

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	1: 0 to 10mV DC
D: 0 to 20mA DC	2: 0 to 100mV DC
Z: Other DC current signals	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 signals

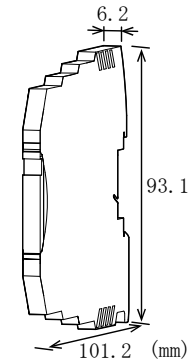
Connection Type _____

No code: Screw connection
S: Spring-cage connection

Options _____

No code: None
H: Polyurethane conformal coating
X: Others (Special order)

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



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 Consumption	
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.)

ORDERING INFORMATION

To place an order, please use the ordering code format as shown above.
(e.g.) MS5007-A
MS5007-A/S
MS5007-A/X (Frequency characteristics: 2Hz-3dB)
MS5007-A/SX (Frequency characteristics: 2Hz-3dB)

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

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

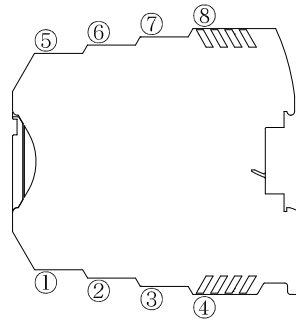
● PHYSICAL

Installation	DIN rail mounting
Wiring	Screw connection or spring-cage connection Recommended tightening torque for screw connection: 0.5 to 0.6 Nm
Wire Size	0.2 to 2.5 mm ²
External Dimensions	W93.1 × H101.2 × D6.2 mm
Weight	60g max.

● MATERIAL

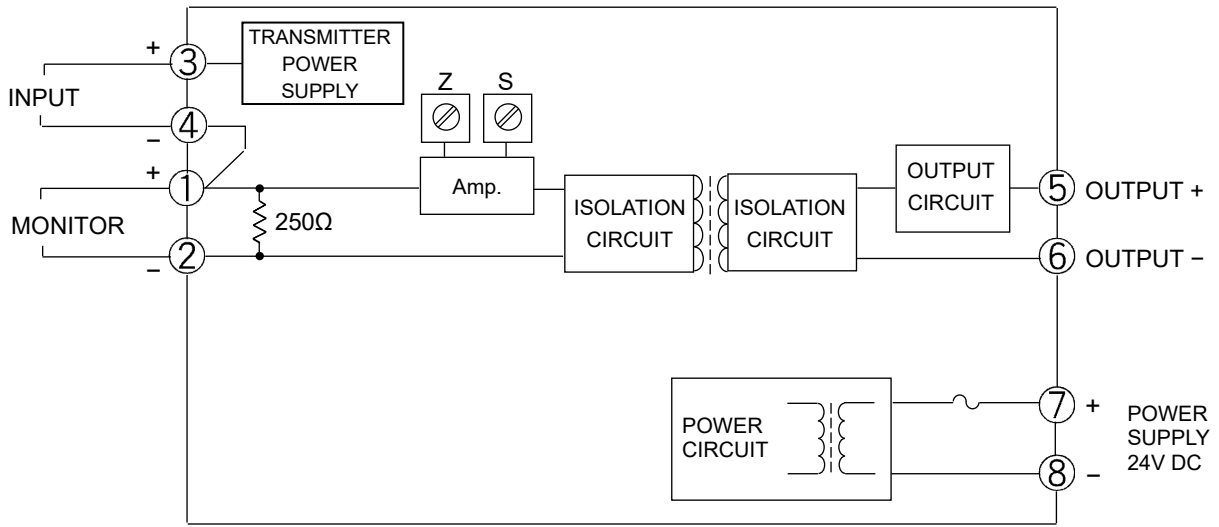
Housing	PBT resin (UL 94V-0)
Screw Terminal	Tin-plated copper alloy
Printed Circuit Board	Glass fabric, epoxy resin (FR-4: UL 94V-0)

TERMINAL ASSIGNMENTS

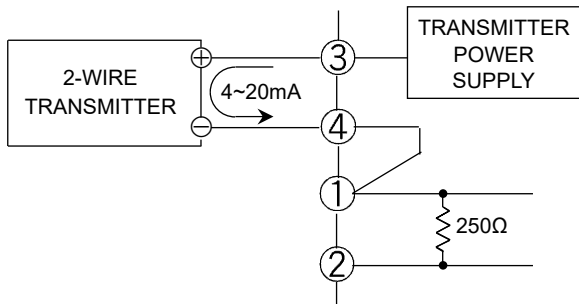


①	MONITOR +
②	MONITOR -
③	INPUT +
④	INPUT -
⑤	OUTPUT +
⑥	OUTPUT -
⑦	POWER +
⑧	POWER -

BLOCK DIAGRAM



When used as a distributor:



When used as an isolator:

