24 V system: PLC, [redacted]

high level: 8 V ≤ [redacted]

low level: V_L ≤ 2 V [redacted]

2 V system: PLC, [redacted]

high level: 9 V ≤ V [redacted]

low level: V_L ≤ 2 V

Load resistance:

≥ 2 kΩ (24 V system: PLC, DCS)

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Note: Configurable logic level default, open collector or emitterr follower can be selected in ordering.

Distribution (Default: 24 V DC):

24 V DC: Distribution voltage ≥ 6 V at 20mA

2 V DC: Distribution voltage ≥ 9 V at 20mA

Transmission characteristics:

Accuracy: ± 0. % F.S. (25 ℃ ± 2 ℃)

Response time: ≤ 0.5 μs

Electromagnetic compatibility: According to IEC 6 326-3-

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

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

[redacted]AC (non-intrinsically safe side /non-intrinsically safe side)

[redacted]**resistance:** ≥ 00 MΩ (Input /Output/Power supply)

[redacted]**rs certified by National Supervision an[redacted]**

Inspection Center for Explosion Protection and Safety [redacted]

Instrumentation (NEPSI):

U_m: 250 V

Terminals , 2:

U_o: 8.7 V I_o: mA P_o: 3 m [redacted])

I n s t r u m F s [redacted]

`oÐ [redacted]

U_m: 23 [redacted]

[redacted]

U_m: 28 [redacted]

[redacted]

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➔ BUS Specification

➔ Installation

- ❍ The apparatus can be installed on the DIN 35 mm standard rail which is corresponding to DIN IEC 607 5. 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.

➔ Light indication

- ❍ **PWR**: Power indicator light shows green, it means work normally.

➔ Attention

- ❍ Isolated Safety Barriers degree of protection is IP 20 and must be protected from undesirable ambient conditions (waterproofing, small foreign objects). It is suitable for installation in the control room or high density field cabinet, DIN 35 mm installation is convenient for installation and displacement.
- ❍ The devices were designed for use in pollution degree 2 and overvoltage category III as per IEC/EN 60664- . If used in areas with higher pollution degree, the devices need to be protected accordingly.
- ❍ Installation position shall not be affected by strong mechanical vibration; impact and electromagnetic induction from signal terminal and power supply, should conformity with the requirements on electromagnetic interference resistance of products in Class 3 industrial field atmosphere stipulated in IEC 6 000-4; the atmosphere shall be free from gases that are corrosive to metal and plastic components.
- ❍ The apparatus must be installed, connected and adjusted by qualified personnel in non-hazardous area according with the instruction manual.
- ❍ The operator must strictly comply with the relevant local safety standards and guidelines.

➔ Supplementary instructions

- ❍ Our company reserves the right to change the product information without prior notification to the user. If the contents of the description are different from website or sample, this description shall prevail.