

General Specifications

Models FH4A, FH4V
DC Converter
(Non-isolated Type)

JUXTA

GS 77J08H04-01E

■ General

The FH4A/FH4V is a compact, front terminal connection type converter that converts DC current or DC voltage signals into DC current or DC voltage signals.

■ Model and Suffix Codes

FH4□-□□*B

Model _____

Output signal specification _____
 A : DC current signal
 V : DC voltage signal

Input Signal _____

A : 4 to 20 mA DC	1 : 0 to 10 mV DC
B : 2 to 10 mA DC	2 : 0 to 100 mV DC
C : 1 to 5 mA DC	3 : 0 to 1 V DC
D : 0 to 20 mA DC	4 : 0 to 10 V DC
E : 0 to 16 mA DC	5 : 0 to 5 V DC
F : 0 to 10 mA DC	6 : 1 to 5 V DC
G : 0 to 1 mA DC	7 : -10 to +10 V DC
H : 10 to 50 mA DC	0 : (Custom order)
Z : (Custom order)	0 : (Custom order)

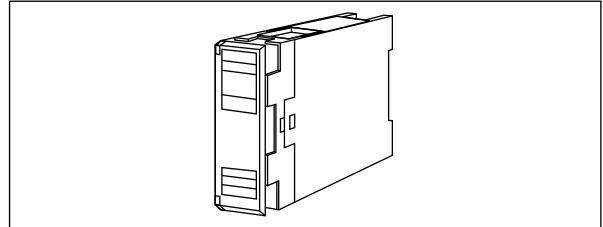
Voltage signal
Current signal
(See "Custom Order Specifications")

Output signal _____

[FH4A]	[FH4V]
A : 4 to 20 mA DC	1 : 0 to 10 mV DC
B : 2 to 10 mA DC	2 : 0 to 100 mV DC
C : 1 to 5 mA DC	3 : 0 to 1 V DC
D : 0 to 20 mA DC	4 : 0 to 10 V DC
E : 0 to 16 mA DC	5 : 0 to 5 V DC
F : 0 to 10 mA DC	6 : 1 to 5 V DC
G : 0 to 1 mA DC	7 : -10 to +10 V DC
Z : (Custom order)	0 : (Custom order)

Current signal Voltage signal
(See "Custom Order Specifications")

Power supply
24 V DC±10% (DC drive)



Maximum allowable input:
 Voltage input: ±30 V DC or less
 Current input: Any level that satisfies the following condition,
 $(\text{Input current})^2 \times \text{Input resistance} \leq 0.5 \text{ W}$

Allowable load resistance:

DC current output	Allowable load resistance	DC voltage output	Allowable load resistance
4 to 20 mA	750 Ω or less	0 to 10 mV	250 kΩ or more
2 to 10 mA	1500 Ω or less	0 to 100 mV	250 kΩ or more
1 to 5 mA	3000 Ω or less	0 to 1 V	2 kΩ or more
0 to 20 mA	750 Ω or less	0 to 10 V	10 kΩ or more
0 to 16 mA	900 Ω or less	0 to 5 V	2 kΩ or more
0 to 10 mA	1500 Ω or less	1 to 5 V	2 kΩ or more
0 to 1 mA	15 kΩ or less	-10 to +10 V	10 kΩ or more

Zero adjustment: -5 to +5%
 Span adjustment: 95 to 105%

■ 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.
 Response speed: 150 ms, 63% response (10 to 90%)
 Insulation resistance: 100 MΩ or more at 500 V DC between (input and output) and power supply.
 Withstand voltage: 500 V AC/min. between (input and output) and power supply.

■ Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. FH4V-66*B

■ Input/Output Specifications

Input signal: DC current or DC voltage signal
 Output signal: DC current or DC voltage signal
 Input resistance:

DC current input	Input resistance	DC voltage input	Input resistance
4 to 20 mA	250 Ω	0 to 10 mV	1 MΩ during power on 100 kΩ during power off
2 to 10 mA	500 Ω	0 to 100 mV	
1 to 5 mA	1 kΩ	0 to 1 V	
0 to 20 mA	250 Ω	0 to 10 V	
0 to 16 mA	250 Ω	0 to 5 V	
0 to 10 mA	500 Ω	1 to 5 V	
0 to 1 mA	1 kΩ	-10 to +10 V	
10 to 50 mA	100 Ω		

■ 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 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 102 mA (FH4A), 80 mA (FH4V)

■ 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

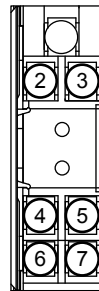
■ Standard Accessories

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

■ Custom Order Specifications

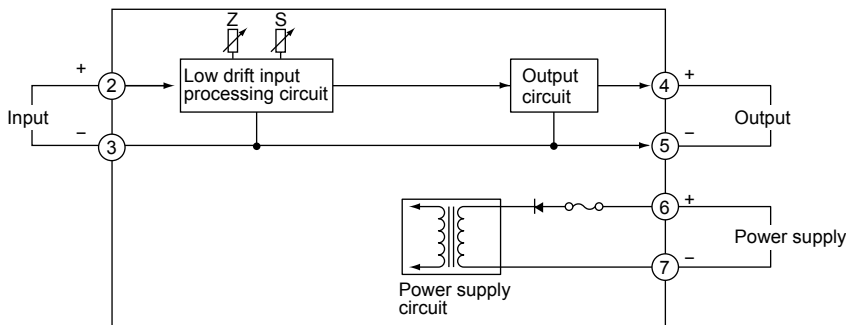
	Current signal	Voltage signal
Input range (DC)	0 to 150 mA	-300 to +300 V
Span (DC)	100 μA to 150 mA	10 mV to 600 V
Zero elevation	0 to 73%	-80 to +73%
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

■ Terminal Assignments



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

■ Block Diagram



■ External Dimensions

