General Specifications

Model MH1
Isolator

JUXTA

GS 77J04H01-01E

■ General

The MH1 is a plug-in type isolator that receives DC current or DC voltage signals to convert them into isolated DC current or DC voltage signals.

• Provided with Power indicator lamp

■ Model and Suffix Codes

MH1-□□-□ *B

Model

Input signal
A: 4 to 20 mA DC
B: 2 to 10 mA DC
C: 1 to 5 mA DC
D: 0 to 20 mA DC
E: 0 to 16 mA DC
F: 0 to 10 mA DC
G: 0 to 1 mA DC
H: 10 to 50 mA DC
Z: Customized current signal*
*See Table 1.

1: 0 to 10 mV DC
2: 0 to 100 mV DC
3: 0 to 1 V DC
4: 0 to 10 V DC
5: 0 to 5 V DC
6: 1 to 5 V DC
7: -10 to +10 V DC
0: Customized voltage signal*

Output signal
A: 4 to 20 mA DC
B: 2 to 10 mA DC
C: 1 to 5 mA DC
D: 0 to 20 mA DC
E: 0 to 16 mA DC
F: 0 to 10 mA DC
G: 0 to 1 mA DC
Z: Customized current signal*
*See Table 1.

1: 0 to 10 mV DC
2: 0 to 100 mV DC
3: 0 to 1 V DC
4: 0 to 10 V DC
5: 0 to 5 V DC
6: 1 to 5 V DC
7: -10 to +10 V DC
0: Customized voltage signal*

Power supply
1: 12-48 V DC
2: 85-264 V AC

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● Items to be specified when ordering

• Model and Suffix Codes: e.g. MH1-66-2*B

■ Input/Output Specifications

Input signal: DC voltage or DC current signal
Input resistance: Attach an external resistor for current input.

Input Range	Input Resistance	Input Range	Input Resistance
4 to 20 mA DC	250 Ω	0 to 10 mV DC	1 MΩ during power on 10 kΩ during power off
2 to 10 mA DC	500 Ω	0 to 100 mV DC	
1 to 5 mA DC	1 kΩ	0 to 1 V DC	
0 to 20 mA DC	250 Ω	0 to 10 V DC	1 MΩ during power on 800 kΩ during power off
0 to 16 mA DC	250 Ω	0 to 5 V DC	
0 to 10 mA DC	500 Ω	1 to 5 V DC	
0 to 1 mA DC	1 kΩ	-10 to +10 V DC	
10 to 50 mA DC	100 Ω		

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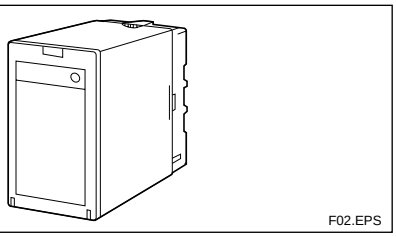

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Allowable input level:
• Voltage input: Within ±30 V DC
• Current input: Any level that satisfies the following condition,
(Input current)^2×Input resistance≦0.5 W

Output signal: DC voltage or DC current signal
Allowable load resistance:

Output Range	Allowable Load Resistance	Output Range	Allowable Load Resistance
4 to 20 mA DC	750 Ω maximum	0 to 10 mV DC	250 kΩ minimum
2 to 10 mA DC	1500 Ω maximum	0 to 100 mV DC	250 kΩ minimum
1 to 5 mA DC	3000 Ω maximum	0 to 1 V DC	2 kΩ minimum
0 to 20 mA DC	750 Ω maximum	0 to 10 V DC	10 kΩ minimum
0 to 16 mA DC	900 Ω maximum	0 to 5 V DC	2 kΩ minimum
0 to 10 mA DC	1500 Ω maximum	1 to 5 V DC	2 kΩ minimum
0 to 1 mA DC	15k Ω maximum	-10 to +10 V DC	10 kΩ minimum

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

■ Standard Performance

Accuracy rating: ±0.1% of span (aside from the ±0.1% accuracy of the external resistor for current input)
Response speed: 150 ms, 63% response (10 to 90%)
Insulation resistance: 100 MΩ minimum at 500 V DC between input, output, power supply and grounding terminals mutually
Withstanding voltage: 2000 V AC for one minute between input, output, power supply and grounding terminals mutually
Operating temperature range: 0 to 50°C
Operating humidity range: 5 to 90% RH (no condensation)
Supply voltage range: 85-264 V AC 47-63 Hz, or 12-48 V DC
Effects of power line regulation: Up to ±0.1% of span for the regulation of 85 to 264 V AC or 12 to 48 V DC
Effects of ambient temperature variations: Up to ±0.15% of span per 10°C
Power consumption: 1.5 W at 24 V DC; 3.2 VA at 100 V AC; 4.4 VA at 200 V AC

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■ Mounting and Appearance

Material: ABS resin (casing)
Mounting method: Wall or DIN rail mounting
More than 5 mm interval is required for side-by-side close mounting.
Connection method: M3.5 screw terminals
External dimensions: 85 (H)×51 (W)×123 (D) mm (including a socket)
Weight: Approx. 250 g (main unit), approx. 60 g (socket)

■ Accessories

Spacer: One (used for DIN rail mounting)
Resistor: One (attached for current input)

■ Customized Signal 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%

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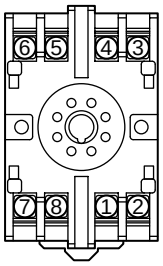
■ Terminal Assignments



1	OUTPUT	(+)
2	OUTPUT	(–)
3	INPUT	(+)
4	INPUT	(–)
5	N.C.	
6	GND	
7	SUPPLY	(L+)
8	SUPPLY	(N–)

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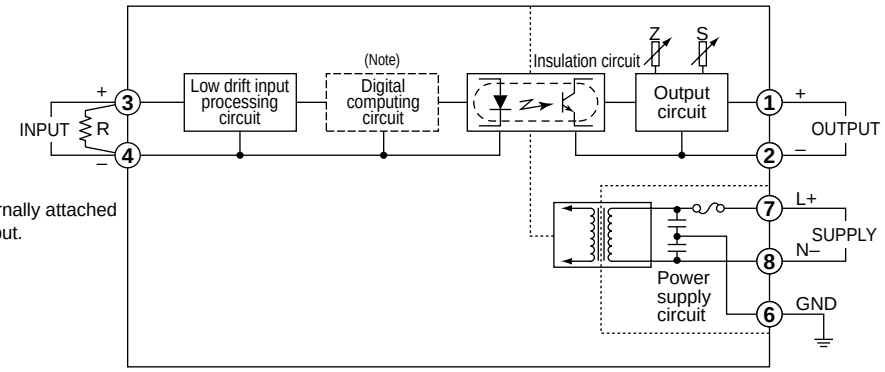
■ Block Diagrams



R: Resistor externally attached for current input.

Note: Digital computing circuit is added for the input/output suffix codes other than "A" and "6".

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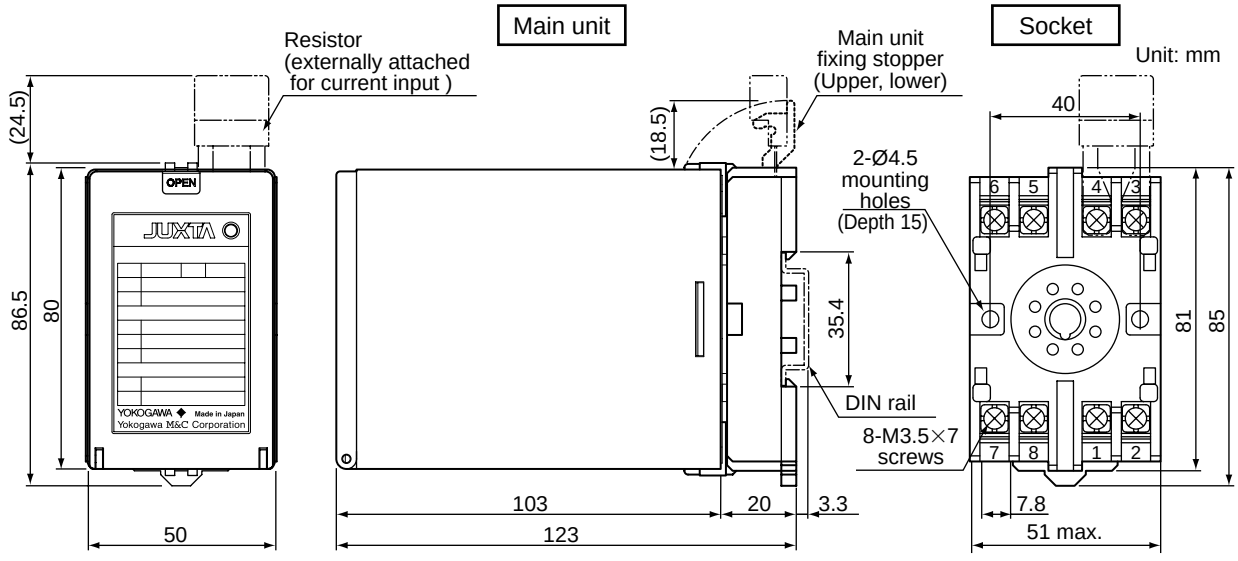
■ External Dimensions



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• The information covered in this document is subject to change without notice for reasons of improvements in quality and/or performance.