

Temperature central unit

674 56

Installation manual



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1 - Introduction

1.1 - Warnings and tips

Before proceeding with the installation this manual should be read carefully, because the guarantee is automatically cancelled in the event of negligence, incorrect manoeuvre or improper use or if unauthorised people tamper with the circuit.

Moreover it is cancelled when the fault is due to strong accidental overvoltages on the power supply network. Thus if the Control Unit is installed in a place which is subject to violent atmospheric discharges (storms), suitable protection must be installed on the power supply line and it must be connected to the earth as rigorously as possible and respecting IEC standards.

1.2 - Contents of package

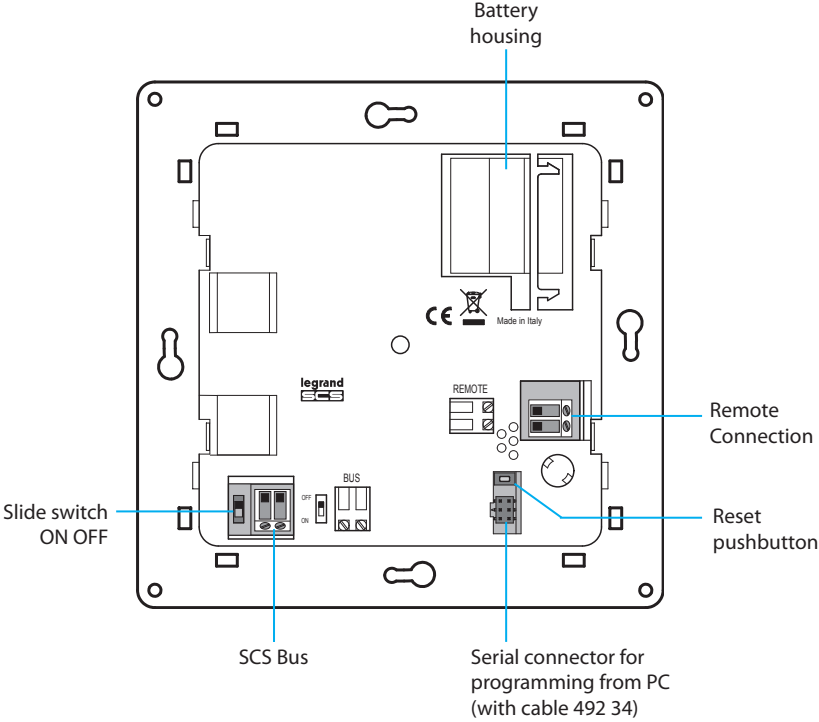
The Control unit package contains:

- Temperature control unit 674 56.
- Installation manual.
- User manual.
- CD-ROM containing ThermoConfig software and manuals in PDF format.



2 - Installation

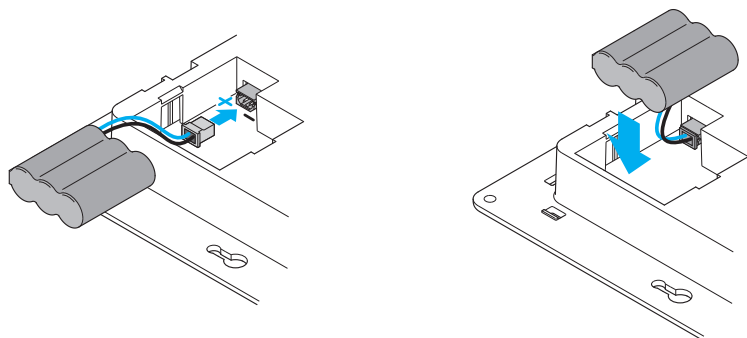
2.1 - Rear view of the Control Unit



2 - Installation

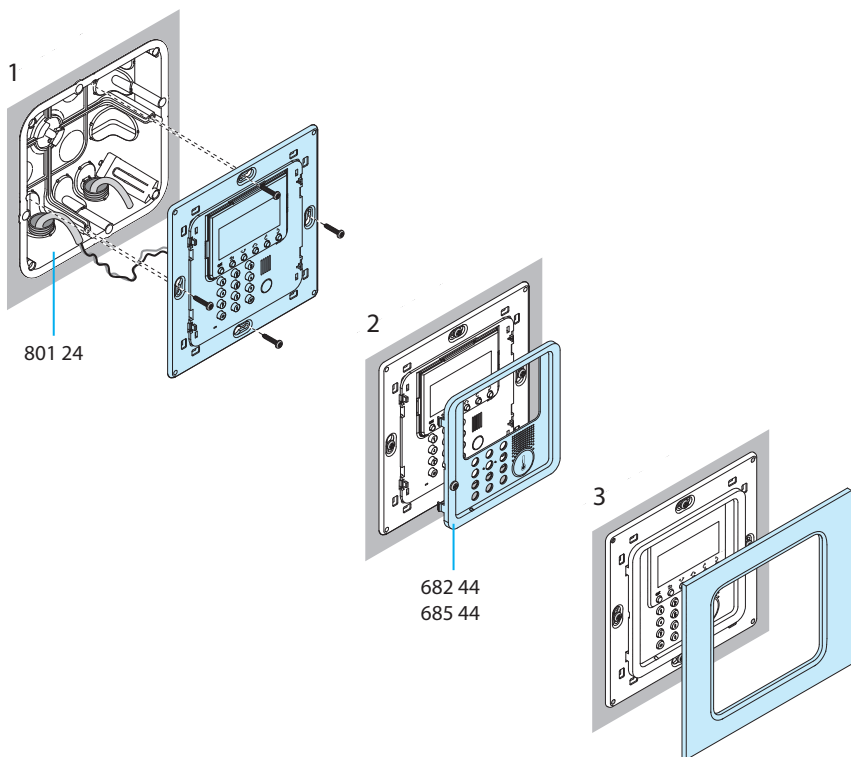
2.2 - Connecting the battery

Connect the battery to the connector respecting the polarities indicated inside the housing.



2.3 - Installing the unit

After making all connections, fasten the Unit to the base. Be careful not to damage the wires.



3 - Switching on for the first time

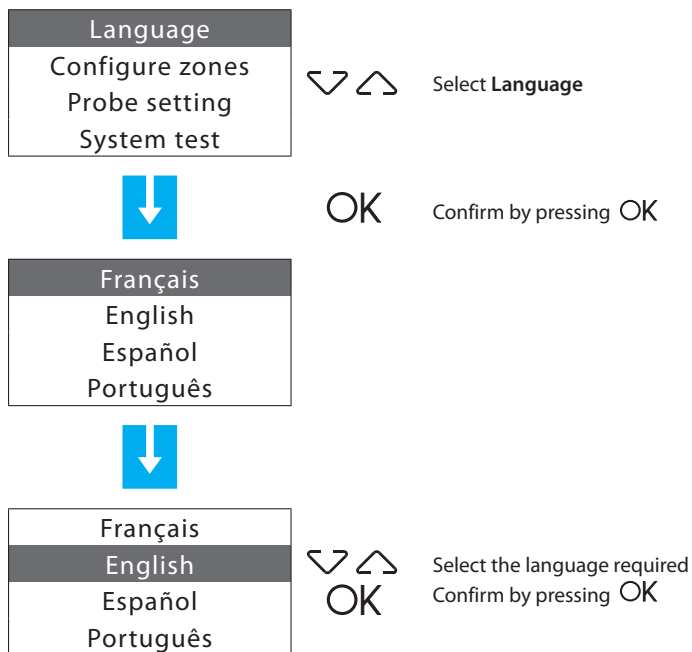
When the Control Unit is switched on for the first time it shows the Maintenance menu with the **Language** function highlighted.

To activate the Control Unit and make it operational:

- Select the **Language**.
- Perform the zone learning - **Zone search**.
- Configure the zone **Actuators**.
- Configure the zone **Pumps**.
- Enter time and date.
- Define the system state (Summer/winter).

3.1 - Selecting the language

Use this function if the language preset in the factory is not that required:



3 - Switching on for the first time

3.2 - Learning the zones

This function lets the Control Unit recognise all the system zones.

Language
Configure zones
Probe setting
System test



Select **Configure zones**



OK

Confirm by pressing OK

No zone configured
Zone search

The Control Unit signals "No zone configured" and that the "Zone search" can be performed



OK

Confirm by pressing OK

Zone search
01
⋮
Zone search
99
System acquisition

The Control Unit searches the zones from 01 to 99. Depending on the size of the system, this operation may take a few minutes



When the search is completed it returns to the Configure zones menu

01:	Zone 1	
02:	Zone 2	
03:	Zone 3	
◀	Actuators	▶

3 - Switching on for the first time

3.3 - Configuring the zone actuators

This function completes the zone configuration, indicating:

- which actuators are installed for Heating;
- which actuators are installed for Cooling;
- which type of load the zone manages.

01:	Living room
02:	Zone 2
03:	Zone 3
◀ Actuators ▶	



Select the **zone** (e.g. Living room)



OK

Confirm by pressing OK

01:	Heating
02:	Heating
03:	Cooling
◀ Not connected ▶	



One of the following options can be selected for each actuator in the list:

◀ Not connected ▶	
◀ Heating ▶	
◀ Cooling ▶	
◀ Heat. & cool. ▶	

Not present on the system

Is used to manage the Heating system

Is used to manage the Cooling system

Is used to manage both the Heating system and the Cooling system (e.g.: 2-pipe fan coil)



OK

Confirm by pressing OK

09:	Not connected
H:	ON/OFF
C:	OPEN/CLOSE
◀ FAN-COIL 3V ▶	

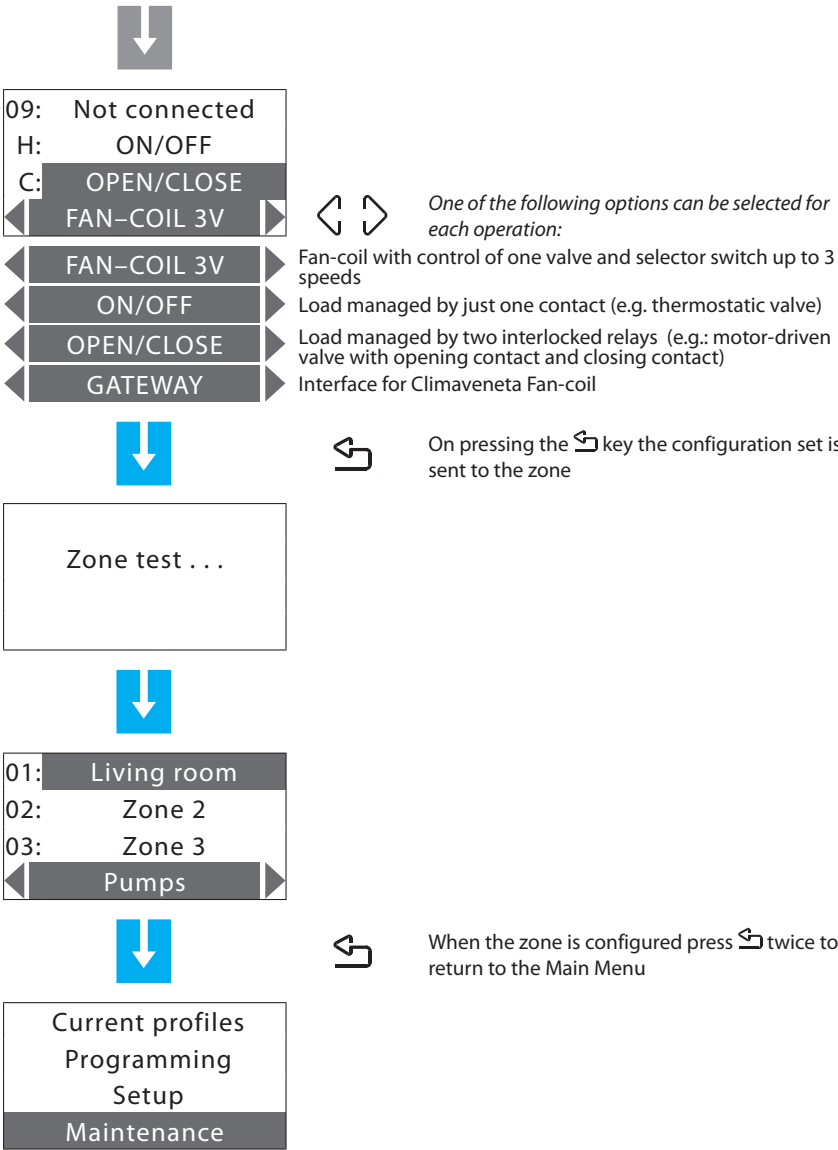


The last two items of the menu can select the type of load managed



NEXT

3 - Switching on for the first time



3 - Switching on for the first time

3.4 - Configuring the pumps

Can complete the zone configuration, indicating which pumps must control the zone and with how much delay.

01:	Living room
02:	Zone 2
03:	Zone 3
Pumps	



Select the **Zone** (e.g.: Living room)



OK

Confirm by pressing OK

01:	Heating
02:	Heating
03:	Cooling
Not connected	



One of the following options can be selected for each actuator in the list:

Not connected
Heating
Cooling
Heat. & cool.

Not present on the system or not managed by the zone selected

Is used to manage the Heating system

Is used to manage the Cooling system

Is used to manage both the Heating system and the Cooling system



OK

Confirm by pressing OK

09:	Not connected
H:	1
C:	0
0	



The last two items of the menu can select the delay in activating the pump



Selects the minutes of delay



OK

Press OK to confirm

NEXT

3 - Switching on for the first time




Zone test . . .



01:	Living room
02:	Zone 2
03:	Zone 3
Pumps	



On pressing the  key the configuration set is sent to the zone.

The control unit sends the configuration:

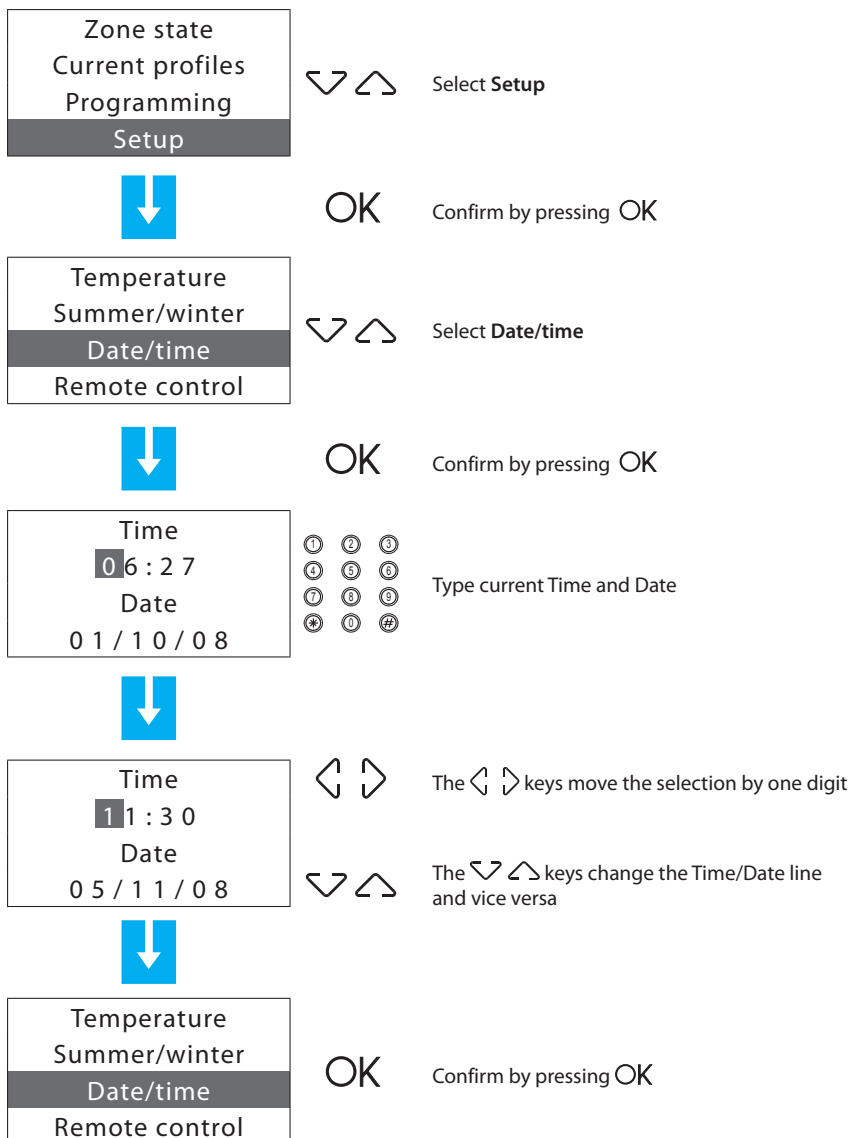
The following error message may be given

ERROR
Verify the
probe
configuration

3 - Switching on for the first time

3.5 - Setting the Date and Time

Setting the Date/time correctly is important for correct running of the set weekly programs.



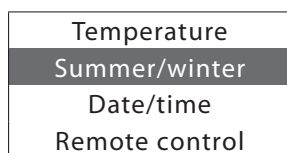
3 - Switching on for the first time

3.6 - Setting the Summer/winter system

Sets the mode of operation of the Cooling or Heating system.



Before performing the switching, perform all the operations necessary for the hydraulic system to work correctly.



Select **Summer/winter**



OK

Confirm by pressing **OK**



*The display indicates the current state: **Winter***



OK

Confirm by pressing **OK**



*A **BEEP** signal that the modification has been made*

*The display indicates the new setting: **Summer***



After the switching the system is set on Antifreeze/Heat Protection mode.

4 - Programming

4.1 - Programming from personal computer

Type of program

The Unit can be programmed by using the ThermoConfig software.

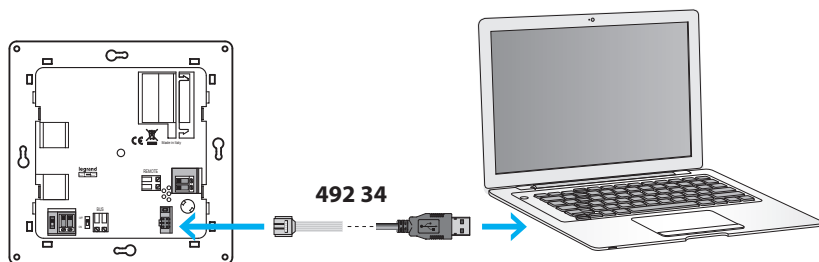
Programming from a PC requires a cable 492 34, for the connection between the Unit 6-way connector and a PC USB port.

Connection is carried out as follows:

Use the maintenance code to enter the **Maintenance** using the Maintenance menu, take the Unit OFF the bracket.

Start **ThermoConfig** program.

Connect cable when requested and then follow the program procedure



For further information, see ThermoConfig software manual.

Firmware update

This function allows updating the Unit software with its latest release. Such update allows bringing in improvements as well as new Unit functions.

The latest firmware releases are available at www.legrandelectric.com



Before starting the firmware updating procedure position the slide switch on OFF

For further information, see ThermoConfig software manual.

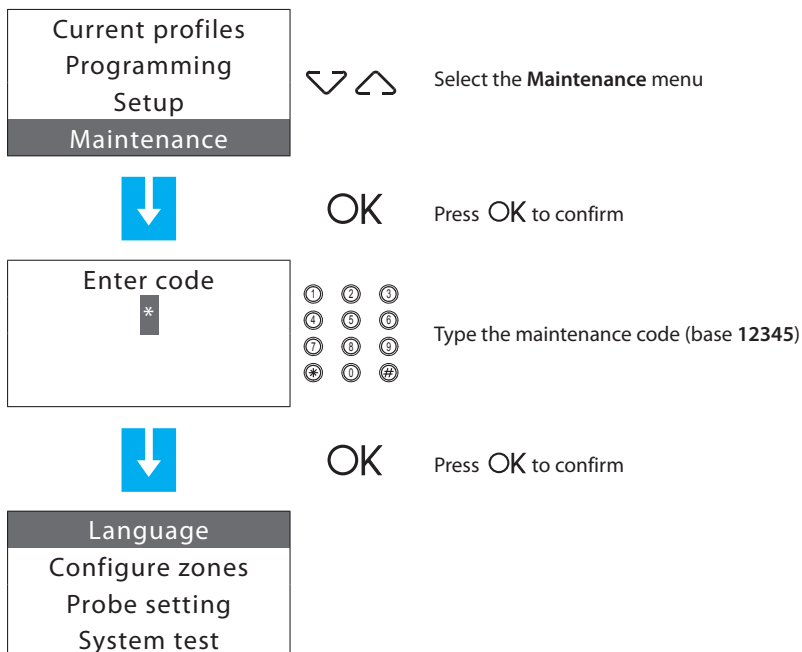
5 - Main menu



5.1 - Maintenance

To prevent inexperienced users modifying the settings and affecting the operation of the Temperature control unit, access to this menu is protected by the **Maintenance Code** (base 12345).

To access the MAINTENANCE menu:



Items present:

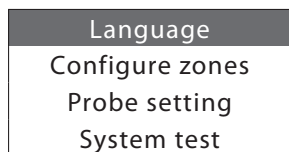
- **Language** - Can select the language;
- **Configure zones** - Can configure the system zones;
- **Probe setting** - Can vary the temperature measured;
- **System test** - Can perform maintenance or checks on the system;
- **Maintenance code** - Can customise the maintenance code;
- **Total reset** - Resets the control unit totally.

5 - Main menu



6.1.1 - Language

Can select the language in which the messages are shown on the display.



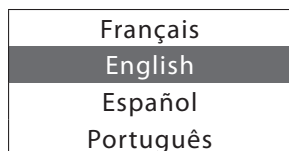
Select **Language**

OK

Confirm by pressing OK



Select the language required
Confirm by pressing OK

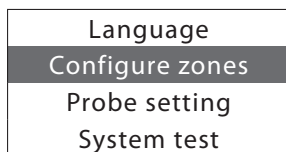


5 - Main menu



5.1.2 - Configure zone

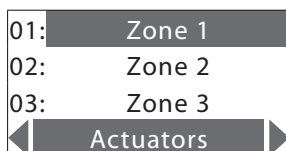
Can perform the system learning and manage the zone configuration.



Select **Configure zones**

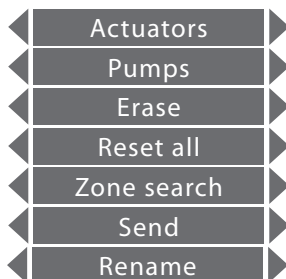


Confirm by pressing **OK**



Select the zone

The following functions are available for the zone selected:



Can configure the actuators for the zone selected

Can configure the pumps for the zone selected

Can erase the zone selected

Can zero the configuration of all the zones

Searches all the zones in the system

Configures the zones on the basis of the settings received from the PC via the ThermoConfig software

It enables renaming the selected zone

Use the   keys to select the function required.

5 - Main menu



5.1.2.1 - Actuators

This function completes the zone configuration, indicating:

- which actuators are installed for Heating;
- which actuators are installed for Cooling;
- which type of load the zone manages.

01:	Living room
02:	Zone 2
03:	Zone 3
◀ Actuators ▶	



Select the **zone** (e.g. Living room)



OK

Confirm by pressing OK

01:	Heating
02:	Heating
03:	Cooling
◀ Not connected ▶	
◀ Not connected ▶	
◀ Heating ▶	
◀ Cooling ▶	
◀ Heat. & cool. ▶	



One of the following options can be selected for each actuator in the list:

Not present on the system

Is used to manage the Heating system

Is used to manage the Cooling system

Is used to manage both the Heating system and the Cooling system (e.g.: 2-pipe fan coil)



OK

Confirm by pressing OK

09:	Not connected
H:	ON/OFF
C:	OPEN/CLOSE
◀ FAN-COIL 3V ▶	



The last two items of the menu can select the type of load managed



NEXT

5 - Main menu



09: Not connected
 H: ON/OFF
 C: OPEN/CLOSE
 FAN-COIL 3V



One of the following options can be selected for each actuator in the list:

FAN-COIL 3V
 GATEWAY
 ON/OFF
 OPEN/CLOSE

Fan-coil with control of one valve and selector switch up to 3 speeds

Interface for Climaveneta Fan-coil


Load managed by just one contact (e.g.: thermostatic valve)

Load managed by two interlocked relays (e.g. motor-driven valve with opening contact and closing contact)



Zone test . . .



Press the  key to send the configuration set to the zone

The control unit tests the configuration.
 When this is finished there may be two error messages:



01: Living room
 02: Zone 2
 03: Zone 3
 Pumps

Configuration
 invalid

Trying to set a configuration of actuators which is not allowed (example: actuators of different type for the same function) in a probe

ERROR
 Verify the
 probe
 configuration

5 - Main menu



5.1.2.2 - Pumps

Can complete the zone configuration, indicating which pumps must control the zone and with how much delay.

01:	Living room
02:	Zone 2
03:	Zone 3
◀ Pumps ▶	



Select the **Zone** (e.g.: Living room)



OK

Confirm by pressing OK

01:	Heating
02:	Heating
03:	Cooling
◀ Not connected ▶	



One of the following options can be selected for each actuator in the list:

◀ Not connected ▶
◀ Heating ▶
◀ Cooling ▶
◀ Heat. & cool. ▶

Not present on the system or not managed by the zone selected

Is used to manage the Heating system

Is used to manage the Cooling system

Is used to manage both the Heating system and the Cooling system



OK

Confirm by pressing OK

09:	Not connected
H:	1
C:	0
◀ 0 ▶	



The last two items of the menu can select the delay in activating the pump



Selects the minutes of delay

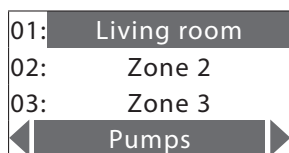
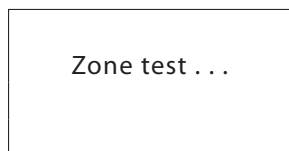



OK

Press OK to confirm

NEXT

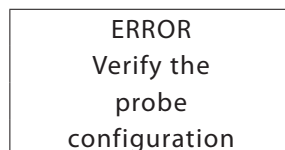
5 - Main menu



Press the  key to send the configuration set to the zone.

The control unit tests the configuration:

The following error message may be given



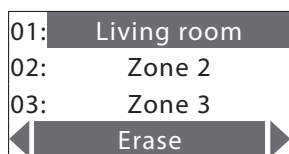
Check that the probe is in configuration (P=CEN) and try again; if it is not this type of configuration, the control unit cannot configure the probe.

5 - Main menu



5.1.2.3 - Erase

Can erase the zone selected from the configuration.

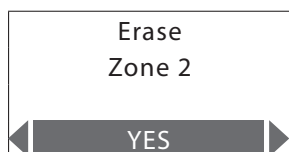


Select the **zone**



OK

Press **OK** to confirm

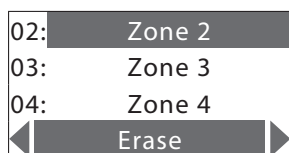



Select **YES**



OK

Press **OK** to confirm



Press  to return to the previous page, keep pressed to return to the first page



The Control Unit no longer manages the erased zones.

5 - Main menu



5.1.2.4 - Reset all

Can erase the saved configuration of all the zones.

01:	Living room
02:	Zone 2
03:	Zone 3
<div>◀ Reset all ▶</div>	



OK

Press OK to confirm

Reset system?	
<div>◀ YES ▶</div>	



Select YES



OK

Press OK to confirm

Reset in progress . . .	
<div>YES</div>	



No zone configured	
<div>Zone search</div>	

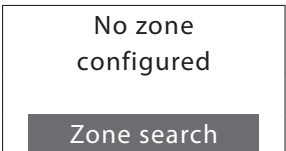
*From this moment on the Control Unit no longer manages any zones.
To reset the system operation, perform the zone LEARNING*

5 - Main menu



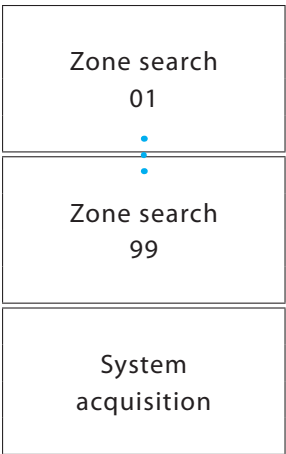
5.1.2.5 - Zone search

Searches all the zones in the system.



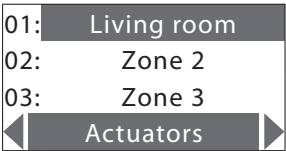
OK


Press OK to confirm



The system searches the zones from 01 to 99. Depending on the system size, this operation may take a few minutes

When the search has finished it returns to the Configure zones menu



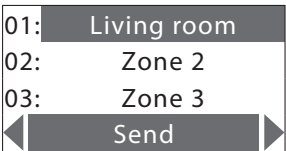
Press  to return to the previous page; keep pressed to return to the first page

5 - Main menu



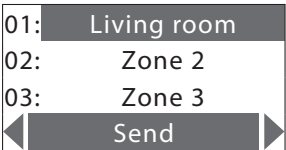
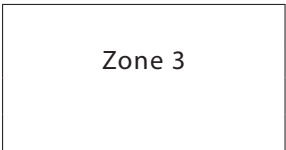
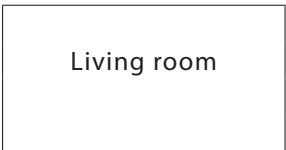
5.1.2.6 - Send

Sends the actuator and pump settings to all the configured zones.



OK


Press OK to confirm



The control unit sends the configuration set to the zones in the system.

This message may be displayed during the send phase:



Pressing  cancels sending the configuration
Press OK to go to the next zone

When the send is completed, it returns to the Configure zones menu

5 - Main menu



5.1.3 - Probe setting

Can align the temperature measured by the probes to a value measured with other devices (thermometer,...) to guarantee better precision in system operation.

Language
Configure zones
Probe setting
System test



Select **Probe setting**



Confirm by pressing OK

Zone 1
Zone 2
Zone 3



Select the zone (e.g.: Zone 2)



Press OK to confirm

Measured: 20.0C
New: 22.5C



Set the effective temperature measured in the room (± 0.1 °C increment)



Press OK to confirm

Probe setting in progress ...



Zone 1
Zone 2
Zone 3



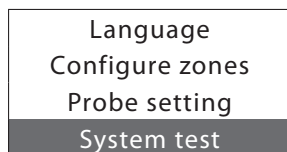
Press to return to the previous page; keep pressed to return to the first page

5 - Main menu



5.1.4 - System test

Can put the **System in test** (the whole system OFF) to check the system. It automatically disables all the commands (including the remote commands).

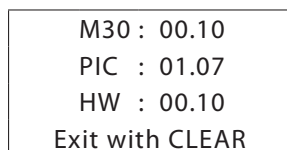


Select **System test**



OK

Confirm by pressing OK




The display indicates the Control Unit software and hardware versions:

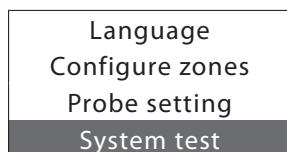
M30 – firmware version

PIC – firmware version SCS interface

HW – hardware version



Press  to return to the previous page



5 - Main menu



5.1.5 - Maintenance code

Can set a new **Maintenance code**.

Configure zones
Probe setting
System test
Mainten. Code



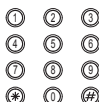
Select the **Mainten. Code**



OK

Press **OK** to confirm

Current:
12345
New:
12345



Type the new maintenance code (e.g.: 55555)

Current:
12345
New:
55555



OK

Press **OK** to confirm

Language
Configure zones
Probe setting
System test

From now on you must type the new code set to access the Maintenance menu



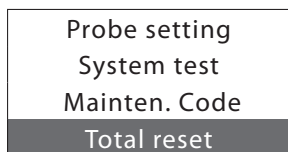
If a new MAINTENANCE CODE is set, make a note of it in the space on page 101 of this manual.

5 - Main menu



5.1.6 - Total reset

Can perform a Control Unit total reset. All the settings will be lost and the factory settings will be reset (see page 89 of the manual).

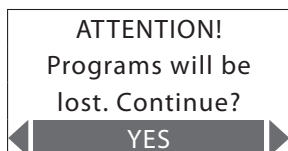


Select **Total reset**



OK

Press **OK** to confirm



Select **YES**

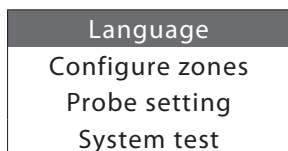



OK

Press **OK** to confirm



The Reset operation takes about 30 seconds.



Press  to return to the previous page, keep pressed to return to the first page



With this operation the system configuration and all the programs run will be lost!

Appendix

Technical data

Power supply from SCS bus	18 – 28 V
Absorption – Max	55mA
Operating temperature	5 – 40 °C
Degree of protection	IP 30

Standard references

The Item in this manual is provided with the CE Conformity Declaration according to the requirements shown below:

Legrand declares that the product:

674 56

is in compliance with the essential requirements of the 2006/5/CE directive, as it complies with the following standards:

EN60950 EN50090-2-2

CE mark year, according to the specified directive: 2008

More information concerning reference standards can be found at:

www.legrandelectric.com

Troubleshooting

PROBLEM	SOLUTION
Battery flat signal	Check that the battery is correctly connected. If the problem continues, replace the battery.
A zone does not adjust correctly	Check whether any problems have been signalled (Settings>Diagnostic>Update).
A zone signals "Error on probe"	The probe does not respond; check whether it is correctly connected (green LED shining steadily or flashing slowly) and configured (correct zone number and mode).
A zone signals "Actuator KO"	An actuator does not respond: <ul style="list-style-type: none"> - check whether the actuators are correctly connected and configured (test the actuators with the local key); - with standard configuration, check that the configuration has been performed correctly in the control unit (Maintenance>Configure zone>Configure).
A zone signals "Slave probe KO"	A slave probe does not respond: <ul style="list-style-type: none"> - check whether it is correctly connected (green LED shining steadily or flashing slowly) and configured (correct zone number, SLA mode); - check the correct configuration of the slaves to be managed on the Master probe.
A zone signals "T out of limits"	The temperature measured by the probe is too low or too high: <ul style="list-style-type: none"> - check that the probe is installed correctly (e.g. not too close to heat sources); - set the probe (Maintenance>Probe setting) measuring the room temperature with a thermometer; - if the problem continues, replace the probe.
A zone signals "R/W EEPROM KO"	If there is an internal problem on the probe, replace the probe.
A zone signals "Pump KO"	The actuator configured to control the circulation pump (Zone = 0) does not respond: <ul style="list-style-type: none"> - check that the actuator is correctly connected and configured (test the actuator with the local key); - check the correct configuration of the pump management on the probe.

Legrand reserves at any time the right to modify the contents of this booklet and to communicate, in any form and modality, the changes brought to the same.



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