

# Temperature Adjuster

Instruction manual is available online:  
<http://fa.misumi.jp/ht/>  
 Refer to a collection of FAQ which compiled frequently asked questions.

Be sure to refer to Temperature Adjuster Overview on P.1667.

Size	Output Type		Heater Wire Breakage Alarm Function	Accessory
	Relay Contact Output	SSR Drive Voltage Output		
24x48	MTMNR	MTMNS	Unavailable	-
	MTMNRD	MTMNSD	Available	CT (Current Transformer)

Accessory mounting attachment is included in the box.

Size	Output Type	Part Number	Heater Wire Breakage Alarm Function	Unit Price 1 ~ 10 pc(s).
24x48	Relay Contact Output	MTMNR	-	
		MTMNRD	Available	
	SSR Drive Voltage Output	MTMNS	-	
		MTMNSD	Available	

Ordering Example  
 Part Number  
**MTMNR**

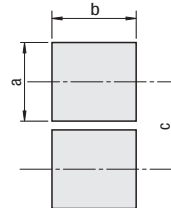
For orders larger than indicated quantity, please check with WOS.

Specification	
Size	24x48mm
Part Number	MTMNR/MTMNRD MTMNS/MTMNSD
O.D. Dimension	24x48x100
Control Method	ON/OFF control, PID Control with Auto Turning, PID Control with Self-turning
Input	Thermocouple (K, J, R, T, N, S, B), Temperature Measuring Resistor (Pt100 JPt100)
Control Output (OUT1)	Relay Contact Output (Contact Capacity AC250V 3A Resistance Load) SSR Drive Voltage Output (DC12V Max. 20mA)
Alarm Output (EV1) Control / Alarm Output2 (OUT2/EV2)	Relay Contact Output (AC250V 2.4A Resistance Load) 1a Contact Point
Sampling Frequency	500mS
Indication Accuracy (Thermocouple)	The bigger one of $\pm 0.3\%$ of specified value +1 digit or $\pm 2^\circ\text{C}$ $\pm 3^\circ\text{C}$ for $-100 \sim 0^\circ\text{C}$ , $\pm 4^\circ\text{C}$ for $-200 \sim -100^\circ\text{C}$ , no regulation for $400^\circ\text{C}$ or less of B Thermocouple
Indication Accuracy (Temperature Measuring Resistor)	The bigger one of $\pm 0.3\%$ of specified value +1 digit or $\pm 0.9^\circ\text{C}$
Indication Accuracy Maintenance Temperature Range	Ambient Temperature: $23 \pm 10^\circ\text{C}$
Storage Element	EEPROM
Power Supply Voltage	AC 100~240V (Allowable Voltage Change Range 85 ~ 264V)
Power Consumption	10VA (max.)
Mass	180g or Less

Sensor Input Types and Sensor Range			
Sensor	Lower	Upper Limit	Setting the 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 Pt100Q	-199	500	-199.9~500.0
11 JPt100Q	-199	500	-199.9~500.0

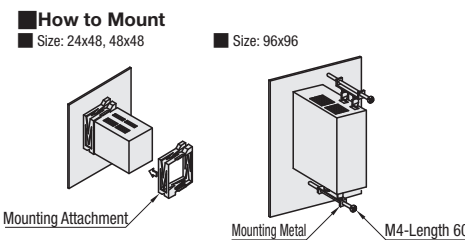
### Panel Cut Dimension

#### Single Installation



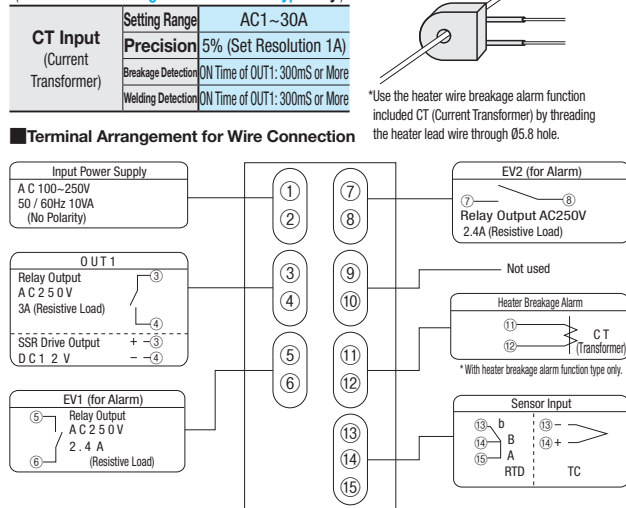
**Solid Installation**  
 \*To install, insert the body and gasket into the square hole of the panel, and insert the mounting attachment from the rear side until clearance is eliminated.

Size	a	b	c	L
24x48	22.2 <sup>+0.3</sup>	45 <sup>+0.6</sup>	60 or More	(48x Qty. of Controllers-3) <sup>+0.6</sup>
48x48	45 <sup>+0.6</sup>	92 <sup>+0.6</sup>	120 or More	(96x Qty. of Controllers-3) <sup>+0.6</sup>



\* 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.

(With Heater Breakage Alarm Function Type only.)



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Size	Output Type		Heater Wire Breakage Alarm Function	Accessory
	Relay Contact Output	SSR Drive Voltage Output		
48x48	MTCTR	MTCTS	Unavailable	-
	MTCTRD	MTCTSD	Available	CT (Current Transformer)
96x96	MTBGR	MTBGS	Unavailable	-

Accessory mounting attachment is included in the box.

Size	Output Type	Part Number	Heater Wire Breakage Alarm Function	A	C	Unit Price 1 ~ 10 pc(s).
48x48	Relay Contact Output	MTCTR	-	48	6	
		MTCTRD	Available			
	SSR Drive Voltage Output	MTCTS	-			
		MTCTSD	Available			
96x96	Relay Contact Output	MTBGR	-	96	9	
	SSR Drive Voltage Output	MTBGS	-			

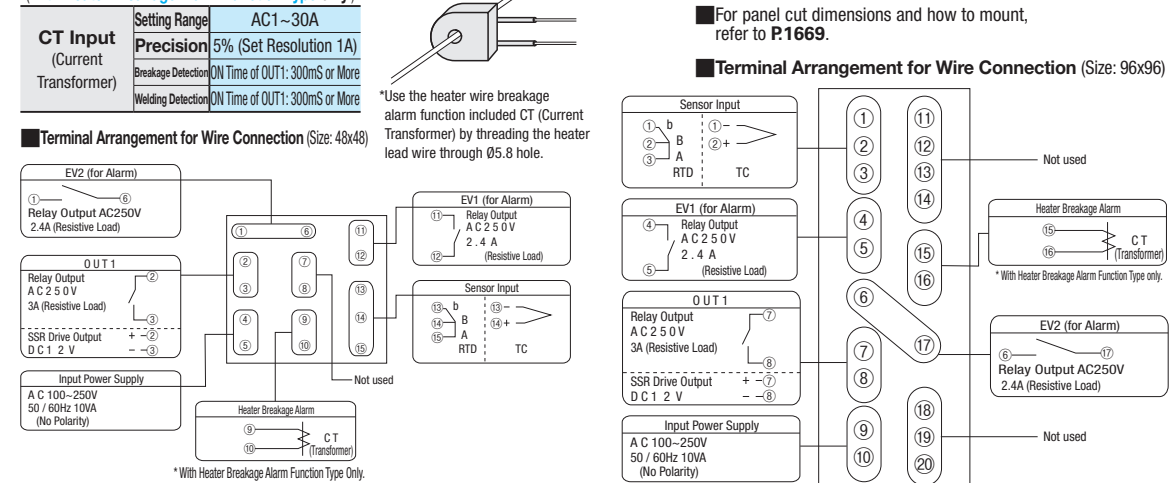
Ordering Example  
 Part Number  
**MTCTR**

For orders larger than indicated quantity, please check with WOS.

Specification		48x48mm		96x96mm	
Size		48x48x83		96x96x86	
Part Number		MTCTR / MTCTRD		MTCTS / MTCTSD	
O.D. Dimension		48x48x83		96x96x86	
Control Method		ON/OFF control, PID Control with Auto Turning, PID Control with Self-turning			
Input		Thermocouple (K, J, R, T, N, S, B), Temperature Measuring Resistor (Pt100 JPt100)			
Control Output (OUT1)		Relay Contact Output (Contact Capacity AC250V 3A Resistance Load)	SSR Drive Voltage Output (DC12V Max. 20mA)	Relay Contact Output (Contact Capacity AC250V 3A Resistance Load)	SSR Drive Voltage Output (DC12V Max. 20mA)
Alarm Output (EV1) Control / Alarm Output2 (OUT2/EV2)		Relay Contact Output (AC250V 2.4A Resistance Load) 1a Contact Point			
Sampling Frequency		500mS			
Indication Accuracy (Thermocouple)		The bigger one of $\pm 0.3\%$ of specified value +1 digit or $\pm 2^\circ\text{C}$ $\pm 3^\circ\text{C}$ for $-100 \sim 0^\circ\text{C}$ , $\pm 4^\circ\text{C}$ for $-200 \sim -100^\circ\text{C}$ , no regulation for $400^\circ\text{C}$ or less of B Thermocouple			
Indication Accuracy (Temperature Measuring Resistor)		The bigger one of $\pm 0.3\%$ of specified value +1 digit or $\pm 0.9^\circ\text{C}$			
Indication Accuracy Maintenance Temperature Range		Ambient Temperature: $23 \pm 10^\circ\text{C}$			
Storage Element		EEPROM			
Power Supply Voltage		AC 100~240V (Allowable Voltage Change Range 85 ~ 264V)			
Power Consumption		10VA (max.)		10VA (max.)	
Mass		180g or Less		380g 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 P.1669 for sensor input type and sensor range.

(With Heater Breakage Alarm Function Type only.)



For panel cut dimensions and how to mount, refer to P.1669.

Terminal Arrangement for Wire Connection (Size: 96x96)

