



## DRT2 LCD Programmable Thermostat

### A. Installation, Mounting:

**Caution:** Turn off DRT2 and the electrical devices (e.g. heater, cooler) which will be connected before installation. It is highly recommended that the installation procedure is processed by trained personnel.

#### 1. Installation Location:

The thermostat should be mounted on an inner wall 1.5m above the floor in position where it is readily affected by changes of the general room temperature with freely circulating air. Prevent direct exposure to sunlight; dripping or splashing area. Do not place this unit at a location where air circulation is low, or where it has great temperature changes (e.g. near door). Do not place the thermostat near heat/cool generating sources.

#### 2. Wiring:

There are 3 wiring terminals at the bottom of DRT2, labeled as "Com"(Common), "NO"(normal open) and "NC"(normal close). Connect heater or cooler to the "NO" and "Com" terminals. Leaves unused hole blank.

Wire the correct cables to the terminal block according to the circuit diagram which is attached inside the thermostat top cover.

Push all cables back into wall prior to fixing to avoid trapping wires. It is recommended that a 5A fuse is fitted. (Please refer to the wiring diagram on the last page.)

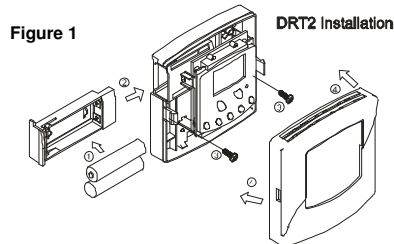
#### 3. Mounting:

Using the accessory screws and wall anchors provided, mount DRT2 with the key-hole at the back. The thermostat should be mounted on the wall as shown in step 3 of Figure1. Install the cover on DRT2 as shown in step 4 of Figure1.

#### Install or replace the battery:

**Caution:** Turn off the electrical devices and disconnect the supply to the appliances before replacing the batteries. Replace only with the same or equivalent type of batteries. Do not dispose the used batteries with household waste. Refer to your local area for the proper disposal.

- 1.Pull out the battery drawer
- 2.Place the new batteries according to the marking on the battery drawer.
- 3.Dispose the old batteries properly.
- 4.Slide the battery drawer back to its position.
- 5.Check if the thermostat works properly or not.  
Press "RST" if necessary.



### B. Start/Reset:

1. After wiring and mounting, switch off all the connected devices. Place 2 new AAA 1.5V alkaline batteries according to the polarities marked. LCD display will be switched on.
2. Press 'RST' to reset. The DRT2 will be ready to control the heater / cooler.
3. Switch ON the heater / cooler. The heater / cooler will remain OFF until DRT2 activates the output ON with displayed on LCD.

### C. Normal Time Mode:

1. Temperature detection starts and LCD displays the room temperature.

2. If Battery is LOW, will be flashing. If has been flashing for 48 hours without new batteries replaced. DRT2 will stop to measure and display the temperature. DRT2 will also turn off the heater / cooler irrespective of the current control temperature setting. The old batteries must be replaced with new one immediately.
3. Defrost function is activated with displayed when temperature is 5°C or below. Output will be forced to ON @ Heat & OFF @ Cool.
4. Below 0°C, DRT2 will display **LO**.
5. Above 40°C, DRT2 will display **HI**.

### D. Normal Time Setting Mode:

1. Press , the Day of Week (1-7) will flash, press , to select the current Day of Week.
2. Press , the Hour will flash, press , to set the Hour.
3. Press , the Minute will flash, press , to set the Minute.
4. Press will jump back to the step 1.
5. Press to confirm the settings and return to Normal Mode. Or DRT2 will auto-return to normal mode after 10 seconds.

### E. Factory Defined Programs:

The heater / cooler turns on according to the activated program and the control temperature setting. When the heater / cooler is On, Program number and icons are shown.

The pre-defined programs are as below:

Heater mode:

	Mon ~ Fri	Sat	Sun
P1	06:00 (21 °C)	08:00 (21 °C)	08:00 (21 °C)
P2	08:00 (16 °C)	10:00 (16 °C)	10:00 (16 °C)
P3	18:00 (21 °C)	18:00 (21 °C)	18:00 (21 °C)
P4	22:00 (16 °C)	23:00 (16 °C)	23:00 (16 °C)

Cooler mode:

	Mon ~ Fri	Sat	Sun
P1	06:00 (24.0 °C)	08:00 (24.0 °C)	08:00 (24.0 °C)
P2	08:00 (29.5 °C)	10:00 (29.5 °C)	10:00 (29.5 °C)
P3	18:00 (29.5 °C)	18:00 (29.5 °C)	18:00 (29.5 °C)
P4	22:00 (26.0 °C)	23:00 (26.0 °C)	23:00 (26.0 °C)

### F. Set Program:

1. Press <PRG>, the hour will flash, press , to change the hour setting.
2. Press <PRG>, the minutes will flash, press , to change the minutes setting.
3. Press <PRG>, temperature will flash, press , to change the setpoint.
4. Press <PRG> to set the next program.
5. The program setting sequence is as below:  
Mon-Fri (P1 → P2 → P3 → P4) → Sat (P1 → P2 → P3 → P4) → Sun (P1 → P2 → P3 → P4) → ...
6. Press to exit the program mode setting and return to the normal mode. Or DRT2 will auto-return to normal mode after 10 seconds.

### G. Temporary / Permanent Override Mode:

There are two modes in the override mode (Temporary override and Permanent override mode). Press to select the override mode.

The sequence is as below:

Normal → Temporary Override → Permanent Override → Normal → ...

#### Selecting the Temporary/ Permanent Override Mode

1. Press to change the mode from normal to Temporary Override. icon will be displayed.
2. Press again, the mode changes from Temporary Override to Permanent Override mode. icon will be displayed.
3. Press once, the mode changes from Permanent Override to normal mode.

**Review and adjust the Override temperature:**

1. Press , , the Override temperature is shown.
2. Hold the , for 2 seconds, the Override temperature will flash.
3. Press , to adjust the Override temperature.
4. Press to exit the Override temperature setting. Or DRT2 will auto-return to normal mode after 10 seconds.

#### Temporary Override Mode:

Temporary Override mode maintains until next program time is met.

#### Permanent Override Mode:

The room temperature will be maintained at the Override temperature until Override mode is released. Press to release the Permanent Override mode.

### H. Control Off / Sleep mode:

1. Press the to select the sleep mode and control off mode. The sequence is as below:  
Normal Mode → Sleep Mode → Control Off Mode → Normal Mode → ...
2. Press any other keys to exit the control off / Sleep mode and return normal mode.

#### Sleep mode:

At sleep mode, icon is displayed. DRT2 stops measuring and displaying the temperature. Only the current time is shown.

The heater / cooler is turned off, irrespective of the current control setting temperature.

#### Control Off mode:

The LCD is fully turned off. The heater / cooler is switched off, irrespective of the current control temperature setting.

### I. Jumper selection:

Delay / No Delay jumper:

	Heater	Cooler
No delay	10sec	4mins
Delay	4mins	4mins

Choose the Delay option if compressor heat is connected.

12-hours / 24-hours mode jumper:

When the 12-hours option is selected, the time is shown in 12-hours mode. Otherwise, the time is shown in 24-hours mode.

Heater / Cooler jumper:

Select the heater option when a heater is connected to DRT2. Select the cooler option when a cooler is connected to DRT2.

### J. Specification:

1. Temperature measurement: 0.0 - 40 °C (0.1 °C/step)
2. Accuracy: ± 0.5 °C
3. Temperature control range: 5.0 - 35.0 °C (0.5 °C/step)
4. Switching: 24..250VAC 50/60Hz 5 (3.5)A max
5. Terminals: 2.5mm<sup>2</sup> cable
6. Electronic control: Type 2.B action
7. Battery: 2 x 1.5V AAA alkaline battery
8. Operating temperature: 0 - 50 °C
9. Storage temperature: 0 - 60 °C
10. Sensing Element: NTC thermistor

#### Terminal block connecting Label:

