General Specifications

Models WH1A, WH1V
Isolator

JUXTA

GS 77J09H01-01E

■ General

The WH1A/WH1V is a compact, front terminal connection type isolator that converts DC current or DC voltage signals into isolated DC current or DC voltage signals.

- Dual output and 2000 V AC withstand voltage specifications are available upon requests.

■ Model and Suffix Codes

WH1□-□□-□*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) Current signal (150 mA or less)	Voltage signal (±300 V or less)

Output signal

[WH1A]	[WH1V]
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) Current signal (24 mA or less)	0 : (Custom order) Voltage signal (±10 V or less)

Power supply
1 : 24 V DC±10% (DC drive)
2 : 85 to 264 V AC (AC drive)

Optional specification
D0 : Dual output (1 to 5 V DC)

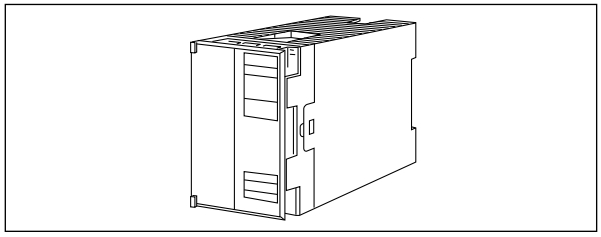
■ Ordering Information

Specify the following when ordering.

- Model and suffix codes: e.g. WH1V-A6-2*B

■ Input/Output Specifications

Input signal: DC current or DC voltage signal
Input resistance: See table on next page
Maximum allowable input:
Voltage input: ±30 V DC or less
Current input: Any level that satisfies the following condition.
(Input current)^2 x Input resistance ≤ 0.5 W
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 durning 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		

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.
Dual output (optional): Relative error between output-1 and 2 is within ±0.2%. These outputs are not insulated.
Response speed: 150 ms, 63% response (10 to 90%)
Insulation resistance: 100 MΩ or more at 500 V DC input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.
Withstand voltage:
DC drive 1500 V AC/min. between input and (output and power supply). 500 V AC/min. between output and power supply.
AC drive 1500 V AC/min. input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.

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■ Environmental Conditions

Operating temperature range: 0 to 50°C
Operating humidity range: 5 to 90% RH (no condensation)
Power supply voltage: 85 to 264 V AC, 47 to 63 Hz or 24 V DC±10%
Effect of power supply voltage fluctuations: ±0.1% or less for 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 (WH1A), 80 mA (WH1V)
Power consumption: 100 V AC 10 VA (WH1A), 6 VA (WH1V)

■ Mounting and Dimensions

Material: ABS resin (Case body)
Mounting method: Rack, Wall or DIN rail mounting
Connection method: M4 screw terminals
External dimensions: 72 × 48 × 127 mm (H x W x D)
Weight: DC; Approx.150 g, AC; Approx. 300 g

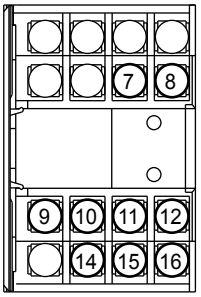
■ Standard Accessories

Tag number label: 1
Mounting block: 2
Mounting screw: M4 screw x 4

■ 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

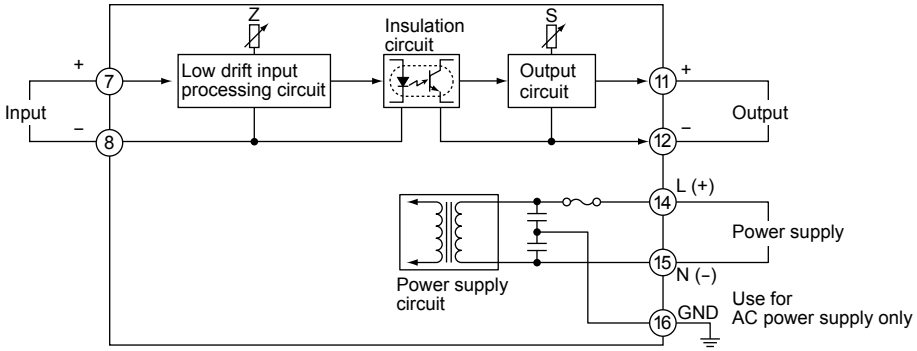


7	Input	(+)
8	Input	(−)
9	Output 2	(+)
10	Output 2	(−)
11	Output 1	(+)
12	Output 1	(−)
14	Supply	(L+)
15	Supply	(N−)
16	Ground	(GND)*

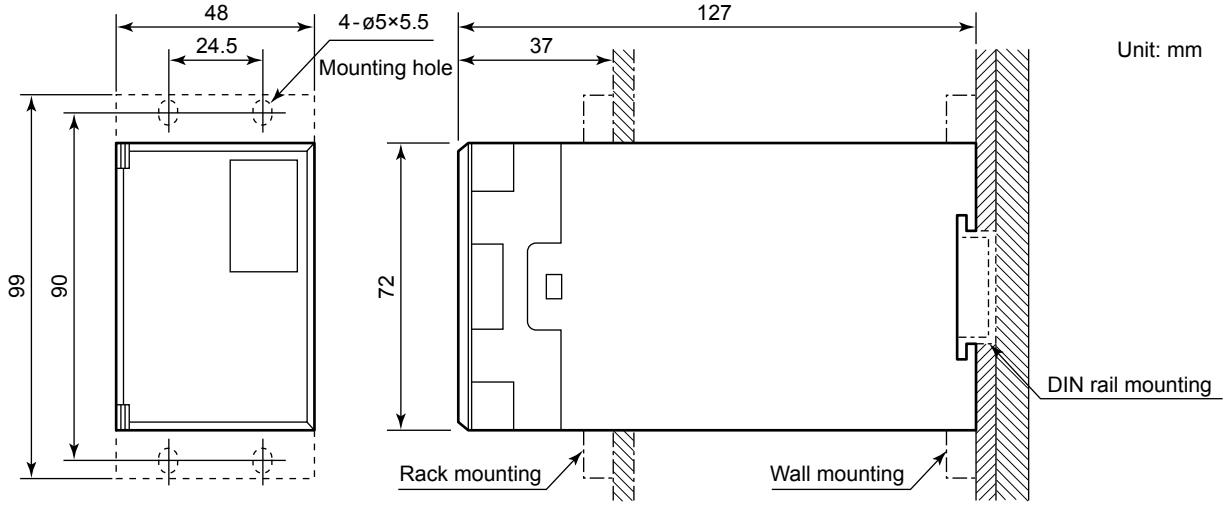
Terminals (9)–(10) are used for Output 2 in case dual output is specified.

*: Use for AC power supply only

■ Block Diagram



■ External Dimensions



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