

# MT-SG STRAIN GAUGE Converter & Isolator

## FEATURE

- 5 Popular Input and Output Ranges Programmable by dip switches
- Changeable Input Module Between V/mA, Pt100, Potentiometer, Strain Gauge, easy maintain and save stock
- Low cost & high stability
- CE Approved



## SPECIFICATION

Input Range	Input Impedance	Output Range	Load Resistance
1.0 mV/V	≥ 1M ohm	0 ~ 100 mV	≥ 100K ohm
1.25 mV/V	≥ 1M ohm	0 ~ 1 V	≥ 100 ohm
1.5 mV/V	≥ 1M ohm	0 ~ 5 V	≥ 500 ohm
2.0 mV/V	≥ 1M ohm	0 ~ 10 V	≥ 1K ohm
3.0 mV/V	≥ 1M ohm	1 ~ 5 V	≥ 500 ohm
4.0 mV/V	≥ 1M ohm	2 ~ 10 V	≥ 1K ohm
5.0 mV/V	≥ 1M ohm	-10 ~ 0 ~ +10 V	≥ 10K ohm
10.0 mV/V	≥ 1M ohm	0 ~ 1 mA	≤ 10K ohm
20.0 mV/V	≥ 1M ohm	0 ~ 10 mA	≤ 1K ohm
50.0 mV/V	≥ 1M ohm	0 ~ 20 mA	≤ 500 ohm
		4 ~ 20 mA	≤ 500 ohm

- Accuracy:** ±0.1% of F.S.
- Response time:** ≤ 250 msec.
- Span adjustment::** ≤ 10% of F.S.
- Zero adjustment::** ≤ 5% of F.S.
- Output ripple:** ≤ 0.1% of F.S.
- Excitation Supply:** DC 5V/10V/24V, 40 mA, adjustable±10%  
10V / 24V changeable by DS3
- Power Supply:** AC 115 or 230V ±10%, 50/60 Hz  
AC 380 or 415V ±10%, 50/60 Hz  
Option: DC 12V, 24V, 48V ±10%, (Isolated)
- Power consumption:** DC 5W, AC 6.5VA
- Operating temperature:** 0~60 °C
- Operating relative humidity:** 20~95 %RH, non-condensing
- Temperature coefficient:** ≤ 100 PPM/°C
- Storage temperature:** -10~70 °C
- Isolation:** Between Power / Input / Output / Excit. Supply
- Insulation resistance:** ≥ 100M ohm at 500Vdc
- Surge test:** 4 KV, 1.2 x 50 μ sec.  
Common mode & differential mode
- Dielectric Strength:** AC 2.0 KV for 1 min  
Between Power / Input / Output / Case
- Standard:** Comply with EN50081-1, EN50082-2
- Dimensions:** 50mm(W) x 87mm(H) x 123mm(D) with socket
- Mounting:** Surface and DIN rail 35mm wide
- Weight:** 600g

## ADJUSTMENT

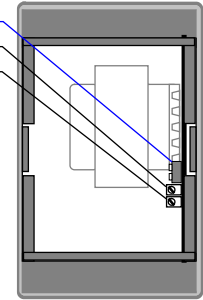
- Dip Switch: Programming for O/P - 4 Ranges selectable
- O/P Span Adjust Pot (Clockwise: o/p increase)
- O/P Zero Adjust Pot (Clockwise: o/p increase)

### Programming for input (on input module)

INPUT mV : (CODE: P1)				
SIGNAL RANGE	SW1	SW2	SW3	SW4
1.0 mV/V	on			
1.5 mV/V		on		
2.0 mV/V			on	
3.0 mV/V				on

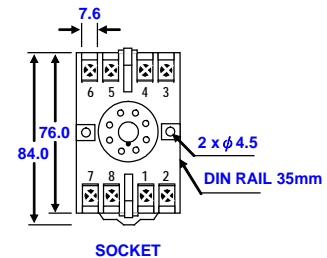
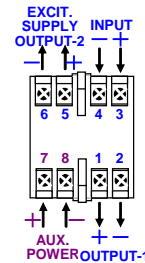
### Programming for output

SIGNAL RANGE	SW1	SW2	SW3	SW4	SW5
0 ~ 5 V		on	on	on	
1 ~ 5 V	on	on	on	on	
0 ~ 10 V			on	on	
2 ~ 10 V	on		on	on	
0 ~ 20 mA					on
4 ~ 20 mA	on				on



## CONNECTION DIAGRAM & SOCKET

### MT-SG WITH Analogue Output



## ORDERING INFORMATION



CODE	INPUT RANGE	CODE	OUTPUT 1 (A)	CODE	OUTPUT 1 (V)	CODE	OUT 2 (EXCIT.)	CODE	AUX. POWER
V1	1.0 mV/V(*P1)	A	0 ~ 1 mA	1	0 ~ 100 mV	E5	DC 5 V	A1	AC 115 V
V2	1.25 mV/V	B	0 ~ 10 mA	2	0 ~ 1 V	E2	DC 10 V	A2	AC 230 V
V3	1.5 mV/V(*P1)	C	0 ~ 20 mA	3	0 ~ 5 V	E0	Specify		
V4	2.0 mV/V(*P1)	D	4 ~ 20 mA	4	0 ~ 10 V				
V5	3.0 mV/V(*P1)	I	Specify (mA o/p)	5	1 ~ 5 V				
V6	4.0 mV/V	P	Programmable 6 ranges(by D-S): 4-20/0-20 mA 0-5/0-10/1-5/ 2-10 V	6	2 ~ 10 V				
V7	5.0 mV/V			7	-10 ~ +10 V				
V8	10.0 mV/V			V	Specify (Vo/p)				
V9	20.0 mV/V			N	None				
VA	40.0 mV/V								
VO	Specify (mV/V)								
P1	Programmable 4 Ranges(by D-S) 1.0 mV/V, 1.5 mV/V 2.0 mV/V, 3.0 mV/V								

**Remark:**

- > When you select coding P1 or P for input and output range, please specify initial range.
- > After change input or output range by dip switches (D-S), re-calibration is to be requested.