



Fan-coil probe

674 55

Description

This probe is used to manage 3-speed fan-coils and it can adjust the room temperature in winter and summer. By using the knob located at the front side of the item, it is possible to change the temperature set on the program or set from the central unit (a maximum variation of ± 3 °C is allowed with 1°C steps). Use the knob again to force the state of the zone to OFF or ANTIFROST. Use the key located on the top side of the probe to choose between two management modes of the fan: "Automatic" and "Manual". In "Automatic" mode the speed of the fan is managed by the sensor, whereas in "Manual" mode it is possible to directly set one of the three speeds: minimum, medium, maximum. The red LEDs indicate both the speed of the fan and its management mode. The green LED indicates that the device is functioning properly and that the antifrost and OFF modes of the associated zone are activated. The yellow LED indicates the state of the actuators as well as their possible anomalies. The management of the modes is performed according to the following guide-lines.

OFF mode

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

Antifrost/thermal protection mode In this position, if the Temperature central unit is set to heating mode, the probe will operate in antifrost mode; if it is set to cooling mode, it will operate in thermal protection mode. The probe can also work in collaboration with other probes in "slave" configuration to allow the central 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 central unit, the probe works with the last settings received, thus continuously maintaining the last temperature determined with summer or winter setting. If the probe selects the OFF mode this has priority even if the central unit is faulty, thus the zone controlled by the probe will remain OFF. The probe can control a zone with a maximum of 9 actuators of the same type, and 8 slave probes (674 58).

Related articles

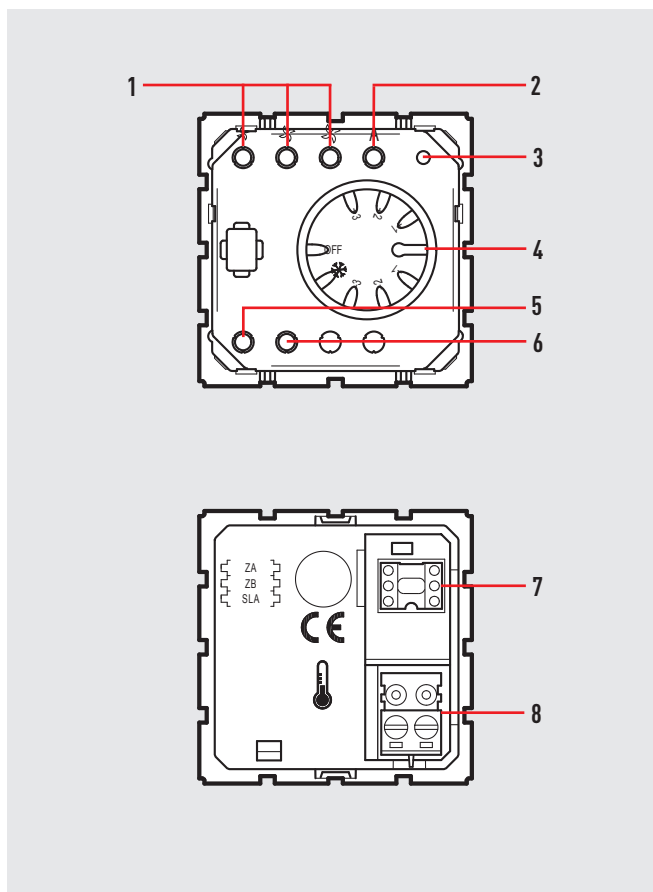
682 41 (White cover)
685 41 (Titanium cover)

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



Legend

1. Red LEDs: indicate the setup of the fan speed; starting on the left, the speeds indicated are: minimum, medium, maximum
2. Red LED: when switched on, it indicates that the "Automatic" mode is enabled; when it is switched off, it indicates that the "Manual" mode is enabled
3. Key: to enable the virtual configuration and select the mode and fan speed of the fan-coil. Use this key to choose the "Automatic" mode (fan speed managed by the probe) or "Manual" mode (fan speed set at minimum, medium and maximum)
4. Knob: for manual temperature setting (± 3 °C), to select the antifrost/thermal protection (*) mode and the OFF state (forced zone off)
5. 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
6. 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
7. Configurator housing
8. 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 order to program the functioning mode of the sensor, use the Temperature central Unit and, by selecting "Configure zones" in the "Maintenance" menu, determine whether the zone controls a heating, cooling or combined system.

This also selects the type of load to be controlled by choosing from: ON/OFF, OPEN/CLOSE, 3V FAN-COIL. To program the central unit refer to the installation manual supplied with the control unit itself.

Master and Slave Probe

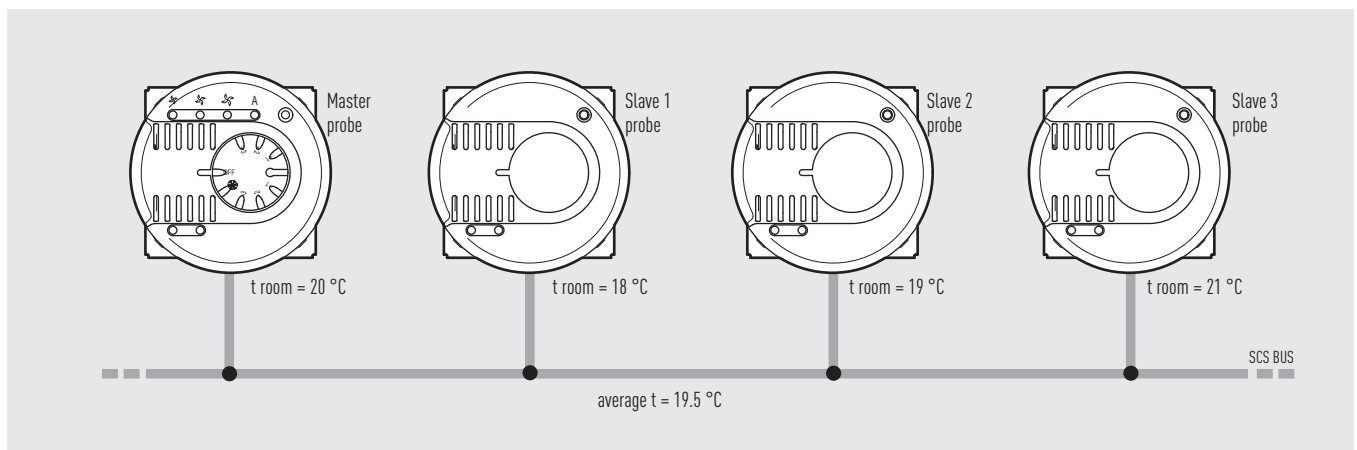
A probe may operate together with other probes, ensuring, within the same zone, the calculation of the average temperature values, based on measurements taken in different points. This function is useful for managing very large rooms, inside which the temperature may vary considerably. To activate this function a probe must be

configured as "Master", while the other 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 sensors, and then performs the appropriate actions. The 674 55 sensor can only operate as "MASTER". Therefore, for the slave function, only probe 674 58 can be used. In addition to the zone address, to configure the Master it is enough to connect to the SLA housing a numerical configurator indicating the number of slave probes installed in the room (max 8). To configure the Slave probe connect the configurator marked with SLA to the MOD housing. Use the SLA housing to progressively assign a number to all Slave probes 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.

Example of configuration of a zone (address 59) with one Master probe and three Slave probes

To define the association of the probes with zone 59, place configurators 5 and 9 in housings [ZA] and [ZB] of the four devices. Place configurator No. 3 in the [SLA] housing of the Master probe (there are three Slave probes in the zone); The SLA

configurator (Slave probes) must be placed in the [MOD] housing of the three Slave probes. Finally, place configurators No. 1, 2 and 3 (progressive number of the probe in the zone), respectively, in the [SLA] housing of the three Slave probes.



Master Probe - 674 55		Slave 1 Probe - 674 58		Slave 2 Probe - 674 58		Slave 3 Probe - 674 58	
Housing	Configurators	Housing	Configurators	Housing	Configurators	Housing	Configurators
[ZA]	5	[ZA]	5	[ZA]	5	[ZA]	5
[ZB]	9	[ZB]	9	[ZB]	9	[ZB]	9
[SLA]	3	[MOD]	SLA	[MOD]	SLA	[MOD]	SLA
		[SLA]	1	[SLA]	2	[SLA]	3

Circulation pump

It is not necessary to use particular configurators to program the functioning mode of the circulation pumps. All you need to use is the Temperature central unit. 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. 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 the hydraulic system requirements, there may be a "single circulation pump" or "several circulation pumps" to slave one or more groups of zones. If necessary, it is also possible to control the "startup delay of the pump" in connection with the opening of

the zone valves.

The pump does not need to be controlled and is not indispensable 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).

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

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 674 55.

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