General Specifications

Model MA7D
Distributor
(Dual-output and Unified Signal Type)

JUXTA

GS 77J04A07-02E

■ General

The MA7D is a insulated dual-output, plug-in type distributor that is used in combination with a two-wire type transmitter to convert the transmitter's 4 to 20 mA DC signals into isolated 4 to 20 mA DC current or 1 to 5 V DC voltage signals.

- Supports BARD-800.
- Provided with Power indicator lamp

■ Model and Suffix Codes

MA7D- □□□ - □

Model

Input signal
A: 4 to 20 mA DC

Output-1 signal
A: 4 to 20 mA DC 6: 1 to 5 V DC

Output-2 signal
A: 4 to 20 mA DC 6: 1 to 5 V DC

Power supply
3: 24 V DC±10%
4: 85-132 V AC / 85-150 V DC
5: 170-264 V AC

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● Items to be specified when ordering

- Model and Suffix Codes: e.g. MA7D-AA6-3

Note: When output signals of 4 to 20 mA and 1 to 5 V DC are required, specify Output-1 as 4 to 20 mA DC because of the allowable load resistance.

■ Input/Output Specifications

Input signal: 4 to 20 mA DC signal from two-wire type transmitter
Input resistance: 250 Ω
Transmitter power supply: 25.25±0.25 V DC (provided with a current limiter to keep the current between 25 and 35 mA)
Allowable conductor resistance (RL): Up to [(20 – transmitter's minimum operating voltage) V/0.02 A] Ω
Maximum allowable input current: 40 mA DC
Output signal: 1 to 5 V DC voltage or 4 to 20 mA DC current insulated dual outputs
Allowable load resistance:

Output-1 Range	Allowable Load Resistance	Output-2 Range	Allowable Load Resistance
4 to 20 mA DC	750 Ω maximum	4 to 20 mA DC	350 Ω maximum
1 to 5 V DC	2 kΩ minimum	1 to 5 V DC	2 kΩ minimum

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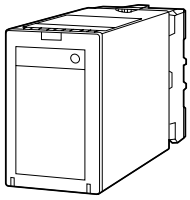
Zero adjustment: –5 to +5%
Span adjustment: 95 to 105%



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■ Standard Performance

Accuracy rating: ±0.1% of span
Response speed: 150 ms, 63% response (10 to 90%)
Insulation resistance: 100 MΩ minimum at 500 V DC between input, output-1, output-2, power supply and grounding terminals mutually
Withstanding voltage: 2000 V AC for one minute between input, (output-1 and output-2), power supply and grounding terminals mutually;
1000 V AC for one minute between output-1 and output-2 terminals
Operating temperature range: 0 to 50°C
Operating humidity range: 5 to 90% RH (no condensation)
Supply voltage range: 24 V DC±10%, 85-150 V DC , 85-132 V AC, 170-264 V AC (47-63 Hz)
Effects of power line regulation: Up to ±0.1% of span for the regulation within allowable range of each supply voltage range
Effects of ambient temperature variations: Up to ±0.15% of span per 10°C
Power consumption: 2.6 W at 24 V DC; 2.3 W at 110 V DC; 4.6 VA at 100 V AC; 6.5 VA at 200 V AC

■ 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)×132 (D) mm (including a socket)
Weight: Approx. 250 g (main unit), approx. 80 g (socket)

■ Accessories

Spacer: One (used for DIN rail mounting)

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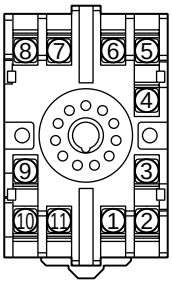
2nd Edition Sep. 2004 (KP)

■ Terminal Assignments



1	OUTPUT-1	(+)
2	OUTPUT-1	(–)
3	N.C.	
4	INPUT	(PS+)
5	INPUT	(–)
6	INPUT	(COM)
7	SUPPLY	(L+)
8	SUPPLY	(N–)
9	GND	
10	OUTPUT-2	(+)
11	OUTPUT-2	(–)

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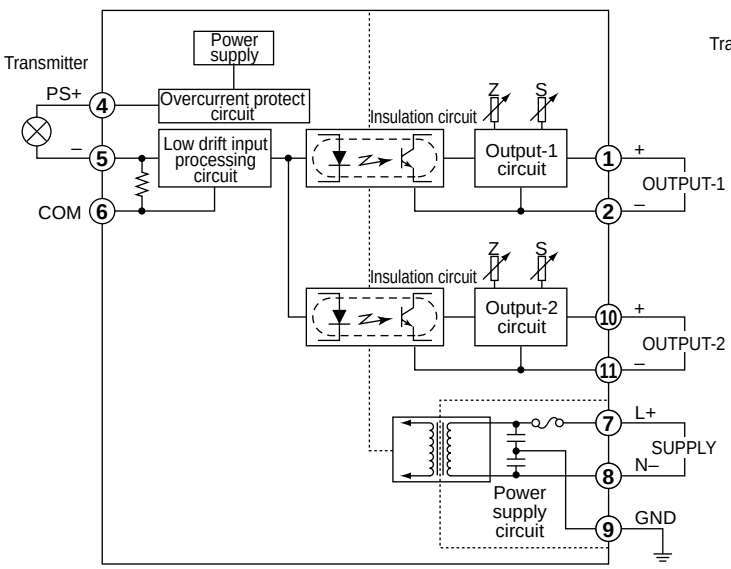
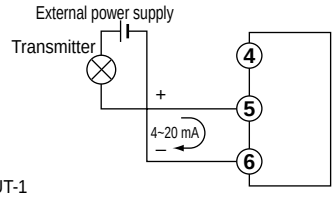
■ Block Diagrams

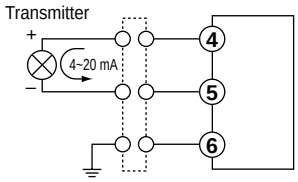
(1) Combination with two-wire type transmitter using internal power supply

(2) Combination with two-wire type transmitter using external power supply





(3) Example to construct Intrinsically Safe System using Zener Barrier



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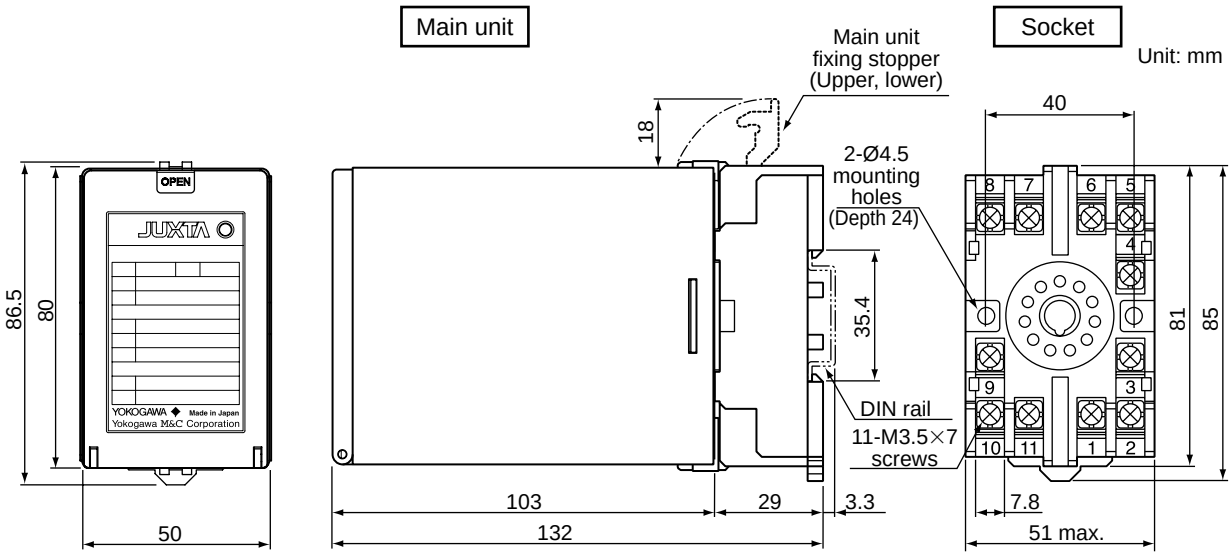
■ External Dimensions



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