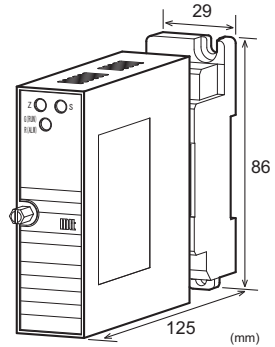
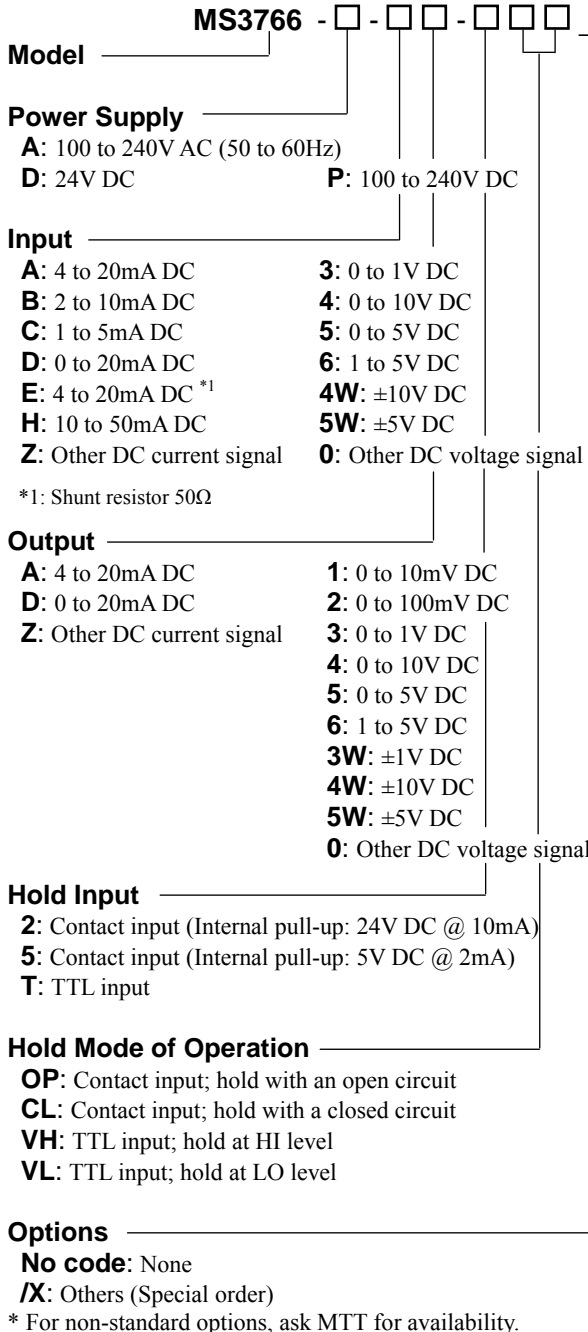


DESCRIPTION

The MS3766 is a slim, plug-in analog memory that holds an output signal using external hold input and provides an isolated single output.

ORDERING CODE



ORDERING INFORMATION

To place an order, please use the ordering code format as shown on the left.
(e.g.) MS3766-A-66-TVH

Other Ordering Examples:
For an input code of "0": MS3766-A-06-TVH (Input: 2 to 10V)
For an output code of "Z": MS3766-A-6Z-TVH (Output: 8 to 20mA)

SPECIFICATIONS

POWER SECTION

Power Requirements	100 to 240V AC: 85 to 264V AC (47 to 63Hz) 24V DC: 24V DC±10%
Power Sensitivity	Better than ±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 1.8W max 7.2W max

INPUT SECTION

Input Resistance	
Voltage Input (DC)	With or without power: 1MΩ min.
Current Input (DC)	4 to 20mA (std.) 250Ω
	2 to 10mA 250Ω
	1 to 5mA 100Ω
	0 to 20mA 250Ω
	10 to 50mA 10Ω
Allowable Input Voltage	
Voltage Input Model	30V DC max., continuous (Standard for a span up to 10V)
Current Input Model	40mA DC max., continuous (Standard for 4 to 20mA)
Hold Input	
Contact Input Model	Dry contact; internal pull-up 5V DC @ 2mA or 24V DC @ 10mA
TTL Input Model	Operated by external TTL input

Ranges Available		
	Current Signal	Voltage Signal
Input Range (DC)	-100 to 100mA	-300 to 300V
Input Span (DC)	100 μ A ^(*) to 200mA	200mV ^(*) to 600V
Input Bias	-100 to 100%	-100 to 100%

Note: For any input range including negative input signals, the input spans for current and voltage signals range from ^(*)200 μ A to 200mA and ^(*)400mV to 600V, respectively.

Input Spec. Ex. 1: For 3 to 8V input, the input span is 5V and the bias +60%.

Input Spec. Ex. 2: For -5 to 0V input, the input span is 5V and the bias -100%.

● OUTPUT SECTION		
Allowable Output Load		
Voltage Output (DC)	1V span and up	2mA max.
	10mV	10k Ω min.
	100mV	100k Ω min.
Current Output (DC)		750 Ω max.
Zero Adjustment	Approx. \pm 5% of span. (Adjustable by the front-accessible trimmer.)	
Span Adjustment	Approx. \pm 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 \pm 0.2% of span (at 25°C \pm 5°C).
Temperature Effect	Better than \pm 0.2% of span per 10°C change in ambient.
Response Time	400ms max. (0 to 90%) with a step input at 100%.
Memory Backup Function	Hold commands allow held values to be saved in the built-in flash memory.
CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	5-way isolation between input, hold input, output, power, and ground.
Insulation Resistance	100M Ω min. (@ 500V DC) between input, hold input, output, power, and ground.
Dielectric Strength	Input / [Output, Hold input] / [Power, Ground]: 2000V AC for 1 minute (Cutoff current: 0.5mA) Power / Ground: 2000V AC for 1 minute (Cutoff current: 5mA) Output / Hold input: 500V AC for 1 minute (Cutoff current: 0.5mA)
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989

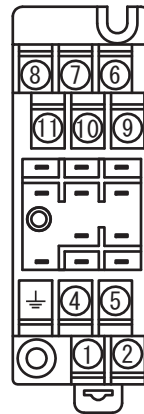
Operating Environment	Ambient temperature: -5 to 55°C Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-10 to 60°C

● 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 x H86 x D125mm (including the mounting screw and socket)
Weight	Main unit: 130g 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 0.2 μ m gold plating
Printed Circuit Board	Glass fabric epoxy resin (FR-4: UL 94V-0)
Anti-Humidity Coating	HumiSeal [®] 1A27NS (Polyurethane)

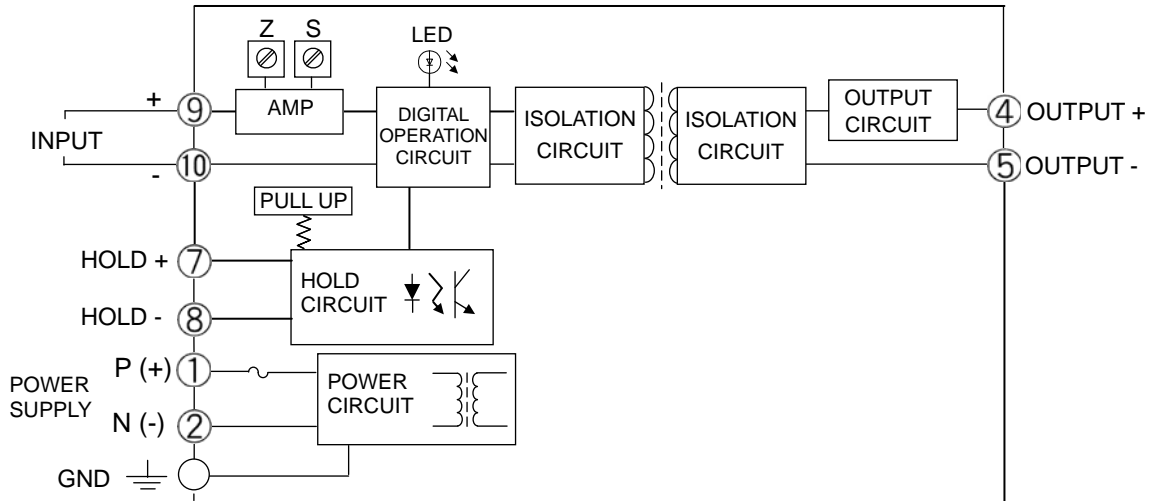
* HumiSeal[®] is a registered trademark of Chase Corporation.

TERMINAL ASSIGNMENT

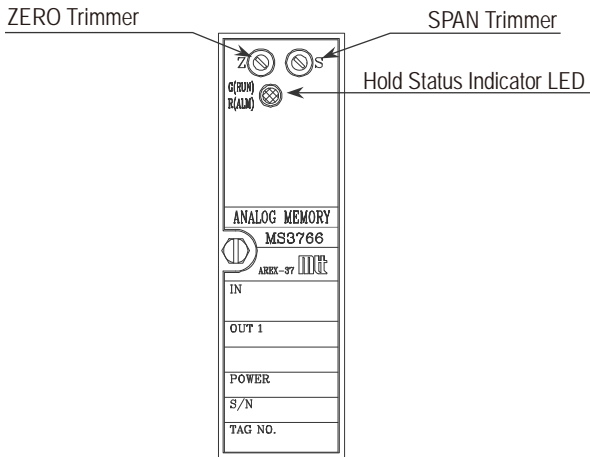


①	P (+)	POWER
②	N (-)	
③	GND	
④	+ OUTPUT	
⑤	- OUTPUT	
⑥	N.C.	
⑦	+ HOLD	
⑧	- HOLD	
⑨	+ INPUT	
⑩	- INPUT	
⑪	N.C.	

BLOCK DIAGRAM



FRONT VIEW



LED STATUS INDICATOR

● INDICATOR PATTERNS

No.	Event	Hold Status Indicator LED	Output	Recovery Operation
1	Power ON	Green LED turns ON for 1 second, and then red LED turns ON for 0.5 second. This cycle is repeated 3 times.	Normal	-
2	Normal operation	Green LED is ON.	Normal	-
3	Hold operation	Green LED blinks at 1 second intervals.	Held value	-
4	Held value recording error	Red LED blinks at 1 second intervals.	Held value: 0% or less	Cancel the hold mode.
5	DAC error	Red LED blinks at 0.25 second intervals.	Typically 0% or less, but may vary.	None
6	System error	Red LED is ON; Green LED is not defined.	Typically 0% or less, but may vary.	None

Note:

No. 6: The red LED sometimes fails to light up.