

DIGITAL THERMOSTAT DTW16S (230VAC)

SUMMARY

• OPTIONS SELECTION

At the back of the thermostat, there are 2 selection switches to set at your preferences.

- Temperature in °C or °F
- Early Start function.

• TO SET TIME AND DAY

Press on DAY, HOUR and MIN buttons to adjust time and day.

• TO RECORD THE ☀ (COMFORT) SETPOINT TEMPERATURE

Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☀ button (2 to 3 seconds) until ☀ icon appears on display.

• TO RECORD THE ☾ (ECONOMY) SETPOINT TEMPERATURE

Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☾ button (2 to 3 seconds) until ☾ icon appears on display.

• TO RECORD THE ☑ (VACATION) SETPOINT TEMPERATURE

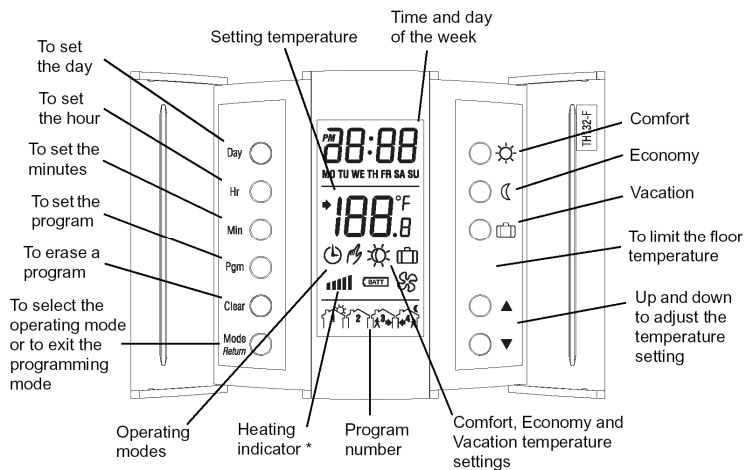
Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☑ button (2 to 3 seconds) until icon appears on display.

• OPERATING MODES

To select an operating mode, use Mode/Return button.

AUTO : Runs the programs. ▲ or ▼ shows temperature setting and can override temporarily your programming up to the next program.

MAN : Maintains the selected temperature. ▲ or ▼ changes the temperature setting.



*Percentage (%) of energy sent to the heating system to maintain the desired temperature.

0 - 20%	20 - 40%	40 - 60%	60 - 80%	80 - 100%

INSTALLATION

This thermostat is designed to use a floor-heating sensor to regulate room temperature.

The DTW16S has two temperature sensors. The first one, installed in the box, controls the ambient temperature. The second one, installed in the floor, limits the floor temperature. Electricians or experienced technicians should install the thermostat.

This thermostat should be connected on a circuit equipped with a fuse or a circuit breaker. It must be installed on a certified electrical box. For a new installation, choose a location about 1.5 meters above the floor, with good air circulation. The thermostat must be installed on an inside wall. Avoid locations where there are air drafts (top of a staircase, air outlet), dead air spots (behind a door), direct sunlight or concealed chimneys or stove pipes.

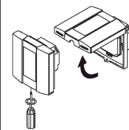
TURN OFF POWER TO THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK. Keep air vents of the thermostat clean and free from obstructions.

PARTS INCLUDED

- One (1) DTW16S (230 VAC) thermostat
- One (1) temperature sensor with a 3 meter extension
- One (1) wall plate (in certain countries)

1. Installation of thermostat

Turn off power to the heating system at the main power panel to avoid electrical shock.

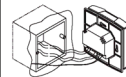


Unscrew and remove the front part of the thermostat from the base.

Please take note that the screw cannot be completely retracted.

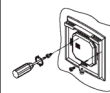
If your thermostat is equipped with a wall plate

Before making the connections, make sure that the base covers the electrical box entirely. If not, insert the wall plate on rear of the base. (The wall plate can be used to cover the plate for aesthetics.)



Connect the wires (see section 1.1).

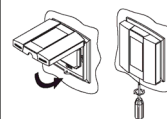
Connect the sensor (see section 1.2).



Secure the base to the electrical box anchorage. (The head of the screw must be less than 2mm of thickness.)

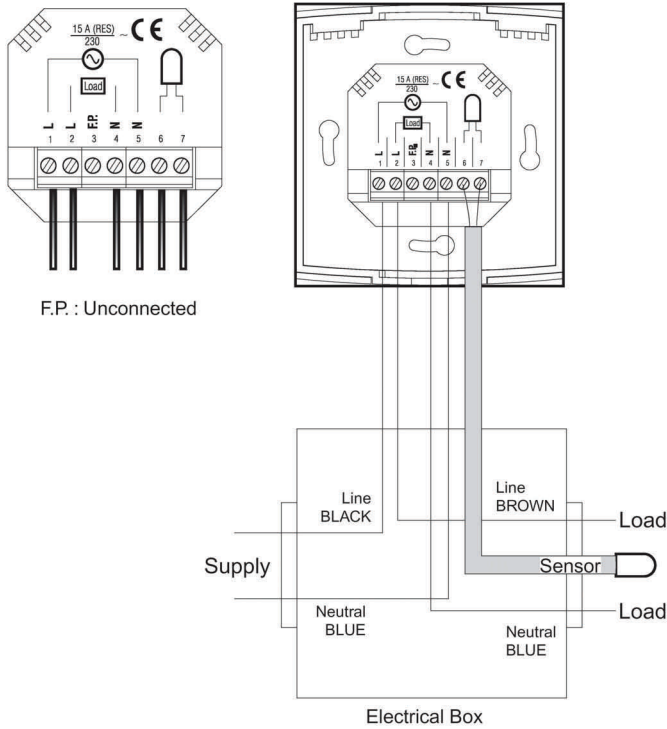


Set the switches located at the back of the front part of the thermostat before replacing it in the base. (see section 1.3)



Affix the front part of the thermostat to the base using the enclosed screw. You can now turn the power back on.

2. Wire connections



3. Connecting temperature sensor wire

Connect the temperature sensor wires to the sensor terminals located at the back of the thermostat (no polarity needs to be respected).

Note: Do not place the sensor probe directly next to an element but rather, for maximum performances, the sensor probe should be centered between the wires in the mat (80 °C max.). The temperature sensor wire cannot lay across any heater wires.

Adjusting the floor's maximum temperature

When the floor sensor is installed, the temperature of the floor will automatically be limited the set maximum regardless of the ambient setpoint. To adjust the floor's maximum temperature, press on the adjustment button (see drawing for its position) using a pointed object, and use the ▲ and ▼ buttons until the desired setpoint appears.

4. Configuration of switches



a) Early Start function

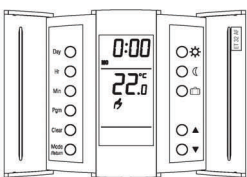
The thermostat is providing a built-in function enabling it to calculate the optimum time to start the heating system to achieve the desired temperature setting at the programmed time. To enable this function, set the switch E.S. (#1) to "ON".



b) Temperature in °C or °F

The default configuration of the DTW16S is in °C. If you wish to change the temperature to °F, push the switch #2 upward. Please note that if you change from °C to °F, your Comfort and Economy settings will need to be reconfigured as well.

POWER-UP



When power is applied for the first time, the display must show the time 0:00, the floor temperature and the Manual mode icon (👉). Other information might show up on the display if installation is defective or does not comply with the instructions.

The message LO or HI will appear on the display if the temperature sensor is defective or the temperature is below 0 °C or higher than 60 °C. Also, if the LO message is displayed, the heating indicator will be present on display and the relay will be closed (current going in the load).

OPERATING MODES

The DTW16S has two (2) operating modes.

MANual (👉)

This mode allows you to maintain a constant temperature.

- 1) To activate this mode, press on Mode/Return button to display the 👉 icon.
- 2) Set the desired temperature using the ▲ ▼ buttons or select the predetermined ☀, ☾, ☼ or settings.

AUTOmatic (🕒)

This mode executes your own programming.

To activate this mode, press on Mode/Return button to display the 🕒 icon. The ☀ ☾ ☼ Icon indicates which temperature setting is used. Also, the icon of the program number will be shown.

Vacation function

This function sets your thermostat to your specified Vacation temperature. You can switch to the Vacation setting for a prolonged absence by pressing on the 🏠 button. The display will show the 🏠 icon. The temperature will remain at this setting until it is returned to the normal operating mode by selecting the Mode/Return button. The Vacation function is also accessible through the CT240 telephone controller. If you wish to immediately return to the programmed settings, press on Mode/Return button.

1. PROGRAMMING

Programming the time and day

- 1) Set the time using the Hour and Min buttons.
- 2) Set the day using the Day button.

Programming the Comfort, Economy and Vacation settings

The Comfort ☀, Economy ☾ and Vacation 🏠 settings respectively represent the temperatures that you wish to have during the day ☀, at night or while you are away at work ☾, or while you are away for an extended period 🏠.

To program your settings

- a) To program the Comfort temperature, select the desired setpoint using the ▲ ▼ buttons and press the ☀ button until the ☀ icon is displayed (app. 3 seconds).
- b) To program the Economy temperature, select the desired setpoint using ▲ ▼ the buttons and press the ☾ button until the icon ☾ is displayed (app. 3 seconds).
- c) To program the Vacation temperature, select the desired setpoint using the ▲ ▼ buttons and press on the 🏠 button until the 🏠 icon is displayed (app. 3 seconds).
- d) Press the Mode/Return button to exit this function and return to the normal operating mode.

Schedule programming

The DTW16S allows 4 setting changes for each day of the week. There are no pre-set programs. The programs are tailored to perfectly adapt to your life style. The principle is very simple. For each day, enter the time at which you wake up (P1), the time you leave for work (P2), the time you arrive back home (P3) and the time you go to bed (P4).

Program	Mode	Time
☀	☀ Comfort	Wake-up time
☾	☾ Economy	Leaving time
☼	☀ Comfort	Return time
🏠	☾ Economy	Bed time

For savings to be obtained, you must lower the temperature for a period of at least 2 times the delay required to bring the temperature back to your comfort level.

Example: If your system takes one hour to go from your saving temperature level to your comfort temperature level, it is useless to lower the temperature for a period less than 2 hours.

a) To program your schedule

- 1) Press on Pgm button to access the programming mode.
- 2) Press on Day button to select the day to be programmed. You can select all days of the week by pressing on Day button for 3 seconds.
- 3) Press on Pgm button to select program 1, 2, 3 or 4.
- 4) Press on Hour and Min buttons to program the time.
- 5) When you have completed your programming, press on Mode/Return button to exit this function.

b) To erase a program

Select the program using Pgm and Day buttons, and press on Clear button. The time field displays -:- when the program is inactive.

Example 1: Comfort period from 7:00 AM to 10:30 AM
Economy period from 10:30 PM to 7:00 AM
Identical schedule for all days of the week.

Schedule / Day	MO	TU	WE	TH	FR	SA	SU
PROG. 1 ☀	7:00	7:00	7:00	7:00	7:00	7:00	7:00
PROG. 2 ☾	--:--	--:--	--:--	--:--	--:--	--:--	--:--
PROG. 3 ☀	--:--	--:--	--:--	--:--	--:--	--:--	--:--
PROG. 4 ☾	22:30	22:30	22:30	22:30	22:30	22:30	22:30

- 1) Press on Pgm button to access the programming mode.
- 2) Press on Day button 3 seconds to select every day of the week.
- 3) Press on Hour button to enter 7:00 AM, Prog. 1 (☀).
- 4) Press 3 times on Pgm button to select Prog. 4 (☾), and press on Hour and Min buttons to enter 10:30 PM.
- 5) Press on Mode/Return button to exit this function.

Example 2: Comfort period : Monday to Friday from 6:15 AM to 8:15 AM and from 5:00 PM to 10:00 PM.
Saturday and Sunday from 7:30 AM to 11:00 PM.

Schedule / Day	MO	TU	WE	TH	FR	SA	SU
PROG. 1 ☀	6:15	6:15	6:15	6:15	6:15	7:30	7:30
PROG. 2 ☾	8:15	8:15	8:15	8:15	8:15	--:--	--:--
PROG. 3 ☀	17:00	17:00	17:00	17:00	17:00	--:--	--:--
PROG. 4 ☾	22:00	22:00	22:00	22:00	22:00	23:00	23:00

Note: It is faster to program the same schedule for every day and then modify the exception days.

- 1) Press on Pgm button to access the programming mode.
- 2) Press on Day button 3 seconds to select every day of the week.
- 3) Press on Hour and Min buttons to enter 6:15 AM Prog. 1 (☀).
- 4) Press on Pgm button to select Prog. 2 (☾) and Hour and Min buttons to enter 8:15 AM.
- 5) Repeat step 4 to enter Prog. 3 (5:00 PM) and Prog. 4 (10:00 PM).

Note: When making modifications, make sure you are in the right program.

To modify the Saturday and Sunday schedules:

- 6) Press on Day button until SA or SU is displayed.
- 7) Press on Pgm button to select Prog. 1 (☀) and Hour and Min buttons to enter 7:30 AM.
- 8) Press on Pgm button to select Prog. 2 (☾) and then Clear button to erase it.
- 9) Press on Pgm button to select Prog. 3 (☀) and then Clear button to erase it.
- 10) Press on Pgm button to select Prog. 4 (☾) and then Hour and Min buttons to enter 11:00 PM.
- 11) Press on Mode/Return button to exit this function.

Memory back-up

In the event of a power failure, an internal circuit will maintain the programming and the time. The time would have to be reset if the power failure exceeds 2 hours.

Temporary or permanent temperature bypass

This operation allows you to temporarily modify the temperature while you are in the Automatic mode. Simply press on ▲ or ▼ button to select the desired temperature, or the ☀ or ☾ button to select the Comfort or Econom settings you have programmed. This temperature will be maintained until the beginning of the next programmed schedule.

If you wish to immediately return to the programmed settings, press on Mode/Return button twice.

CHARACTERISTICS

- Model: DTW16S/TH132- AF
 - Supply: 230 VAC 50 Hz
 - Load:
 - resistive: max. 15 Amps
 - inductive (necessary to use Snubber AC 130-03): max. 2 Amps
 - Power: 3450 W (NI) @ 230 VAC
 - Approvals: EN60730- 2- 9
EN50081- 1 / EN50082- 2
 - Display range: 0 to 60 °C
 - Setting range, ambient temp.: 5 to 30 °C
 - Setting range, floor temp.: 5 to 40 °C
 - ☀ default setting: 20 °C
 - ☾ default setting: 18 °C
 - ☼ default setting: 10 °C
 - Storage: -20 to 50 °C
 - Software: Class A
 - Controller: Electronic
 - Protection: Class 2
 - Protection degree: IP20
 - Automatic action: Type 1B
 - Environment: Normally polluted
 - Programming protection: Memory back-up
 - Clock protection: 2 hours
- The terminals are designed to handle a cross-section of wire measuring 0.33 to 3.1 mm² in diameter.

Warranty

Dimplex 1 year warranty

This product is warranted against material defect and workmanship in normal use for a period of one year from the date of original purchase from authorised dealers. Dimplex will repair or replace the product with a new or equivalent quality at Dimplex's option, without charge, any product proven defective in use. This warranty does not cover the cost of transportation costs. Nor does it cover a product subjected to misuse or accidental damage. This warranty does not cover the cost of installation, removal or reinstallation.

Please retain your receipt as proof of purchase.

SERVICE

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