



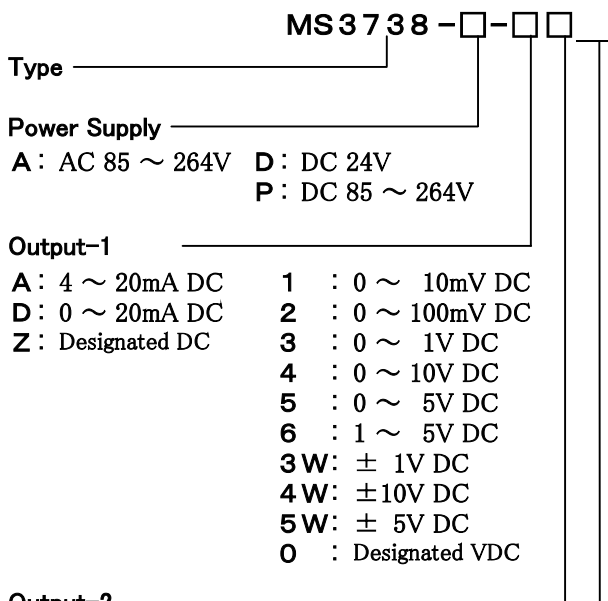
Standard Specifications Type: MS3738
Slim-shaped Plug-in Manual Setter with Single/Dual Output

MS3700

Overview

MS3738 is a slim-shaped plug-in manual setter with isolated single/dual output to output signals set by the switch on the front panel. (RoHS-conformed)

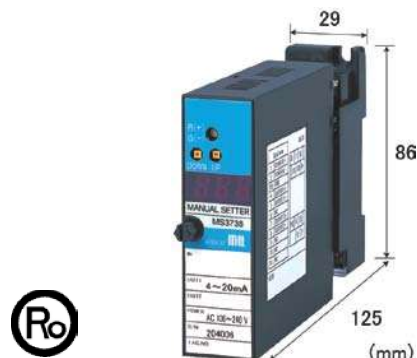
Ordering Format



Please specify upon ordering

- Product Model Number
 (Example) MS3738-A-AA
- *Factory default setting output value will be 0%.

- Other items to be specified:
- For output "Z": MS3738-A-AZ (Output 8~20mA)
 - To specify set value (output) MS3738-A-A(50%)
 - For more than one option: Enter Option Codes in succession. (/LX)



Specifications

●Power Supply Section

Power Supply	AC85~264V (Rating 100V~240V) 47~63Hz DC24V±10% DC85~264V (Rating 100V~240V)
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Power Sensitivity	Within ±0.1% of Span for each power supply voltage.
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Power Supply Fuse	160mA Fuse
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●Maximum Power Consumption

Power Supply	AC85~264V	DC24V	DC85~264V
Single Output	6.0VA max. / 1.7W max. / 6.0W max.		
Dual Output	6.5VA max. / 2.1W max. / 7.2W max.		

●Output Section

Maximum Output Load

Voltage Output (DC)	1V Span min.	2mA max.
	10mV	10kΩ min.
	100mV	100kΩ min.
Current Output (DC)	4~20mA Single output	750Ω max.
	4~20mA Dual output	Out-1 550Ω max. Out-2 350Ω max.

Output Setting Range	-10~+105% (0.1% step) (For 100% or more: Changeable by the switch on the front panel to 1% step.)
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Range of Products Available

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

- *For current output smaller than 0.1mA, the accuracy is not guaranteed.
 (e.g.1) 4~20mA⇒ Output span 16mA, Bias 25%
 (e.g.2) -1~4V⇒ Output span 5V, Bias -20%

● Standard Performance

Conversion Accuracy	Within $\pm 0.1\%$ /F.S. (@25°C $\pm 5^\circ\text{C}$)
Temp. Characteristics	Within $\pm 0.15\%$ of Span with every 10°C variation
Signal Isolation	Between Out1-Out2-Power Supply-Ground
Set Value Display	Red LED Line height:8.0mm 3 digits
Isolation	100M Ω min. (@500V DC)
Resistance	Between Out-1 - Out-2 - Power Supply - Ground
Dielectric Strength	Between [Out1,Out2]-[Power Supply, Ground] :2000V AC, Shut Down Current 0.5mA for 1 minute
	Between Power Supply - Ground :2000V AC, Shut Down Current 5mA for 1 minute
	Between Out1 - Out2 :500V AC, Shut Down Current 0.5mA for 1 minute
Measures against SWC	Conform to ANSI/IEEE C37.90.1-1989
Operating Environment	Temperature: -5~55°C Humidity : 5~90%RH(Non-Condensing)
Storage Temp.	-10~60°C

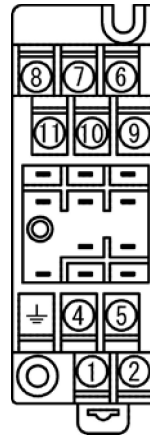
● Installation / Physical Specifications

Installation	Wall mounting &/or DIN-rail mounting
Wiring	M3.5 screw terminal connection (with P.S. terminal cover & screw drop-protection)
Screw Tightening Torque	0.8~1[N·m] Recommendable
Outer Dimension	W29×H86×D125mm (incl. set screws & terminal block)
Mass	Main Body 120g max., Terminal Block 80g max.

● Materials

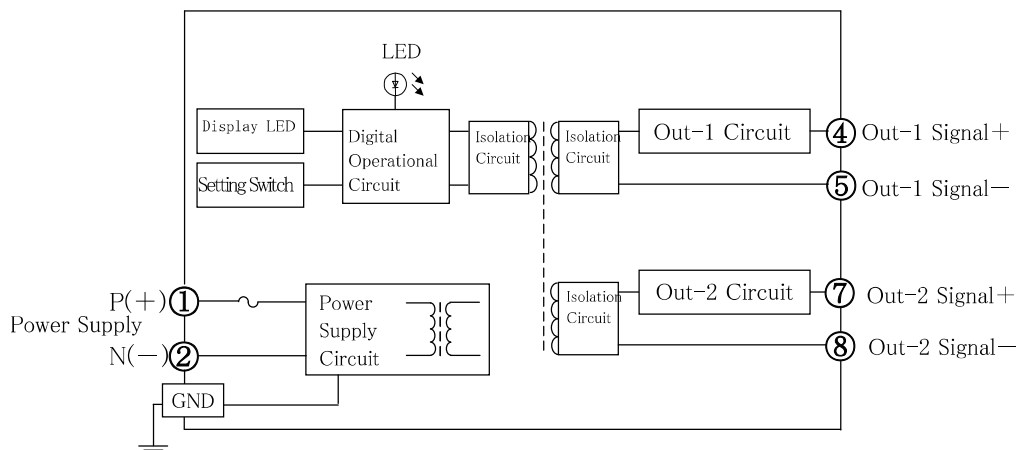
Housing	ABS Resin (UL-94V-0)
Terminal Block	ABS Resin (UL-94V-0)
Terminal Screws	Iron/Nickel-plated
Terminal Surface Treatment	0.2 μm / Gold plated
P.C. Board	Glass-Epoxy (FR-4:UL-94V-0)
Moisture-proof Coating	HumiSeal Coating :HumiSeal 1A27NS(Polyurethane Resin)

Terminal Arrangement / Signal Assignment

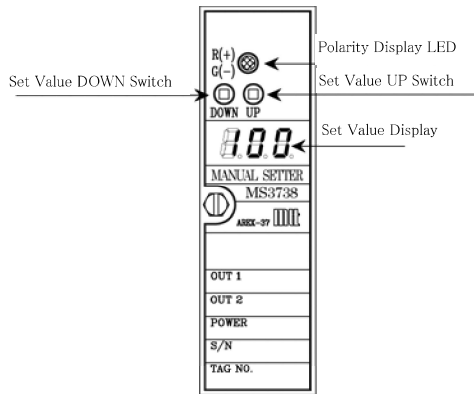


①	P(+)	POWER
②	N(-)	
⏏	GND	
④	+ OUTPUT 1	
⑤	- OUTPUT 1	
⑥	N. C	
⑦	+ OUTPUT 2	
⑧	- OUTPUT 2	
⑨	N. C	
⑩	N. C	
⑪	N. C	

Block Diagram



Front Drawing



Setting

● Setting Output

Setting Output

When the unit is powered on, the display will show the current set value. The set value can be changed by manipulating the Set UP/DOWN switch.

Display

The Set Value Polarity Display LED will be lighted in red when the set value is positive and in green when the value is negative. The Set Value Display will be off in about 1 min. after the last manipulation of the switch, but the Polarity Display LED will keep lighting in accordance with the set polarity.

Set Value UP/DOWN Switch

During the Set Value UP/DOWN Switch is kept pressed, the shift speed of value setting will be accelerated.

Factory Default Setting

The factory default output will be 0% unless otherwise specified.

State Display LED

● Display Pattern

Item	Event	7SEG LED Display	Red LED	Green LED	Output Signal	Recovery
1	Power activation and SW operation	Blinking with 1 sec. ON and 0.5 sec. OFF, 3 times	Blinking with 1 sec. OFF and 0.5 sec. ON, 3 times	Blinking with 1 sec. ON and 0.5 sec. OFF, 3 times	Normal output	—
2	Normal operation	Light OFF	Light ON when setting positive value	Light ON when setting negative value	Normal output	—
3	Setting	Set value	Light ON when setting positive value	Light ON when setting negative value	Normal output	—
4	DAC error detected	Error code 1	Blinking with 0.25-sec. interval	Light OFF	0% output	None
5	Set value CRC error detected	Error code 2	Blinking with 1-sec. interval	Light OFF	0% output	Reset
6	Correction value CRC error detected	Error code 4	Blinking with 1-sec. interval	Light OFF	0% output	Readjust
7	System error	Irregular	Light ON	Irregular	0% output	None

*Item 1: "888" and the dot light when 7SEG LED is ON.
 *Item 4: Output signals may be irregular.
 *Item 7: Output signals may be irregular.

*Item 7: Red LED may not be ON.
 *Items 4 to 7: Error code is indicated in the last 1 digit to be distinguished from the normal set value.