EUROSTER 2510TXRX

Introduction

Congratulations on the purchase of your new Digital Thermostat. Thanks to the latest microprocessor technology, the thermostat offers many convenient and energy-saving features. Please read the following instructions fully before installing your thermostat.

Overview of features & functions

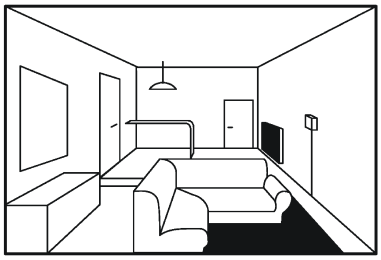
Your Digital Thermostat incorporates preset daily programs to suit different user lifestyles. The thermostat can be programmed easily to accommodate exacting user needs. This user guide shows how to get the best from your Digital Thermostat. It is powered by 2 x AA batteries and can replace most domestic thermostats.

Caution! The Digital Thermostat has been designed to switch a 230VAC supply. The maximum load is 6 Amps (resistive)/ 2 Amps (inductive).

Installation

Caution! Electricity can be lethal. Before beginning any work, ensure that the electricity supply is turned off at the mains. If in any doubt, contact a qualified electrician. If you currently have a thermostat connected by two wires, you can replace it directly with your new Digital Thermostat. If you are not replacing an existing thermostat, you must install a two-wire cable to your heating system.

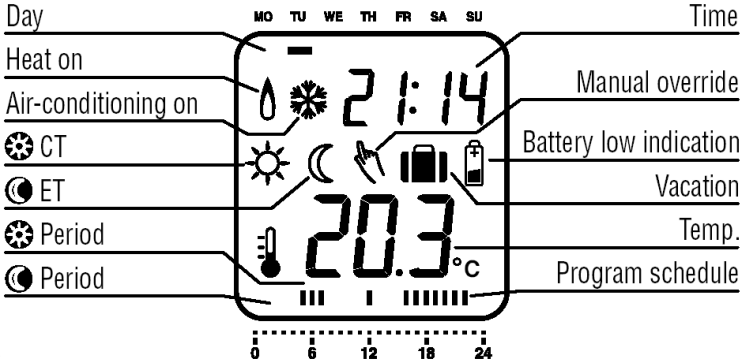
1. Before carrying out any installation work, choose an appropriate location for Digital Thermostat using the following guidelines:

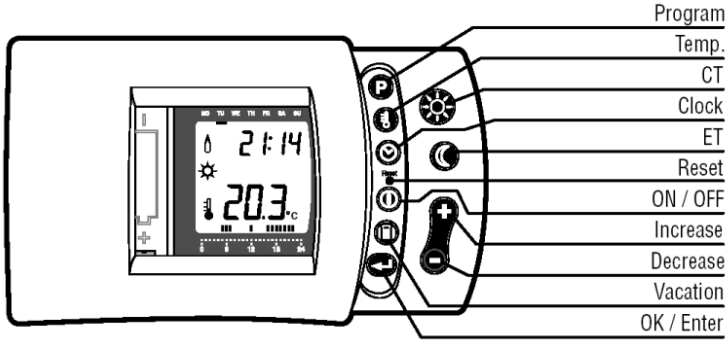


   a) Mount the Digital Thermostat approximately 1.6m above the floor.
   b) Only mount on interior walls (the thermostat is not for outdoor use)
   c) Avoid any location where the Digital Thermostat could be exposed to direct sunlight.
   d) Avoid any location in proximity to a heater, cooker, ventilation outlet or any appliance/fitting that generates heat.
   e) Avoid any location where there may be concealed boilers, pipework or chimney flues.
   f) Mount away from doors and the corners of rooms.

LCD display

Familiarise yourself with the LCD panel and the keys before programming.



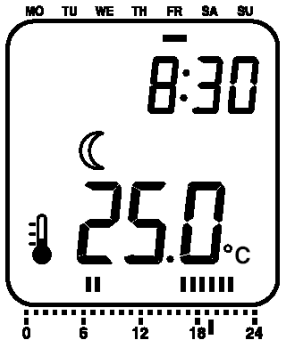


Key function:

- (P) - to enter programming mode
- (i) - to view the Temperatures (☼) i (☾)
- ☐ - to enter TIME and DAY adjustment mode
- Reset - to reset the unit to INITIAL mode
- (◐) - to turn the thermostat ON/OFF
- (▯) - to enter Vacation mode.
- (↵) - to confirm setting
- (☼) - enter CT (COMFORT TEMPERATURE) mode
- (☾) - enter ET (EVENING TEMPERATURE) mode.
- \+ - temporary TEMPERATURE OVERRIDE mode/ increase value adjustment
- \- - temporary TEMPERATURE OVERRIDE mode/decrease value adjustment

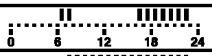
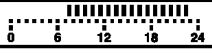
Operation and Programming

1. To set clock and day:
   After inserting the batteries, or pressing the RESET key or ☐key. The thermostat will enter TIME ADJUSTMENT mode and the HOUR will start to flash. Press the **+** or **-** keys to adjust the HOUR setting. Press ↵key to confirm setting. The MINUTE will now flash, press **+** or **-** Key to adjust MINUTE. Press ↵key to confirm setting. The DAY will now flash, press **+** or **-** key to adjust day. Press ↵key to confirm setting. This will confirm the setting of clock and day. The display will return into running mode. E.g. if the clock at 8:30 FRIDAY and the room temperature is 25 C.



   The Digital Thermostat is a weekly programmable thermostat, with 7 day/24 hour programs that can be set as required. For each hour you can set the Digital Thermostat so that either the CT (☼) (COMFORT) or (☾)ET (EVENING) temperature mode operates. The Digital Thermostat comes with a preinstalled program that will accommodate many users' requirements

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	

Reviewing preset program

To review the settings for the pre-installed program, press P to enter the PROGAMMING mode. The preset program for Monday will show - 0:00 is displayed. Press +/- to show the temperature mode setting (either COMFORT or EVENING) for each hour.

For example, the Monday program has:
ET (EVENING temperature mode) 0.00 to 5.59 (Midnight to 5.59am) and 8.00 to 15:59 (8am to 3.59pm)
CT (COMFORT temperature mode)6.00 to 7.59 (6am to 7.59am) 16.00 to 22.59 (4pm to 10.59pm)
Note: 23.00 to 0.00 (11pm to Midnight) is set to ET (EVENING temperature mode).
Press the ↵ key and next day's temperature setting will be displayed. As before, use the **+** /**-** keys to show which temperature mode is operating for each hour. Repeat this procedure until Sunday has been reached. Press the ↵ key to return to the RUNNING mode.

Changing the preset program

The preset program can be adjusted to meet your requirements. Press the P key to enter the PROGRAMMING mode. Press the ↵ key to select the day you wish to adjust the program for. Use the **+** /**-** keys to select the hour you wish to adjust. Press ☼ or ☾ to change the temperature mode.

For example, to change 12pm to 4.59pm on Saturday from COMFORT to EVENING temperature mode:

Press the P to enter the PROGRAMMING MODE.
Press the ↵ key repeatedly until Saturday is displayed.
Press the **+** key repeatedly until 12.00 with CT is displayed.
Press the ☾ key - CT will change to ET.
Press the **+** key so the display advances to 13:00 and press the ☾ so that CT changes to ET.
Press the **+** key so the display advances to 14:00 and press the ☾ so that CT changes to ET.
Press the ↵ key to confirm the setting. The display will advance to Sunday - press the key again to return to the RUNNING mode.
Note: do not set a program using 0.00 as either a start or end time. Set programs to begin or end at 23:00 or 1:00. The thermostat may not operate correctly if 0:00 is used.

Viewing and changing the preset temperatures

Each temperature mode is set at the following values:

Mode	AIR-CONDITIONING	HEATING
☼	23℃	20℃
☾	28℃	17℃

Press the i key to view CT or ET temperature mode.
Press ☼ to view the CT setting or ☾ to view the ET setting (from the CT setting). With the temperature setting flashing, press **+/-** to change the temperature setting. Press the ↵ key to confirm the setting and return to the RUNNING mode.

Setting the temporary manual override for temperature
Temporary manual override allows you to override the existing temperature setting for any period from 1 to 48hrs. Press the **+/-** key to enter the MANUAL OVERRIDE TEMPERATURE mode. The temperature reading on the LCD panel will flash.
Use **+/-** to set the desired temperature.
Press ↵ to confirm the new temperature.
H1 will show on the LCD panel and flash (indicating a 1 hour override). Use the + key to increase this up to a maximum of 48 hours as required.
Press ↵ the key to confirm.

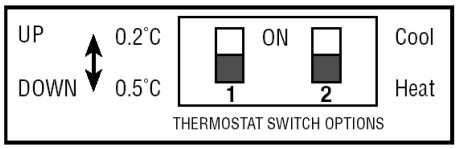
Overriding the temperature mode (temporarily)
You can override the programmed CT (COMFORT) or ET (EVENING) temperature mode (i.e. CT instead of ET, or vice versa) until the temperature mode is programmed to activate again. If the thermostat is currently running in ET mode, press the ☼ key to change to CT mode the thermostat will run CT mode until the next ET program period activates. Similarly if CT is running, press the ☾ key to change to ET mode. The thermostat will continue to run in ET mode until the next CT program period activates.
Note: the first hour of override will only run for a maximum of 45 minutes. Each subsequent hour of override will function for the full hour. For example, 2 hours of override will function for 1 hour 45 minutes

Setting permanent/vacation temperature override
The Digital Thermostat program can be overridden to give one constant temperature for any period between 1 and 99 days. This is particularly useful if you are going on holiday. Press the ⌂ key and the day bar on LCD will flash. Use the **+/-** keys to set the number of days override required. Press the ↵ key to confirm. Use the **+/-** keys to select the required temperature. Press the ↵ key to confirm.
Note: If using the vacation mode for frost protection, some areas of the heating system may be in an exposed location outside the area monitored by the Digital Thermostat.

Cancelling overrides
Should you wish to cancel either the manual, temporary or permanent/vacation override, press either the ☼ or ☾ key to return to the RUNNING mode. Alternatively, press ⏻ to turn the Thermostat off.

Resetting the Digital Thermostat
Should you wish to return the Thermostat to its original preset program (and erase any changes you have made) simply press the RESET key.

Further adjustment
The Digital Thermostat incorporates twin DIP switches on the circuit board at the rear of the front housing.



DIP switch 1 adjusts the sensitivity of the thermostat. In the DOWN position if the temperature variation is greater than 0.5°C the thermostat is activated. In the UP position it will activate if the variation is greater than 0.2°C.
DIP switch 2 switches between HEATING and AIR CONDITIONING. DOWN position selects HEATING control, UP position selects AIR CONDITIONING control.

Sensor operation
Your Digital Thermostat uses an advanced NTC thermistor to detect the temperature, located on the lower left-hand side of the circuit board. If the sensor is accidentally touched, you must allow a few minutes for the sensor to return to the normal temperature. The sensor measures the temperature once a minute.

WIRELESS TEMPERATURE CONTROLLERS

Important: Any guarantee claims will be processed only if both the transmitter and receiver have been delivered to the point of sale, accompanied with the guarantee certificate.
Euroster with wireless technology – TX RX

A. Overview

Programmable temperature controllers Euroster TX RX are a wireless version of the relevant wired models, with the same programming functions. **Therefore, the user manual of the relevant wired model is attached herewith.** The difference is in the method of transferring the switch on/ off signals.
EUROSTER TX RX utilises wireless technology, thus eliminating the need for routing of cables between the transmitter unit EUROSTER TX and the appliance, which is controlled by receiver unit EUROSTER RX.
The operating range of the transmitter/ receiver pair depends to a large extent on the materials used for construction of the building. In the open the operating range is ca. 100 m. With up to 30 m range inside buildings the signal will pass several storeys. In reinforced concrete enclosures signal attenuation is very high and consequently the operating range drops.
IMPORTANT! The low battery lamp LED will come on when the voltage has dropped below the minimum admissible level. Then the batteries must be replaced and EUROSTER TX must be programmed anew.

B. First start-up

1. Insert new alkali batteries
2. Fully extend the telescopic antenna of the RX unit
3. Green LED indicates that the receiver unit is in the range of the transmitter. For the first minute upon connection of the TX/ RX pair the green lamp comes on every 3 seconds to indicate communication between the units. After that time communication is tested every minute for ca. 1 second. When the green LED does not light up the receiver unit is beyond the range.
4. Red LED indicates that the heating/ cooling appliance has been switched on.

C. Protections

1. If due to external interference such as strong electromagnetic pulse or low battery in EUROSTER TX confirmation of switch on/ off signal has not been received by EUROSTER RX for seven subsequent cycles the heating appliance will be switched off to prevent potential overheating. When communication has been restored the system automatically returns to the current program. EUROSTER TX must be programmed anew after each replacement of batteries.
2. Coded digital transmission technology, as used in EUROSTER TX allows for operation of several units in a limited area without any disturbance. A minimum distance of 0.5 m should be kept between two RX units. Modules are not interchangeable as the transmitter and receiver form a pair with the same unique code. The code is given both on the RX unit (sticker at the plug side) and on the TX unit (on the left-hand side in the battery compartment).

For any doubts or queries, please do not hesitate to contact us or your local distributor.

D. Operation

As it is required due to one-way transmission of signal and as a protection of the controlled heating/ cooling appliance every minute a momentary coded signal is sent by EUROSTER TX to verify the status of the relay of EUROSTER RX, which is signalled by green LED. For this reason the on/ off lamp on the controller may come on before the appliance has been actually switched on. This difference should not exceed 1 minute. Similarly, this may happen during switching off the appliance. Taking into account the heat capacity of buildings this has no effect on the energy efficiency and, consequently, on the heating cost.

Note: The controller may be connected to an electrical, gas-fired or oil-fired appliance with rated power exceeding the contact rating only through an intermediate switch with load rating and performance appropriate for the controlled appliance parameters.

Note: High inductive and capacitative loads should be avoided as they shorten the life of relay contacts.

Note: Green LED on the receiver unit confirms receiving of signal from the transmitter. Normally it lights up at ca. 1 second intervals.
If it does not, do the following:

1. **Reduce the transmitter/ receiver distance**
2. **Check the battery charge status, and replace with new alkaline type ones, if required. With low batteries the operating range will be reduced and replacement is recommended.**

Red LED signals switching on of the heating or other controlled appliance.

Danger! Hazardous voltage is present inside the enclosure. Any tampering with the unit may result in a life-threatening electrical injury!

E. Troubleshooting list

1. The controller does not switch on the heating appliance
- replace the batteries - use only new alkaline batteries;
- reset and program the controller;
- move the controller to another place;
- verify the operation of LEDs on the receiver unit (green and red);
- verify connection between the receiver and the controlled appliance;
- disconnect the receiver unit from the controlled appliance and check the operation of the latter;
- check if the code given on the transmitter is the same as on the receiver;
- fully extend the antenna.

2. Blinking LCD display on the controller
- replace the batteries - use only new alkaline batteries;
- reset and program the controller.

3. Blinking battery charge indicator on the LCD display:
- replace the batteries - use only new alkaline batteries;
- make sure the battery contacts are clean.

4. Lack of windmill icon on the LCD display, which indicates that the appliance is switched off::
- verify the setting of DIP switches on the controller;
- verify the settings of operating parameters: day, hour, temperature**.**

Technical specifications

Temperature measuring range:	0 - 40°C
Temperature control range	5°C - 30°C
Batteries	2xAA (1.5VDC)
Temperature scale division	0,5°C
Differential:	0,4°C or 1°C
Rated switching power	250V, 6A resistive load, 2A inductive load
Minimum ON time:	In heating mode: 1 mins In air conditioning mode: 3 mins
Dimentions: length/width/height	130/78/30mm
Operating temperature (of environment)	0°C – 45°C
Ingress Protection	IP20