

# General Specifications

Models FH2A, FH2V  
Isolator (Free Range Type)



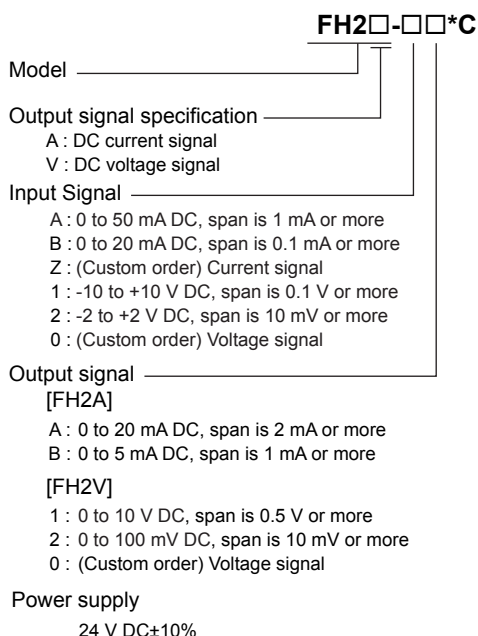
GS 77J08H02-01E

## General

The FH2A/FH2V is a compact, front terminal connection type isolator that converts DC current or DC voltage signals into isolated DC current or DC voltage signals.

- I/O range setting, zero/span adjustment, I/O monitoring, etc. can be made using the optional Parameter Setting Tool (VJ77) or Handy Terminal (JHT200).

## Model and Suffix Codes



## Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. FH2V-B1\*C
- Input range :e.g. 4 to 20 mA DC
- Output range :e.g. 1 to 5 V DC

## Input/Output Specifications

Input signal: DC current or DC voltage

Code	Setting range (DC)
A	0 to 50 mA, span is 1 mA or more
B	0 to 20 mA, span is 0.1 mA or more
1	-10 to +10 V, span is 0.1 V or more
2	-2 to +2 V, span is 10mV or more

Input resistance: Input signal code

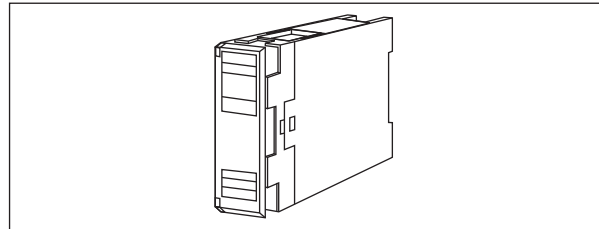
- A, B: 100 Ω
- 1: 1 MΩ during power on, 800 kΩ during power off
- 2: 1 MΩ during power on, 10 kΩ during power off

Maximum allowable input:

- Current input: 70 mA DC or less
- Voltage input: Within ±15 V DC

Output signal: DC current or DC voltage signal

Output signal setting range and Allowable load resistance:



Code	Setting range (DC)	Allowable load resistance
A	0 to 20 mA, span is 2 mA or more	15 V/100% output (A) Ω or less
B	0 to 5 mA, span is 1 mA or more	
1	0 to 10 V DC, span is 0.5 V or more	10 kΩ or more
2	0 to 100mV, span is 10 mV or more	250 kΩ or more

Input adjustment: ±1% (Zero/Span)

Output adjustment: ±10% (Zero/Span)

In the case of 5 V or more for output span it is ±5% of span.

## Standard Performance

Accuracy rating: ±0.1% of span

Accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.

The accuracy is limited by the input/output range setting.

In case where both settings are limited, the greater value calculated by the following formula is the accuracy.

$$\text{Accuracy} = \pm 0.1\% \times a/b$$

(If the obtained value is less than ±0.1%, ±0.1% is the accuracy.)

Use the following formula if the elevation of an input exceeds ±50%, or if the elevation of an output exceeds 150%.

$$\text{Accuracy} = \pm 0.2\% \times a/b$$

(If the obtained value is less than ±0.2%, ±0.2% is the accuracy.)

Input signal code		a	b
A	0 to 50 mA DC	16 (mA)	Input span
B	0 to 20 mA DC	4 (mA)	
1	-10 to +10 V DC	2 (V)	
2	-2 to +2 V DC	0.4 (V)	

Output signal code		a	b
A	0 to 20 mA DC	8 (mA)	Output span
B	0 to 5 mA DC	2 (mA)	
1	0 to 10 V DC	2 (V)	
2	0 to 100 mV DC	20 (mV)	

Response speed: 200 ms, 63% response (10 to 90%)  
 Insulation resistance: 100 MΩ or more at 500 V DC  
 between input and output, output and power supply, and input and power supply.  
 Withstand voltage: 1500 V AC/min. between input and (output and power supply).  
 500 V AC/min. between output and power supply.

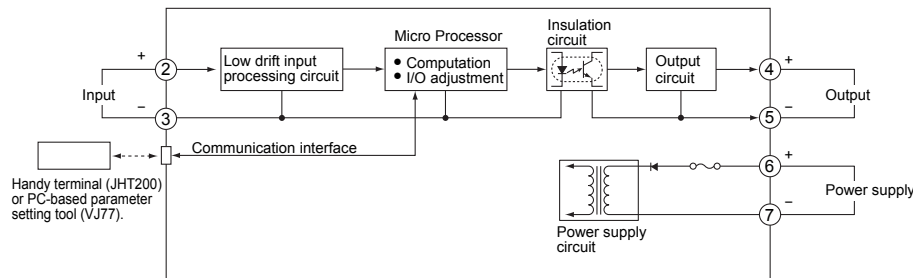
**■ Environmental Conditions**

Operating temperature range: 0 to 50°C  
 Operating humidity range: 5 to 90% RH (no condensation)  
 Power supply voltage: 24 V DC±10% (percentage ripple is 5%p-p or less)  
 Effect of power supply voltage fluctuations: ±0.1% or less for the fluctuation within the operating range of power supply voltage specification.  
 Effect of ambient temperature change: ±0.2% of span or less for a temperature change of 10°C.  
 Current consumption:  
 24 V DC 70 mA (FH2A), 50 mA (FH2V)

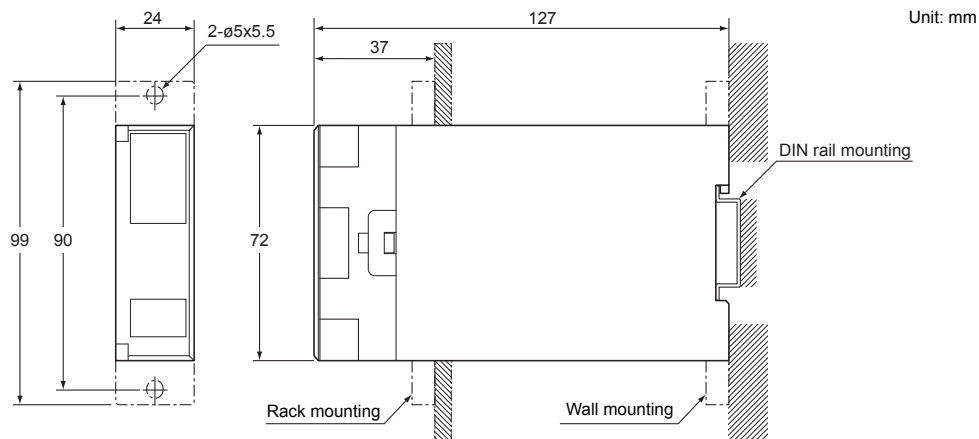
**■ Mounting and Dimensions**

Material: ABS resin (Case body)  
 Mounting method: Rack, Wall or DIN rail mounting  
 Connection method: M4 screw terminals  
 External dimensions: 72 × 24 × 127 mm (H x W x D)  
 Weight: Approx. 130 g

**■ Block Diagram**



**■ External Dimensions**



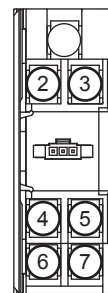
**■ Standard Accessories**

Tag number label: 1  
 Range label: 1  
 Mounting block: 2  
 Mounting screws: M4 screw x 2

**■ Custom Order Specifications**

	Current signal	Voltage signal
Input range (DC)	0 to 100 mA	-30 to +30 V
Span (DC)	100μA to 100 mA	0.3 to 60 V
Zero elevation	0 to 50%	-50 to +50%
Output range (DC)	-----	-10 to +10 V
Span (DC)	-----	10 mV to 20 V
Zero elevation	-----	-100 to +200%

**■ Terminal Assignments**



2	Input	(+)
3	Input	(-)
4	Output	(+)
5	Output	(-)
6	Supply	(+)
7	Supply	(-)