Climatic 50

Wireless System

Roof-Top, Aircoolair & Compactair Version 23

INSTALLATION OPERATING & MAINTENANCE MANUAL

Ref : CL50-RoofTop-IOM-Wireless-0708-E



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INTRODUCTION

Compatibility

- This documentation is compatible with the programs Roof Top and Aircoolair:
- Ranges Baltic I, Baltic 410, Flexy I, Flexy II, FX, AC and LV, starting from the version 23.0

Important Warning

Any parameter modification should be carried out by trained and licensed competent technician.

Before start-up or restart of a unit controlled by Climatic 50, it is mandatory to check adequacy between Climatic 50 and the unit with its options.

- 38xx menus for unit and options
- 39xx menus for communication

In case of wrong parameters, I/O links could be incorrect and may create some operation problems for the units and ultimately breakdowns.

Lennox cannot be held responsible for any claims on the units due to a wrong parameters sequence or a parameters modification carried out by non competent technicians. In this case, the warranty will be legally null and void.

Any wiring modification on the CLIMATIC 50 must be done by Lennox technician or employees having valid electrical qualification and authorisation.

For any modification of wiring on the 24V supply or on 4-20mA sensor, check the polarity prior to apply the power. Wrong polarity may cause serious damage and destroy the Plan network. Lennox will not accept liability for damage caused by wrong power connection or any wiring modification done by people without valid training and qualifications.

Any external connection with the unit, using 24Vac voltage should not exceed a length of more than 30m. It concerns external contacts connected to Climatic™50 logical inputs or humidifier control connection to the output 0-10v.

Over 30 m, the installer must interface this information with relays or converters or a external 24V supply. In any case, the 24Vac control voltage must not be used to drive external function with Climatic[™]50 logical output

WARNING: Separate as much as possible probes, displays, logical input cables from power cables with strong inductive load, in order to avoid possible electromagnetic perturbations



WIRELESS

Function

The CAREL© / LENNOX© Wireless system is designed for all HVAC/R applications that require the monitoring of the ambient conditions (temperature and for the future humidity) and/or the control of the ambient comfort based on the requirements of the end user (operating mode, set point, ...).

Description

Wireless is made up of:

DCw (display):

An innovative wireless terminal with integrated sensors for measuring the temperature and humidity. With the Climatic[™] Roof-Top soft is it possible to have au maximum 1 DCw by unit.

- SCw (sensor): Wireless sensors that measure the temperature and humidity. With the Climatic[™] Roof-Top soft is it possible to have au maximum 6 SCw by unit.
- APw (access point): RS485/ZigBee[™] gateway hat collects the information from the terminals and sensors. With the Climatic[™] Roof-Top soft is it possible to have au maximum 1 APw by unit.
- ARw (repeater):
 - ZigBee[™] to ZigBee[™] device that relays the wireless signals, allowing greater distances between the access point and terminals or sensors

The Humidity management and the repeater are not currently available

Terminology

Wireless

Wireless means "without wires", in contrast to the term "wired".

Wireless network

Telecommunications system (series of devices, appliances, methods and protocols) for the transmission of information via radio, typically radiofrequency technology used instead of wired connections, making the systems particularly flexible.

ZigBee™

Zigbee™ is a set of specifications based on the IEEE-802.15.4 standard for the creation of Wireless Personal Area Networks (WPAN).

Comparable in some ways to Bluetooth, it stands out for its very low power consumption and the reduced cost of implementation, despite having a maximum data transfer speed of 250 Kbit/s.

ZigBee[™] devices, with compact dimensions and low costs, are designed to work in dedicated self-organised networks (Mesh networks) and are used in many fields.

Advantages of the wireless solution

Advantages of a wireless network over a wired network

- Mobility of the terminals;
- Ease of installation and connection of the devices;
- Coverage even where obstacles are present;
- Flexibility in the event of structural modifications;
- Reduction in wiring costs;
- Scalability in the interconnection of terminals;
- Sturdiness.

The advantages of wireless networks can overcome some of the intrinsic limits in wired systems.

Advantages of ZigBee™

- Standard technology;
- Reduced costs ;
- Can be used globally;
- Reliable;
- Supports a large number of nodes;
- Easy configuration;
- Long battery life;



• Secure data transmission.

The advantages of working at 2.4 GHz

The band centred around 2.45 GHz (used in the Wireless system) is the only one that can be used all over the world, without needing to apply for special licenses. In addition, the ISM band (Industrial, Scientific and Medical) exploits the full potential of the standard, that is, can use 16 transmission channels with a bit rate of 250 Kbit/s.

LENNOX© CONCEPTION



The Lennox[©] Wireless system is designed around an Access Point per unit. The latter, in a bubble radius of 50 meters at most, allows connection to wireless displays 'DCw' and a maximum of 6 probes 'SCw'

The display allows the display and adjusting the parameters of the unit connected.

For probes, a setting can send to the unit concerned the average value of probes desired.

If the bus Master/Slave is made between units, the value of one or other probes connected to an APw may be sent to another unit





INSTALLATION

Access point

APw

For this option the BM50 must be fitted on the Field-bus (or Analog Selection) port with the PCO100FD10 card (3 pins) This card is used to interface a BM50 Field-bus with an RS485 type bus.

The card provides optically coupled isolation between the regulator and the RS485serial network.

If a board tLan, PCO100TLN0 (2 pins), is already present in the Field-Bus port, you need to replace it by a board RS485 (3 pins), PCO100FD10

Similarly, the BE50 is different depending on the type of bus, by default it is installed a BE50-tLan, PCOE00TLN0, in the case of an option Wireless BE50-RS485 must be put in place, PCOE004850.





Fasten the APw to the wall with the cable gland facing downwards;

- Tighten the antenna in the special housing (4), position it vertically to the floor;
- Connect the '+' and '-' of RS485 network to terminal (2);
- Connect the power supply to terminal (1) '+' from 'G' and '-' from 'G0'.

General warnings

The APw must be positioned in the same open-space that the display DCw or probes SCw.

• Fasten the APw in the desired position, considering that as the device being installed is a radio device, the following simple rules must be observed:

- Avoid enclosing the appliance between two metal walls;
- The efficiency of radio transmission is reduced when there are obstacles, metal shelving or other objects that may block the reception of the wireless signals;
- If the product is wall-mounted, fasten it to a masonry wall rather than a metal wall, to improve the range of the signal;
- Remember that the best position for the APw is one where it is "visible" to the other devices. It should be positioned in such a way as to minimise any obstacles;
- Like all radio equipment, avoid installing the APw near other electronic appliances, so as to avoid interference. Do not install the instruments in environments with the following characteristics:
- Strong vibrations or knocks;
- Exposure to water sprays;
- Exposure to direct sunlight or the elements in general;
- If the appliance is used in a way that is not described by the manufacturer, the specified level of protection may be affected.

Terminal and Sensor

DCw & SCw

The terminal and the sensor can be fastened to the wall using the support shown in the figure (included with the product).



Part A shown in the figure is used to lock the instrument to the support. A screwdriver will be required to remove the instrument. This plastic part may be essential for hotel-type applications. For applications where the instrument needs to be removed frequently (residential, office,...) part A can be eliminated simply.

CONFIGURATION

The following chapter describes the procedure for setting the address, configuring and connecting the devices for the creation of a wireless domain connectable to the Climatic of the unit.

- The procedure includes:
- 1. setting the address of the access point
- 2. setting the address of the terminals
- 3. setting the address of the sensors
- 4. Connecting the modes. In this phase, the terminals and the sensors are associated with the access point.

Visualization with the DS50

The Wireless option must be activated in the program Climatic $^{\text{TM}}$ 50 by **3941** setpoint. If a DCw must be installed; settle the **3942** setpoint by 1 (0 if not DCw) The number of SCw installed must be setting in **3943** (between 0 and 6)

All other parameters of the option Wireless are visible on the special screens

To enable these special screens press the button 'Prg' when you're on the menu 000 or menus data 2xxx. Then you move from one screen to another, press the buttons ' \uparrow ' or ' \downarrow ' to see the screen desired.

Setting the addresses

This is a fundamental phase in setting up the system, and allows each device to be identified uniquely.

Important: the address can only be set at this time. Any changes, when the channel has been set (see Automatically search for wireless communication channel), will be ignored. The address can only be changed after having reinitialised the device (see Resetting the devices).

Access point

APw

Position the dip-switch in the following manner:

- No. 1 to **Off**
- No. 2 to **Off**
- No. 3 to Off
- No. 4 to On This configuration is at No. 8

Check that LED L1 (yellow) on the left is always on and the others are off. If the LEDs are not in this status, reinitialise the access point (see Resetting the devices);









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Automatically search for the wireless communication channel

The wireless system requires of use a transmission channel for the communication of the wireless messages between the various devices. The best communication channel for the environment in question is automatically selected by the access point, using the following procedure:



For around 20 seconds

The instrument is ready for the use.

The transmission channel has been selected and will be sent to the repeaters, sensors and terminals during the binding phase.

Important:

• If the sequence is not as indicated, reinitialise the device

• If the instrument is reinitialised, all the instruments associated with it will be disconnected and will need to be connected again.

DS50

In the special screens, search the screen beginning with [Wireless (APw)] For an APw perfectly set and connected we have the following screen:



If the connection is correct between the BM50 and APw the symbol ' Ξ ' appears on the second line.

Terminal

DCw

Perform the following steps for the correct connection to an existing network.

Power up the terminal by removing the insulating tab from the battery compartment;

Check that the display comes on and the text OFF is shown;

Press the "ON/OFF" button.

Check that the symbol (antenna) is off. This means that the instrument is ready to be connected to a new network; otherwise, it means that the device has been previously been associated and needs to be reinitialised.

Access the parameters menu. Pressing simultaneously, for a few seconds, on the two buttons at the bottom;

Enter the value 16 for the desired network address for the parameter loc09;

Enter the password (22 default) for parameter loc 10.

Check that the instrument is not connected to any network, by making sure that parameter loc 12= OFF.

<u>Sensor</u>

SCw

Open the battery compartment and set the Desired network address using the 8 dipswitches (0 = OFF; 1 = ON), as shown in the table.



If the symbol ' \perp ' is displayed instead of a symbol ' Ξ ' it means that communication between the BM50 and APw is not achieved. In this case check the cable connection between the two packages or addressing the APw if these points are correct reset the APw and / or cut and replace the 24V of the box

If on the second line the state east to Off and on the third line the text [Access Point] is not present, repeat the Automatically search for the wireless communication channel (described above).



| SCw | Address | | | | Dipsy | witch | | | |
|-----|---------|-----|-----|-----|-------|-------|-----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| N°1 | 21 | On | Off | On | Off | On | Off | Off | Off |
| N°2 | 22 | Off | On | On | Off | On | Off | Off | Off |
| N°3 | 23 | On | On | On | Off | On | Off | Off | Off |
| N°4 | 24 | Off | Off | Off | On | On | Off | Off | Off |
| N°5 | 25 | On | Off | Off | On | On | Off | Off | Off |
| N°6 | 26 | Off | On | Off | On | On | Off | Off | Off |

The address can be set but the device will not be able to connect to the access point. When pressing the button the LED will flash quickly a number of times to indicate that the address is not valid.

Connecting the devices (Binding)

The logical connection between the access point and the wireless terminals/sensors is called binding. The operation must be performed after setting the addresses.

Open Domain



Switch on the access point and check that the LED on the left is flashing



DS50

You can open the Domain with the DS50. In the special screens, search screens starting with [Wireless (DCw) Clo] or [Wireless (SCw 1) Clo] or if you have several SCw.



Terminal

DCw

After having opened the domain on the access point: Access the parameters menu Enter the password (22 default) for parameter loc 10. Set parameter loc12 to ON the terminal displays "bin" and subsequently --- "On" if the connection was successful ---- "no" if the connection failed. Automatically exit the parameter programming menu.

CHECK: On the first valid transmission the terminal displays the "antenna" symbol.



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The cursor blinks at the top left of the screen. Press the button '-' to move the cursor over the text 'Clo'.

Press the buttons '↓' or '↑' to see the text 'Ope'. After a few seconds 3 LEDs on APw must flash and the symbol 'a' indicates the opening of the domain.

To close the domain do the same.

The access point indicates that the connection has been made by sequentially activating the 3 LEDs .

DS50

In the special screens, search the screen beginning with [Wireless (DCw) Clo] For an DCw perfectly set and connected we have the following screen:



If the connection is correct the symbol ' Ξ ' appears on the second line.

<u>Sensor</u>

SCw

After having opened the domain on the access point: Insert the battery, paying attention to the polarity. Check that LED (A) comes on for a few seconds. Press the button located on the rear of the sensor (B) once. The LED on the sensor (A) remains on until the device is connected to the access point.

Note:

If the LED flashes once rather than remain on steady, it means that it has already been associated with another access point. In this case, reinitialise the sensor.

compared to APw

battery.

The access point indicates that the connection has been made by sequentially activating the 3 LEDs .

CHECK: The sensor will be correctly associated if each time the button is pressed once the LED flashes once.

DS50

In the special screens, search the screen beginning with [Wireless (SCw 1) Clo] or several For an SCw perfectly set and connected we have the following screen:



If the connection is correct the symbol ' $\ensuremath{\Xi}$ ' appears on the second line.

Reset devices

To reinitialise the devices to the initial purchase status, proceed as follows.

Access point

APw

0).

Important: All the devices previously associated will be removed from the access point/repeater (no devices connected =



Press the button, 10 seconds, until the 3 LEDs remain on steady (not flashing).

Release the button.

The LEDs will start flashing quickly;

The device is reinitialised if after a few seconds the LED on the left remains on steady.



If the symbol ' \perp ' is displayed instead of a symbol ' Ξ ' it means that the Wireless communication does not, or more. In this case check the position of the display compared to APw

The third line shows the power of communication.

The fourth shows the percentage of charging the battery.

If the symbol '+' is displayed instead of a symbol '+' it means that the Wireless communication does not, or

The fourth shows the percentage of charging the

more. In this case check the position of the sensor

The third line shows the power of communication.

<u>Terminal</u>

DCw

The following procedure reinitialises the terminal and removes the connection to the reference access point. Access in the parameter programming procedure and set loc21 = ON. Parameter loc21 is used to return the terminal to the default configuration (including the supervisor address).

<u>Sensor</u>

SCw

The address of the sensor can only be set again if it has first been associated with an access point; in the case the connection to the access point in question will be removed.

Press the button on the rear until the LED flashes (10s);

Release the button;

The LED will flash quickly;

The device is reinitialised if when pressure the button again the LED remains on for 15s.

Note:

Resetting the terminal/sensor does not eliminate the space reserved for the terminal inside the access point. Note that, after resetting the terminal/sensor, the number of devices on the access point remains unvaried.

SETTING AND ASSIGNMENT

<u>Terminal</u>

DCw

In the special screens, search the screen beginning with [Wireless (DCw)]



This screen can display the temperature, and humidity, as measured by the display and adjust an offset to these sensors.

To change the value of an offset:

The cursor blinks at the top left of the screen. Press the button \checkmark to move the cursor to the value of offset temperature.

Press the buttons ' \downarrow ' or ' \uparrow ' to change the value.

Then press, again, the button \checkmark to validate the new value and position the cursor on the value of the offset humidity.

Then press, again, the button "" to validate the new value and position the cursor in the upper right corner.

<u>Sensor</u>

SCw

In the special screens, search the screen beginning with [Wireless (SCw)] or several



This screen can display the temperature, and humidity, as measured by the sensor and adjust an offset to these sensors. To change the value of an offset:

The cursor blinks at the top left of the screen. Press the button ' \Box ' to move the cursor to the value of offset temperature.

Press the buttons ' \downarrow ' or ' \uparrow ' to change the value.

Then press, again, the button \Box' to validate the new value and position the cursor on the value of the offset humidity.

Then press, again, the button \Box to validate the new value and position the cursor in the upper right corner.

Choice of probes

Warning: if this is not carried out, the unit will work with its return probe, and not with the probes system Wireless.

The following special screens to select the probes used by the unit.

You'll find 12 screens identical; representing 12 units can be connected to Master/Slave.

Each unit has the opportunity to work on the average values of sensors connected to all units slaves bus. (Altogether it is possible to work on the average of 84 probes of the bus, 7x12)





| DS 50 set | rvice | DS 5 | 0 service |
|---|-------|--|---|
| DCw SCw (01) Prg 01 9 9 1 < | | DCw SCw (01 Prg 02 0 | > ↑ · · · · · · · · · · · · · · · · · · |
| <u>LENNOX</u> | | LENNOX | |

The number in the upper right shows the unit affected by this setting. (Unit connected by the DS50)

The number of the second line indicates the number of different cards that could be connected to the bus Master/Slave. (Note: Even if the unit is not connected to the bus that screen will be displayed)

The first column represents the symbol DCw may be connected to this unit slave.

The following six columns represent the symbol SCw may be connected to this unit slave.

A symbol 'E' indicates that a probe is present and connected to the slave

A Symbol 'D' indicates that the values of this probe will not be used for the unit concerned.

A Symbol "I' indicates that the values of this probe will be used for this unit.

To change the choice of assignments (a make on 12 pages):

The cursor blinks at the top left of the screen. Press the button \checkmark to move the cursor to the square of DCw. Press the buttons \downarrow or $\uparrow\uparrow$ to change status.

Then press, again, the button '+ to validate the new value and position the cursor on the following square corresponding to the first probe SCw.

Then press, as many times as necessary, button 4 to reposition the cursor on the other probes then at the top right corner

The last special screen shows the result of averaging probes selected for this unit.





TERMINAL DCw

This chapter describes the functional characteristics of the terminal.



<u>Display</u>



Key:

1 Main field. 2 Operating mode indicator

3 Flat battery indicator

4 Wireless connection active with the APw

5 Display in °C/°F indicator

6 Set mode for the value of field 1

7 Fresh Air display indicator

8 Secondary field.

9 Time in 12/24 h mode indicator

10 Occupancy mode active

11 Time band active (1 or 2) indicator

12 Sleep mode indicator. The digit shows the hours remaining

13 Lock button/function active

14 Active alarm. Field 8 shows "E" + alarm code 1 to 255

<u>Keypad</u>

Front buttons

(Numbered from 1 to 6, from top to bottom, left to right)

| n. | Button | meaning |
|-----|---------------------------|--|
| 1 | Mode ON/OFF | Pressed briefly: • Terminal ON if the instrument is OFF. • Return to the main screen. Pressed and held (3 s): • Terminal OFF. |
| 2 | Time Bands | Pressed briefly: • Enter time band setting mode. Pressed and held (5 s): • Enter clock setting mode. |
| 3 | Fresh Air | Pressed briefly: • Change percentage of Fresh Air (UP/DOWN buttons to change value). |
| 4 | Up | From the main menu increase the value of the set point displayed in the large field. From the other menus display the variables or the parameters or set the value if first pressing the multifunction button. |
| 5 | Multifunction | Each time the button is pressed displays the menu set for parameters loc 7, 8, 13, 14, and 15. To change, if available, the values displayed in the menus, press the up/down buttons. |
| 6 | Down | From the main menu decrease the value of the set point displayed in the field. From the other menus display the variables or the parameters or set the value if first pressing the multifunction button |
| 3&6 | Fresh Air + Down ↓ ↓ ▼ | Pressing Fresh Air/DOWN together accesses the parameters menu. Press the UP/DOWN buttons to access the desired parameter and the multifunction button to set the value, again using the UP / DOWN buttons. Press the multifunction button again |



Information Displayed

Mode

| Auto | Dead zone, Blower to Off |
|----------|--------------------------|
| ß | Dead zone, Blower to On |
| ₩ | Cooling mode |
| ※ | Heating mode |
| ~ | Electrical heaters to On |

Zone

| 仓 | Zone A |
|----|------------|
| ♥余 | Zone B |
| | Zone C |
| | Unoccupied |
| | BMS |

ON/OFF

Button pressed and held for 3 sec

Clock button

The button is used to set: • The time bands.

The clock

Key: Select band number Select HOUR, MINUTES and ON/OFF/TEMP fields ▼▲ Set the value of the field

Terminal time bands

The terminal can save up to two daily events with the automatic changeover of the ambient settings at set times.

Key:

C Enter time band setting mode by pressing once

Band 1 can now be programmed, with HOUR digits flashing

- 1. Enter the start hours for band 1 using the \blacktriangle and \blacktriangledown buttons
- 2. Press 😏 to select MINUTES
- 3. Enter the start minutes for band 1 using the \blacktriangle and \blacktriangledown buttons
- 4. Press \varTheta to select ON/OFF/TEMP
- 5. Enter the action of band 1 using the \blacktriangle and $\overline{\mathbf{v}}$ buttons
- OFFON
- Temperature set point: 8 °C to 32 °C
- 6. Press 🕑 to select band 2 and repeat steps 1 to 5

To exit the time band setting mode:

• by time around 30 s after the last button was pressed



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Manually by pressing

The enabling of the time bands is indicated in normal operation by the symbols **and the number of the band** that is active at that time.

Note: from when programming until the expiry of the first band, only the symbols without indicating the number of the active band.

The time bands can be disabled by selecting the value Off in step No. 4 above.

Example: with manual set point 21°C.



Clock from terminal



Key:

 \bigcirc Enter clock setting mode when pressed and held for 5 seconds.

The clock can now be set, with the hour digits flashing

- Enter the current hours using the \blacktriangle and \blacksquare buttons
- Press * to select MINUTES
- Enter the current minutes using the \blacktriangle and \blacksquare buttons

To exit clock setting mode:

- By time around 30 sec after the last button was pressed
- Manually by pressing

FRESH AIR button

Set the % of outside air mixed (mainly for applications with ARIA).

- Pressing the button I once displays the %FA already set in the main field.
- Each time the **A** and **V** button is pressed increases/decreases the %FA in steps of 1%FA.
- To exit the FRESH AIR function:
- By time, 5 seconds after the last button is pressed
- Manually by pressing the button



Multifunction button

Used to manage the display/setting of the five functions shown in the following list:

| Value | function | notes |
|-------|-----------------|--------------|
| 0 | No function | |
| 1 | Set temperature | Modifiable |
| 2 | Temperature | Display only |
| 3 | Set humidity | Modifiable |
| 4 | Humidity | Display only |
| 5 | Clock | Display only |
| 6 | Sleep | Modifiable |
| 7 | °C/°F | Modifiable |

Pressing once displays the configured functions, in sequence.

• Each time the UP/DOWN button is pressed increases/decreases the function selected (where modifiable)

To exit the selected function:

By time, 5 seconds after the last button is pressed

Manually by pressing

The functions that can be associated are configured using parameters loc 7, loc 8, loc 13, loc 14, and loc 15.

- loc 7 Field displayed when pressing multifunction once
- loc 8 Field displayed when pressing multifunction the second time
- loc 13 Field displayed when pressing multifunction the third time
- loc 14 Field displayed when pressing multifunction the fourth time
- loc 15 Field displayed when pressing multifunction the fifth time

Note:

- The humidity value is displayed on the temperature-only model as "---".
- The humidity set point can also be displayed/set on the temperature only model.

Functions

Display

The numeric fields on the display can be configured based on requirements. Parameters loc1 and loc2 are used to customise these fields.

Main display (loc1)

| ~ | (| | |
|---|------|-----------------|--|
| | loc1 | display | notes |
| | 1 | Temperature | Default |
| | 2 | Set Temperature | COMFORT displayed if COMFORT function active (loc) |
| | 3 | Humidity | "" if humid. sensor not fitted |
| | 4 | Set Humidity | - |

Secondary display (loc2)

| loc2 | display | notes |
|------|-----------------|--|
| 0 | no display | Blank |
| 1 | Temperature | - |
| 2 | Set Temperature | COMFORT displayed if COMFORT function active (loc) |
| 3 | Humidity | "" if humid. sensor not fitted |
| 4 | Set Humidity | - |
| 5 | Clock | Default |

Sleep

The Sleep function is especially useful at night, when the decrease in body temperature (due to sleep) changes our perception of the ambient temperature.

• Association with the multifunction button.

In this case:

• Press the multifunction button until reaching the following screen.



To exit the selected function:



• By time, 5 seconds after the last button is pressed

Manually by pressing the button

The enabling of the function is highlighted on the display in normal status:

The operating hours count down until the time (3h) expires, after which the Sleep function will end. Upon activation of the function is for the time requested, the unit will be forced to Uno mode

<u>Alarms</u>

An alarm/warning from the BM50 can also be shown on the display.

Setting the Parameters

The terminal features a series of internal parameters to customise the device according to the type of use. The parameters are divided into two categories:

- User parameters modifiable by the user without entering the password
- Factory parameters modifiable only after having entered the password

Editing the user parameters



Editing the factory parameters

Use the procedure described in the previous paragraph to access parameter loc10, and enter the password (default 22).



The factory parameters (loc9, loc11 to loc21) can now be displayed and set.



| Loc | Description | Values | Min | Def It | Max |
|-------|---|--|------------|------------------------|--------|
| Loc1 | It sets up the visualization of the great field | 1 = setpoint temperature (C°/F°) 2 = temperature (C°/F°) 3 = setpoint humidity (%Rh) 4 = humidity (%Rh) | 1 | 2 | 4 |
| | It sets up the visualization of the small | 0 = No visualization 1 = setpoint temperature (C°/F°) 2 = temperature (C°/F°) 3 = setpoint humidity (%Rh) 4 = humidity (%Rh) | | | |
| Loc2 | field | 5 = Clock | 0 | 5 | 5 |
| Loc3 | 24 or 12h AM/PM | 1 = AM/PM | 0 | 0 | 1 |
| Loc4 | Value in C° degrees to the setpoint of temperature in the sleep mode | Not used | - 5.0°C | 0.0°C | +5.0°C |
| Loc5 | Ambient calibration probe temperature | +/-10°C | - 9.5°C | 0.0°c | +9.5°C |
| Loc6 | Ambient calibration probe humidity | +/- 10% | -10% | 0% | +10% |
| l oc7 | It sets up the visualization to the first pressure of the key multifunction () | 0 BLANK. The field remains empty 1 Setpoint of temperature 2 Temperature 3 Setpoint humidity 4 Relative humidity 5 Clock 6 Timer of sleep | 0 | 1 | 6 |
| | | 0 BLANK. The field remains empty 1 Setpoint of temperature 2 Temperature 3 Setpoint humidity 4 Relative humidity | | | |
| Loc8 | It sets up the visualization to the second pressure of the key multifunction () Address for the supervisor. For its formulation it is necessary that finishes is not associated they to some Access Point. If finishes the parameter is associated they is alone in reading. If she wants herself to be removed from | 5 Clock 6 Timer of sleep | 0 | 4 T. & Hu 6 T. only | 6 |
| Loc9 | the net they finishes look | [16199] The value of the password is defined from P11. And present a | 16 | 16 | 199 |
| Loc10 | order to approach the parameters with password | value of default decided in factory in order to concur the first access. | 0 | 22 | 999 |
| Loc11 | Modification the password of access (P10) | 000-998 = new password 999 = it eliminates the password | 0 | | 999 |
| Loc12 | them from the running net disassociandolo from just the Access Point | ON = Current value OFF = Removal of the terminal on the current network | Off | On | On |
| | | 0 BLANK. The field remains empty 1 Setpoint of temperature 2 Temperature 3 Setpoint humidity 4 Relative humidity | | 0.T. 0.11 | |
| Loc13 | it sets up the visualization to the third pressure of the key multifunction () | о слоск 6 Timer of sleep | 0 | 3 T. & Hu 0 T. only | 6 |



LENNOX

| Loc | Description | Values | Min | Def It | Max |
|-------|--|---|-----|---------------------------|-----|
| Loc14 | It sets up the visualization to the quarter pressure of the key multifunction () | 0 BLANK. The field remains empty 1 Setpoint of temperature 2 Temperature 3 Setpoint humidity 4 Relative humidity 5 Clock 6 Timer of sleep | 0 | 6 T. & Hu 0 T. only | 6 |
| | It sets up the visualization to the fifth | 0 BLANK. The field remains empty1 Setpoint of temperature2 Temperature3 Setpoint humidity | | | |
| | pressure of looks at table description | 4 Relative humidity | | | |
| Loc15 | multifunction () | 6 Timer of sleep | 0 | 0 | 6 |
| Loc16 | Resistance It sets up the allowed modalities in the | Automatic from BM50 | Off | Off | On |
| Loc17 | system of conditioning through key MODE Modality lock. Several rules except the | Automatic from BM50 | 0 | 0 | 6 |
| Loc18 | keys come block to you to the keys second up/down Set the mode of occupation. It is a function of the terminal which makes it | Automatic from BM50 | 0 | 0 (Keys were Liber to) | 15 |
| | possible to send to the supervisor if a person misses or present. When that a key is in a hurry the person is present in the definite state of Occupation for a | | | | |
| Loc19 | definite time. With If qualified limits the variation of the setpoint of temperature through keys up/down to a range of +/- 3C° (+/- 6°F). They In place of visualizing the setpoint | Not used | 0 | 0 | 3 |
| Loc20 | tinishes visualizes the degrees to add or to embezzle to this (from $-3C^{\circ}/-6F^{\circ}$ to $+3C^{\circ}/+6F^{\circ}$) | OFF = Disable function ON = Enable function | Off | Off | On |
| Loc21 | Factory parameters. | To set up to ON for having the factory parameters. | Off | Off | On |