MyHOME

Thermostat with display

Installer manual

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MyHOME

legrand®

bticino

Thermostat with display

1.1 Warnings and recommendations

Before proceeding with the installation it is important to read this manual very carefully.
The guarantee is automatically void in case of negligence, improper use, tampering by unauthorised personnel.
The thermostat is only suitable for indoor installation.

2.1 General features

The thermostat with display can be used both in heating and in air conditioning systems, and gives the possibility of adjusting the temperature on 5 levels. Comfort, Eco, Antifreeze / Thermal Protection, Automatic, and Manual.

Based on the type of use, the backlit display will show the following information: the current function or mode (heating, cooling, or automatic function; Comfort, Eco, Antifreeze / Thermal Protection, Automatic, Temporary Manual, or Off), the detected room temperature, the temperature set point defined, the fan-coil speed, and the status of the zone.

The thermostat can be used in MyHOME temperature control systems (MyHOME probe with central unit), hotel room systems, or residential systems (individual system). The configuration can be done by connecting the configurators to the corresponding sockets in the back of the thermostat, or using the MyHOME_Suite software.

Programming is simple and intuitive: to switch from one mode to the other press **MODE**, **+** or **−** .

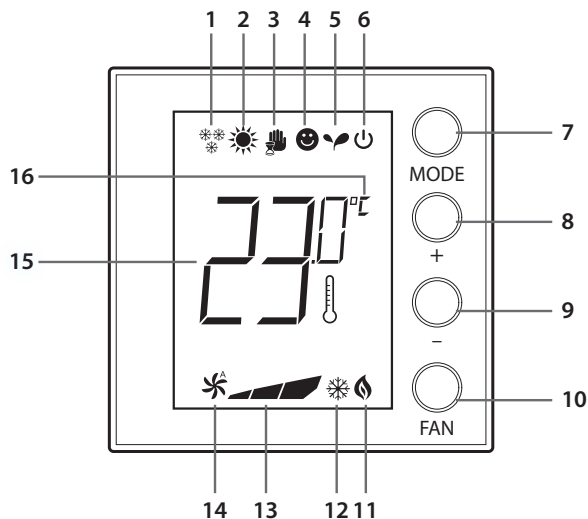**Factory settings**

|	Heating	Cooling
Adjustment interval for hotel or residential	14 – 26 °C	20 – 32 °C
Adjustment interval for MyHOME	3 – 40 °C	3 – 40 °C
☻ Comfort	21 °C	25 °C
❤ Eco	18 °C	28 °C
⏻ Antifreeze	7 °C	
⏻ Thermal protection		35 °C

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2.2 Front view

1 - Heating function.
2 - Cooling function.
3 - Manual mode icon.
4 - Comfort mode icon.
5 - Eco mode Icon.
6 - Antifreeze / Thermal protection / OFF mode.
7 - MODE key: a short pressure changes the mode of operation of the device; an extended pressure (unless used as MyHOME probe) changes the function. For the Hotel mode of operation only it is possible to change the function using the Mode key (performing the configuration using the MyHOME_Suite software).
8 - **+** key: increase the set value.
9 - **–** key: decrease the set value.
10 - FAN key: set the fan-coil speed on 3 levels + automatic.
11 - Heating On indicator.
12 - Cooling On indicator.
13 - Fan-coil speed indicator, 3 levels.
14 - Fan-coil in automatic mode indicator.
15 - Measured (thermometer symbol On) / set (thermometer symbol Off) temperature indicator.
16 - Unit of measure: °C or °F.

2.3 Rear and side view
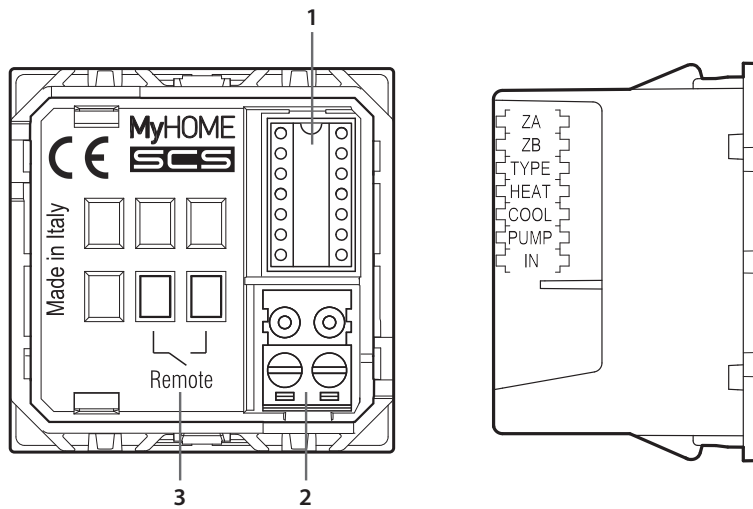
1 - Configurator socket.
2 - Connection to the BUS.
3 - Local contact.

ZA / ZB	= zone address,
TYPE	= Thermostat operating mode (MyHOME probe, hotel thermostat, or individual residential system);
HEAT	= definition of the type of heating load (valves, fan-coil, etc.);
COOL	= definition of the type of cooling load (valves, fan-coil, etc.);
PUMP	= selection of the pumps to control;
IN	= definition of the function performed by the contact connected to the thermostat.

⚠ For the configuration and setup of the local contact see the technical sheet.
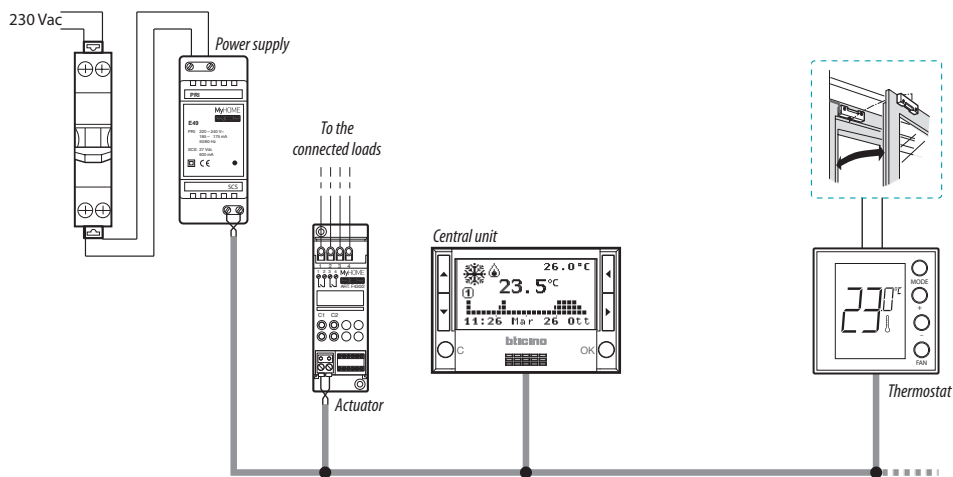
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3.1 Installation

Installation in a MyHOME temperature control system

Thanks to the internal sensor, the thermostat can operate as master probe of a MyHOME system. In this case it will obtain the settings from the central unit managing the system.

Using the + and − keys, it is possible to enter settings different from those of the central unit; the new settings are temporary, and will only be applied until the next central unit set-point change.

Example of MyHOME system

The systems consists of:

• Power supply;
• Actuators and pumps;
• Temperature control central unit;
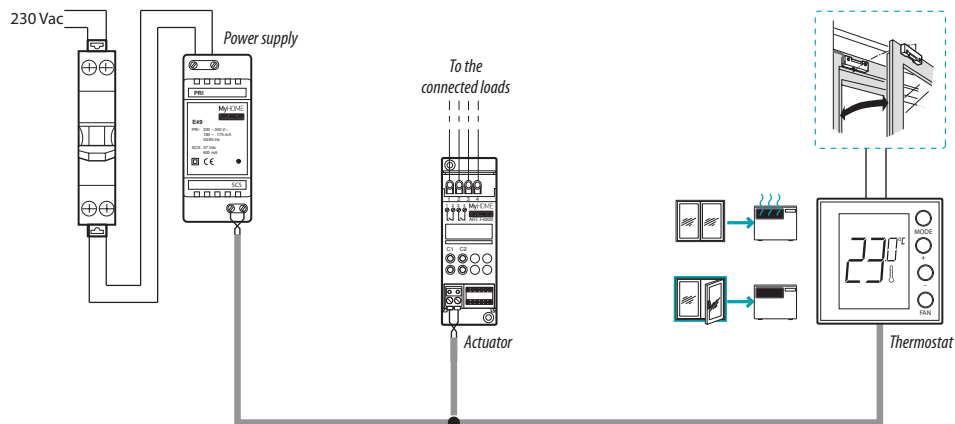• Thermostat with local contact for the detection of open windows.

Installation in hotel room

The operation in the hotel room configuration gives the customer the possibility of easily setting the temperature to the desired level of comfort. The hotel manager can integrate the individual thermostat installed in the room as part of a system that can be managed using a software for the monitoring of consumptions, therefore avoiding unwanted energy waste.

Installation in individual residential system

The third type of use, as room thermostat, manages the temperature control of an individual system, without the need for additional control devices.

Example of hotel room or individual residential system

230 Vac
Power supply
To the connected loads
Actuator
Thermostat

The systems consists of:

• Power supply;
• Actuators and pumps;
• Thermostat with local contact for the detection of open windows.

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3.2 Function comparison table

DESCRIPTION	MyHOME SYSTEM	HOTEL SYSTEM	INDIVIDUAL SYSTEM
Heating or cooling function setup	• From central unit	• From keypad (blockable) • From local contact • From software	• From keypad • From local contact
Automatic changeover function	–	●	●
Manual Mode	–	●	●
Temporary manual mode	●	–	–
Comfort mode	●	●	●
Eco mode	●	●	●
Antifreeze and Thermal Protection mode	●	●	●
OFF Mode	●	●	●
Comfort mode – 1 (*)	●	●	●
Comfort mode – 2 (*)	●	●	●
Fan-coil speed (**)	• From keypad • From remote	• From keypad • From remote	• From keypad

NOTE (*):   only for fil-pilote.
NOTE (**):   only for fan-coil .

4.1 Physical or advanced configuration

Depending on personal requirements and the type of system to install, the thermostat may be configured in two ways: physical or advanced configuration.

The physical configuration is completed by connecting the configurators to the appropriate sockets on the back of the thermostat.

If no physical configurators are connected, the device can be configured virtually by connecting it to a PC and using the dedicated MyHOME_Suite software.
In this way it is possible to simplify the configuration operations in large systems, without the need to manually intervene on each device.
The advanced configuration also gives the possibility to control several actuators with one single thermostat, and to configure the automatic changeover mode (heating / cooling).

For the configuration see the product technical sheet.
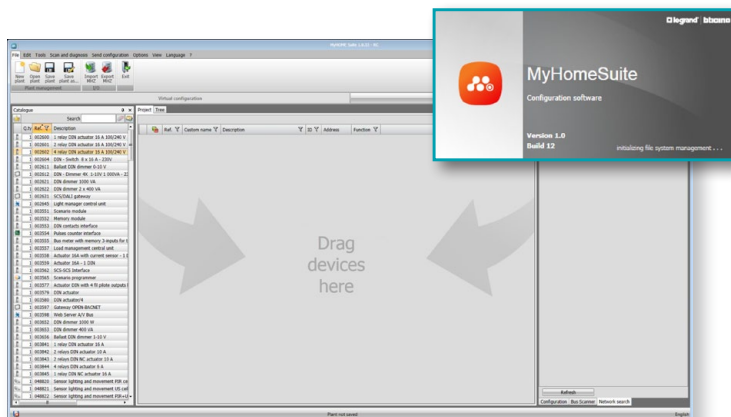
5.1 Heating and cooling function

The thermostat can be set for the management of four different functions, depending on the type of system to install:

- heating function (only the heating is active);
- cooling function (only the cooling is active);
- cooling function in summer / heating function in winter;
- automatic changeover between cooling and heating (not available in MyHOME systems).

The setting of the function (with the exclusion of the use as MyHOME probe) can be modified with an extended pressure of the **MODE** (> 7 seconds). For the Hotel mode of operation only it is possible to change the function using the Mode key (performing the configuration using the MyHOME_Suite software).

Heating function ❄❄

If the measured temperature is lower than the reference value, the heating system is activated and the corresponding symbol appears on the display 🔥 .

When the temperature is reached, the thermostat switches the zone off and the icon disappears.

Note: The heating icon is always displayed ❄❄ .

Cooling function ☀

If the measured temperature is higher than the reference value, the cooling system is activated and the corresponding symbol appears on the display ❄ .

When the temperature is reached, the thermostat switches the zone off and the icon disappears.

Note: the cooling icon is always displayed ☀ .

Summer / winter function

By configuring the thermostat both for the winter (HEAT) and the summer (COOL) functions, it is possible to use it with the heating system in winter, and the cooling system in summer.

The icons shown on the display will be the same as the ones previously described for the heating and cooling functions.

5.2 Automatic changeover function
(available starting from version 1.3 of MyHOME_Suite)
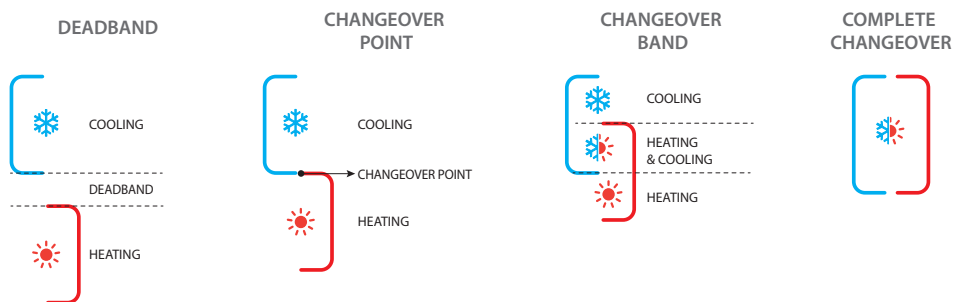
(Not available in MyHOME systems).

The thermostat can be programmed for automatic changeover between the heating and the cooling functions. When programmed in this way, the (❄ / ☀) icons are not displayed.

Depending on the temperature measured, the heating or cooling system in operation symbols (◊ / ❄) will appear, to indicate that the corresponding function is active.

Note: Automatic changeover mode cannot be configured physically, but must be enabled during the advanced configuration (using the MyHOME_Suite software).

This function can be used when it is necessary for the thermostat to automatically manage the changeover between heating and cooling, and is for example useful in case of 4 tube fan-coils.

Using the MyHOME_Suite software, it is possible to set the range of temperature at different levels, for the activation of the heating and the cooling systems, depending of the thermal inertia of one's own system, and specific requirements.

DEADBAND

❄ COOLING

DEADBAND

☀ HEATING

CHANGEOVER POINT

❄ COOLING

→ CHANGEOVER POINT

☀ HEATING

CHANGEOVER BAND

❄ COOLING

❄☀ HEATING & COOLING

☀ HEATING

COMPLETE CHANGEOVER

❄☀

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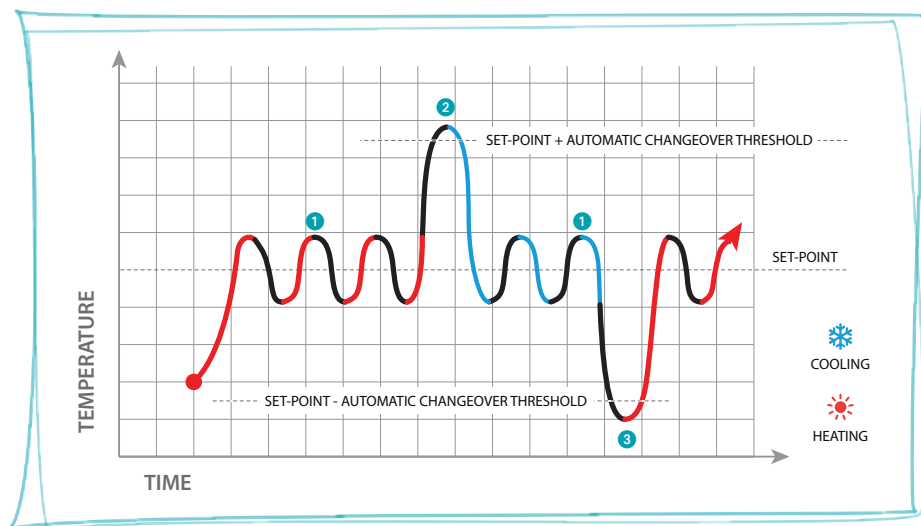
5.2.1 Automatic changeover in automatic or manual mode (fixed set-point)

The switching from the heating to the cooling function, and vice versa, depends on the rules listed in the following table (T° represents the measured temperature).

Measured temperature	Action
T° between (set-point + automatic changeover threshold) and (set-point – automatic changeover threshold).	It maintains the current function. ❶
T° > (set-point + automatic changeover threshold).	It switches to the cooling function. ❷
T° < (set-point – automatic changeover function).	It switches to the heating function. ❸

NOTE: the automatic changeover threshold has been set to 2°C.

Example chart

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5 Functions and operating modes
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5.2.2 Automatic function in Comfort, Eco, and Protection mode

Automatic changeover depends on the operating mode selected: comfort, eco, or protection.

In this case, the heating and cooling ranges must have been previously set in the corresponding modes (see paragraph 6.3).

Therefore, two parameters for each mode must be set: a high set-point to set in the cooling function, and a low set-point to set in heating mode.

*Example of temperature range settings*
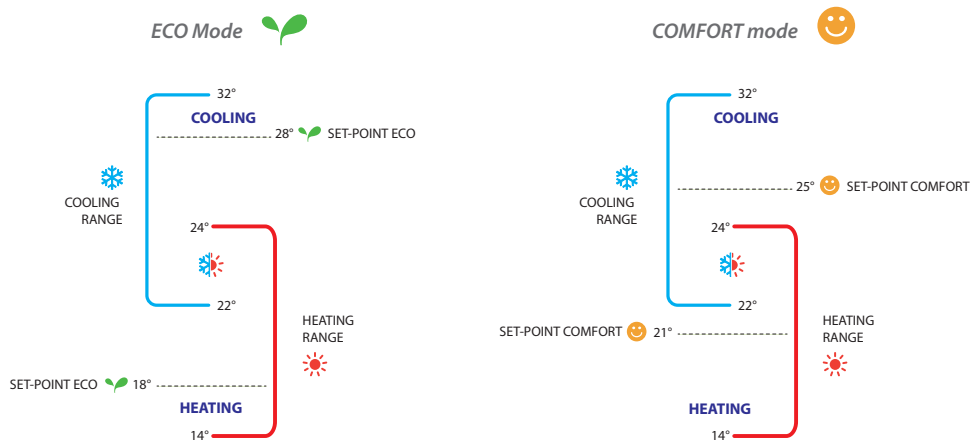
The above example indicates the temperature set-point pairs for Eco mode and Comfort mode. The cooling system will activate when the temperature exceeds the upper set-point, while the heating system will activate when the temperature falls below the lower set-point.
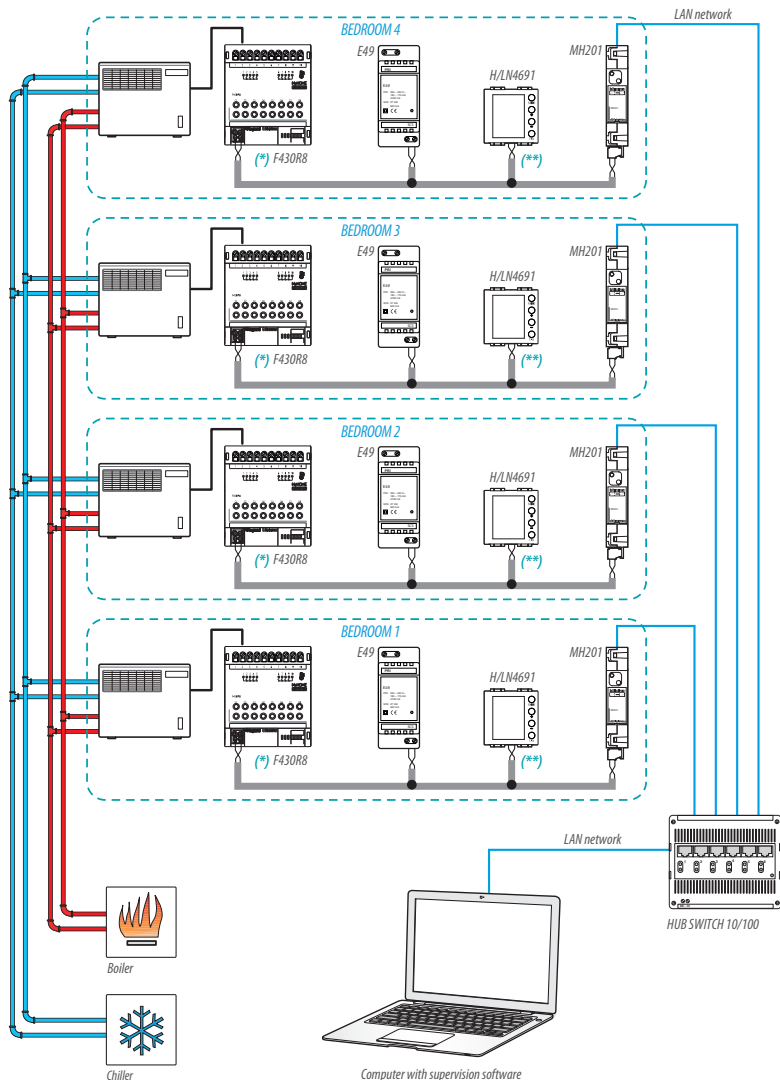
The thermostat operates on two different set-points: high set-point, and low set-point.
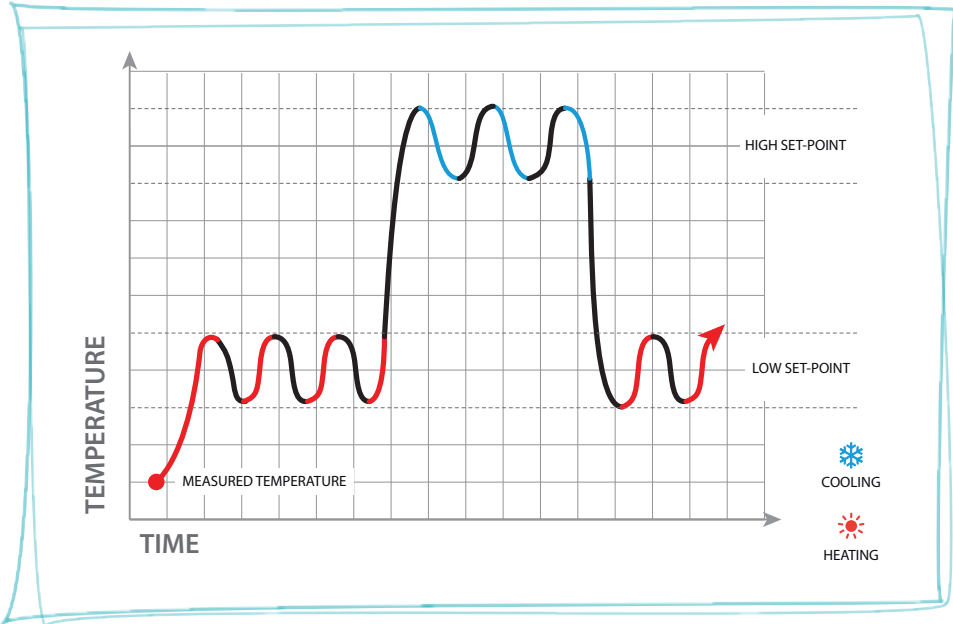
Example chart

5.3 Example of installation diagram

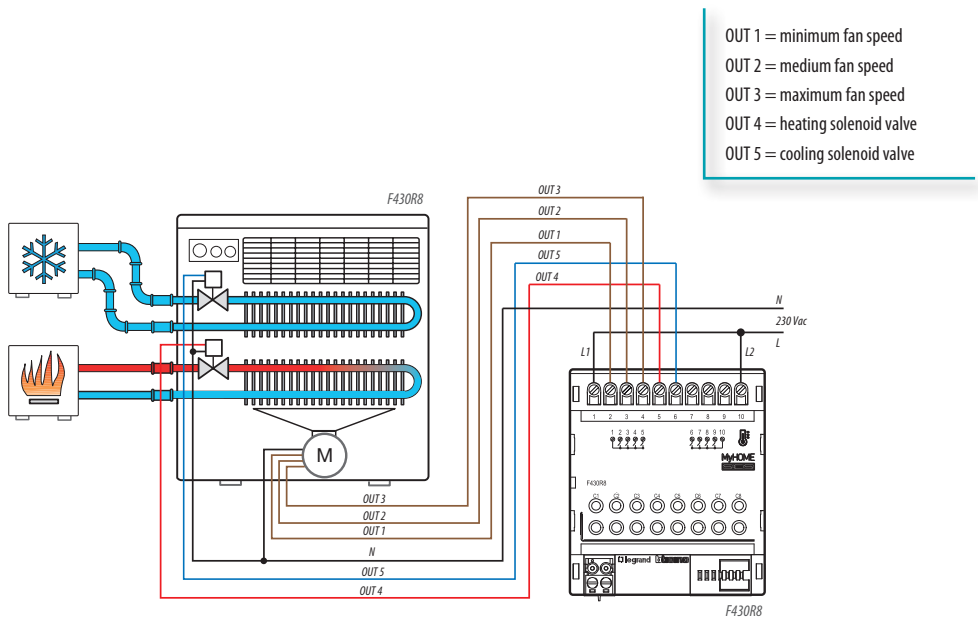4 zone system with 4 tube fan-coil for heating and cooling systems.

LAN network

BEDROOM 4
E49
H/LN4691
MH201
(*) F430R8
(**)

BEDROOM 3
E49
H/LN4691
MH201
(*) F430R8
(**)

BEDROOM 2
E49
H/LN4691
MH201
(*) F430R8
(**)

BEDROOM 1
E49
H/LN4691
MH201
(*) F430R8
(**)

LAN network

HUB SWITCH 10/100

Boiler

Chiller

Computer with supervision software

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(*) Connection and configuration detail F430R8

OUT 1 = minimum fan speed
OUT 2 = medium fan speed
OUT 3 = maximum fan speed
OUT 4 = heating solenoid valve
OUT 5 = cooling solenoid valve

BEDROOM 1 ACTUATOR

[ZA]	[ZB]	[N]	[TYPE]
0	1	1	

BEDROOM 2 ACTUATOR

[ZA]	[ZB]	[N]	[TYPE]
0	2	1	

BEDROOM 3 ACTUATOR

[ZA]	[ZB]	[N]	[TYPE]
0	3	1	

BEDROOM 4 ACTUATOR

[ZA]	[ZB]	[N]	[TYPE]
0	4	1	

(**) *Thermostat configuration detail*

H/LN4691
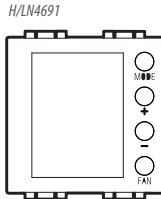
BEDROOM 1 THERMOSTAT

[ZA]	[ZB]	[TYPE]	[HEAT]	[COOL]	[PUMP]	[IN]
-	1	1	7	CEN	-	-

BEDROOM 2 THERMOSTAT

[ZA]	[ZB]	[TYPE]	[HEAT]	[COOL]	[PUMP]	[IN]
-	2	1	7	CEN	-	-

BEDROOM 3 THERMOSTAT

[ZA]	[ZB]	[TYPE]	[HEAT]	[COOL]	[PUMP]	[IN]
-	3	1	7	CEN	-	-

BEDROOM 4 THERMOSTAT

[ZA]	[ZB]	[TYPE]	[HEAT]	[COOL]	[PUMP]	[IN]
-	4	1	7	CEN	-	-

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5.4 Operating modes

The thermostat can operate in the following modes:

	Manual / Automatic.
✋;	Temporary manual.
☺	Comfort; 2 customisable set-points: ideal heating and cooling temperatures (default 21 – 25°C).
🌱	Eco; 2 customisable set-points: saving heating and cooling temperatures (default 18 – 25°C).
⏻	Antifreeze: Minimum safety temperature (default 7°C).
⏻	Thermal protection: maximum safety temperature (default 35°C).
⏻	Off: zone off (can only be set remotely, or by contact).

With a short pressure (3 seconds maximum) of the **MODE** key, the system toggles between modes.

5.5 Fan-coil speed

If the thermostat is configured for the management of a fan-coil type load, by pressing the **FAN** key it is possible to scroll through the fan speeds available, selecting one of the following values.

Press **FAN** to set the fan speed at the desired level.

◢	Speed 1
◢◢	Speed 2
◢◢◢	Speed 3
❋ᴬ	Automatic operation

6.1 Display items

Set point

The thermometer icon is not shown, and the unit of measure of the temperature is in °C.

In OFF mode the display does not show the temperature detected, but the "- -" symbol.

Note: Using the MyHOME_Suite software it is possible to switch from °C to °F.

Temperature calibration (see paragraph 6.2).
The thermometer icon flashes quickly to indicate that calibration is being performed. The unit of temperature is set to °C.

Configuration from central unit

The "CU" symbol indicates that a session with a central unit or with a supervision software is running.

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Configuration / test being completed

The "[ ]" symbol flashes slowly to indicate that a remote configuration / test is being completed.

No configuration

The "[ ]" symbol flashes slowly to indicate that the thermostat is not configured.

Wrong configuration

The "- -" symbol flashes quickly to indicate that the physical configuration of the thermostat is wrong.

Error condition
The display shows the "Er" symbol followed by a number (1 to 5), to indicate an error condition. For more information see paragraph 7.3.

6.2 Temperature calibration detected

By pressing **+** and **−** at the same time it is possible to calibrate the measured temperature.

Press **+** and **−** at the same time
(> 7 seconds); the thermometer icon
starts flashing quickly. Release the
keys

After releasing the keys, it is possible to increase
or decrease the temperature detected using **+**
and **−** .
Wait a few seconds, or press **MODE** or **FAN** to
terminate the procedure.

NOTE: to reset the factory calibration settings press **+** and **−** (> 7 seconds) at the same time; the
thermometer icon starts flashing quickly.
Keep pressing the keys; after a further 7 seconds the thermometer icon stops flashing, and the
manual calibration is deleted.
The thermometer returns to the factory calibration settings.

6.3 Modification of the set-point using the keypad

Below is a description of how to manually change the temperature set-points.

Press **MODE** to select the mode for which the set-point must be changed.

The current set-point flashes for a few seconds. During this time press **+** or **−** to change the temperature.
The display flashes for 4 seconds, showing the new set-point.

Once the display stops flashing, the new set-point is saved (the set-point stops flashing and remains on the display). After this, the display returns to showing the temperature detected.

⚠️ The Comfort and Eco set-points can only be modified if the loads have been assigned to the device, otherwise they are blocked.

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7.1 Installation height

The thermostat must be installed on a wall at an average height of 150 cm from the floor, unless otherwise required by current laws.
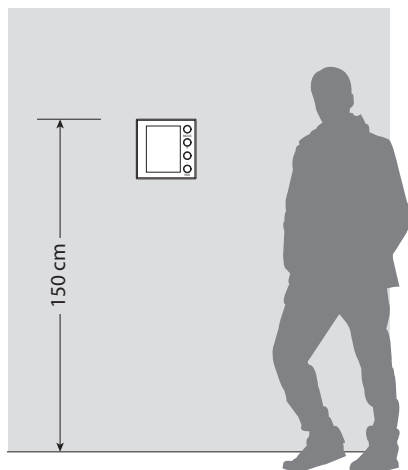
7.2 Technical data

Power supply from BUS	18 – 27 Vdc
AAbsorption	30 mA (maximum backlighting while the keys are being pressed)
	16 mA (backlighting during stand-by)
	13 mA (backlighting off)
Unit of measure	°C or °F
Operating temperature	0 – 40 °C
Dimensional data	2 flush mounted modules

CE certification.
Standards: EN 60669-2-1 / EN 50090-2-2 / EN 50090-2-3 / EN 50428.

7.3 In case of error

When the display shows the "Er" symbol followed by a number, the thermostat is indicating an error condition.
Below is a list of possible errors:

Er1	No response from pump.
Er2	No response from actuator.
Er3	No response from slave probe.
Er4	Temperature sensor fault.
Er5	Internal error device.

With errors "Er1", "Er2", and "Er3" the thermostat keeps the current mode and the displayed error condition can be reset (by pressing any key). If the error condition persists, after 15 minutes the error screen will reappear.

With errors "Er4", and "Er5" the thermostat switches OFF, and all the actions that can normally be performed by the user, like the pressure of the keys, are disabled.

Below is an example of an error screen.

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