



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.

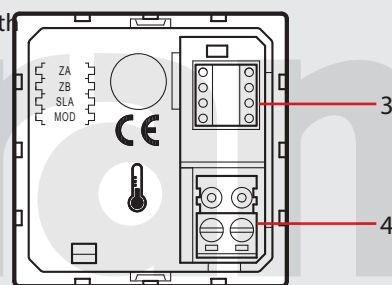
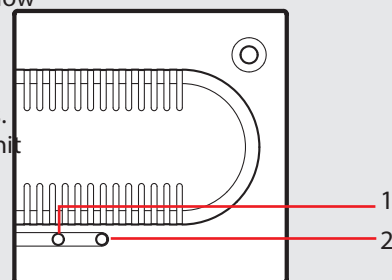
OFF mode

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 actuators in the corresponding zone, when it flashes it signals a fault
3. Configurator housing
4. BUS connector

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Configuration

Mode

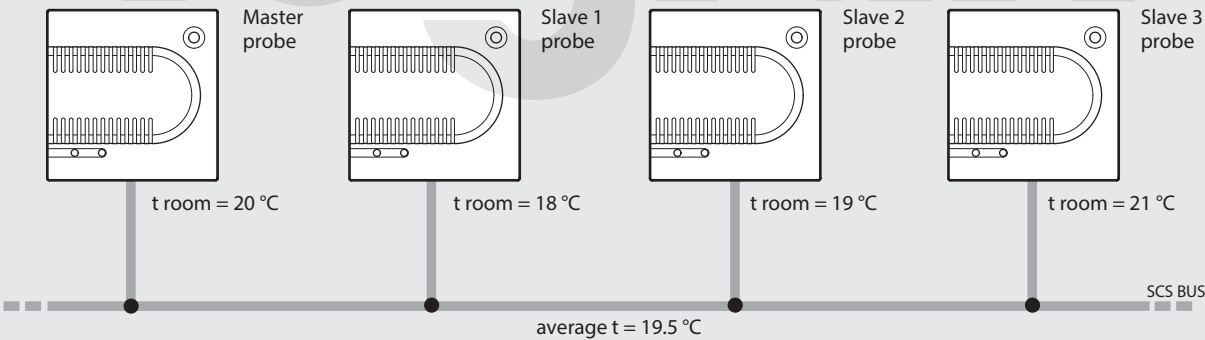
In practice one defines whether the zone manages a heating, cooling or ventilation system. To tell the Temperature controller that the zone is a heating zone, Master insert a numeric configurator which indicates the type of zone, up to eight, in the [SLA] housing. To configure the zone, up to eight, in the [SLA] housing insert the configurator marked SLA in the [MOD] housing. To program the Control unit refer to the installation manual supplied with the device. Using the [SLA] housing number all the zone Slave sensors progressively numbering start from configurator 1 and respect the sequence without numbers.

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

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 0 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 Master probe (definition of the zone); insert configurators 1, 2 and 3 (progressive number of the probe in the zone) in the SLA housing of the three SLAVE probes, respectively.



Master sensor - 5739 20/21		Slave 1 sensor - 5739 20/21		Slave 2 sensor - 5739 20/21		Slave 3 sensor - 5739 20/21	
Housing	Configurators	Housing	Configurators	Housing	Configurators	Housing	Configurators
[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

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Circulation pump

By selecting "Pumps" in the "Maintenance" menu, it is possible to select the zones which need to be controlled in the following cases:

- in a system in which the pump is always in operation (due to water recirculation in hydraulic systems or three-way valves);
- in the systems in which the pump is controlled automatically (in other words, a heating system or a cooling system, or a combined heating and cooling system. Depending on requirements, a 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.

Pump startup delay

If necessary, it is possible to activate the circulation pump with a 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 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 before performing the calibration operation, ensure the following:

- the probes are connected and powered with the hydraulic system off for at least 24 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 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.