Ultra-Slim Distributor with Isolated Single Output (European Style Screw Terminal Block)

DESCRIPTION

The MS5007 is an ultra-slim distributor that powers a two-wire transmitter (output: 4 to 20mA), converts its signals into commonly used DC signals, and provides an isolated single output.

ORDERING CODE

MS5007 - □

Model

Output

A: 4 to 20mA DC
D: 0 to 20mA DC
Z: Other DC current signal

1: 0 to 10mV DC
2: 0 to 100mV DC
3: 0 to 1V DC
4: 0 to 10V DC
5: 0 to 5V DC
6: 1 to 5V DC
3W: ±1V DC
4W: ±10V DC
5W: ±5V DC
0: Other DC voltage signal

Options

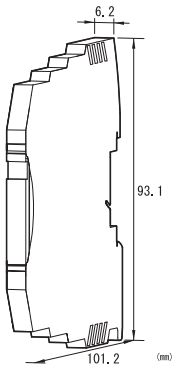
No code: None
/X: Special order

* 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.) MS5007-A

Another Ordering Example:
For an output code of "0": MS5007-0 (0 to 2V)



SPECIFICATIONS

●POWER SECTION

Power Requirement	24V DC±10%
Power Sensitivity	Better than ±0.1% of span.
Power Line Fuse	125mA fuse is installed (standard).
Current Rating	
Voltage Output	42mA max. (at 24V DC) (Approx. 38mA for 100% input)
Current Output	63mA max. (at 24V DC) (Approx. 55mA for 100% input)

●INPUT SECTION

Input Signal	4 to 20mA DC from 2-wire transmitters
Input Resistance	250Ω
Transmitter Power Supply	Output voltage: 24 to 30V (0% input) 18V min. (100% input) Maximum current: 25mA (typ.)
Limit Current for Short-Circuit Protection	30mA max.
Permissible Short-Circuit Duration	Continuous.

●OUTPUT SECTION

Allowable Output Load		
Voltage Output (DC)	10V	5kΩ min.
	5V	2.5kΩ min.
	1V	500Ω min.
	10mV	10kΩ min.
	100mV	100kΩ min.
Current Output (DC)	4 to 20mA output	550Ω max.
Zero Adjustment	Approx. ±5% of span. (Adjustable by the front-accessible trimmer.)	
Span Adjustment	Approx. ±5% of span. (Adjustable by the front-accessible trimmer.)	

Ranges Available		
	Current Signal	Voltage Signal
Output Range (DC)	0 to 20mA	-10 to 10V
Output Span (DC)	4 to 20mA	10mV to 20V
Output Bias	0 to 100%	-100 to 100%

* For current output signals, the accuracy of any current output smaller than 0.1mA is not guaranteed.

Output Spec. Ex.1: For 4 to 20mA output, the output span is 16mA and the bias +25%.

Output Spec. Ex. 2: For -1 to 4V output, the output span is 5V and the bias -20%.

PERFORMANCE

Accuracy Rating	Better than ±0.1% of span (at 25°C±5°C).
Temperature Effect	Better than ±0.2% of span per 10°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	3-way isolation between input, output, and power.
Insulation Resistance	100MΩ min. (@ 500V DC) between input, output, and power.
Dielectric Strength	1500V AC for 1 minute between input, output, and power. (Cutoff current: 0.5mA)
Operating Environment	Ambient temperature: -20 to 55°C Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-25 to 70°C

PHYSICAL

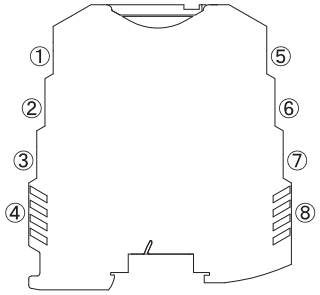
Installation	DIN rail mounting
Wiring	European style screw terminal block connection (M3)
Wire Size	0.2 to 2.5 mm^2
Screwing Torque	0.5 to 0.6 [Nm] * Recommended
External Dimensions	W93.1 × H101.2 × D6.2mm
Weight	60g max.

MATERIALS

Housing	PBT resin (UL 94V-0)
Screw Terminal	Tin-plated copper alloy
Printed Circuit Board	Glass fabric epoxy resin (FR-4: UL 94V-0)
Anti-Humidity Coating	HumiSeal® 1A27NSLU (Polyurethane)

* HumiSeal® is a registered trademark of Chase Corporation.

TERMINAL ASSIGNMENT



①	+ MONITOR	
②	- MONITOR	
③	+ INPUT	
④	- INPUT	
⑤	+ OUTPUT	
⑥	- OUTPUT	
⑦	+	POWER
⑧	-	

BLOCK DIAGRAM