KS
KingShield

INSTALLATION / OPERATING INSTRUCTIONS FOR WIRELESS DIGITAL PROGRAMMABLE THERMOSTAT - THPW1-C*

Part numbers:
THPW1-CA, THPW1-CB, THPW1-CC, THPW1-CD, THPW1-CE

Our latest microprocessor controlled programmable thermostat has been designed to reduce your heating and air-conditioning bill. The THPW1-C* is made to be user friendly and easy to use.

SAFETY INSTRUCTIONS

Please read these instructions fully before attempting installation.
IF IN DOUBT, INSTALLATION SHOULD BE MADE BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH CURRENT WIRING REGULATIONS.

GENERAL

The THPW1-C* digital programmable thermostat consists of the thermostat transmitter and the remote mains operated receiver unit.
It has 7 days preset programs which can be tailored to suit your lifestyle.

The THPW1-C* transmitter is operated by 2 x AA size batteries and can replace any mechanical standard 2 wire thermostat. Please note that the maximum resistive load is 16A.

These units are paired during manufacture and the operating channel is given by a letter code. When installing more than one unit in a system ensure each thermostat pair has a different letter code.
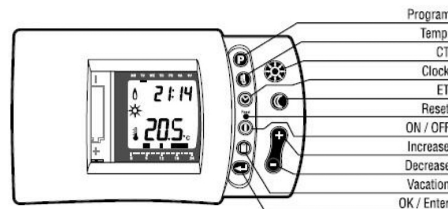
INSTALLATION

1. You should place the thermostat as following:
   a. About 160cm up from the floor.
   b. Only on inside walls (not on an outside wall).
   c. Do not expose to direct sun light.
   d. Do not position close to a heater, ventilation outlet or close to an outside door.

2. Remove the front cover. Unscrew the screw in the battery compartment. Remove the front housing from the base.
3. Using the base as a template, drill two holes in the wall and secure the base with appropriate wall plugs and screws.
4. Replace the front housing onto base and replace the screw in battery compartment.
5. Install 2 x AA size batteries into battery compartment and replace front case.
6. Press the reset button once to enter time set mode.

Features of the LCD display and keys:
THPW1-C LCD display

Fig 1

Fig 2

Description of each key function:

- **P** - To enter into program mode
- **☼** - To view ❄ an ☾ Temperatures
- **◎** - To enter into time and day adjustment mode
- **Reset** - To reset the unit into initial mode
- **◍** - To turn the unit on or off
- **▦** - To enter into Vacation mode
- **⏎** - To confirm setting
- **❄** - To override into CT (COMFORT Temperature) mode (20°C)
- **☾** - To override into ET (ECONOMY Temperature) mode (17°C)
- **+** - Temporary temperature override mode or increase value adjustment
- **—** - Temporary temperature override mode or decrease value adjustment

OPERATION AND PROGRAMMING INSTRUCTIONS

To set clock and day:

After the batteries (2 x AA size) have been installed into the thermostat unit, or reset or ◎ key is pressed, the thermostat is in time adjustment mode.
The hour is flashing. Press + or — key to adjust hour.
Press ⏎ key to confirm setting. The minute is flashing.
Press + or — key to adjust minute. Press ⏎ key to confirm setting. The day is flashing. Press + or — key to adjust day.
Press ⏎ key to confirm setting. This will confirm the setting of time and day.
The display will return into running mode.
E.g. If you have set the clock at 8.30 FRIDAY and the room temperature is 25°C.
The display will display in Fig 3.

Fig 3

To view programs:

THPW1-C* thermostat is a weekly programmable thermostat, and each day can be programmed separately.
Each hour can select ❄ or ☾ temperature. However a weekly factory preset program is installed.
This preset program is set to suit most families life style. See table 3.1 for factory preset program.

Heating & Air-Conditioning Program

Day	CT period	ET period	Display Program Schedule
MO-FR	6:00-7:59 & 16:00-22:59	23:00-5:59 & 8:00-15:59	
SA-SU	7:00-22:59	23:00-6:59	

Fig 3.1

Press **P** key. The Monday preset program at 0.00 is on display.
Press + or — key the display will show the temperature setting in each hour. E.g. Monday program show 0:00 - 5:59 and 8:00 - 15:59 are set at evening temp.,6:00 - 7:59 and 16:00 - 22:59 is set at CT. Note 23:00 - 0:00 is set at ET.
Press ⏎ key the next day preset program is displayed. Again Press + or — key. This will show the temperature setting at each hour. Repeat above steps, each preset program will display until Sunday. Once Sunday program has been reviewed. Press ⏎ key. The display will return into running mode.

To change preset program:

The preset program may not be suitable for some families but the program may be adjusted to suit your living life style.
The following instruction will allow you to change the preset program.
Press **P** key to enter into program viewing mode.
Press ⏎ key to select the day of program to make a change.
Press + or — key to select the hour to make change. Press ❄ or ☾ to select the temperature to make change. E.g. To change Saturday 12:00 - 16:59 from CT to 12:00 - 16:59 ET.

1. Press **P** key to enter into program viewing mode.
2. Press ⏎ key to select the day to Saturday program.
3. Press + key until 12:00 with CT setting.
4. Press ☾ key to change CT period to ET period.
5. Repeat step 3 & 4 to change 13:00 - 14:00 from CT period to ET period.
6. Press ⏎ key to confirm setting. Press ⏎ key to return into running mode.
7. You can review the program on Saturday to check the program and confirm the setting (Fig 4).

Fig 4

Important

Note: Do not set the beginning and end of the program to 0:00 due to the thermostat needing this time for its reference use. Therefore you must set the beginning or end time at 23:00 or 01:00.

To view and change ❄ or ☾ temperature:
The CT and ET temperature is preset at below table for heating and air-conditioning mode:

Mode	Air-conditioning	Heating
❄	23°C	20°C
☾	28°C	17°C

Press ❶ key to view CT and ET temperature mode.
Press ✵ to change the viewing of CT setting from ET setting or press ☾ key to change the viewing of ET setting from CT setting. The temperature is flashing at this moment. Press ✚ or ➖ key to change CT or ET setting. Press ⏎ key to confirm the setting and return to running mode.

To set temporary manual override temperature:

This function allows you to change the present temperature setting to a temporary temperature setting from next 1 hour up to 48 hours. Press ✚ or ➖ to enter the manual override temperature mode and temperature is flashing.
Press ✚ or ➖ key to select override temperature. Press ⏎ key to confirm temperature setting. H will display and flash.
Press ✚ or ➖ key to select hours for overriding time. The maximum hours are 48. Press ⏎ key to confirm setting.

To set temporary override program temperature:

This function allows you to temporarily override the CT temperature from the ET temperature settings, until next CT setting (or vice versa).

Program temperature setting until next ET setting.
The unit is running at CT program period. Press ☾ to change from CT to ET setting (until the next CT program period).
The unit is running at ET program hour. Press ✵ to change from ET to CT setting (until next ET program hour).

Note: The first hour of override (1H) will only run for maximum 45 minutes. However from second hour onward will run for full hour timing. e.g. If you select 2 hours override the maximum time of override will be 1 hour and 45 minutes.

To set vacation or permanent override temperature:

This function allows you to set your vacation temperature from 1 to 99 days or to set a permanent override temperature forever. Press ⏻ key will display under "SA SU" and flash. Press ✚ or ➖ key to select the number of day for your vacation period.

The maximum selection is up to 99 days. If you choose - - the period will be permanent override. Press ⏎ key to confirm the vacation period.
Press ✚ or ➖ key to select temperature. Press ⏎ key to confirm the override setting.

To cancel manual, temporary, vacation or permanent override:

Press ✵ or ☾ key to return into running mode. Or press ⏻ key to turn off the unit.
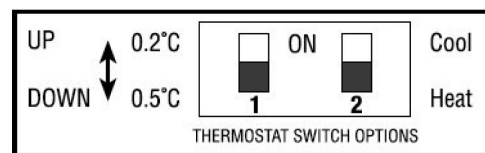
To switch the unit ON and OFF:

Press ⏻ key to turn off from on. Press ⏻ key to turn on from off.

To reset the unit:

Press the Reset key to reset the unit into initial clock setting mode. All previous programs will reset to factory preset settings.

User Optional Selection:

On the back of the front housing there is a DIP SWITCH on the PCB where the user can select following option:

THERMOSTAT SWITCH OPTIONS

DIP SWITCH 1 - SWING CYCLE -   ON   =   0.2°C
                               OFF   =   0.5°C
DIP SWITCH 2 - HEATING OR AIR-CONDITIONING
               System setting
                               ON   =   AIR CONDITIONING
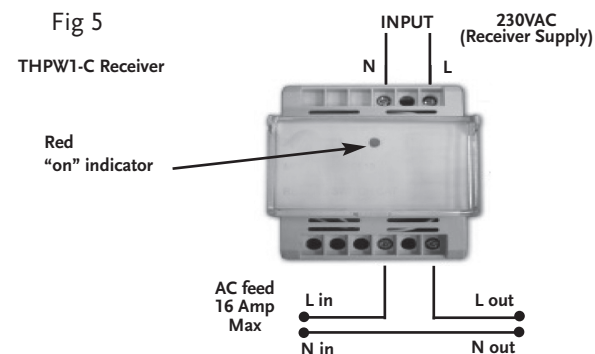   OFF   =   HEATING

Sensor:
This thermostat (THPW1-C*) uses the most advance temperature sensing element located on the lower right side of the cast under the grill. If the sensor is touched accidentally you must allow few minutes for sensor to come back to normal temperature.
The temperature is measured every minute.

Note that if you connect the receiver to a 230V AC system, please make sure the power is switched off and that only a person with good electrical knowledge carries out the installation. This receiver has a volts free contacts.
If you have a mechanical receiver connected with 2 wires just take away the old receiver and replace it with THPW1-C* receiver. Connect the wires to the terminals as shown in Fig 5.

Note: The base unit of this product must be mounted within a suitable enclosure. Base unit is DIN rail mountable.

Fig 5

Receiver should be mounted on a wall close to the boiler and within 50m of the THPW1-C* thermostat transmitter.
Receiver should be mounted on a 65mm long section of DIN rail within a suitable enclosure. Red "on" indicator illuminates when the "heat on" indicator is showing on the THPW1-C* thermostat transmitter.
230V AC input supply to THPW1-C* receiver should be from a switched spur unit fused at 3 Amps.

TECHNICAL INFORMATION

Temperature range:	5-30°C
Differential:	+/- 0.5°C from set temperature
Temperature accuracy:	+/- 0.5°C
Batteries:	2 x AA (1.5VDC) size batteries
Receiver Rated switching power:	230V, 50Hz AC, 16A resistive 2A Inductive load
Minimum on time in heating mode:	1 minute
Minimum off time in air-conditioning mode:	3 minutes
RF Frequency:	433MHz

CE