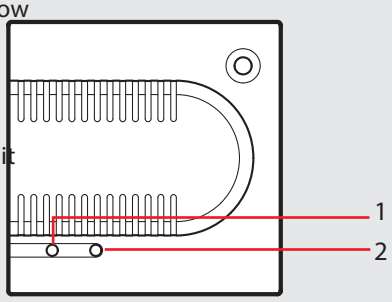
Basic probe

5739 20 (White)
5739 21 (Magnesium)

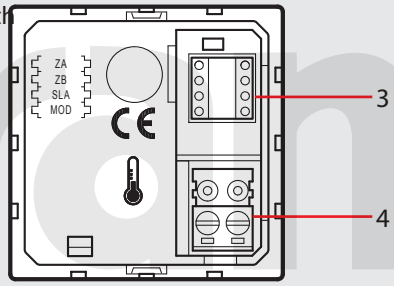
Description

The device can control the room temperature according to the daily rates, both during winter and summer. There are two LEDs at the front: a green one and a yellow one. The green LED indicates that the device is functioning properly. The yellow LED indicates the state of the actuators as well as their possible anomalies. Apart from the LEDs, there are no adjustment controls at the front. This feature is ideal for installations in rooms containing people so as to avoid improper interventions. The antifrost/thermal protection and OFF modes can be selected only from the Unit according to the guide-lines below.



OFF mode
This mode turns off the associated zone.

Antifrost/thermal protection mode
When this mode is selected, if the Temperature control system is set to heating mode, the sensor will operate in antifrost mode; if it is set to cooling mode, it will operate in thermal protection mode. The sensor can also work in collaboration with other sensors of the same type in “slave” or “master” configuration to allow the Control unit to calculate an average of the temperature over several measuring points. This function is useful for managing very large rooms, inside which the temperature can vary appreciably.
If there is a fault on the control unit, the sensor works with the last settings received, thus continuously maintaining the last temperature determined with summer or winter setting. The OFF mode has priority even if the control unit is faulty, thus the zone controlled by the sensor will remain OFF. The sensor can control a zone with a maximum of 9 actuators and 8 “slave” sensors of the same type.



Technical data

Power supply from SCS BUS: 18 – 27 Vdc
Maximum absorption: 6 mA
Operating temperature: 0 ÷ 40 °C
Installation height: 150 cm from ground

Dimensional data

Size: 2 modules
Depth: 20.7 mm

Legend

1. Green LED: when it shines steadily it indicates that the device is active
2. Yellow LED: when it shines steadily or it is OFF it signals the state of the act in the corresponding zone, when it flashes it signals a fault
3. Configurator housing
4. BUS connector

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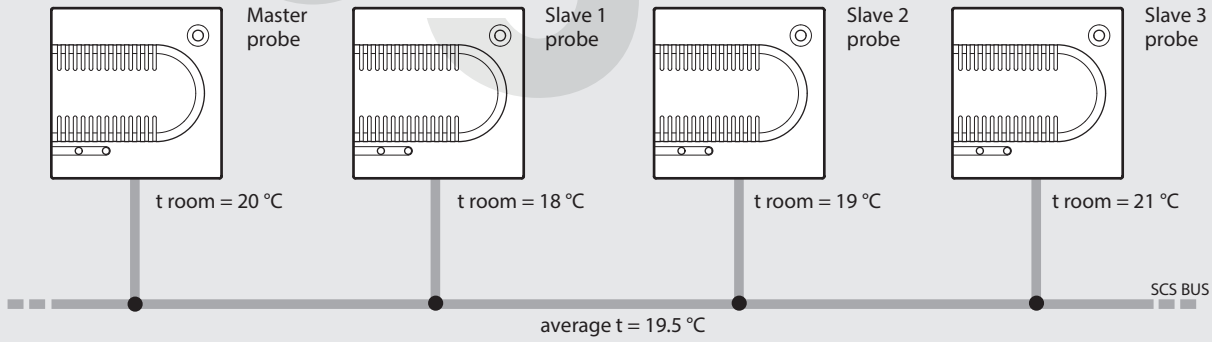
Configuration

Mode
In practice one defines whether the zone manages a heating, cooling or the energy system by "Configure zones" in the "Maintenance" menu. This also selects the type of loads to be controlled by choosing from: ON/OFF, OPEN/CLOSE, FAN-COIL 3V.
To program the Control unit refer to the installation manual supplied with the unit itself.

Master and Slave probe
A sensor can work in collaboration with other sensors to allow, inside the same zone, the average calculation of the temperatures at several measurement points. This function is useful for managing very large rooms, inside which the temperature can vary appreciably.To actuate the function one sensor must be configured as "Master" and one or more sensors as "Slave" (max. 8). The Master sensor calculates the average between its temperature and the temperature measured by the Slave sensor and then carries out the correct actuations. To tell the Temperature con that the sensor is Master insert a numeric configurator which indicates t of Slave loads in the zone, up to eight, in the [SLA] housing. To config housing insert the configurator marked SLA in the [MOD] housing.
Using the [SLA] housing number all the zone Slave sensors progressivel numbering start from configurator 1 and respect the sequence without numbers.

Example of configuration of a zone (address 47) with one master sensor 5739 22/23 and three slave sensors

To assign the probes to zone 47, insert configurators 4 and 7 in the ZA and ZB housings of the four devices. Insert the O configurator in the MOD SLAVE configurator in the MOD housing of the three SLAVE probes (definition of slave probes). Insert configurator 3 in the SLAVE housing of the in this zone); insert configurators 1, 2 and 3 (progressive number of the probe in the zone) in the SLA housing of the three SLAVE probes, respec



Master sensor - 5739 20/21		Slave 1 sensor - 5739 20/21		Slave 2 sensor - 5739 20/21		Slave 3 sensor - 5739 20/21		Confi
Housing	Configurators	Housing	Configurators	Housing	Configurators	Housing		
[ZA]	4	[ZA]	4	[ZA]	4	[ZA]	4	
[ZB]	7	[ZB]	7	[ZB]	7	[ZB]	7	
[MOD]	0	[MOD]	SLA	[MOD]	SLA	[MOD]	SLA	
[SLA]	3	[SLA]	1	[SLA]	2	[SLA]	3	

5739 20
5739 21

Circulation pump

By selecting “Pumps” in the “Maintenance” menu, it is possible to select the zones that need to be slaved by means of a circulation pump. Basically, when programming, a system bond is performed between the zones and the pump which supplies them hydraulically.
In order to complete the programming phase, it is also necessary to select the operating mode of the pump, thus determining if the pump is supplying a heating system, a cooling system or a combined heating and cooling system. Depending on requirements (hydraulic system), can have a “single circulation pump” or “several circulation pumps” to serve one or several groups of zones. If necessary the “switching ON the pump delay” with respect to the opening of the zone valves can also be controlled.

The zones don’t need to be controlled in the following cases:
- with a system in which the pump is always in operation (due to water recircul hydraulic systems or three-way valves);
- with systems in which the pump is controlled automatically (in other words system, cooling system when water is needed and stops automatically when all valves are closed);
- with systems in which the pump is simply inexistent (for example, for contro the heating of the air-conditioners).

Pump startup delay

If necessary, it is possible to activate the circulation pump with a certain delay relative to the opening of the zone valve. This choice depends on the type of valve installed and makes it possible to turn on the pump only when the valve is completely open.
If a time equal to 4 minutes is set, after closing the relay which controls the opening of the zone valve, the sensor will wait 4 minutes before starting up the pump

delay can be nine minutes at the most and depends on the time needed for the valve is
In order to know the opening time, refer to the specifications indicated by th manufacturer of the solenoid valve.

NOTE: For details concerning the programming operations from the Unit, please refer to the installation manual supplied with the unit thereof.

Configurator summary table

The following table includes the housings and the configurators used with the sensor item 5739 20/21.

Housing	Function		Configurators
[ZA]	zone address	0 – 9	
[ZB]	zone address	0 – 9	
[MOD]	Master/Slave mode	0	SLA
[SLA]	Master/Slave mode	0 – 8	

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