



Product Specification Sheet

Model: MS3704W

MS3700

Slim Plug-In High-Level Signal Conditioner (Isolator) with Isolated Dual Output (Outputs 1&2 Separately Adjustable)

DESCRIPTION

The MS3704W is a slim, plug-in high-level signal conditioner (isolator) that converts DC current or voltage signals into commonly used DC signals and provides an isolated dual output. This model features separate adjustment of the two outputs (Output 1 & Output 2).

ORDERING CODE

Model MS3704W - ☐ - ☐ ☐ ☐

Power Supply

A: 100 to 240V AC (50 to 60Hz)
D: 24V DC **P:** 100 to 240V DC

Input

A: 4 to 20mA DC **3:** 0 to 1V DC
D: 0 to 20mA DC **4:** 0 to 10V DC
 5: 0 to 5V DC
 6: 1 to 5V DC

Output 1

A: 4 to 20mA DC **5:** 0 to 5V DC
D: 0 to 20mA DC **6:** 1 to 5V DC

Output 2

The codes are the same as for Output 1.

Note: When 4 to 20mA or 1 to 5V is selected for input, 0 to 20mA or 0 to 5V cannot be selected for both outputs.

Options

No code: None

/X: Special order

* For non-standard options, ask MTT for availability.

ORDERING INFORMATION

To place an order, please use the ordering code format as shown above.

(e.g.) MS3704W-A-AA6

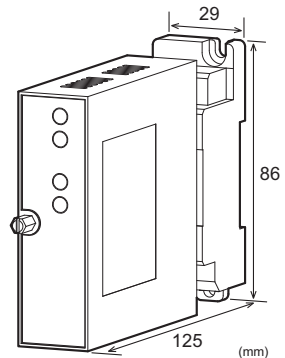
Another Ordering Example:

For an option code of "X": MS3704W-A-666/X (0-90% response time: 200ms max.)

SPECIFICATIONS

POWER SECTION

Power Requirements	100 to 240V AC: 85 to 264V AC (47 to 63Hz) 24V DC: 24V DC \pm 10% 100 to 240V DC: 85 to 264V DC		
Power Sensitivity	Better than \pm 0.1% of span for each power supply range.		
Power Line Fuse	160mA fuse is installed (standard).		
Power Consumption			
Power	100-240V AC	24V DC	100-240V DC
	6.5VA max	2.0W max	2.5W max



INPUT SECTION

Input Resistance	
Voltage Input (DC)	1M Ω min. with or without power.
Current Input (DC)	250 Ω
Allowable Input Voltage	
Voltage Input	30V DC max., continuous.
Current Input	40mA DC max., continuous.

OUTPUT SECTION

Maximum Output Load	
Voltage Output (DC)	Output 1: 2mA max. Output 2: 2mA max.
Current Output (DC)	Output 1: 750 Ω max. Output 2: 350 Ω max.
Zero Adjustment	Output 1: Approx. \pm 5% of span. Output 2: Approx. \pm 5% of span. (Adjustable by the front-accessible trimmer.)
Span Adjustment	Output 1: Approx. \pm 5% of span. Output 2: Approx. \pm 5% of span. (Adjustable by the front-accessible trimmer.)

PERFORMANCE

Accuracy Rating	Better than \pm 0.1% of span (at 25 $^{\circ}$ C \pm 5 $^{\circ}$ C).
Temperature Effect	Better than \pm 0.2% of span per 10 $^{\circ}$ C change in ambient.
Response Time	85ms max. (0 to 90%) with a step input at 100%.
CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	4-way isolation between input, output [Output 1/Output 2], power, and ground.
Insulation Resistance	100M Ω min. (@ 500V DC) between input, output [Output 1/Output 2], power, and ground.
Dielectric Strength	Input / Output [Output 1/Output 2] / [Power, Ground]: 2000V AC for 1 minute (Cutoff current: 0.5mA) Power / Ground: 2000V AC for 1 minute (Cutoff current: 5mA) Output 1 / Output 2: 500V AC for 1 minute (Cutoff current: 0.5mA)
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989.

Operating Environment	Ambient temperature: -5 to 55°C Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-10 to 60°C

● PHYSICAL

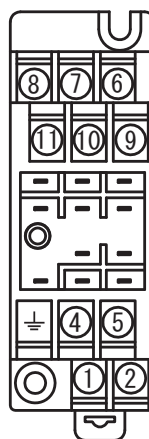
Installation	Wall/DIN rail mounting
Wiring	M3.5 screw terminal connection (with a power terminal block cover & drop-out prevention screws)
Screwing Torque	0.8 to 1.0 [Nm] * Recommended
External Dimensions	W29 × H86 × D125mm (including the mounting screw and socket)
Weight	Main unit: 120g max. Socket: 80g max.

● MATERIALS

Housing	ABS resin (UL 94V-0)
Terminal Block	PBT resin (UL 94V-0)
Terminal Block Cover	PC resin (UL 94V-2)
DIN Rail Stopper	PP resin (UL 94HB)
Screw Terminal	Nickel-plated steel
Contacts Material and Finish	Brass with 0.2μm gold plating
Printed Circuit Board	Glass fabric epoxy resin (FR-4; UL 94V-0)
Anti-Humidity Coating	HumiSeal® 1A27NS (Polyurethane)

* HumiSeal® is a registered trademark of Chase Corporation.

TERMINAL ASSIGNMENT



①	P (+)	POWER
②	N (-)	
③	GND	
④	+ OUTPUT 1	
⑤	- OUTPUT 1	
⑥	N.C.	
⑦	+ OUTPUT 2	
⑧	- OUTPUT 2	
⑨	+ INPUT	
⑩	- INPUT	
⑪	N.C.	

BLOCK DIAGRAM

