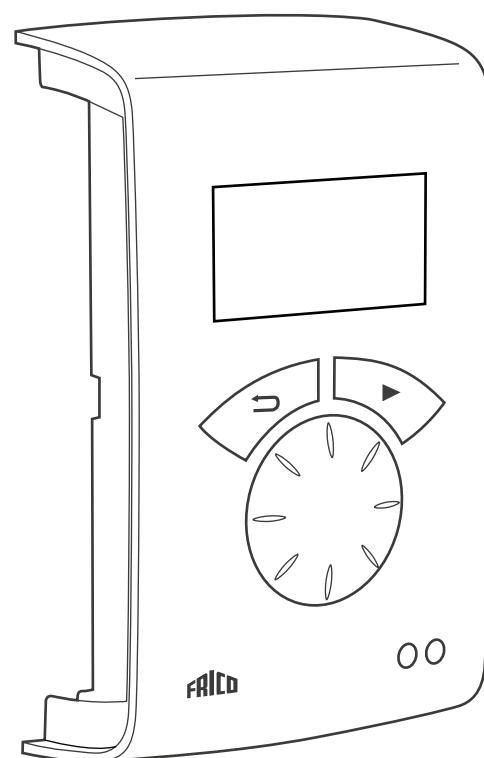


Original instructions

SIRe Competent Fan heaters Functions

SIReFC



GB

For the following, please see Quick Guide:

- *Wiring diagrams*
- *Installation instructions*
- *Constituent parts and accessories*
- *Alarm and error codes*
- *Connecting external control - including BMS functions*

Operating modes



Unit with electrical heating

Control is based on the three operating modes selected in Installer menu > Fan settings > Fan mode:

- Thermostat / Manual fan
- Thermostat / Automatic fan
- Manual

Thermostat / Manual fan

The thermostat controls the heating only and the fan runs continually. The fan speed is set manually. The fan symbol is marked in the status window, select desired speed with the rotary dial and confirm. (High speed limit is step 4 for SE06-15 and step 2 for SE20/30).

When room temperature falls 0.5 K below setpoint, the first heating step is activated. If the temperature falls further the next heating step is activated, etc. (SE06-15, 20 has 2 heating steps, SE30 has 3 heating steps).

The temperature difference between the heating steps activation, is set under Heating step diff., see Installer menu > Heating settings > Heating step diff.

Thermostat / Automatic fan

The thermostat activates both the heating and the fan. The fan speed is set manually in the status window and the temperature setpoint is set in Main menu > Temperatures settings.

Manual

The fan speed and heating is set manually in the status window. The heating can be set to 2 or 3 steps. Heating is blocked in summer mode, see: Main Menu > Summer/Winter



Unit with water heating

Control is based on the four operating modes selected in Installer menu > Fan settings > Fan mode:

- Auto
- Thermostat / Manual fan
- Thermostat / Automatic fan
- Manual

Auto

When room temperature falls 0,5K below setpoint, the fan starts at speed 1 and the valve opens. If a fully open valve is not sufficient to maintain the temperature, the fan control increases to a max of step 4. The temperature difference, which controls the increase of fan speed when the room temperature falls further, is set under Heating step diff., see Installer menu > Heating settings > Heating step diff.

When Auto is active the fan speed and heating cannot be changed in the status window.

Thermostat / Manual fan

The thermostat just controls the heating and the fan runs continually. The fan speed is set manually. The fan symbol is marked in the status window, select desired speed with the rotary dial and confirm.

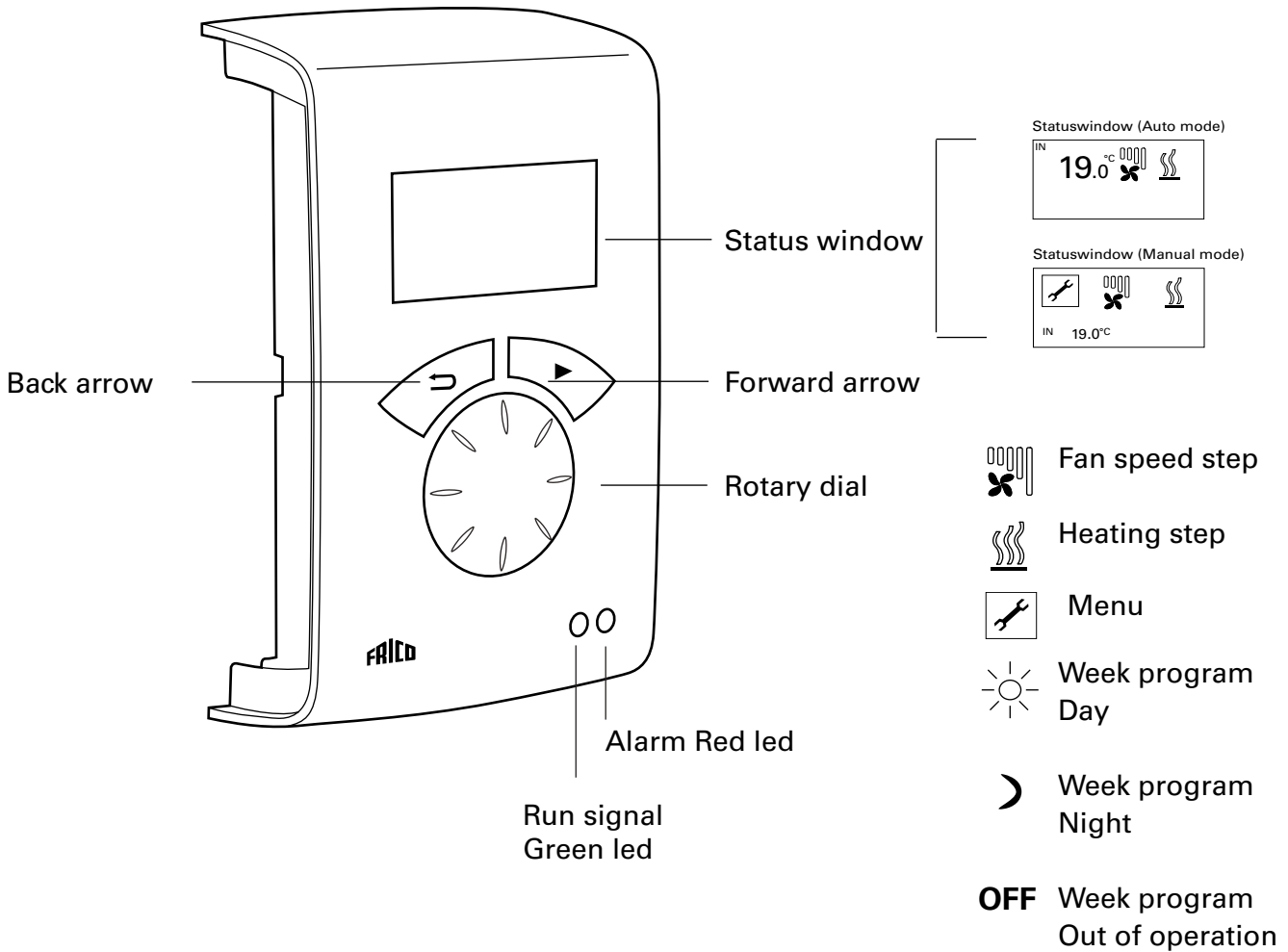
Thermostat / Automatic fan

The thermostat activates both the heating and the fan. The fan speed is set manually in the status window and the temperature setpoint is set in Main menu > Temperatures settings.

Manual

The fan speed and heating is set manually in the status window.

Overview



Explanations

Status window

The display shows the prevailing room temperature, fan and heating step, door status and day/night mode or Off when the week program is used.

This also displays whether the control is set to auto mode or manual mode.

Forward arrow

Confirm selection and proceed.

Rotary dial

Scroll between alternatives

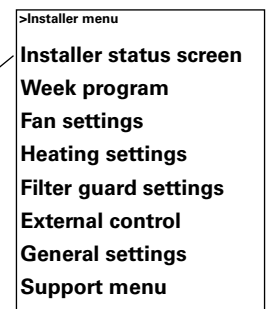
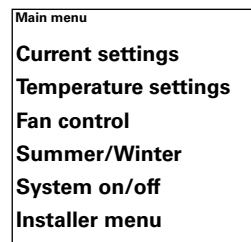
Back arrow

Go back.

After three minutes the control unit goes back to displaying the status window.

Status window

For thermostat/manual control of the fan and heating the relevant symbol is marked in the status window with the forward arrow. Steps can then be set, confirm with the forward arrow. For description, see section Operating modes. Press forward arrow to enter the main menu.

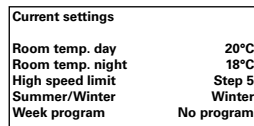
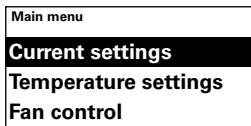


Main menu



Current settings

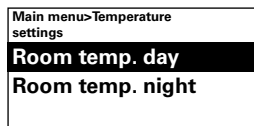
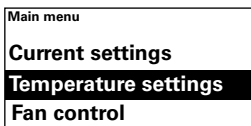
Displays set room temp, high speed limit, Summer/Winter and week program status.



Temperature settings

Set the desired room temperatures to apply for day respectively night mode (room temperature night is used for week program/night reduction).

Factory setting



Room temp. day: 20°C (5 – 35°C)

Room temp. night: 18°C (0 – 20°C)

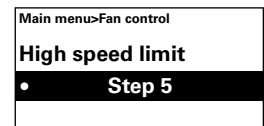
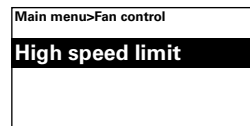
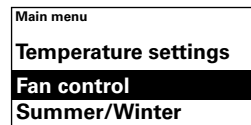
Fan control

Unit with electrical heating

No function. The fan speed is set manually in the status window.

Unit with water heating

Possibility of limiting the fan's highest speed. In Auto mode (see fan settings) the high speed is limited to step 4 in order to keep the sound level down. To reduce the high speed even further, a lower value can be set.

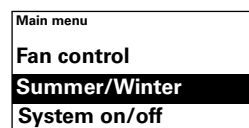


Factory setting

High speed limit: 5 (1-5)

Summer/Winter

To permit or block heating. Heating is permitted in winter mode. Summer mode is displayed with a crossed out heating symbol in the status window.



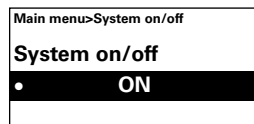
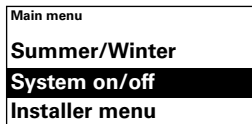
Factory setting

Summer/Winter: Winter (Summer - heat off)

System on/off

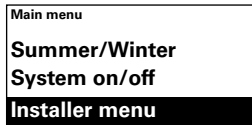
Switch the whole system off manually. In Off the display goes out; as soon as a button is pushed the display lights and shows System on/off. To activate the unit again select On.

The unit's safety functions are still active when the system is switched off, which means that the fan can continue to run for a moment after mode Off has been selected.



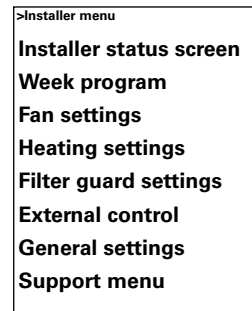
Installer menu

The installer menu is at the bottom of the main menu, this is password protected. See Installer menu in this manual.



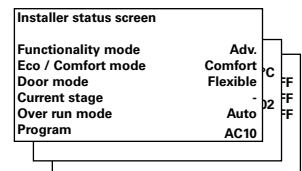
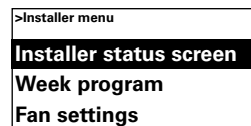
Installer menu

To enter the Installer menu, code 1932 is entered. Select the digits using the rotary dial and confirm using the forward arrow.



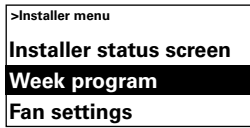
Installer status screen

Check the settings. The installer status screen consists of three pages with settings, scroll using the rotary dial.



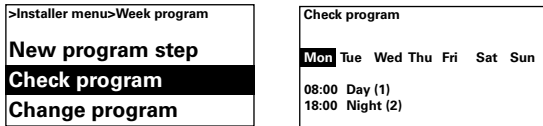
Week program

Make settings for week program.

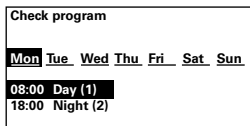


A basic program is pre-entered in SIRe.
 Mon-Fri Day from 08:00, Night from 18:00
 Sat Day from 10:00, Night from 16:00
 Sun Day from 11:00:00, Night from 14:00

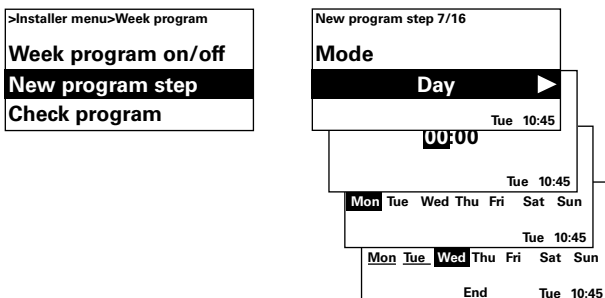
To check which program is set for a particular day, select Check program and then switch between the days using the rotary dial.



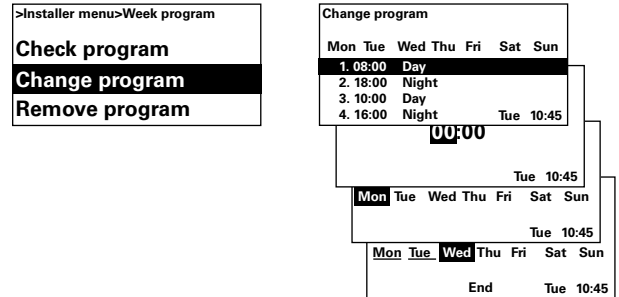
To check which days a certain program is active, select a week day by pressing the forward arrow, the program is marked and those days that the program is used will be underlined, switch between the programs for a particular day using the rotary wheel.



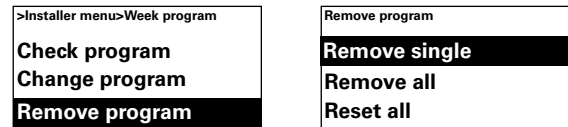
To add program step, select New program step. Confirm your selection with the forward arrow. Select Day, Night or Off (if the unit should not be in operation), set the time for switch on and then for which days the program applies, then go to End to finish.



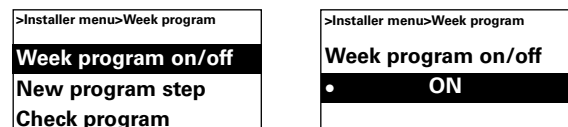
A new program step does not replace a set time for Day for example, but you can instead select to change a program step. To change a program step, select Change program.



The program steps that should not apply are removed in Remove program. One or all program steps can be removed in the menu. To return to the factory set basic program, select Reset all.

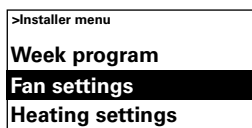


Week program is activated by selecting On, under Week program on/off. In On-mode, a sun, moon or Off in the Status window appears to indicate day, night respectively Off-function.

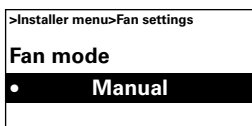
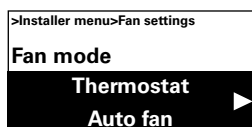
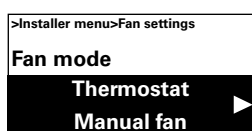
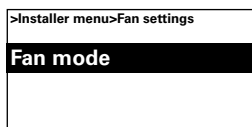


Fan settings

Make settings for fan mode (see also Operating modes section).



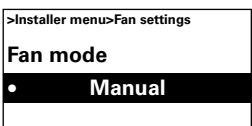
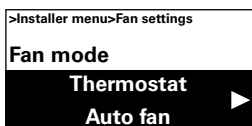
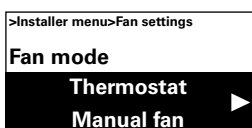
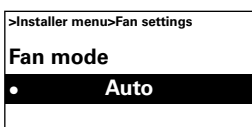
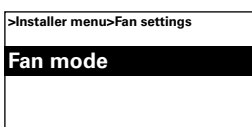
Unit with electrical heating



Factory setting

Fan mode: Thermostat / Automatic fan
 (Thermostat / Manual fan, Manual)

Unit with water heating

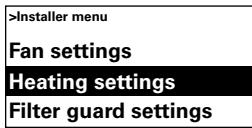


Factory setting

Fan mode: Auto (Thermostat / Manual fan,
 Thermostat / Automatic fan, Manual)

Heating settings

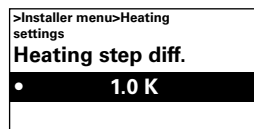
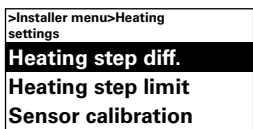
Make settings for heating.



Heating step diff.

Unit with electrical heating

The temperature difference between connection of the electrical heating step. Factory setting of 1.0K and a set point value of 20°C gives the following function: first output step is activated at +19.5°C (deactivates at +20.0°C). If the temperature continues to fall below +18.5°C another output step is activated (deactivates at +19.0°C). For 3 output steps the last step is activated at +17.5°C and deactivates at +19.0°C.

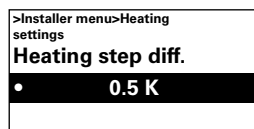
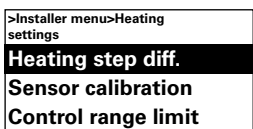


Factory setting

Heating step diff: 1.0K (0K – 10K)

Unit with water heating

When room temperature falls 0,5K below setpoint, the fan starts at speed 1 and the valve opens. If the room temperature falls further (i.e. increasing temperature difference), the fan speed will increase (High speed limit 4). The temperature difference, which will increase the fan speed one step, is set in Heating step diff.



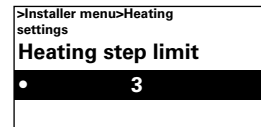
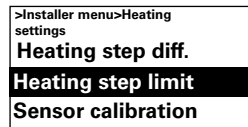
Factory setting

Heating step diff: 0.5K (0K – 10K)

Heating step limit

Unit with electrical heating

Possibility of limiting the heating.

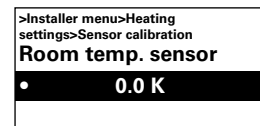
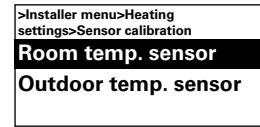
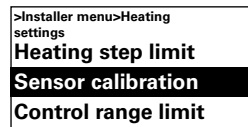


Factory setting

Heating step limit: 2 (SE06-15, 20) 3 (SE30)

Sensor calibration

If the sensor displays the wrong values these can be calibrated. Some display errors may occur, but this is primarily due to the location (cold/hot surfaces etc). The value + or – adds to or subtracts from the measured value (for example +2K gives an increase of the displayed value of 2 degrees).

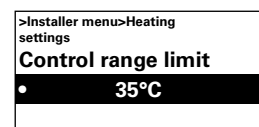


Factory setting

Room temperature sensor: 0.0K (-10K – 10K)

Control range limit

The maximum room temperature that a user can select is limited to between 5 – 35°C.



Factory setting

Control range limit temperature: 35°C (5 – 35°C)

Filter guard settings

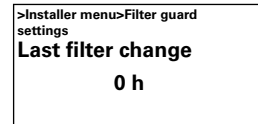
Unit with water heating

Filter alarm is displayed when the set Filter time has been exceeded or when an external filter guard is installed and triggered. Filter timer can be used as a Service interval timer for electrical heated units when filter is not allowed.



Last filter change

To check the number of run time hours since the last filter replacement, select Last filter change. The time is reset when the filter alarm is reset. If the time is to be reset before the alarm has gone, switch the filter timer on and off.



Filter timer on/off

Filter alarm is activated by selecting On, under Filter timer on/off.

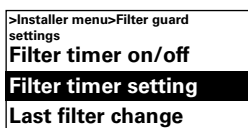


Factory setting

Filter timer on/off: Off (On)

Filter timer setting

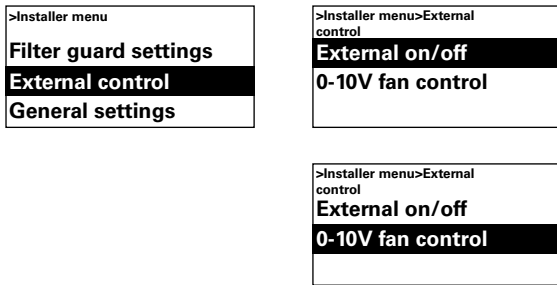
Under Filter timer setting, set the desired run time to between 50 and 9950 hours.



Filter timer setting: 1500 h (50 - 9950 h)

External control (BMS)

BMS functions can be activated under External control. Activate External on/off or 0-10V fan control by selecting On under the respective one. See diagrams and Connecting external control (Quick Guide). Heat activates automatically when fan starts.



Unit with water heating

Note! Ext. control of 0-10V fan control will automatically control actuator/valve on/off.

SWH02-33

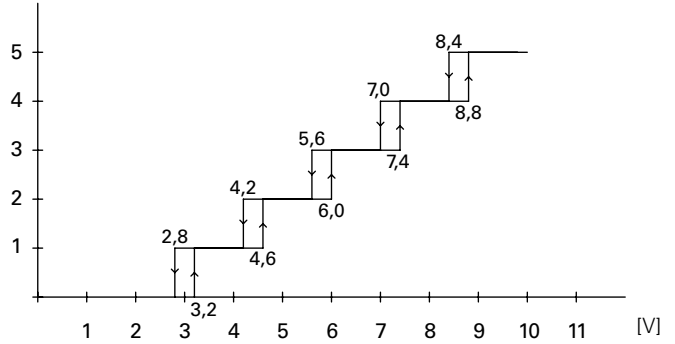
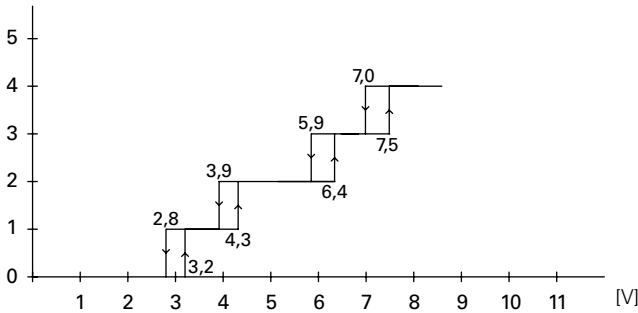


Diagram: Fan step at incoming 0-10V DC voltage level, 5 step.

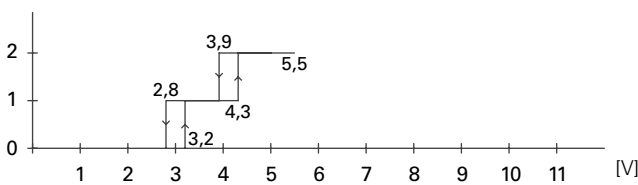
Unit with electrical heating

Panther SE06-15



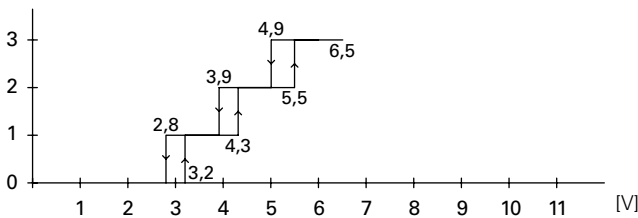
Current stage	Fan	Heat
0	0	0
1	1	1
2	2	2
3	3	2
4	4	2

Panther SE20



Current stage	Fan	Heat
0	0	0
1	1	1
2	2	2

Panther SE30



Current stage	Fan	Heat
0	0	0
1	1	1
2	2	2
3	2	3

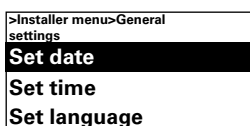
Diagram: The fan step and heating step at incoming 0-10V DC voltage level.

General settings

Possibility of making general settings that are also in the Start-up wizard and execute user reset.

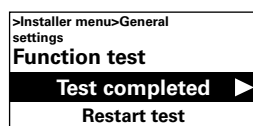
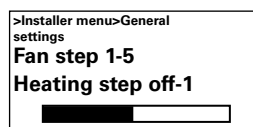
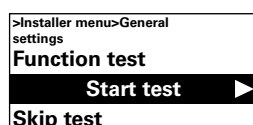
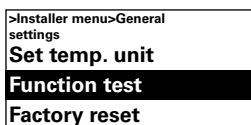


Change the date, time, language and temperature unit.



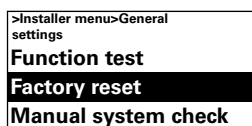
Function test

To test the fan and heating steps, run the function test.



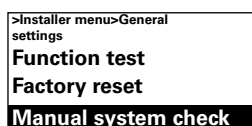
Factory reset

Resets values to factory settings.



Manual system check

Run Manual system check, if required or after physical alteration of system, to identify connected units and sensors.



Support menu

The support menu is password protected and is used for support in contact with Frico or authorised installer.

Alarm and error codes

SIRe has different alarms and error codes for safe and problem free operation.

If alarms or error codes have been indicated these must be reset in order to return to normal operation, for example activating the heating again. Fan mode is active even when, for example, the over heating alarm has been indicated.

Displaying alarm and error codes

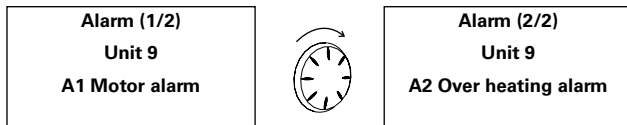
In event of alarm or error the alarm/error code is shown in the status window. In event of alarm/error code the unit it applies to is displayed.

See Table - Alarms and Table - Error codes (Quick Guide).

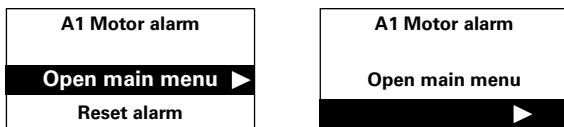
Reset alarm

Note! Before resetting, check that the fault is rectified and there is nothing to prevent the unit from being recommissioned.

If several alarms occur, scroll down to view next alarm, however the alarms must be reset in the same order.



When the fault is rectified, the alarm is reset by pressing the forward arrow and selecting Reset alarm and then confirm. At the first start up alarm and error codes can occur, these can usually be reset without action.



Power failure

Note that in case of power failure the time settings need to be checked, if the time is not set correctly week program will be affected.

Overheat protection

Only applies to units with internal sensor. The overheat protection is primarily intended to prevent the unit from overheating and protect the unit and its surroundings from damages, should an overheating occur. It will do this by reducing the power output to keep the internal temperature within its limits, see table.

If the internal temperature rises above its alarm limit, an A2 Overheat alarm is triggered and the fan will start running in order to evacuate the heat. If the internal temperature continues to rise despite this, for example because of a faulty contactor or an incorrect water valve, the fan speed will increase until full speed is reached and will continue running until the internal temperature is reduced and the alarm is reset.

The alarm remains in the display until it is reset. For electrically heated units the heat will remain off until then. For water heated units the actuator/valve will reengage when internal temperature has fallen to safe levels, even if the alarm is not yet reset.

For correct function, water heated units must be equipped with actuator/valve controlled by SIRe. Electrically heated units are also equipped with a mechanical over heat protection.

Frost protection function

Unit with water heating

Only applies to units with internal sensor.

The frost protection function is intended to prevent the water coil from freezing.

If the internal temperature falls below +5 °C frost protection alarm A3 is given, the valve actuator opens and the fan stops.

Note! In event of repeated alarms, overheating alarms and frost protection alarms, carry out a thorough check and if the fault cause cannot be found contact authorised installer or Frico.

Overheat protection - temperature limits

Fan heater	Decrease heat Start ramp-up	Heat off	Alarm Full speed
SE6-15	70°C	75°C	80°C
SE20-30	85°C	90°C	95°C
SWH02-33	90°C	95°C	100°C



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