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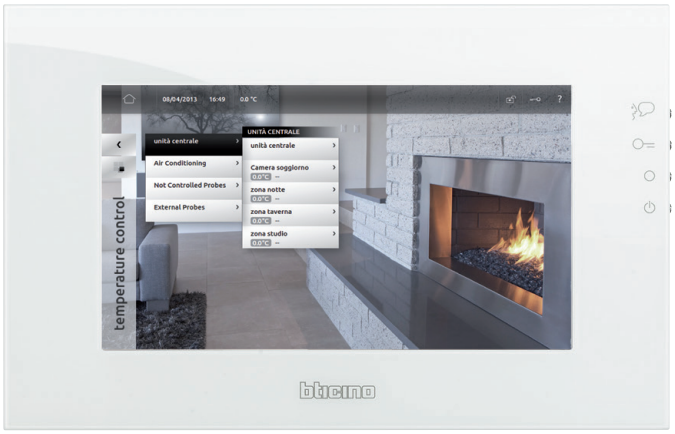
MyHOME domotica



TEMPERATURE CONTROL INTEGRATION WITH FAN-COIL 0-10V SYSTEMS WITH CONTINUOUS VENTILATION ADJUSTMENT

GUIDE FOR DESIGN AND CONFIGURATION

bticino

GENERAL FEATURES

CONFIGURATION

WIRING DIAGRAMS

TEMPERATURE CONTROL AND HOME AUTOMATION
TWO PERFECTLY INTEGRATED SYSTEMS

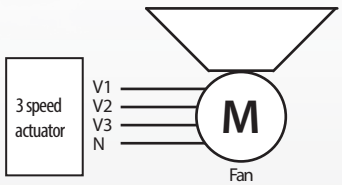
MyHOME

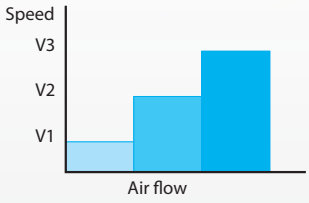
The MyHOME temperature control system controls the heating and air conditioning of 99 zones using detection probes or thermostats dislocated around the home. The advantages are immediate: different temperature profiles for each room, with important energy savings Using MyHOME_Screen, it is possible to set and control the temperature of each zone, while the thermostats in the various rooms enable local adjustment of the settings, ensuring maximum comfort.

THE ADVANTAGES OF THE 0-10V PROPORTIONAL CONTROL OF THE FAN-COILS.

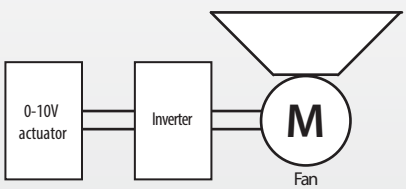
The linear speed variation ensures a consistent and better air exchange when compared with the 3 speed level control system. This translates into better temperature control system efficiency and better comfort, thanks to the proportional dosing of the air quantity based on the temperature to reach, together with better sound comfort.

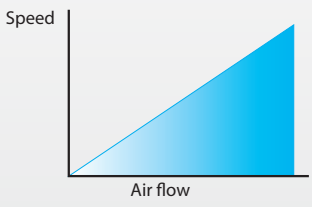
3 speed ventilation





Continuous speed ventilation





HOTEL SOLUTIONS

The BTicino offer for the hotel sector includes access control, home automation, and supervision; a complete offer that now integrates with fan-coil 0-10V systems with continuous speed adjustment.

Internal unit

Digital thermostat

Using the supervision software installed on the reception PC it is possible to interact with some room parameters.

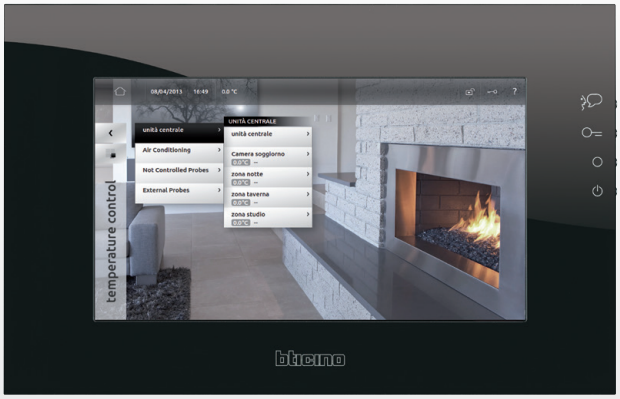
Internal unit

HOME SOLUTIONS

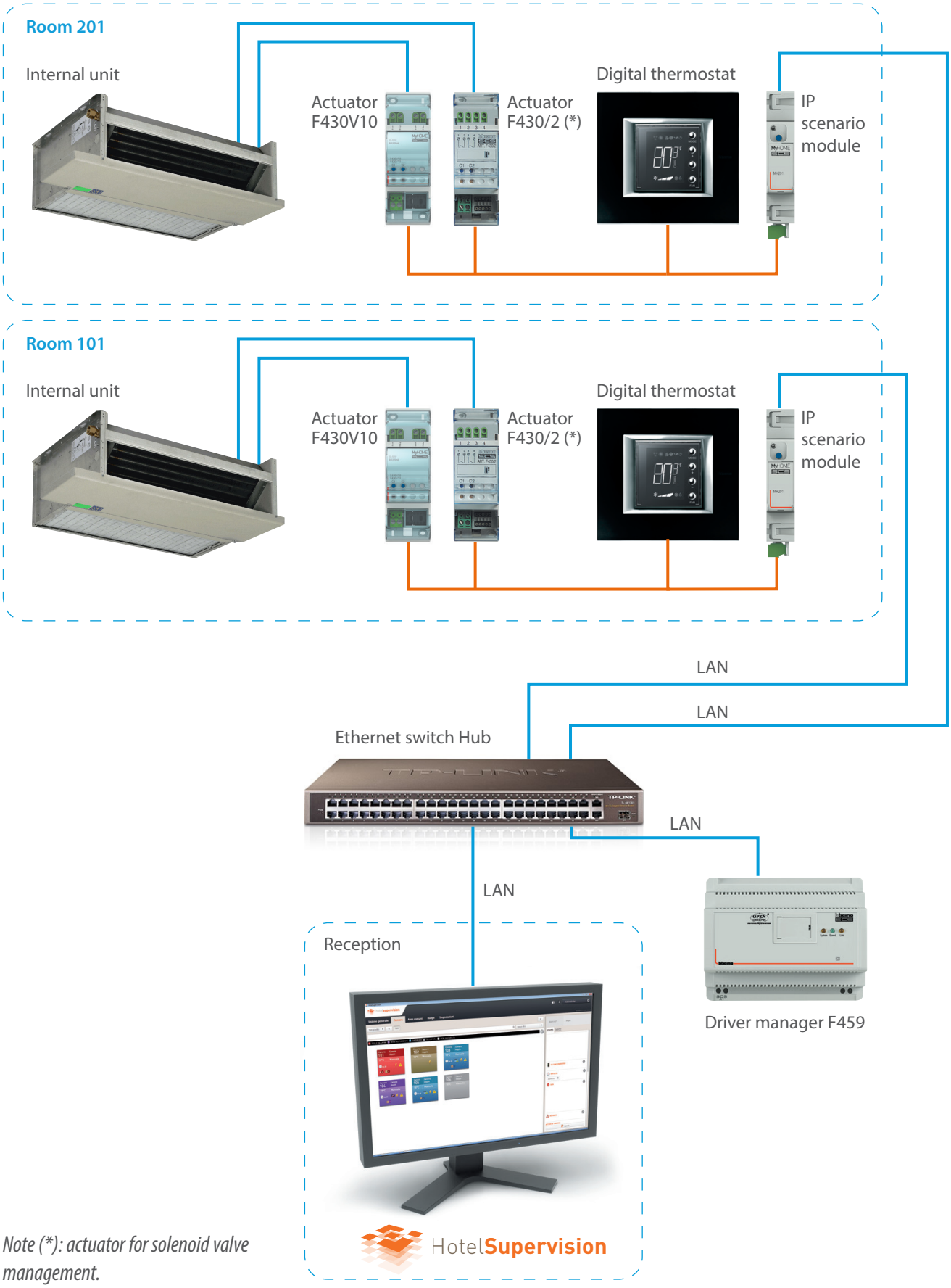
Using the MyHOME controls it is possible to manage several functions of the fan-coil 0-10V systems with continuous speed adjustment, both in a centralised mode, using the touch screens, and locally, operating the probes or the thermostats of each single system zone.

Digital thermostat

MyHOME_Screen10

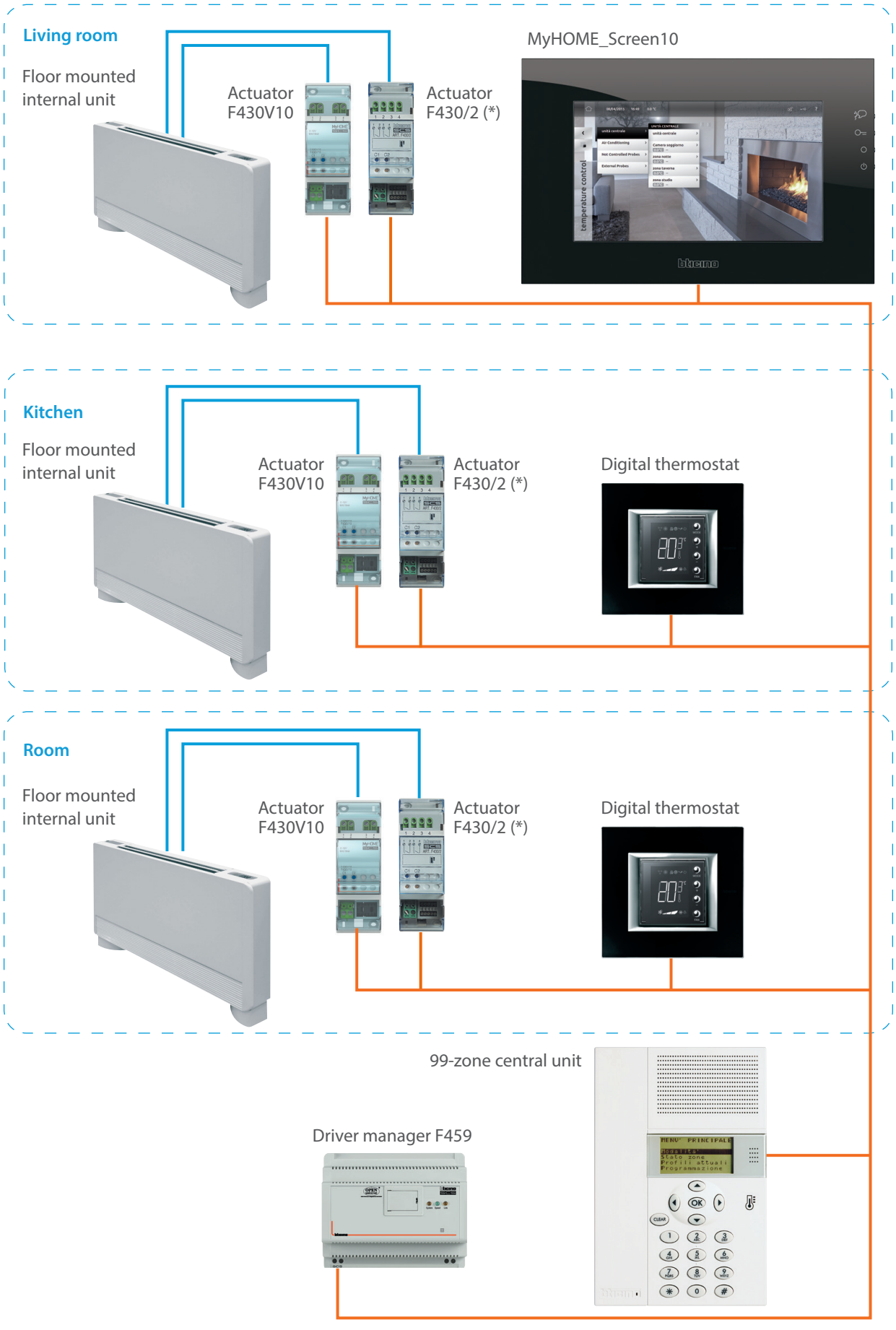


Hotel integration



Note (*): actuator for solenoid valve management.

Home integration



Features of the integrated system

The system gives the possibility of controlling fan-coil 0-10V systems with continuous speed adjustment using the standard MyHome temperature control solution, based on the 3550 central unit and temperature probes HC/HD/HS/L/N/NT4692/FAN and later.
The adjustment is performed using temperature control regulation actuators F430V10 (0-10V regulators), managed using a firmware customised for Drive Manager F459 used as Gateway.
The operation features are the following:

1. Possibility of associating to each thermal zone (identified by a ZA/ZB address) one or more actuation solutions, with indication if operating for the heating mode, air conditioning mode, or for both scenarios, and if the integration with another system is active or not. An actuation solution consists in combining an actuator F30V10 (fan-coil speed) with an actuator F430/2 (solenoid valve ON/OFF).

2. Possibility of globally defining the modes of operation of the solution:

   2.1 (R) activation delay between the solenoid valve and the fan-coil (different for summer and winter), consisting of a time expressed in seconds, going from the moment of the command of opening of the solenoid valve, and the start of the fan-coil;

   2.2 (tR) switching on only ramp delay, consisting in the number of seconds required to go from 1% of the speed, to the desired speed;

   2.3 (dT) delta of the temperature (between set-point and ambient temperature, different for summer and winter) within which the fan-coil speed in automatic mode is modulated. For example, if in winter the ambient temperature is lower or equal to the -dT set-point, the speed will be 100%; on the other hand, if it is halfway between set-point and set-point -dT, the speed will be 50%.

   2.4 (mS) minimum speed, expressed as a percentage, from which to start the adjustment of the fan-coil;

   2.5 (iT) hysteresis temperature of the system (different for summer and winter) applied to the adjustment of the fan-coils;

   2.6 (Tp) set-point deviation in case of integrated operation, different for the two seasons.

3. Possibility of manually adjusting the fan-coil speed using thermostats HC/HD/HS/L/N/NT4692/FAN, H/LN4691, or MyHOME touch screen devices.

4. Possibility of displaying the status of operation of the actuation solution on the standard probes (operation LEDs).

System layout

MyHOME temperature control system must be preset with:

- Central unit 3550, temperature probes HC/HD/HS/L/N/NT4692/FAN and later, and actuators F430/2, F430/4 and F430R8 for the management of ON/OFF valves (if necessary in case of integrated operation).

- Driver manager F459.

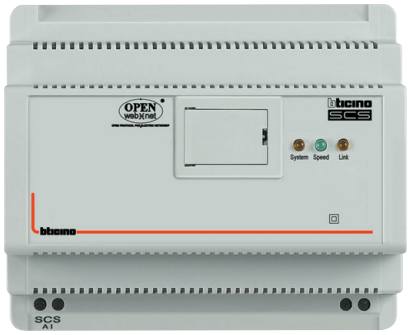
- Actuators with output 0-10V F430V10.

When dealing with temperature control system of other manufacturers, these must be fitted with fan-coil internal units with input for the proportional adjustment of the ventilation speed based on the 0-10V standard.

The devices that permit integration

DRIVER MANAGER F459

Audio/Video Web Server for local and remote control of MyHOME applications using dedicated web pages.
This device can be updated, to install the drivers for the integration with other systems.
By contacting Technical Support it is possible to request the update software and the dedicated firmware for the control of the internal fan-coil units with 0-10V control.



Driver manager F459

ACTUATOR WITH OUTPUT 0-10V F430V10

DIN modularity actuator for the control of fan-coils 0-10V with valves and fans.
It has two 0-10V outputs, two control pushbuttons for manual control of each output and the corresponding operating status LEDs.

Technical data:

Power supply from SCS BUS:	18 – 27 Vdc
Absorption in stand by:	19 mA
Max. absorption:	25 mA
Operating temperature:	(+5) – (+40) °C
Outputs:	2 x 0 – 10 V
Maximum current on each output:	1 mA

Actuator F430V10

F459 firmware update

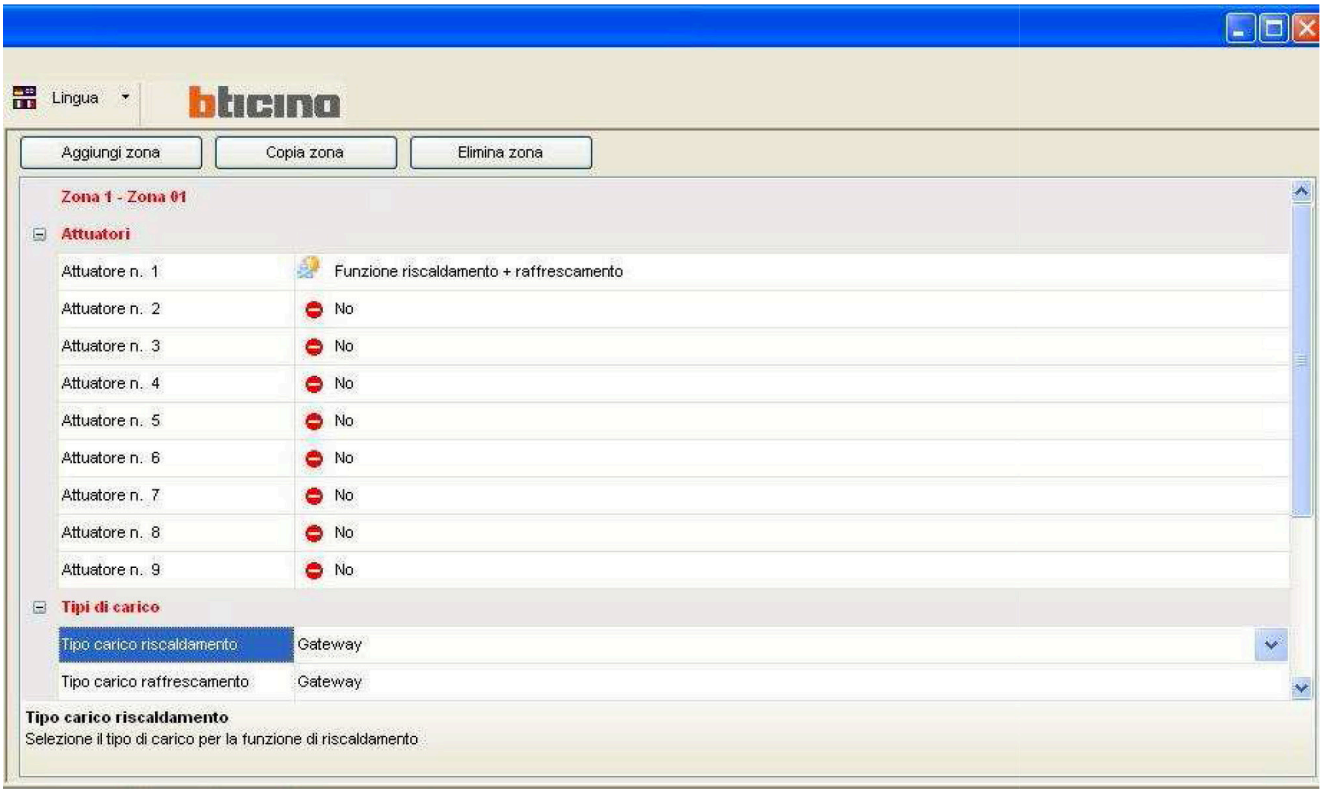
In the following pages are detailed descriptions of the operations for the configuration of the MyHOME temperature system. For the update and configuration of the Driver Manager F459, refer to the documentation supplied with the driver itself.

Configuration of 3550 central unit

EXAMPLE 1: HEATING AND COOLING WITH FANCOIL

Zone	Probe	Actuators					
	ZaZb	N	Type	Item	Managed by	Season	Function
01	01	1	Driver	F459	Central unit	S/W	Gateway actuator emulation
		2	Physical	F430V10	Driver	S/W	Fancoil ventilation speed adjustment
		3	Physical	F430/2	Driver	W	Fancoil heating solenoid valve control
		4	Physical	F430/2	Driver	S	Fancoil cooling solenoid valve control

Zone of 3550 central unit



EXAMPLE 2: FLOOR HEATING - FANCOIL COOLING

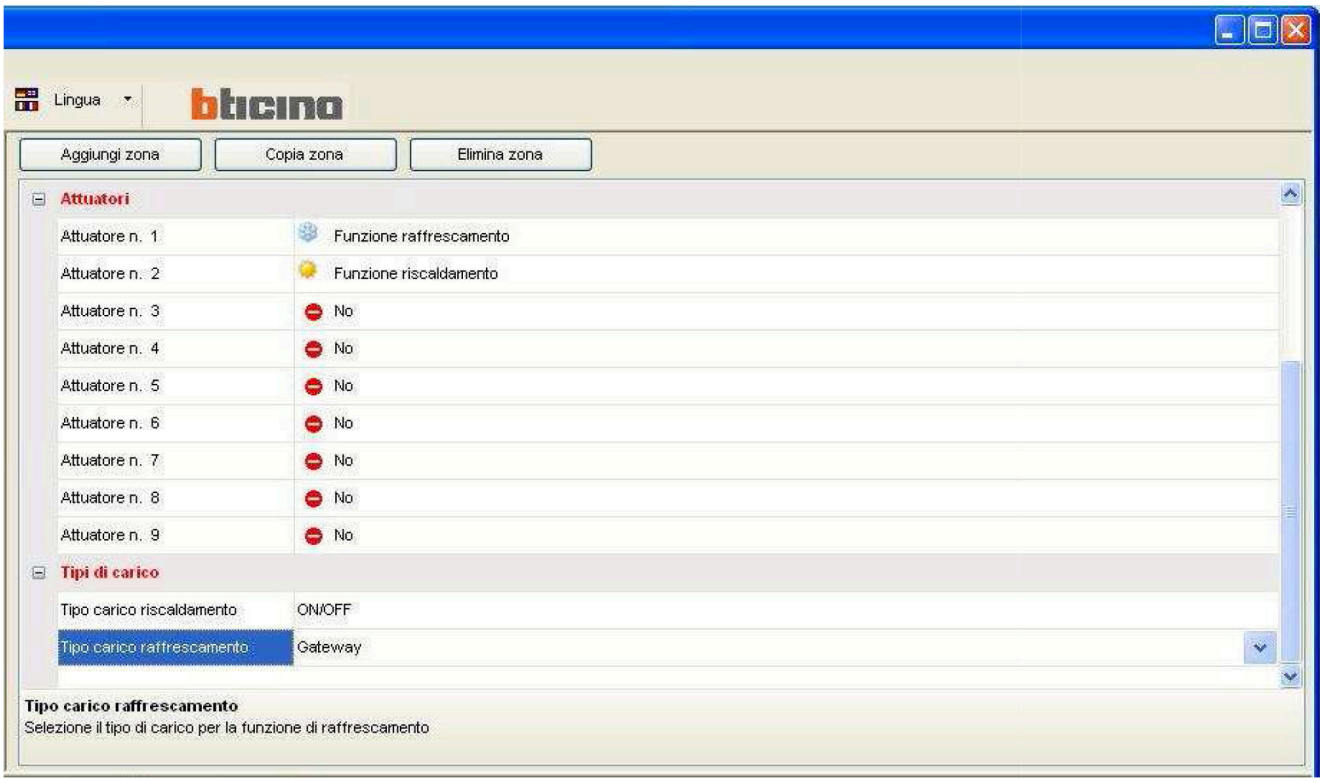
Zone	Probe	Actuators					
	ZaZb	N	Type	Item	Managed by	Season	Function
01	01	1	Driver	F459	Central unit	S	Gateway actuator emulation
		2	Physical	F430/2 or F430/4	Central unit	W	Floor solenoid valve control
		3	Physical	F430V10	Driver	S	Fancoil ventilation speed adjustment
		4	Physical	F430/2	Driver	S	Fancoil solenoid valve control

Zone of 3550 central unit

EXAMPLE 3: FLOOR HEATING + FANCOIL (INTEGRATION) - FANCOIL COOLING

Zone	Probe	Actuators					
	ZaZb	N	Type	Item	Managed by	Season	Function
01	01	1	Driver	F459	Central unit	S	Gateway actuator emulation
		2	Physical	F430/2 or F430/4	Central unit	W	Floor solenoid valve control
		3	Physical	F430V10	Driver	S/W	Fancoil ventilation speed adjustment
		4	Physical	F430/2	Driver	W	Fancoil heating solenoid valve control
		5	Physical	F430/2	Driver	S	Fancoil cooling solenoid valve control

Zone of 3550 central unit



EXAMPLE 4: FLOOR HEATING AND COOLING + FANCOIL (INTEGRATION)

Zone	Probe	Actuators					
	ZaZb	N	Type	Item	Managed by	Season	Function
01	01	1	Physical	F430/2 or F430/4	Central unit	S/W	Floor solenoid valve control
		2	Physical	F430V10	Driver	S/W	Fancoil ventilation speed adjustment
		3	Physical	F430/2	Driver	W	Fancoil heating solenoid valve control
		4	Physical	F430/2	Driver	S	Fancoil cooling solenoid valve control

Zone of 3550 central unit

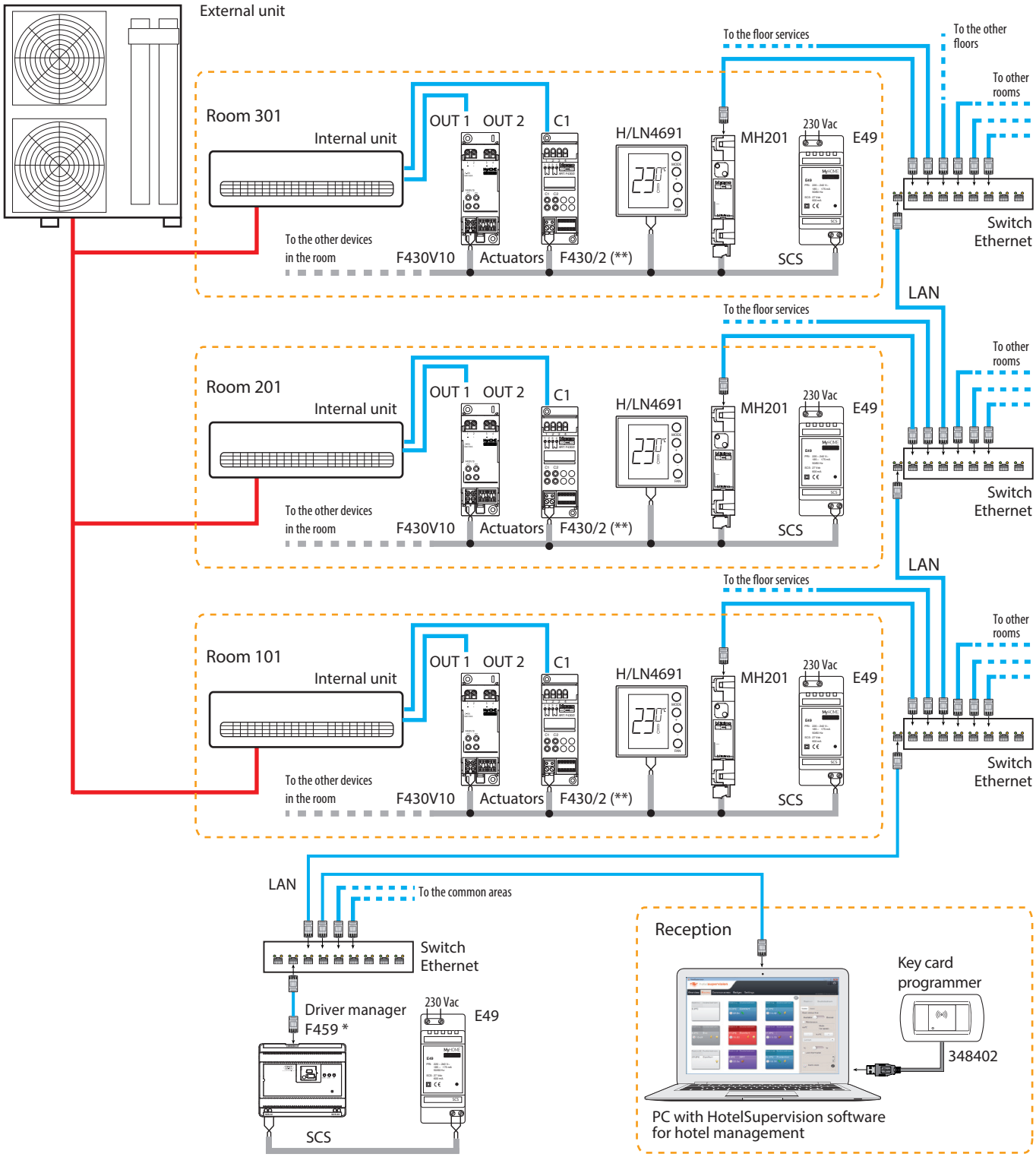
Probe configuration

In case of use of the master probe of the thermostat with display H/LN4691, only configure the Za/Zb address.
Do not configure the actuator parameters.

Note: FANCOIL SOLENOID VALVES: If the fan-coil is not fitted with solenoid valves, do not insert the corresponding ON/OFF actuators, and select "None" in the corresponding housings of the Driver (Heating valve N-address, Cooling valve N-address).
if the fan-coil only has one solenoid valve for hot and cold, only insert one ON/OFF actuator, indicating the address in both the corresponding housings of the Driver (example 2 excluded).

Example 1- Hotel

HOTEL SOLUTIONS: HEATING AND COOLING REALISED THROUGH INTEGRATION, USING THE GATEWAY; CENTRAL MANAGEMENT AND SUPERVISION USING THE HOTEL SUPERVISION SOFTWARE



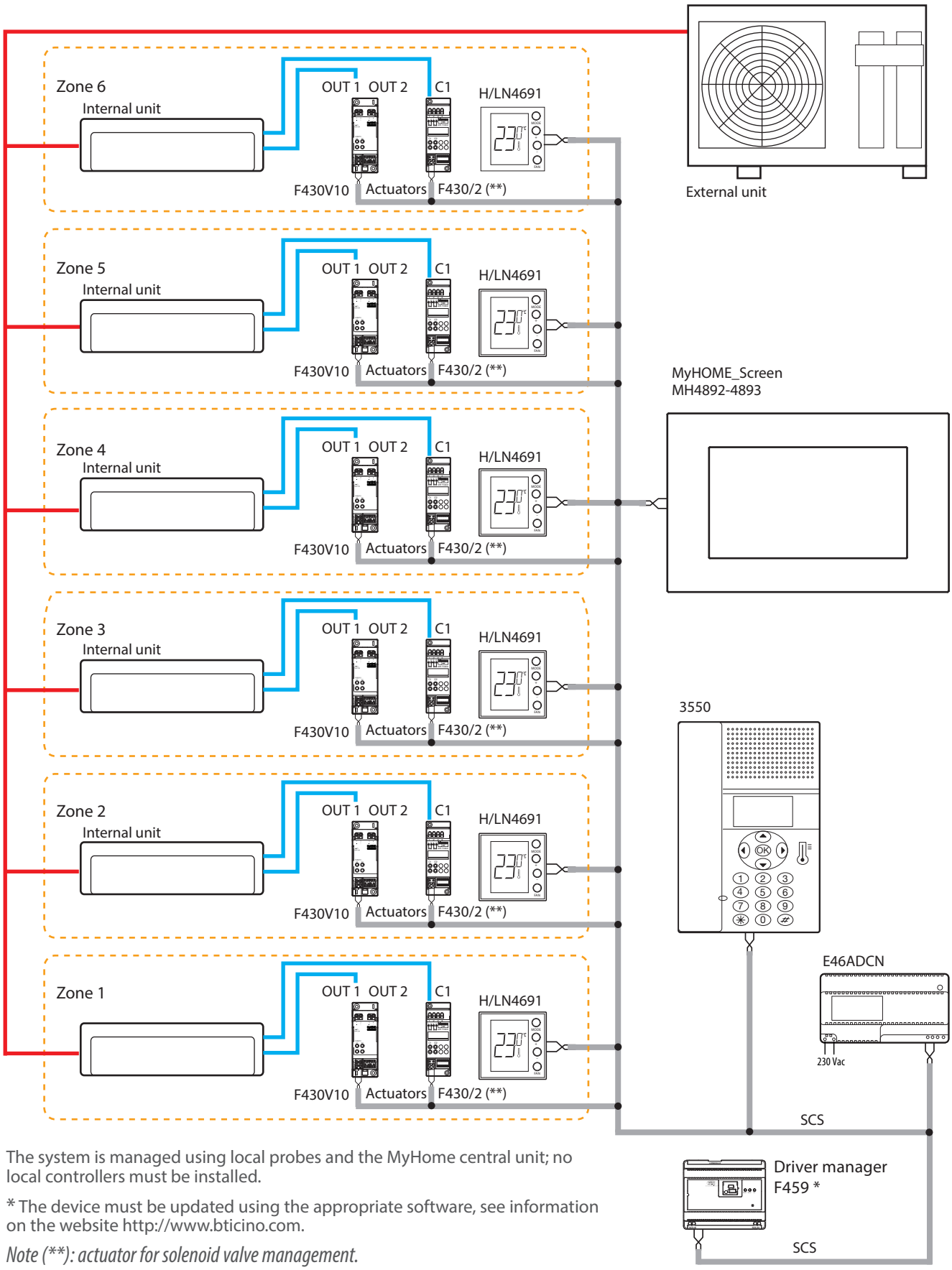
The system is managed using local MyHome probes and the Hotel Supervision management software; no local controllers must be installed.

* The device must be updated using the appropriate software, see information on the website http://www.bticino.com.

Note (**): actuator for solenoid valve management.

Example 2 - Home

HOME SOLUTIONS: HEATING AND COOLING REALISED THROUGH INTEGRATION, USING THE GATEWAY



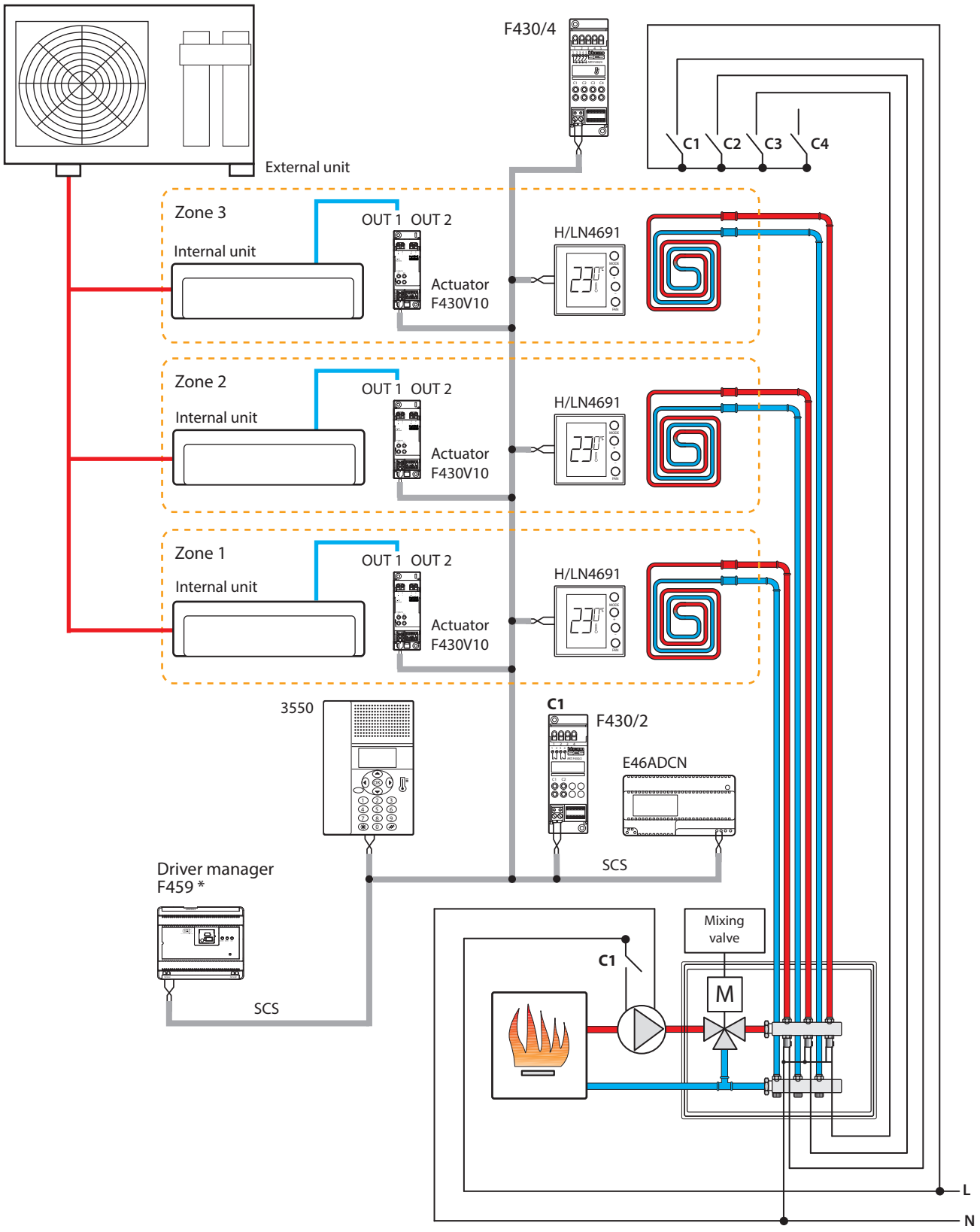
The system is managed using local probes and the MyHome central unit; no local controllers must be installed.

* The device must be updated using the appropriate software, see information on the website http://www.bticino.com.

Note (**): actuator for solenoid valve management.

Example 3 - Home mixed

HOME SOLUTIONS: RADIATING PANEL HEATING AND COOLING THROUGH INTEGRATION, USING THE GATEWAY



The system is managed using local probes and the MyHome central unit; no local controllers must be installed.

* The device must be updated using the appropriate software, see information on the website http://www.bticino.com.

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