■Universal - Compact
Universal - Compact with Alarming Function
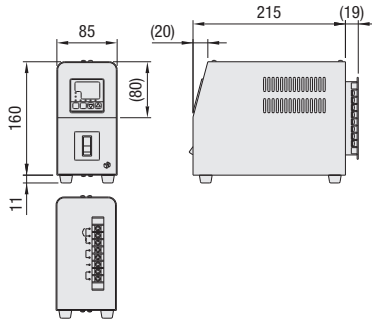
■Universal - Dual Outputs

RoHS 10

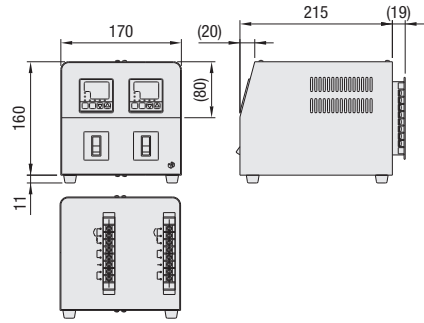## ■Universal - High Electrical Current

RoHS 10

Universal - Compact
MTCS [Single-phase, AC100V~240V, 20A Max.]

Universal - Compact with Alarming Function
MTCRM [Single-phase, AC100V~240V, 20A Max.]

Universal - Dual Outputs
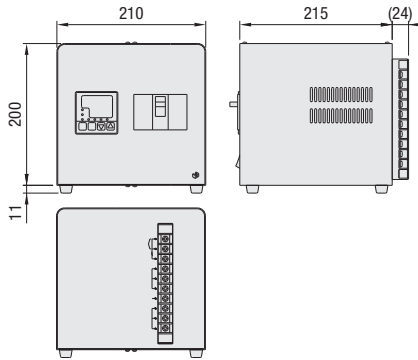**MTCD** [Single-phase, AC100V~240V, 20A x2 Max.]

85   (20)   215   (19)
160
(80)
11

170   (20)   215   (19)
160
(80)
11

Universal - High Electrical Current
MTCH [Three-phase, AC200V, 30A Max.]

210   215   (24)
200
11

Part Number	Input Type	Unit Price Qty. 1 ~ 4
MTCS	Swivel	
MTCRM		
MTCD		
MTCH		

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

• Cautions on MTCD (Double Output Type)

1CH   2CH
R ○── ○ R
S ○── ○ S
E ○── ○ E
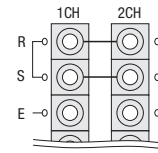
For power source of 1CH and 2CH, be sure to wire separately. Avoid using by shorting the terminals of 1CH and 2CH as shown. Otherwise, the power capacity of 1CH and 2CH will be added to the power source and the allowable power source value will be exceeded. As a result, heat generation and ignition may occur.

Be sure to avoid the wiring shown above.
Power cord supplied by user.

Ordering Example   **Part Number**   **MTCH**

■ Type of Sensor

The Universal Type can be used as the sensor for Thermocouples (K, J, R, T, N, S, B) and Pt100Ω / JPt100Ω. * Set for thermocouple K at the time of shipping.
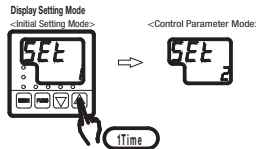
---

i How to Set the Controls

1 Switching of Display
Press "MODE" key for 2 seconds to change displays.

20
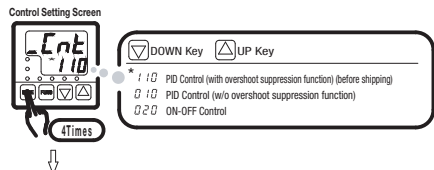80

Long Press for 2 Seconds

⇒

2 Change of Display Setting Mode
When display Setting Mode is shown, press UP key and change from "Initial Setting Mode" *1* to "Control Parameter Mode *2*.

Display Setting Mode
<Initial Setting Mode>
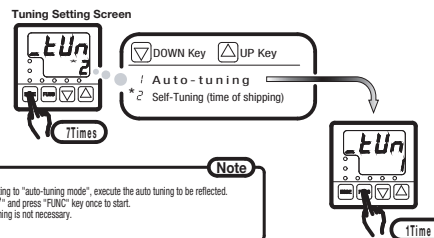SEE

<Control Parameter Mode>
SEE 2

1Time

⇒

3 PID (Time of Shipping) and ON / OFFSettings
Set to Control Parameter Mode, press MODE key four times and the control setting screen will be on display. Use UP/DOWN keys.

Control Setting Screen
Cnt 110

4Times

▽ DOWN Key   △ UP Key
* 110 PID Control (with overshoot suppression function) (before shipping)
  010 PID Control (w/o overshoot suppression function)
  020 ON-OFF Control

⇓

4 Setting of Self-tuning (Time of Shipping) and Auto-tuning
Set to Control Parameter Mode, press MODE key seven times and the tuning setting screen will be on display. Use UP/DOWN keys.

Tuning Setting Screen
tUn 2

7Times

▽ DOWN Key   △ UP Key
1 Auto-tuning
* 2 Self-Tuning (time of shipping)

tUn 1

Note
After setting to "auto-tuning mode", execute the auto tuning to be reflected. Set at "1" and press "FUNC" key once to start.
* Self-tuning is not necessary.

1Time

■Other Display

At

Auto tuning is executing.
* This message and standard display will be shown alternately.

‾‾‾‾

The sensor is disconnected or the allowable temperature range is exceeded.
* Check the sensor connections.

- - - -

The temperature is below the sensor temperature range.

ErrO

· Memory Error
* If the error message is displayed after reboot, temperature regulator is damaged. It is not operational.

Err1

· Sensor type is incorrect.
* Ex. If a Temperature Measuring Resistor (Pt100Ω) is connected instead of a thermocouple for the thermocouple setting.

Err2

· Auto Tuning Error
* Execute Auto Tuning Again.