

# MT-RT POTENTIOMETER (RESISTANCE) Convertor

## FEATURE

- Measures 3 Wire Potentiometers and 2 Wire resistances
- 2 Pot Ranges and 4 two wire Resistance Range Programmable
- 6 Popular Output Ranges Programmable by dip switches
- Changeable Input Module Between V/mA, Pt100, Potentiometer, Strain Gauge, easy maintain and save stock
- Low cost and high stability
- CE Approved



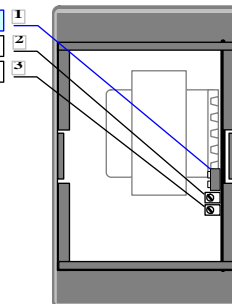
## SPECIFICATION

Input Range	Input Impedance	Output Range	Load Resistance
<b>POTENTIOMETER</b>			
0~50/~2.0K ohm	≥ 1M ohm	0 ~ 100 mV	≥ 100K ohm
0~2.0K/~200K ohm	≥ 1M ohm	≥ 100 ohm	≥ 100 ohm
0~2.0K/~200K ohm	≥ 1M ohm	≥ 500 ohm	≥ 500 ohm
<b>RESISTANCE</b>			
0 ~ 50 ohm	≥ 1M ohm	0 ~ 10 V	≥ 1K ohm
0 ~ 100 ohm	≥ 1M ohm	1 ~ 5 V	≥ 500 ohm
0 ~ 200 ohm	≥ 1M ohm	2 ~ 10 V	≥ 1K ohm
0 ~ 500 ohm	≥ 1M ohm	-10 ~ 0 ~ +10 V	≥ 10K ohm
0 ~ 1K ohm	≥ 1M ohm	0 ~ 1 mA	≤ 10K ohm
0 ~ 2K ohm	≥ 1M ohm	0 ~ 10 mA	≤ 1K ohm
0 ~ 5K ohm	≥ 1M ohm	0 ~ 20 mA	≤ 500 ohm
0 ~ 10K ohm	≥ 1M ohm	4 ~ 20 mA	≤ 500 ohm
0 ~ 20K ohm	≥ 1M ohm		
0 ~ 50K ohm	≥ 1M ohm		
0 ~ 100 K ohm	≥ 1M ohm		

- Accuracy:** ±0.1% of F.S.
- Option range:** Potentiometer: 0~50 / ~ 200K ohm (3 wired)  
Resistance: 0 ~ 100K ohm (2 wired)
- Excitation:** Potentiometer: 0~50/ ~ 2.0K ohm: 0.2Vdc  
: 0~2.0K/ ~ 200K ohm: 2Vdc  
Resistance: 0 ~ 100K ohm: 0.04 ~ 2.00 mAdc
- Response time:** ≤ 250 msec.
- Span adjustment:** ≤ 10% of F.S.; Option: 50% of F.S.
- Zero adjustment:** ≤ 5% of F.S.; Option: 50% of F.S.
- Output ripple:** ≤ 0.1% of F.S.
- Power Supply:** AC 115 or 230V ±15%, 50/60 Hz  
AC 380 or 415V ±10%, 50/60 Hz  
Option: DC/AC 20V~90V, (Isolated)  
DC 5W, AC 6.5VA
- Power consumption:** 0~60 °C
- Operating temperature:** 20~95 %RH, non-condensing
- Operating relative humidity:** ≤ 100 PPM/ °C
- Temperature coefficient:** -10~70 °C
- Storage temperature:** Between Power / Input / Output
- Isolation:** ≥ 100M ohm at 500Vdc
- Insulation resistance:** 4 KV, 1.2 x 50 μ sec.
- Surge test:** Common mode & differential mode  
AC 2.0 KV for 1 min
- Dielectric Strength:** 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:** 500g

## ADJUSTMENT

- Dip Switch: Programming for O/P - 6 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 )

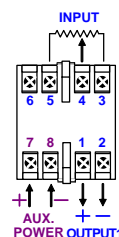
INPUT Resistance : ( CODE: P1 )				
SIGNAL RANGE	DIP-SWITCH (INPUT)			
	SW1	SW2	SW3	SW4
0Ω ~ 1KΩ	on	on		
0Ω ~ 2KΩ	on	on	on	
0Ω ~ 5KΩ	on	on	on	on
0Ω ~ 10KΩ				on

INPUT Potentiometer : ( CODE: P2 )				
SIGNAL RANGE	DIP-SWITCH (INPUT)			
	SW1	SW2	SW3	SW4
0~50Ω/~2.0KΩ	on	on		
0~2.0K/~200KΩ	on	on	on	

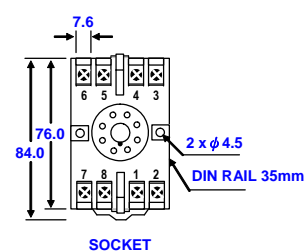
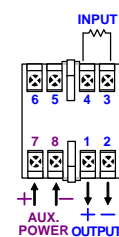
OUTPUT V / mA : ( CODE: P )					
SIGNAL RANGE	DIP-SWITCH (OUTPUT)				
	SW1	SW2	SW3	SW4	SW5
0 ~ 5 V		on	on	on	on
1 ~ 5 V	on	on	on	on	on
0 ~ 10 V			on	on	on
2 ~ 10 V	on		on	on	on
0 ~ 20 mA					on
4 ~ 20 mA	on				on

## CONNECTION DIAGRAM & SOCKET

MT-RT POTENTIOMETER WITH 1 ANALOGUE OUTPUT



MT-RT RESISTANCE WITH 1 ANALOGUE OUTPUT



## ORDERING INFORMATION

MT-RT- Input Range — Output Range — Aux. Power

CODE	INPUT RANGE	CODE	INPUT RANGE	CODE	INPUT RANGE	CODE	OUTPUT	CODE	OUTPUT	CODE	AUX. POWER
R1	0 ~ 50 ohm	R8	0 ~ 10.0K ohm	RP1	0~50/~10.0KΩ	A	0 ~ 1 mA	1	0 ~ 100 mV	A1	AC 115 V
R2	0 ~ 100 ohm	R9	0 ~ 20.0K ohm	RP2	0~10.0K/~50.0KΩ	B	0 ~ 10 mA	2	0 ~ 1 V	A2	AC 230 V
R3	0 ~ 200 ohm	RA	0 ~ 50.0K ohm	RPO	Specify(3-w Ω)	C	0 ~ 20 mA	3	0 ~ 5 V		
R4	0 ~ 500 ohm	RB	0 ~ 100K ohm	P2	Programmable 2 Ranges (by D-S) 0~50Ω/~2.0KΩ 0~2.0K/~200.0KΩ (Potentiometer)	D	4 ~ 20 mA	4	0 ~ 10 V		
R5	0 ~ 1.0K ohm	RO	Specify(2-w Ω)			I	Specify (mA o/p)	5	1 ~ 5 V		
R6	0 ~ 2.0K ohm	P1	Programmable 4 Ranges (by D-S) 0~1.0/~2.0/~5.0/~10.0KΩ (Resistance)			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		
R7	0 ~ 5.0K ohm					V		Specify			N

- Remark:**
- When you select coding P1, P2 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.