Radio interface
for outdoor temperature probes

HD4577   HS4577   N4577
HC4577   L4577   NT4577

Description

The radio interface is indispensable to receive the temperature data transmitted by the radio probe. Up to two probes can be associated with each interface thus giving the system two measuring points for each interface. Up to nine temperature probes can be installed in a system.

Both the interface and the communication probe use radio waves with a frequency of 868 MHz. The maximum distance of communication between the receiving interface and the temperature sensor is 70 m in free air. This distance is less if there are walls in cement, metal or other material between the devices.

Technical data

- Power supply from SCS BUS: 27 Vdc
- Operating power supply with SCS BUS: 18 – 27 Vdc
- Max. absorption: 33 mA
- Operating temperature: 0 – 40 °C
- Radio frequency: 868 MHz
- Range: 70 m in free field (metal walls and surround plates and reinforced concrete walls reduce the range);
- Size: 2 flush mounted modules

Configuration

In order to use a receiving interface and radio probe, configuration must first be performed, followed by the programming procedure. Only the interface needs configuring. Up to 2 probes may be combined with each interface, therefore providing the system with two detection points for each interface. Up to a maximum of 9 temperature sensors may be installed in one system.

The configuration sockets on the interface identify the radio probes address.

They are: A1/-, PL1/N1, M1 for the first address, and A2/-, PL2/N2, M2 for the second address. The two addresses must always be different from each other, PL1/N1 ≠ PL2/N2. Only one radio probe may be associated to each address. Only used addresses must be configured.

The interface must be configured in temperature control mode by connecting configurator 1 to M1 and M2. With this mode the A1/- and A2/- sockets are not used, therefore no configurator needs to be connected.

Programming of devices:

After performing the configuration, it will be necessary to associate The radio probe to the interface following the programming procedure below:

1) Press the pin pushbutton of the interface for 5 seconds. The red LED turns on. Release the pushbutton. The interface LED will flash every two seconds to confirm that programming mode is active on the first address (group of configurators PL1/N1, M1). If the second address of the interface is not configured (no configurator is connected to the PL2/N2, M2 positions), go to step 2 of the procedure.
   However, if also the second address must be configured (group of configurators PL2/N2, M2), simply press the pin pushbutton of the interface again.
   The LED will flash twice in succession every two seconds.
   Every time the pin pushbutton is pressed, the system will switch from the first to the second address and vice versa.

2) After choosing the address the radio probe should be associated to, within 20 seconds press the transmission key of the probe itself. Pressing the transmission key will send the probe serial code. After receiving the code through the radio signal, the red LED of the interface will quickly flash for 2 seconds, confirming that programming is complete, and the procedure has been terminated.

Front view

Rear view
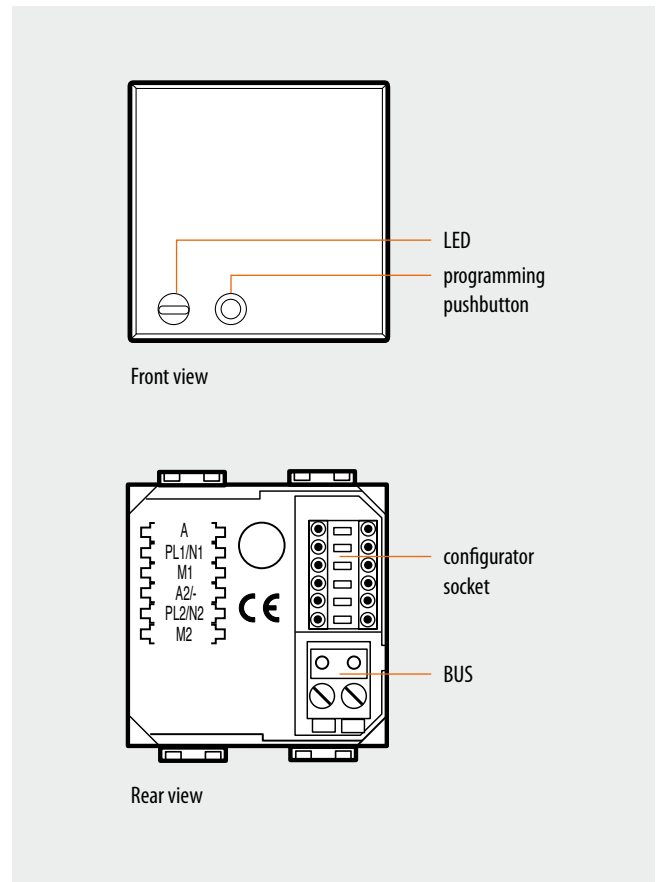
If necessary repeat the operation, to save the code of another probe. If on the other hand an address has already been associated and the procedure is repeated with another probe, the interface performs an overwriting action, only keeping the last probe in the memory. During normal operation, the sending of information from the probe is confirmed by the flashing of the red LED of the interface. A single flashing indicates that the radio message has been received, and the "temperature" data has been sent through the BUS by a probe associated to the **PL1/N1, M1** address. A double flashing indicates that the radio message has been received, and the "temperature" data has been sent through the BUS by a probe associated to the **PL2/N2, M2** address. To delete all codes from the interface press the pin pushbutton for 12 seconds. After 5 seconds from pressing the key, the LED will turn on steadily, and after a further 7 seconds, it will start flashing quickly, confirming that all programs have been deleted.

NOTES:
- If the interface configuration is wrong, the red LED will flash. Correct the configuration.
- If the second interface address has not been configured (no configurator connected to the **PL2/N2, M2** sockets), during the programming procedure it will not be possible to switch to this address, which therefore cannot be programmed.