

H Series Isolator



→ Introductions

This isolator converts the current/voltage signals into current/voltage signals, and also provides transmitters with power in the field. Current input isolator allows transmission of HART communication signals.

The input, output, and power supply are galvanically isolated from each other. The main advantages of the isolator are fast response, low dissipation and temperature stability. It can be interfaced with all kinds of device, such as DCS, PLC and other systems.

→ Parameters

Power supply (13, 14):

Rated voltage: 18 V DC ~ 32 V DC (Recommended voltage: 24 V DC)

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

Current: 0(4) ~ 20 mA; 0 ~ 10 mA

Voltage: 0(1) ~ 5 V; 0 ~ 10 V (Please see the product label for details)

Input resistance:

Current: Approx. 50 Ω

Voltage: ≥ 1 MΩ

Available voltage:

Open-circuit voltage ≤ 27 V, voltage: ≥ 22 V at 20 mA

Output (8, 9; 11, 12):

Sink mode: 4 ~ 20 mA

Output current: 0(4) ~ 20 mA; 0 ~ 10 mA

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

Other signal types is required special customization, please see the product label for details

Load resistance:

Sink mode: $R_L \leq [(U-3)/0.02] \Omega$ U: Loop power supply

0(4) ~ 20 mA: ≤ 450 Ω; 0 ~ 10 mA: ≤ 900 Ω

0(1) ~ 5 V: ≥ 1 MΩ; 0 ~ 10 V: ≥ 2 MΩ

Other load resistance is required special customization, please see the product label for details.

Transmission characteristics:

Accuracy: ± 0.1% F.S. (25 °C ± 2 °C)

Response time: ≤ 2 ms

Temperature drift: 0.005%F.S./°C

Electromagnetic compatibility: According to IEC 61326-3-1

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

≥ 1500 V AC (Input /Output, Input /Power supply)

≥ 500 V AC (Power supply / Output)

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

Ambient conditions:

Operation temperature: -20 °C ~ +60 °C

Relative humidity: 10% RH ~ 90% RH (40 °C)

Atmosphere pressure: 80 kPa ~ 106 kPa

Storage temperature: -40 °C ~ +80 °C

Power dissipation:

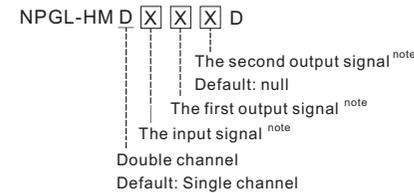
1.3 W (24 V DC, single input, single output; full-load)

1.8 W (24 V DC, single input, double output; full-load)

2.5 W (24 V DC, double input, double output; full-load)

Degree of protection: IP 20

→ Model rules



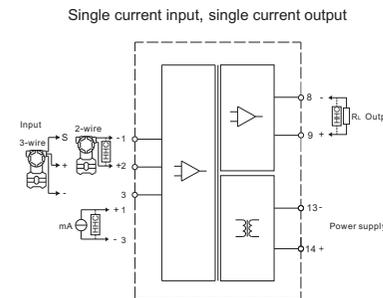
NOTE : Input/Output signal

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
1S	Sink mode 4 mA ~ 20 mA output
X	User customized signal type

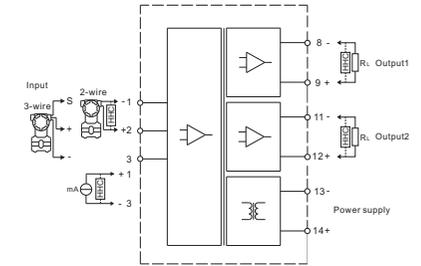
○ When the input signal is 4 ~ 20 mA or 1 ~ 5 V, the output signal only can select 4 ~ 20 mA or 1 ~ 5 V or sink mode 4 ~ 20 mA.

○ When the input signal is 0 ~ 20 mA or 0 ~ 10 mA or 0 ~ 5 V or 0 ~ 10 V, the output signal only can select 0 ~ 20 mA or 0 ~ 10 V or 0 ~ 5 V or 0 ~ 10 mA.

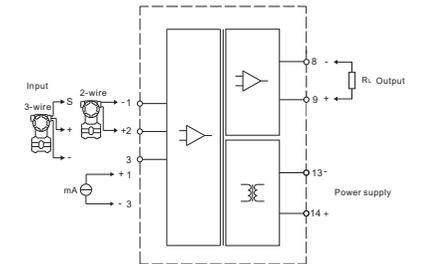
→ Wiring diagram



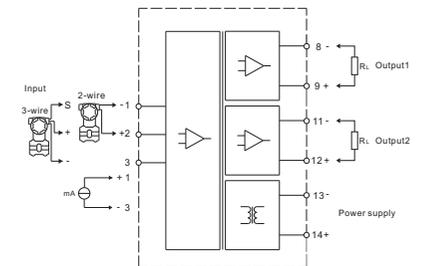
Single current input, double current output



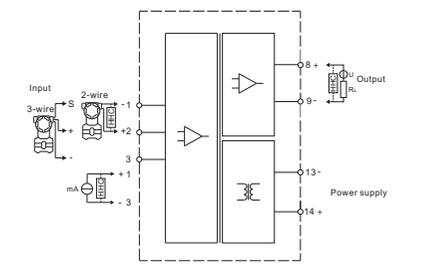
Single input, single voltage output



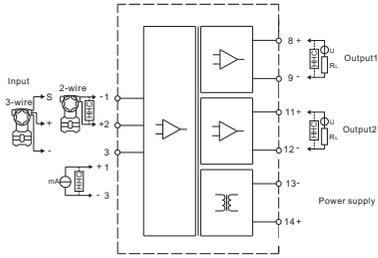
Single input, double voltage output



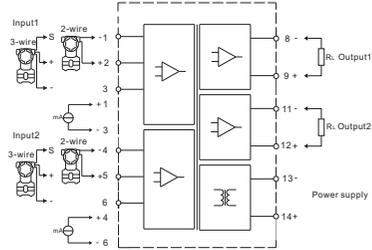
Single input, single sink mode current output



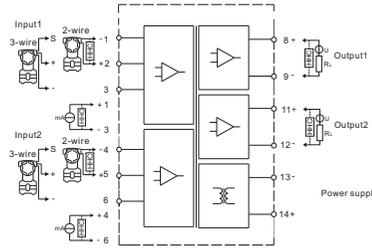
Single input, double sink mode current output



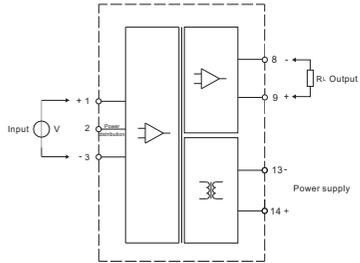
Double input, double voltage output



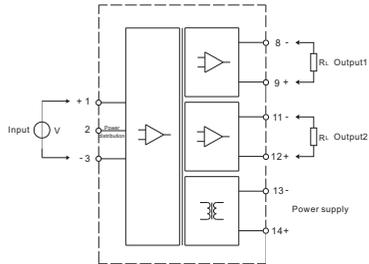
Double input, double sink mode current output



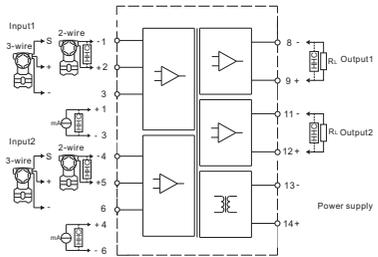
Single voltage input, single output



Single voltage input, double current output

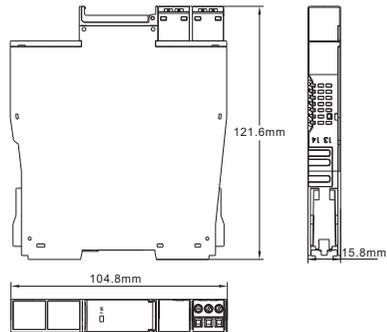


Double input, double current output



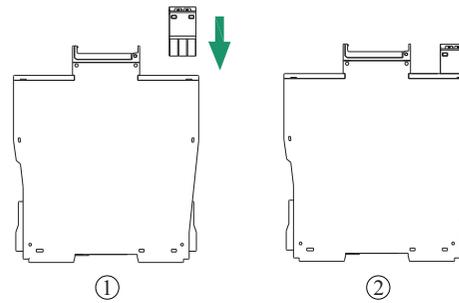
→ Dimension

Width × Height × Depth: 15.8 mm × 121.6 mm × 104.8 mm



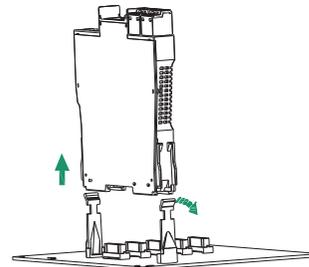
→ Connection

- Through plug-in connectors, the apparatus can be used to connect equipment which is installed in the hazardous area. The main apparatus is directly snapped onto the backplane.



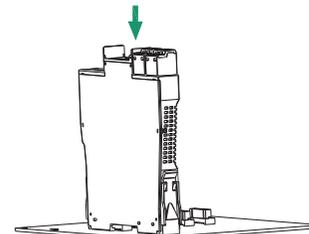
Installation

- The apparatus can be snapped onto the backplane, and it can be hot-plugged without any tools.
- Installation steps are as follows:

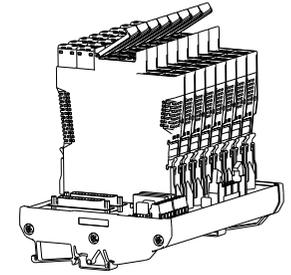


Install the apparatus, make the both sides of the apparatus aim at the slot of the backplans, press down the apparatus onto the backplans as the direction of the arrow.

- Removing steps are as follows:



Pull the slot of the backplans outward, and remove the apparatus as arrow shows .



Installation

→ Light indication

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

→ Attention

- The devices 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 conform 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 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.