

C Series
Single Channel
Current Output Isolated Safety Barrier

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→ Introductions

This isolated safety barrier converts the current signals from a safe area into current or voltage signals to a hazardous area. DIN rail power supply function can be selected in ordering. It allows transmission of HART communication signals. It is used to control field apparatus such as electrical convertor or valve positioner in hazardous areas.

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. The LFD function of output short-circuit/line-break can be closed by the DIP switch on the front side.

→ Parameters

Explosive-proof grade: [Ex ia Ga] IIC

Power supply:

Connection type: Terminals (9+, 10-) or DIN rail connector

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

Input (5, 6):

Input signal: 0(4) ~ 20 mA

Input voltage drop: ≤ 1.2 V

Over current/voltage protection: yes

Output (1, 2):

Output current: 0(4) ~ 20 mA

Output voltage: 0(1) ~ 5 V; 0 ~ 10 V

Load resistance:

4 ~ 20 mA: $80\ \Omega \leq R_L \leq 800\ \Omega$

0 ~ 20 mA: $R_L \leq 800\ \Omega$

0(1) ~ 5 V: $R_L \geq 1\ M\Omega$

0 ~ 10 V: $R_L \geq 2\ M\Omega$

Max. output current: ≤ 32 mA

Transmission characteristics:

Accuracy: ± 0.1% F.S. (25 °C ± 2 °C)

Min. controllable current: 10 μA

Response time: ≤ 2 ms

Settling time: ≤ 20 ms

Temperature drift: 30 ppm/°C

Electromagnetic compatibility: Accordance to IEC 61326-3-1

→ Wiring diagram Power Post is It

Current input, current output

Current input, voltage output

Number	Output signal
1	4 mA ~ 20 mA
2	1 V ~ 5 V
3	0 mA ~ 10 mA
4	0 V ~ 5 V
5	0 V ~ 10 V
6	0 mA ~ 20 mA
X	User customized signal type

...al lock onto mounting rail, then rotate the safety
... B, press down the safety barrier onto
... ensure that the BUS connector pins of
... are in close contact.

→ Light indication

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

→ Attention

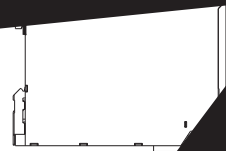
- Isolated Safety Barriers degree of protection is IP 20 and must be protected from undesirable ambient conditions (waterproofing, small foreign objects). It is suitable for installation in the control room or high density field cabinet, DIN 35 mm installation is convenient for installation and displacement.
- The devices were designed for use in pollution degree 2 and overvoltage category III as per IEC/EN 60664-1. 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 61000-4; 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 operation must comply with the relevant local safety regulations and guidelines.

→ Notes

- The user might to change the product specification to the user. If the specification is different from website or manual, the manual prevail.

... the safety barrier as arrow shows.

... as far as possible to mount it vertically, In order to dissipate the heat of the apparatus.



Vertically installation

... between field
... and process control system. It can be used to
connect field equipment which is installed in potentially
explosive gas environment, and protect the intrinsically safe