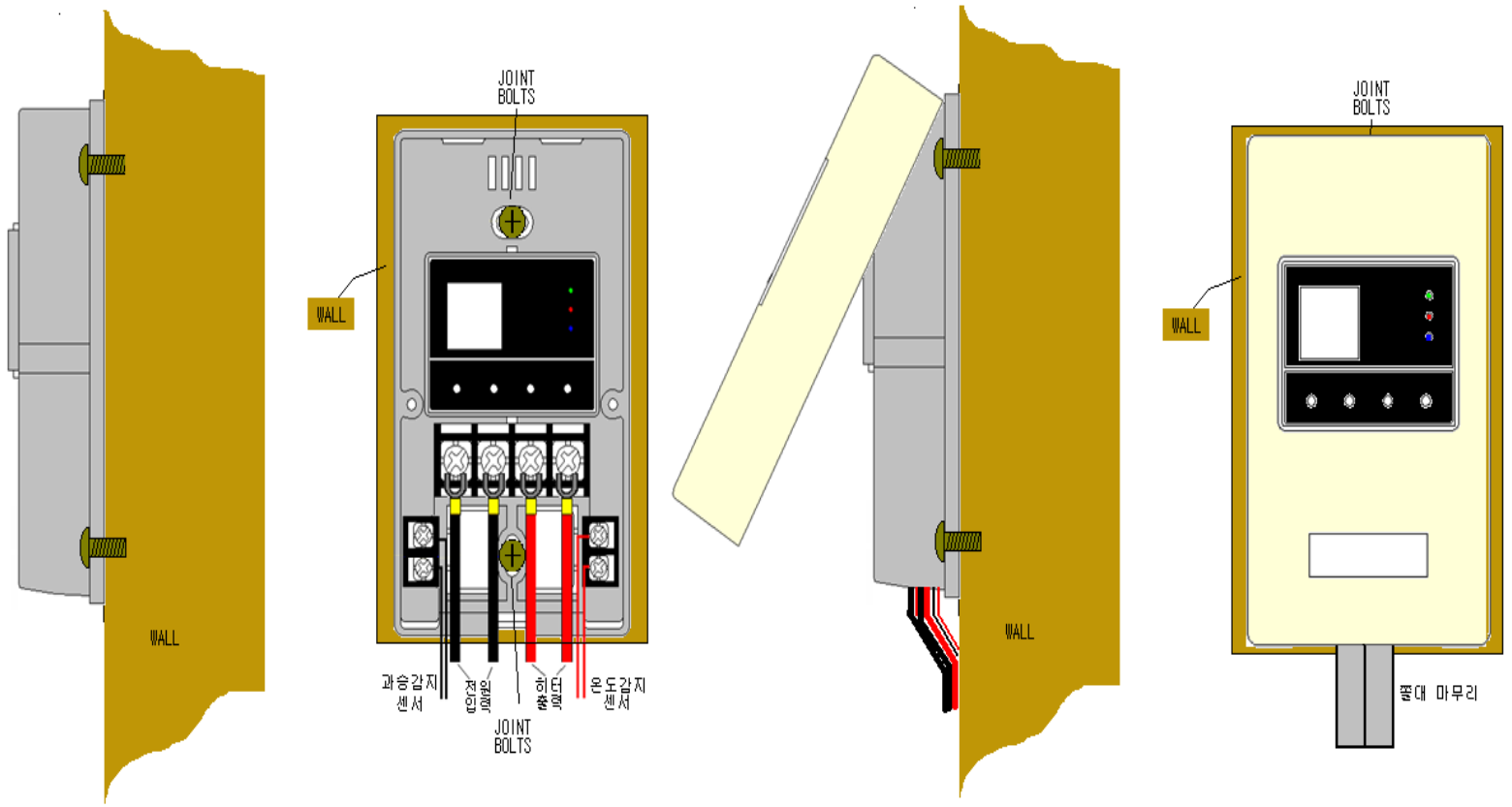
Manual for Use and Installation
UTH-170R

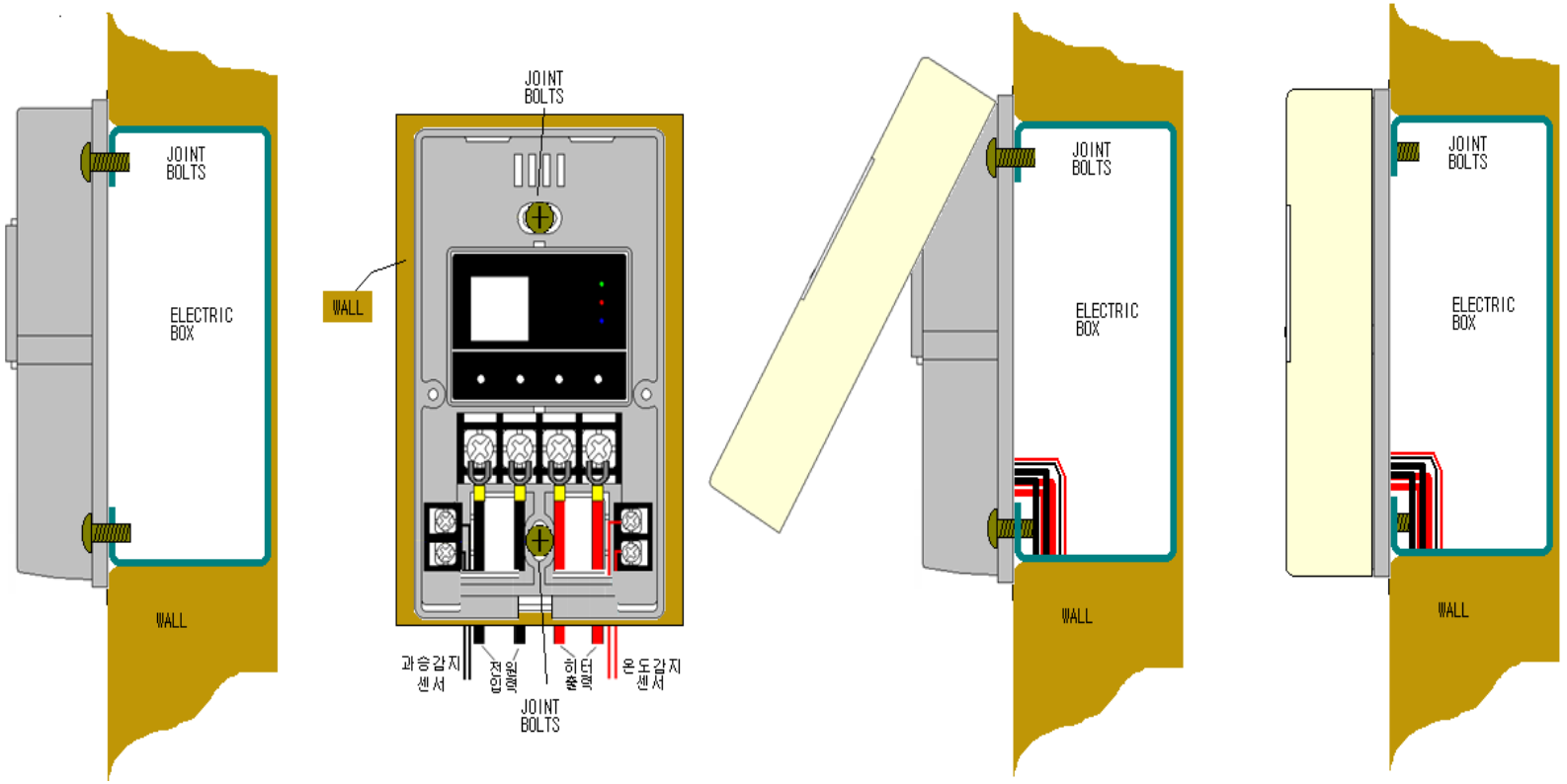
Connection and Fixing

Fixing & Connection Method #1



Connection and Fixing

Fixing & Connection Method #2



Function Change and Motion

Lamp Display

SET Lamp : This Lamp flickers at the time of changing the set value with temp set button or changing set temp. (Green lamp)
If there is no key motion as temp change is over or set is completed, after 3 sec, the present temp displays and set limp flickers

RUN Lamp : This lamp is lightened when output is advanced to the side of load. (Red Lamp)
This lamp is lightened when output is continued after set is over and upon error is occurred, this lamp flickers.

Basic Motions

Temp Set : The temp on the display screen always shows the present temp. if pushing the set button or changing the temp, the temp on the display screen shows the set temp. If this is no change in set temp for over 3 sec, the present temp is shown.

Power Motion : This uses for controller power ON /OFF. If power motion is OFF, all displays are OFF and Key does not work.

Remote Control Motion:

The remote control only for UTH-remocon 1 controls the controller power ON/OFF and sets temp set UP/DOWN.

Use the remote control toward the front. The function of fine setting motion or the sequence motion is intentionally removed for reducing the occurrence of malfunction. (For fine setting, please use the keys on the controller).

How to Set

Set if necessary to change the range of set temp finely. " tn" displays on the Temp display Screen after pushing Temp Set UP/DOWN button for 3sec simultaneously. At this time, push UP or DOWN key, then the menu of In – St – En is shown. Move to the next step by pushing Temp Set UP/DOWN button for 3sec simultaneously till the intended menu is shown. When all sets are completed by repeating above process, the message, "AU" flickers for 3 times and the change value is saved.

※ It is not recommend for the end-user to conduct the fine setting because it may cause error message and/or malfunction.

※ If any malfunction is occurred due to poor noise setting, push the power key for about 10 sec, then the display, "AU" flickers for 3 times and the setting values are initialized (all setting values are changed to the basic values set at the time of factory shipment).

Function Change and Motion

En : This is one of the most common sensor mode. The sensor mode works by comparing the controller's set temp with the temp sensed at the position of the present sensor (see Table #1)
(Ex: Set Temp > Present Temp: Output ON , Set Temp <Present Temp: Output Off)

Table #1 (Sensor Mode)

Roles	Display	Basic Set	Scope of Set	Description
Classification of function	**tn**	SEN	SEN , TIMER	SEN (Sensor Motion mode) , TIMER(Time Motion mode)
Min Temp Set	**-L**	0℃	-9℃ ~ not exceeding Max Temp	Set the lowest Temp in the range of Temp Set
Max Temp Set	**-H**	60℃	Over Min Temp ~80℃	Set the highest Temp in the range of Temp Set
Temp Deviation Set	**IF**	2℃	0℃ ~5℃	ON/OFF motion from the deviation between Set Temp and present Temp
Output Delay Time	**Ly**	20 sec	01 sec ~ 60 sec	After output ON, work later as long as the delay time
Overheating Temp Set	**Ht**	60℃	Over Max Temp ~ 80℃	Error occurs when overheating sensor sensing temp exceeds the set temp (OPTION)
Correction Temp Set	**ES**	00℃	-9℃ ~ 10℃	Scope for correcting the actual temp deviation

TIMER Functions

* Must disconnect the temp sensor for using timer functions (see Table #2).
Push ∨ and ∧ keys simultaneously for 3 sec, 'tn' displays. Push ∧ key once again, the 'EN' displays. 'EN' as the mode by sensor is same to the present mode. Push ∧ key once again, then 'In' displays. At this time push ∨ and ∧ keys simultaneously, then the present cycle value displays. For setting cycle, use ∨ or ∧ key. After setting the cycle value, push ∨ and ∧ keys simultaneously, then 'AU' flickers, the cycle value is saved, and the present intensity displays.

How to set (serviceman) = push ∨ and ∧ keys simultaneously– 'tn' displays on the screen- select 'tin' - push ∨ and ∧ keys simultaneously–Cycle value d splays(Cycle) – select Cycle (basic 3 min)
- Set cycle value - push ∨ and ∧ keys simultaneously - 'AU' flickers – saved

*** It is recommended for the end-user not to set.**
How to use by the end-user = select the intensity to be used with ∨ and/or ∧ key (basic single-step)

Function Motion(Timer Mode)

In mode = A timer mode of operating by setting cycle and step (see Table #2)

(Must disconnect the temp sensor for using timer mode)

If sensor is snapped while the sensor mode has been used, the senor mode is converted to the timer mode automatically.

TIMER Function

* Must disconnect the temp sensor for using timer functions.

Push ∨ and ∧ keys simultaneously for 3 sec, 'tn' displays. Push ∧ key once again, the 'EN' displays. 'EN' as the mode by sensor is same to the present mode. Push ∧ key once again, then 'In' displays. At this time push ∨ and ∧ keys simultaneously, then the present cycle value displays. For setting cycle, use ∨ or ∧ key. After setting the cycle value, push ∨ and ∧ keys simultaneously, then 'AU' flickers, the cycle value is saved, and the present intensity displays.

How to set (serviceman) = push ∨ and ∧ keys simultaneously– 'tn' displays on the screen- select 'tin' - push ∨ and ∧ keys simultaneously–Cycle value d splays(Cycle) – select Cycle (basic 3 min)

- Set cycle value - push ∨ and ∧ keys simultaneously - 'AU' flickers – saved

*** It is recommended for the end-user not to set.**

How to use by the end-user = select the intensity to be used with ∨ and/or ∧ key (basic single-step)

Table # 2

Step	Output (0N)	Output (OFF)	Remarks
1	15 sec * S	45 sec * S	※ S: Selected cycle value In case of 1 min, S=1 In case of 3 min, S=3 In case of 5 min, S=5 * * ※ (in case of 20 min, S = 20, value multiplying by 20) ※ (in case of 60 min, S = 60 , value multiplying by 60) This will be the length of ON and OFF
2	20 sec * S	40 sec * S	
3	25 sec * S	35 sec * S	
4	30 sec * S	30 sec * S	
5	35 sec * S	25 sec * S	
6	40 sec * S	20 sec * S	
7	45 sec * S	15 sec * S	
8	50 sec * S	10 sec * S	
9	50 sec * S	10 sec * S	
10	50 sec * S	10 sec * S	

SPEC.

Classi.	Item		SPECIFCATIONS
Power Unit	Rated input voltage		85V AC ~ 265V AC (Universal voltage)
	Output Voltage		85V AC ~ 265V AC (Universal voltage)
	Driving Type		Electronic Type
	Max. Output		4 kw
	Load	No. of circuit	1 circuit
		Max. Capacity	18A (Resistive Load)
Degree of Precision	Degree of Temp Precision		± 1℃ ; Change of 1℃ /30sec (Delay Option 20 sec)
Motion	Power input display		FND Temp Display
	Output Display		RUN RED is ON (Red)
	Temp Range		Possible to choose within the range of -9 ℃ ~ 80 ℃
	Output Delay(Option)		01 sec ~ 60 sec
Sensor	Types		NTC: Negative Temperature Coefficient Epoxy Molding
	Degree of Precision %		1 %
	25 ℃'s rating resistance		5000 ohm, Beta Constant = 4000 ^{0} K
	Quantity		SENSOR 1: for sensing Temp, SENSOR 2: for checking Overheating (Option)
Function (Capacity)	Safety Device	Snapping / Short circuit of Sensor Wires	If Temp Sensing Sensor is snapped, converted to Timer mode automatically and work If short Circuit, "ES" displays and output is OFF
		Overheating Prevention Sensor(OPTION)	If overheating sensing temp is higher than that of set overheating temp, "Ht (Overheat)" displays and output is shut off.
		Fuse Resistance	10 ohm (for controller internal circuit protection)
Others	External Case		Flame Retarding
	Weight		270 g
	Dimensions (mm)		70(W) × 120(H) × 27(D)
	Use Temp	Air Temp	0 ℃ ~ 40 ℃
		Air Humidity	Under 80 %