Probe with regulation

5739 22 (White)
5739 23 (Magnesium)

Description

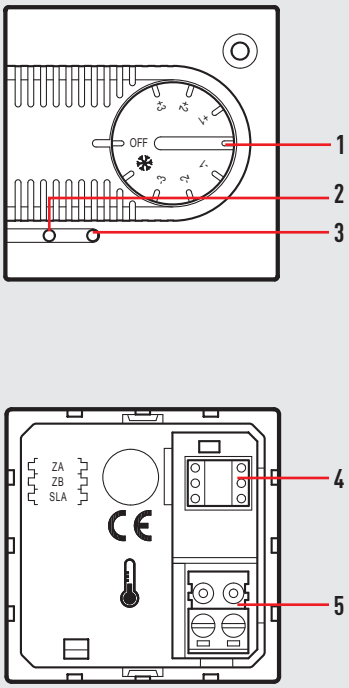
The device can adjust the room temperature in both winter and summer, varying the settings locally with respect to those received from the control unit. The item has a knob for the local temperature selection (limited to ± 3°C with respect to the value set by the control unit), the antifrost mode and the OFF mode. There are two LED, one green and one yellow, on the front of the item. The green LED indicates that the device is working correctly and the activation of the antifrost mode and OFF of the corresponding area. The yellow LED indicates the actuator state and any faults.

OFF mode

This mode has the maximum priority, whether selected by the sensor or set by the control unit; to quit the OFF mode use the device which set it.

Antifrost/thermal protection mode

In this position if the Temperature control system is set as heating the sensor works in antifrost mode; if it is set as cooling it works as thermal protection. The sensor can also work in collaboration with other sensors in "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. If the sensor selects the OFF mode this 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 of the same type, and 8 slave sensors 5739 20/21.



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. Knob: for manual temperature setting (± 3°C), to select the antifrost/thermal protection (❄) mode and the OFF state (forced zone off)
2. Green LED: when it shines steadily it indicates that the device is active, when it flashes it indicates that the OFF or antifrost modes are set locally
3. 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
4. Configurator housing
5. BUS connector

Configuration

The probe can be remotely configured "virtual configuration". If physical configurators are not connected, a PC with a Virtual Configurator software will be required.

Mode

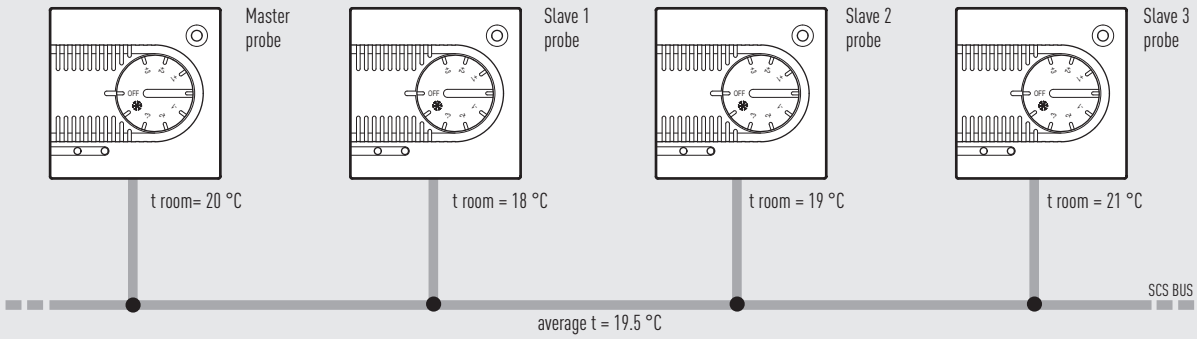
In practice one defines whether the zone manages a heating, cooling or combined system by "Configure zones" in the "Maintenance" menu. This also selects the type of load to be controlled by choosing from: ON/OFF, OPEN/CLOSE, FAN-COIL 3V.
To program the Control unit refer to the installation manual supplied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

Master and Slave probe

A sensor may operate together with other sensors, ensuring, within the same zone, the calculation of the average temperature values, based on measurements taken in different points.
This function is useful for managing very large rooms, inside which the temperature may vary considerably. To activate this function a sensor must be configured as "Master", while the other sensors must be configured as "Slave" (max 8). The Master sensor calculates the average between its own temperature and the temperatures measured by the slave sensors, and then performs the appropriate actions. Configure the Master sensor by connecting to the SLA housing a numerical configurator indicating the number of slave sensors installed inside the room (max 8). To configure the Slave sensor connect the configurator marked with SLA to the MOD housing. Use the SLA housing to progressively assign a number to all Slave sensors of the zone. When performing this number allocation, it is necessary to start from configurator no. 1, and follow the sequence, ensuring not to miss any numbers. The 5739 22/25 sensor can only operate as "MASTER". Therefore, for the slave function, only sensor 573920/21 can be used.

Example of configuration of a zone (address 47) with one Master sensor 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 SLA 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 (there are three SLAVE probes in this zone); insert configurators 1, 2 and 3 (progressive number of the probe in the zone) in the SLAVE housing of the three SLAVE probes, respectively.



Master sensor - 5739 22/23		Slave 1 sensor - 5739 20/21		Slave 2 sensor - 5739 20/21		Slave 2 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]	SLA	[MOD]	SLA	[MOD]	SLA
[SLA]	3	[SLA]	1	[SLA]	2	[SLA]	3

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5739 23

Circulation pump

By selecting "Pumps" in the "Maintenance" menu, it is possible to select the zones which need to be slaved by means of a circulation pump. Basically, when programming, a logical 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 management mode of the pump, thus determining if the pump is supplying a heating system, 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.

The pump does not need to be controlled in the following cases:
- with systems in which the pump is always in operation (due to water recirculation hydraulic systems or three-way valves);
- with systems in which the pump is controlled automatically (in other words, it starts automatically when water is needed and stops automatically when all the valves are closed);
- with systems in which the pump is simply inexistent (for example, for controlling electric heating or 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. The delay can be nine minutes at the most and depends on the time needed for the valve to open.
In order to know the opening time, refer to the specifications indicated by the 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 5739 22/23.

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