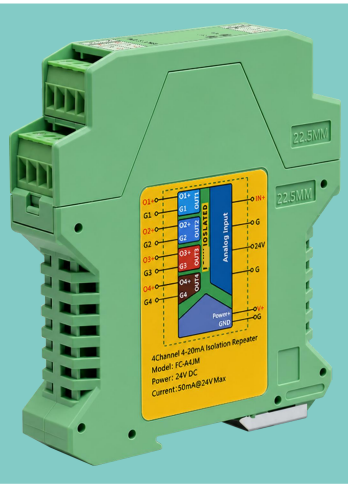
# 1 To 4 4-20mA Signal Splitter

Model: FC-A4JM

4–20mA 1 in / 4 out · 24 V DC supply
Isolation ≥1500VDC (1 min) · Separate grounds



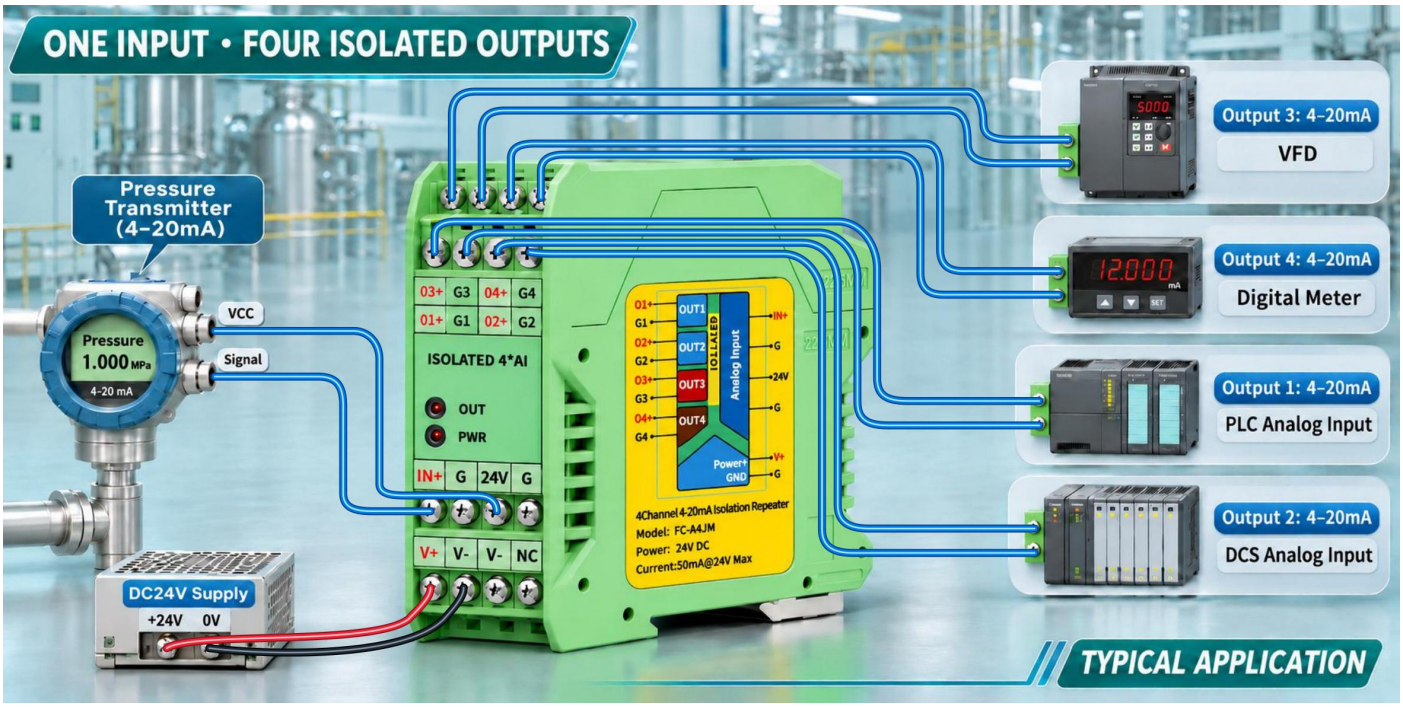
## Product Overview

- Splits one 4–20mA input into four isolated outputs for control systems, VFDs and displays.
- Accepts flow / pressure transmitters and current sources. Transformer isolation separates power, input and outputs; output grounds are independent.
- Supports 2/3/4-wire transmitters and a 24V feed. Separate power required. Not for intrinsically safe hazardous areas.

## Key Features

- **Split** One measurement to four receivers.
- **Grounds** Separate grounds reduce loop interference.
- **Isolation** Withstands ≥1500VDC for 1 min.
- **Protection** 6kV at analog and power interfaces.
- **Sensor** 24V feed for 2-wire transmitters.
- **Mounting** −40 to +85°C; DIN rail or wall mount.

## Typical Application

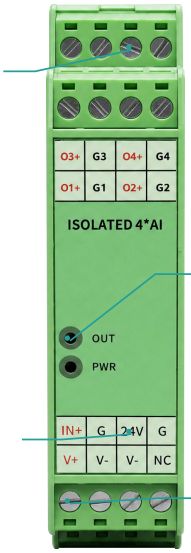



2-wire: 24V → VCC; Signal → IN+; both input G terminals unused. Each output has its own receiver.

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## Interfaces and Wiring

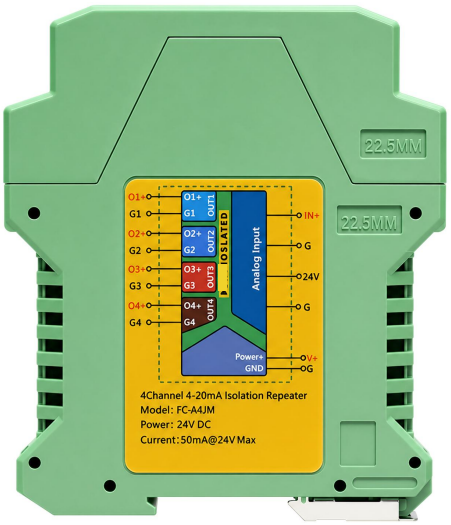
4 independent outputs
Top: 3/4; below: 1/2




Power / output LEDs
PWR / OUT

Input / 24V feed
IN+ · G · 24V · G

24 V DC power
V+ · V− · V− · NC




Actual 4-pin terminal and label-side views. Separate output loop grounds: G1, G2, G3 and G4.

| Interface | Terminals (left to right in photo) | Connection |
|---|---|---|
| **Outputs 3 / 4** | O3+ / G3 / O4+ / G4 | Top row on the terminal side; connect to receivers 3 and 4 respectively. |
| **Outputs 1 / 2** | O1+ / G1 / O2+ / G2 | Second row: receivers 1 and 2. Keep each loop ground separate. |
| **Input / feed** | IN+ / G / 24V / G | One 4–20mA input; wire the 24V feed to suit the transmitter. |
| **Power** | V+ / V− / V− / NC | Separate 24 V DC supply; leave NC unconnected. |

## Transmitter and Output Loop Wiring

| Connection Type | Wiring |
|---|---|
| **2-wire transmitter** | Input-side 24V → VCC; transmitter Signal → IN+ (AIN+). Leave both input G terminals unconnected. |
| **3-wire transmitter** | Input-side 24V / G → transmitter VCC / GND; Signal → IN+ (AIN+). |
| **4-wire transmitter** | 24V / G → VCC / power GND; signal GND → input G; Signal → IN+ (AIN+). |
| **Four outputs** | Connect each On+ and Gn to the corresponding receiver + and − terminals (n = 1, 2, 3, 4). Match the signal ranges. |

Keep input ground, all four output grounds and supply negative separate. Match the transmitter load to the 24V feed capacity.

## Analog Signal Specifications

| Item | Specification / Conditions |
|---|---|
| **Signal configuration** | One isolated 4–20mA input; four isolated 4–20mA outputs. |
| **Sampling rate** | 2,000 samples/s |
| **Latency** | <0.1ms |
| **Load per output** | 600Ω |
| **Input resistance** | 125Ω |
| **Accuracy** | 0.1% (at room temperature) |

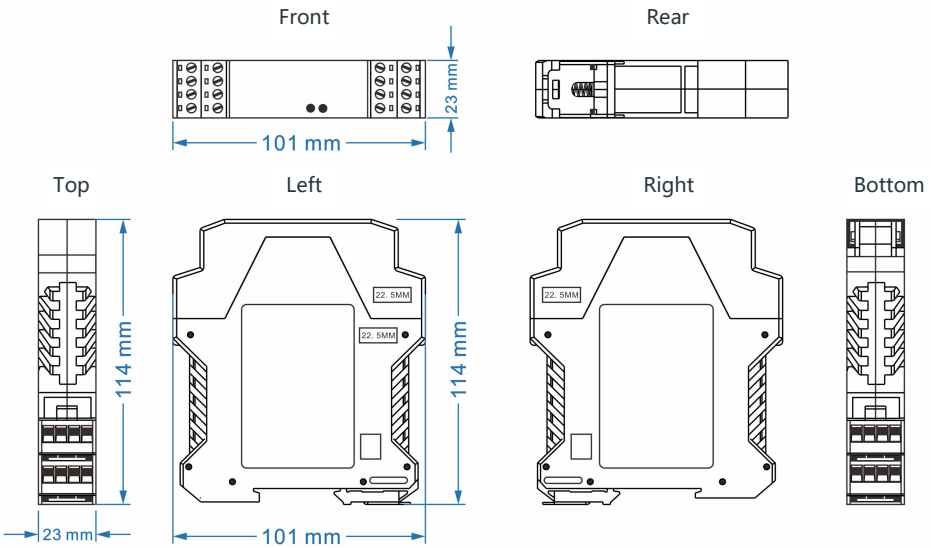
24 V DC; one 4–20mA input and four outputs. Use the written specifications for product selection.

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## Power Isolation and Environment

| Item | Specification / Conditions |
|---|---|
| Power input | 24 V DC; separate power supply required. |
| Input current | 50mA maximum @ 24V. |
| Isolation | Transformer isolation.<br>Input/output ≥1500VDC (1 min), input/power ≥1500VDC (1 min), output/power ≥1500VDC (1 min). |
| Channel grounds | Each of the four analog outputs has a separate ground; power, input and outputs are isolated from one another. |
| Analog protection | 6kV lightning protection per analog channel to suppress induced high voltage and surge interference. |
| Power protection | 6kV lightning protection at the power input; overload and reverse-polarity protection. |
| EMC | Industrial EMC level 4 requirements. |
| Operating / storage temperature | −40 to +85°C / −40 to +85°C |
| Operating humidity | 0–95% RH (non-condensing) |
| Reliability / cooling | MTBF >100,000 hours; 100% burn-in testing; efficient fanless cooling. |
| Mounting | 35mm DIN rail or wall mounting. |
| Drawing dimensions | 101×114×23mm. See the engineering drawing below for all views and mounting details. Unit: mm. |

## Dimensions and Mounting Drawing




Six views: front, rear, top, bottom, left and right. The original 22.5MM structural markings are retained.

## Ordering Information

| Model | Standard Configuration |
|---|---|
| FC-A4JM | 1 To 4 4-20mA Signal Splitter; one isolated input, four isolated outputs, 4-pin terminals and a 24V sensor feed. |

Fixed configuration: 24 V DC supply, one 4–20mA input and four outputs. For general industrial use; not for intrinsically safe hazardous areas.

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