

## Probe without selector

067458 HD4693 HS4693 N4693  
5739 21 (Magnesium) 5739 20 (White) HC4693 L4693 NT4693

### Description

The device can be used to control the room temperature, based on daily rhythms, both in winter and in summer. On the front of the device are a green and a yellow LED. The green led indicates that the device is working correctly.

The yellow LED indicates the status of the actuators, and any possible fault on the same. The front of the item does not have any controls. This makes the device ideal for installation in public places, so that any improper intervention may be prevented. The anti-freeze/thermal protection and OFF modes can only be selected from the central unit.

### OFF mode

Set this mode to turn the corresponding zone off.

### Antifrost/thermal protection mode

By selecting this mode, if the temperature control system is set for heating, the probe operates in anti-freeze mode. If the system is set for cooling, the probe operates in thermal protection mode. The probe can also operate together with other probes of the same type in "slave" or "master" configuration, to enable the central unit to calculate an average of the temperatures taken from several detection points. This function is useful for the management of very large areas, throughout which the temperature may change consistently. In case of central unit fault, the probe will continue to work implementing the last settings received, and therefore the last temperature set in the summer or winter programs. However, the OFF mode also has priority in case of central unit fault. Therefore, in this case the zone controlled by the probe will stay off. The probe can be used to control a zone with up to 9 actuators and 8 slave probes of the same type.

### Related articles

682 48 (Cover White)

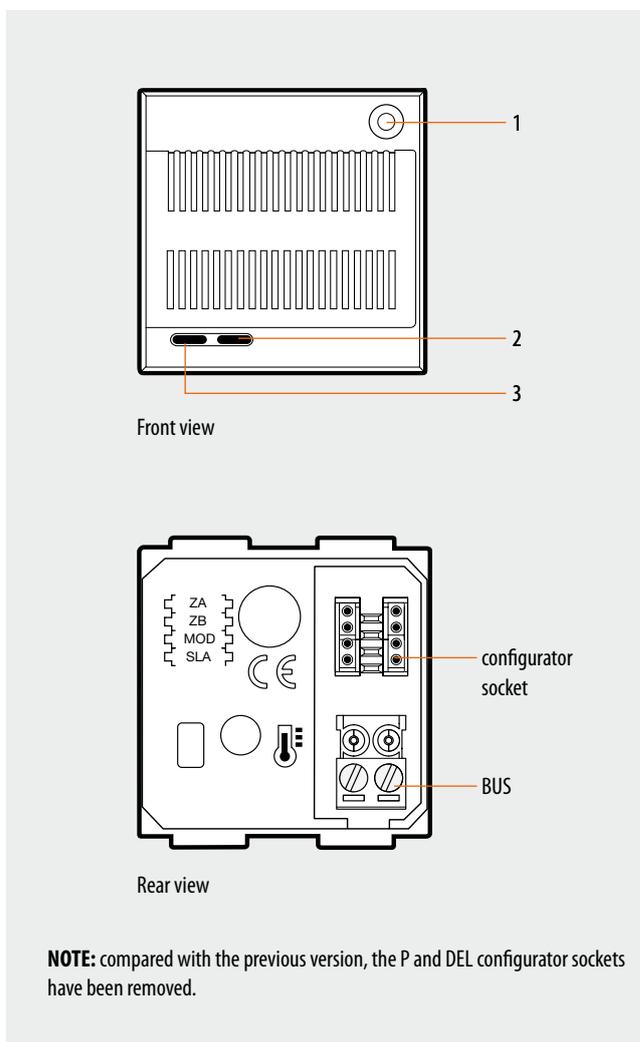
685 48 (Cover Titanium)

### Legend

1. Key in the low position to enable virtual configuration
2. Yellow LED: when it shines steadily or it is OFF it signals the state of the actuators in the corresponding zone, when it flashes it signals a fault.
3. Green LED: when it shines steadily it indicates that the device is active.

### Technical data

- Power supply from SCS BUS: 27 Vdc
- Operating power supply with SCS BUS: 18 – 27 Vdc
- Absorption: 6 mA
- Operating temperature: 0 – 40 °C
- Size: 2 modules
- Installation height: 1500 m from the floor



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### Configuration

The probe must always be configured by connecting two configurators to the ZA and ZB sockets, which identify the device address, and the number of the zone controlled by the

probe itself. The actuators controlled by the probes must be configured with the same zone address.

Socket	Function	Configurators
<b>ZA</b>	zone address	0 – 9
<b>ZB</b>	zone address	0 – 9
<b>MOD</b>	Master/Slave mode	0 - SLA
<b>SLA</b>	Master/Slave mode	0 – 8

The probe can be configured remotely with "Virtual Configuration". When no physical configurators are available, a PC with Virtual Configurator software version 2.1 must be used.

### Programming

Using the "Configure zones" item of the "Maintenance menu" of the temperature control system central unit, it will be possible to define if the zone should manage a heating system, a cooling system, or a combined one.

Using the same menu item, also select the type of load to control, among the following: ON/OFF, OPEN/CLOSE, 3SP FAN-COIL. When performing programming operations from the central unit, refer to the installation manual supplied with the central unit itself.

### Master and Slave probe

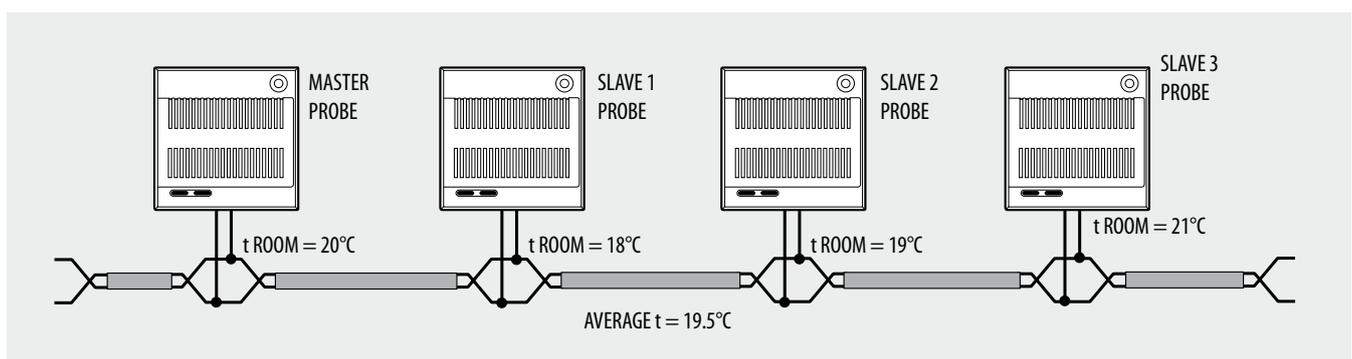
A probe can operate in conjunction with other probes so that an average temperature calculation can be performed, based on measurements taken from several points within the same zone. This function is useful for the management of very large areas, throughout which the temperature may change consistently. To activate this function, one probe must be configured as "Master", and one or more probes must be configured as "Slave" (max 8). The Master probe calculates the average between its own temperature, and the temperatures measured by the Slave probes, and then performs the appropriate

operations. The probe can operate as Master if configurator 0 is connected to the MOD socket, and a configurator indicating the number of SLAVE probes present inside the zone (max 8) is connected to the SLA socket. The same probe can operate as Slave if a configurator marked as SLA is connected to the MOD socket, and a configurator with the progressive SLAVE probe number within the ZONE is connected to the SLA socket. During this numbering procedure, it is essential to start from no. 1, and that the sequence is respected, without missing any numbers.

### Example of configuration of a zone (address 47), with one Master, and three Slave probes.

To define the probes as belonging to ZONE 47, connect configurators 4 and 7 to the ZA and ZB sockets of the 4 devices. Connect configurator no. 0 to the MOD socket of the Master probe. The SLA configurator must be connected to the MOD socket of the three Slave probes (definition of Slave probes). Connect configurator no. 3 to the SLA socket of

the Master probe (there are three Slave probes inside the zone); connect configurators no. 1, 2, and 3 to the SLA socket of the three Slave probes respectively (progressive number of the probe within the zone).



Master Probe (HC/HS/L/N/NT4693, 573920, 573921 and 067458)		Slave 1 probe (HC/HS/L/N/NT4693, 573920, 573921 and 067458)		Slave 2 probe (HC/HS/L/N/NT4693, 573920, 573921 and 067458)		Slave 3 probe (HC/HS/L/N/NT4693, 573920, 573921 and 067458)	
Socket	Configurators	Socket	Configurators	Socket	Configurators	Socket	Configurators
<b>ZA</b>	4	<b>ZA</b>	4	<b>ZA</b>	4	<b>ZA</b>	4
<b>ZB</b>	7	<b>ZB</b>	7	<b>ZB</b>	7	<b>ZB</b>	7
<b>MOD</b>	0	<b>MOD</b>	SLA	<b>MOD</b>	SLA	<b>MOD</b>	SLA
<b>SLA</b>	3	<b>SLA</b>	1	<b>SLA</b>	2	<b>SLA</b>	3

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### Circulation pump

In addition to controlling the zone valves, for some types of systems it will also be necessary to control one or more water circulation pumps. When programming the operating mode of the circulation pumps is not necessary to connect any special configurators: it will be sufficient to use the central unit through the "Pump" item; inside the "Maintenance" menu, select the zones that must be served by a circulation pump. Using the programming procedure, set a logic link between the zones, and the pump that hydraulically supplies them. To complete the programming procedure, the pump management mode must also be selected, thus defining if the pump supplies a heating, a cooling, or a combined system. Depending on the needs of the hydraulic system, one "circulation pump" or "several circulation pumps" may be installed, to supply one or more zone groups. If necessary, it is also possible to set a "pump switch-on delay", in relation to the opening of the zone valves. In the following cases, pump control is not necessary:

- in systems where the pump is always in operation (thanks to water recirculation hydraulic systems, or the presence of three-way valves);
- in systems where the pump is managed automatically (it comes on by itself when water is required, and turns off again when all valves are closed);
- in systems where the pump has simply not been installed (for example for air conditioning units or electric heating control).

### Probe calibration

Probes don't normally require calibration; however, in particular installation situations (perimeter walls, north or south facing walls, when close to heat sources, etc.), the temperature value measured may be corrected using the appropriate calibration function, which can be found in the central unit menu.

Before performing the calibration operation, ensure the following:

- leave the probes connected and powered with the hydraulic system off for at least 2 hours. During this time, avoid any changes in the room temperature (e.g. by opening or closing windows, doors, etc.), and avoid standing near them;
- for the calibration use a calibrated sample thermometer, correctly positioned inside the room.

**Note:** For more details on the calibration procedure and the programming operations using the central unit, refer to the installation manual of the central unit.

### Pump switch-on delay

If necessary, it is also possible set the circulation pump to activate after a certain time delay, in relation to the opening of the zone valves. This selection depends on the type of valve installed, and enables the pump to only activate once the valve is fully open. If a time delay of 4 minutes is set, after closing the relay controlling the opening of the zone valve, the probe will wait 4 minutes before switching the pump on. A maximum delay of 9 minutes can be set, depending on the time needed for the valve to open. For the opening times refer to the official technical specifications issued by the solenoid valve manufacturer.

**NOTE:** for details of the programming operations to be performed from the central unit refer to the installation manual supplied with the central unit itself.