Temperature Regulator

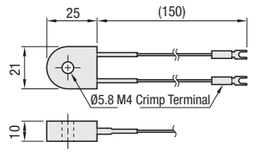
24 x 28

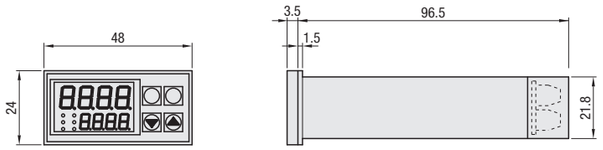
Temperature Regulator – 24 X 48

Size	Output Type		Heater wire breakage alarm function	Accessories
	Relay Contact Output	SSR Drive Voltage Output		
24 x 48	MTMNR	MTMNS	No Flange	—
	MTMNRD	MTMNSD	Available	CT (Current Transformer)

Accessories mounting attachment is included in the box.

CT Current Transformer





Size	Output Type	Part Number	Heater Wire Breakage Alarm Function
24 x 48	Relay Contact Output	MTMNR	—
		MTMNRD	Available
	SSR Drive Voltage Output	MTMNS	—
		MTMNSD	Available

Part Number Example

Part Number: MTMNR

Be sure to refer to Temperature Regulator Guide on **P.3770**.

Specification

Size	24 x 48 mm	
Part Number	MTMNR / MTMNRD	MTMNS / MTMNSD
Outer Diameter Dimension	24 x 48 x 100	
Control Method	ON/OFF control, PID Control with Auto Turning, PID Control with Self-Turning	
Input	Thermocouples (K / J / R / T / N / S / B) Temperature Measuring Resistor (Pt100 JPt100)	
Control Output (OUT1)	Relay Contact Output (Contact Capacity AC250 V 3A Resistance Load)	SSR Drive Voltage Output (DC12 V Max. 20mA)
Alarm Output (EV1)	Relay Contact Output (AC250 V 2.4A Resistance Load) 1a Contact Point	
Control/Alarm Output 2 (OUT2/EV2)	Relay Contact Output (AC250 V 2.4A Resistance Load) 1a Contact Point	
Sampling Frequency	500 mS	
Indication Accuracy (Thermocouple)	The bigger one of ±0.3% of specified value +1 digit or ±2°C ±3°C for -100~0°C, ±4°C for -200~-100°C, no regulation for 400°C or less of B Thermocouple	
Indication Accuracy (Temp. Measuring Resistor)	The bigger one of ±0.3% of specified value +1 digit or ±0.9°C	
Indication Accuracy Maintenance Temp. Range	Ambient Temperature: 23±10°C	
Storage Element	EEPROM	
Power Supply Voltage	AC 100–240V (Allowable voltage change range 85–264V)	
Power Consumption	10 VA (Max.)	
Mass	180 g or less	

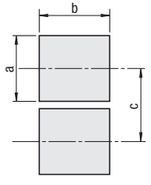
*For relay contact of OUT1 EV1 OUT2 EV2, the mechanical life is 5 million times or more, and the electrical life is 100 thousand times or more.

Sensor Input Types and Sensor Range

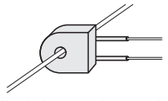
Sensor		Lower to Upper Limit	Setting of Decimal Point
00	K Thermocouple	-200~ 1372	-199.9~990.0
01	J Thermocouple	-200~ 850	-199.9~850.0
02	R Thermocouple	0~ 1700	
03	T Thermocouple	-200~ 400	-199.9~390.0
04	N Thermocouple	-200~ 1300	-199.9~990.0
05	S Thermocouple	0~ 1700	
06	B Thermocouple	0~ 1800	
10	Pt100Ω	-199~ 500	-199.9~500.0
11	JPt100Ω	-199~ 500	-199.9~500.0

Panel Cut Dimension

Single Installation

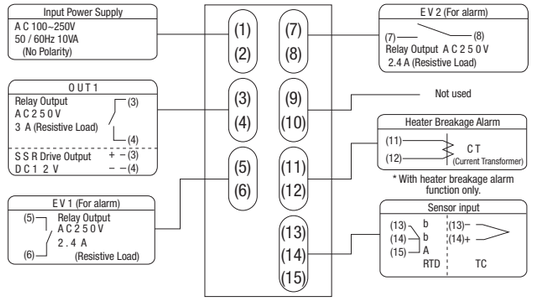


With heater wire breakage alarm function only.		
CT Input (Current Transformer)	Setting Range	AC1–30A
	Precision	5% (Set Resolution 1A)
	Breakage Detection	ON Time of OUT1: 300mS or More
	Welding Detection	ON Time of OUT1: 300mS or More



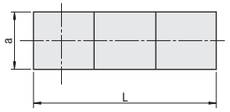
*Use the heater wire breakage alarm function included CT (Current Transformer) by threading the heater lead wire through Ø5.8 hole.

Terminal Arrangement for Wire Connection



Solid Installation

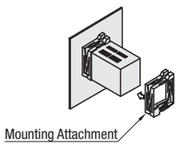
*To install, insert the body and gasket into the square hole of the panel, and insert the mounting attachment from the rear side until clearance is eliminated.



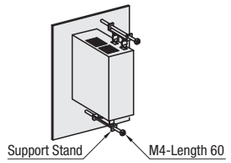
Size	a	b	c	L
24 x 48	22.2 +0.3 0	45 +0.6 0	60 or more	(48 x No. of regulators -3) +0.6 0
48 x 48	45 +0.6 0			
96 x 96	92 +0.6 0	92 +0.6 0	120 or more	(96 x No. of regulators -3) +1 0

How to Mount

Size: 24 x 48, 48 x 48



Size: 96 x 96



Temperature Regulator

48 x 48 / 96 x 96

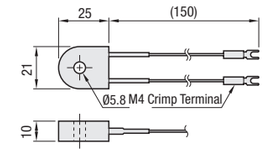
Temperature Regulator – 48 X 48

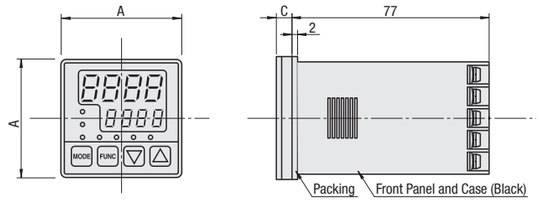
Temperature Regulator – 96 x 96

Size	Output Type		Heater Wire Breakage Alarm Function	Accessory
	Relay Contact Output	SSR Drive Voltage Output		
48 x 48	MTCTR	MTCTS	No Flange	—
	MTCTRD	MTCTSD	Available	CT (Current Transformer)
96 x 96	MTBGR	MTBGS	No Flange	—

Accessories mounting attachment is included in the box.

CT Current Transformer





Size	Output Type	Part Number	Heater Wire Breakage Alarm Function	A	C
48 x 48	Relay Contact Output	MTCTR	—	48	6
		MTCTRD	Available		
	SSR Drive Voltage Output	MTCTS	—		
		MTCTSD	Available		
96 x 96	Relay Contact Output	MTBGR	—	96	9
	SSR Drive Voltage Output	MTBGS	—		

Part Number Example

Part Number: MTCTR

Be sure to refer to Temperature Regulator Guide on **P.3770**.

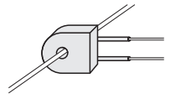
Specification

Size	48 x 48 mm		96 x 96 mm	
Part Number	MTCTR / MTCTRD	MTCTS / MTCTSD	MTBGR	MTBGS
Outer Diameter Dimension	48 x 48 x 83		96 x 96 x 86	
Control Method	ON/OFF control, PID Control with Auto Turning, PID Control with Self-Turning			
Input	Thermocouples (K / J / R / T / N / S / B) Temperature Measuring Resistor (Pt100 JPt100)			
Control Output (OUT1)	Relay Contact Output (Contact Capacity AC250 V 3A Resistance Load)	SSR Drive Voltage Output (DC12 V Max. 20 mA)	Relay Contact Output (Contact Capacity AC250 V 3A Resistance Load)	SSR Drive Voltage Output (DC12 V Max. 20 mA)
Alarm Output (EV1)	Relay Contact Output (AC250 V 2.4A Resistance Load) 1a Contact Point			
Control/Alarm Output2 (OUT2/EV2)	Relay Contact Output (AC250 V 2.4A Resistance Load) 1a Contact Point			
Sampling Frequency	500mS			
Indication Accuracy (Thermocouple)	The bigger one of ±0.3% of specified value + 1 digit or ±2°C ±3°C for -100~0°C, ±4°C for -200~-100°C, no regulation for 400°C or less of B Thermocouple			
Indication Accuracy (Temp. Measuring Resistor)	The bigger one of ±0.3% of specified value +1 digit or ±0.9°C			
Indication Accuracy Maintenance Temp. Range	Ambient Temperature: 23±10°C			
Storage Element	EEPROM			
Power Supply Voltage	AC 100–240 V (Allowable voltage change range 85–264 V)			
Power Consumption	10 VA (Max.)			
Mass	150 g or less		380 g or less	

* For relay contact of OUT1 EV1 OUT2 EV2, the mechanical life is 5 million times or more, and the electrical life is 100 thousand times or more.

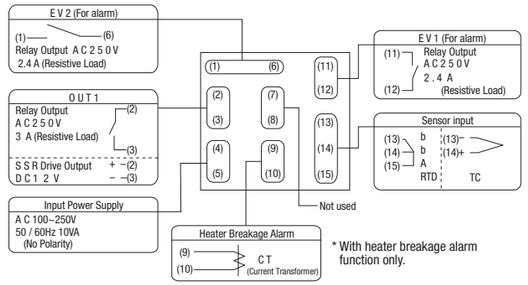
* Refer to the left page for sensor input type and sensor range.

With heater wire breakage alarm function only.		
CT Input (Current Transformer)	Setting Range	AC1–30A
	Precision	5% (Set Resolution 1A)
	Breakage Detection	ON Time of OUT1: 300 mS or More
	Welding Detection	ON Time of OUT1: 300 mS or More



*Use the heater wire breakage alarm function included CT (Current Transformer) by threading the heater lead wire through Ø5.8 hole.

Terminal Arrangement for Wire Connection Example (48 x 48)



For panel cut dimensions and how to mount, refer to the previous page.

Terminal Arrangement for Wire Connection (Size: 96 x 96)