FRICO

Original instructions

SIRe Basic Fan Heaters
Water
With quick guide

SIReB
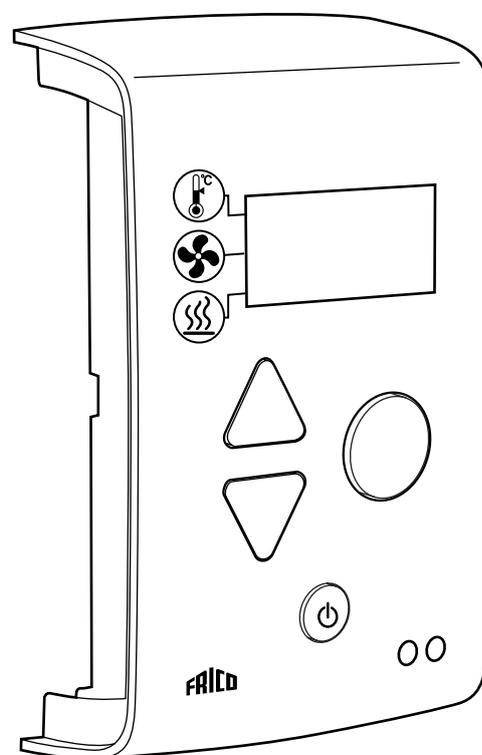
For wiring diagram, please see last pages.

Quick guide/start up

Check that all constituent parts are present (see section Constituent parts).

Advice about location

Control unit SIReUB1 has an integrated room temperature sensor and is installed so that it is easily accessible to the user.

RJ12 (6p/6c) modular cables, which are available in different lengths, are used to connect the PC board and the control unit. Longer cables are available as options. Maximum cable lengths see section Options.

To prevent unauthorised people from accessing the Control unit it can instead be placed in another area and an external room sensor, SIReRTX (option), can be installed in the premises to sense the correct temperature.

Connect the system

In PC board Base SIReB1(X) the unit is connected further with RJ12 (6p/6c) modular cable if several units are to be connected in parallel.

If an external room temperature sensor SIReRTX (option) is used it is connected using modular cable RJ11 (4p/4c) on HUB SIReB1(X).

The actuator is connected to the PC board Base SIReB1(X).

PC board Base SIReB1(X) in/at the unit and control unit SIReUB1 is connected with RJ12 (6p/6c)modular cable after the other units are powered up.

For fixed installation requirements, remove the supplied cable and plug. Perform the installation in accordance with applicable regulations.

Wiring diagrams

The wiring diagrams are in a separate section at the end of this manual.

When external PC board Base SIReB1X is used, wiring between the PC board base and the unit must be done. Please see separate manual for SIReB1X.

Enter ID/Operation without control unit

The control system can control one or more units in parallel (max 9). Each unit must get a unique ID number (1-9) which is set in the ID selector of the PC board. E.g. Unit 1: ID=1, unit 2: ID=3
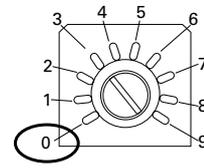
If the external control for some reason has not been installed the unit can still be run temporarily. The ID selector is then set to mode 0 see the image below.
The function is half speed and heating is on.

When the ID number must be changed the unit must be disconnected from power.
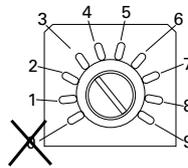
Each unit should have a unique ID on its SIReB1X card.

To run the unit temporarily without external control select mode 0.

Start up

System supplied with power. Three digits 1.4.0. (software version) is quickly shown in the status window followed by three horizontal lines. After about 30 seconds the prevailing room temperature is then shown in the status window.

Use arrow up/down and set the desired room temperature, fan speed step and heating step. To change a setting push the round button (confirm), the setting will start to flash and can be adjusted by using the arrow up/down.

Factory settings gives manual control of fan and heating controlled by thermostat. For more setting alternatives see section Operating modes.

At the first start up alarm and error codes can occur, these can usually be reset without action.

Choose desired room temperature 5 - +30 °C
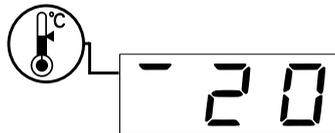
Choose fan step 1-5

Activate heat
0 = No heat
1 = Heat step 1 possible
2 = Heat step 2 possible
(3 = Heat step 3 possible)
Heat steps controlled by thermostat

Contents

Wiring diagrams, see last pages

Constituent parts

SIReB
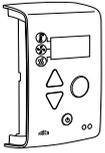
SIReUB1,
control unit Basic

Wall unit
cover
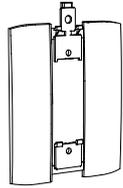
Integrated in fan heater
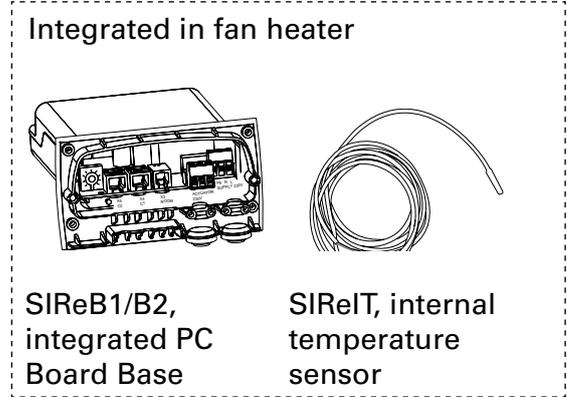
SIReB1/B2,
integrated PC
Board Base

SIReIT, internal
temperature
sensor

SIReCC,
modular cable

Dimensions constituent parts

Typ	Description	HxWxD [mm]	L [m]
SIReUB1	Controll unit	120x70x35	
SIReB1	Integrated PC board Base		
SIReIT	Intern temperature sensor		1
SIReCC605	Modular cable RJ12 (6/6)		5

Option
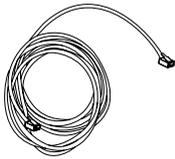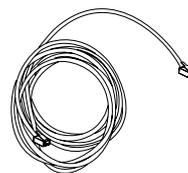
SIReRTX, external room temperature sensor

SIReCJ4, joint piece

SIReCJ6, joint piece

SIReCC, modular cable

| Type	Description	HxWxD	L [m]
SIReRTX	External room temperature sensor	70x33x23	10
SIReCJ4	Joint piece for two pcs. RJ11 (4/4)		
SIReCJ6	Joint piece for two pcs. RJ12 (6/6)		
SIReCC603	Modular cable RJ12 (6/6)		3
SIReCC605	Modular cable RJ12 (6/6)		5
SIReCC610	Modular cable RJ12 (6/6)		10
SIReCC615	Modular cable RJ12 (6/6)		15
SIReCC403	Modular cable RJ11 (4/4)		3
SIReCC405	Modular cable RJ11 (4/4)		5
SIReCC410	Modular cable RJ11 (4/4)		10
SIReCC415	Modular cable RJ11 (4/4)		15

Max. cable lenght

• Modular cabel RJ12 (6p/6c) between SIReUB1 and SIReB1(X):   max 50 m.
• Modular cabel RJ12 (6p/6c) between two SIReB1(X):   max 50 m.
• Modular cabel RJ11 (4p/4c) to room sensor SIReRTX: max 20 m.

Total cable lenght is permitted in the system is a maximum of 300 m.

Water control - valve kit

VOS

SD230
TBVC

BPV10

AV

VOSP

SD230
TBVCMP

BPV10

AV

VOT

SD230
TRVS
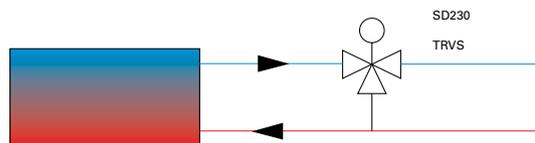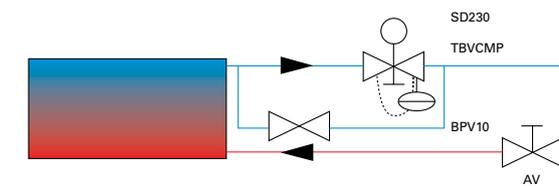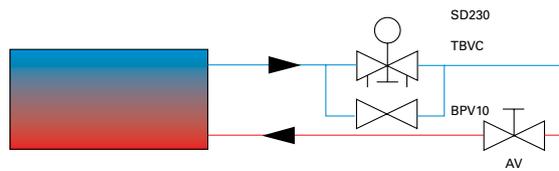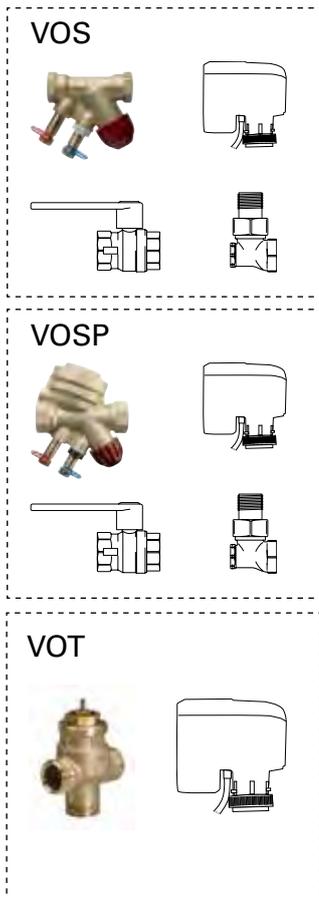
Water control - option

VAT, adjustment tool
for valve package.

Type	RSK-no.	Description	Connection
VOS15LF	673 09 35	On/off	DN15
VOS15NF	673 09 36	On/off	DN15
VOS20	673 09 37	On/off	DN20
VOS25	673 09 38	On/off	DN25
VOSP15LF	673 09 43	Pressure independent	DN15
VOSP15NF	673 09 44	Pressure independent	DN15
VOSP20	673 09 45	Pressure independent	DN20
VOSP25	673 09 46	Pressure independent	DN25
VOT15		Three way valve and actuator on/off	DN15
VOT20		Three way valve and actuator on/off	DN20
VOT25		Three way valve and actuator on/off	DN25
VAT	482 98 30	Adjustment tool for valve package	

Operating modes

Operating modes

In factory settings the fan runs in auto mode.

Auto mode

Set maximum fan speed and the thermostat controls the heat by open/close actuator/valve and successive increase/decrease fan speed. When the desired room temperature is reached the actuator/valv will close and the fan stops.
Maximum fan speed in Auto mode is limited to step 4.

Change parameter P04 from 0 to 1 (see list of parameters on next page) to active auto mode, the fan runs continuously on the selected fan step and thermostat controls the heater on/off.

Manual mode

Decrease the temperature setting below 5 °C and the following symbols are shown in the status window = manual mode.

In manual mode both fan- and heating steps are controlled manually.
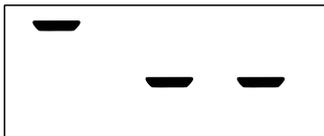
Fan over run

When heat has been activated the fan will continue to run to cool down the unit. The over run time is 180 seconds or shorter if the internal temperature has dropped below +30 °C (only valid for units with internal temperature sensor).

Set values

Use arrow up /down to choose desired room temperature, fan speed step and heating step.
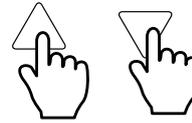
Push the confirm button and the digit(s) starts to flash. The value can now be adjusted using the arrow up /down, and confirm.

Temperature

Fan speed step

Heating step
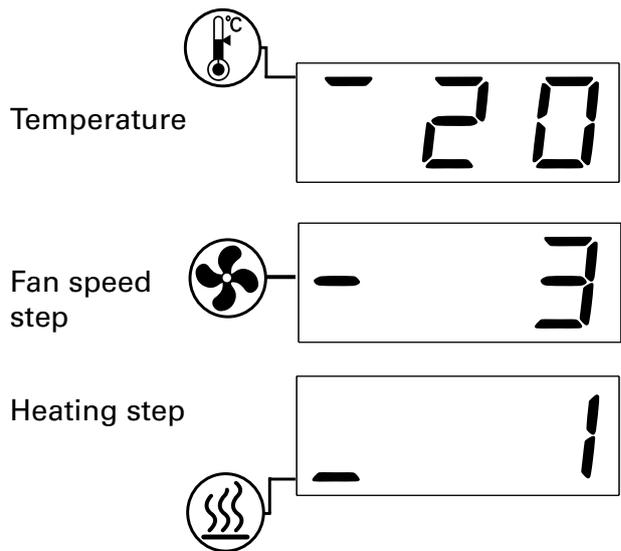
System on/off

Press the ON /OFF button for 2 seconds to switch off the system. 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.

Control unit SIReUB1

Overview

Statuswindow

Arrow up
Scroll up

Arrow down
Scroll down

Confirm

Alarm Red led

Run signal Green led

ON/OFF
button

Prevailing room
temperature

Desired room
temperature

Fan speed step
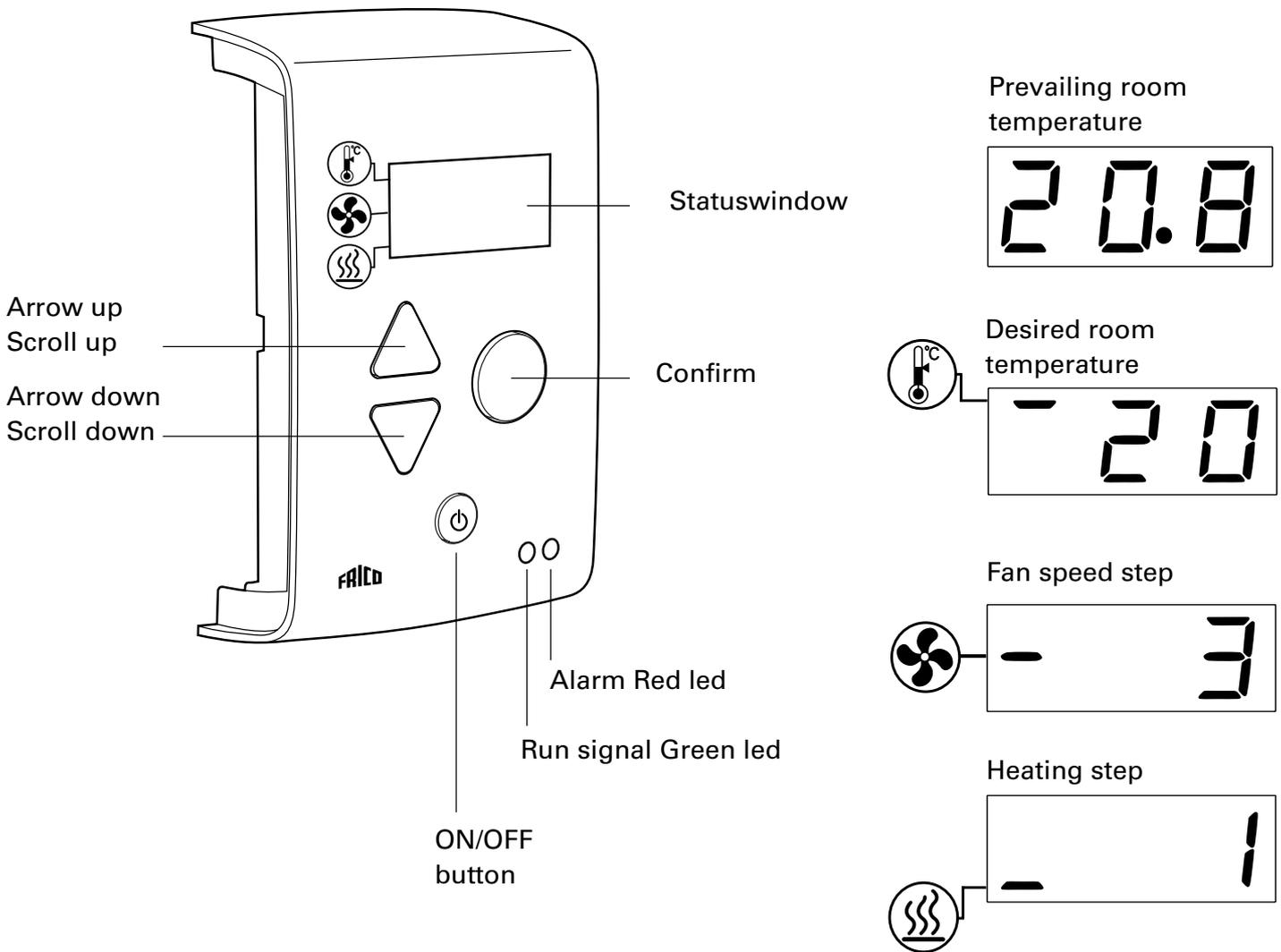
Heating step

Explanations

Status window

The status window has four main displays:
prevailing and desired room temperature, fan
and heating steps. Alarm codes and parameter
settings can also be shown in the status
window.

Arrow up

Scroll up in menu / increase a setting.

Arrow down

Scroll down in menu / deacrease a setting.

Confirm

To have access to the Installers menu, choose
parameters and cofirm an adjusted setting.

After about 20 seconds the control unit goes
back to displaying the prevailing temperature.

Installer menu

Parameter menu

Keep Confirm button pressed until P00 is shown in the status window. Use arrow up / down to scroll between the parameters. Press Confirm button once to change a setting in the parameter menu. Flashing values can be adjusted using the arrow up/down and then confirm. Keep the Confirm button pressed to return to the status window. (Returning automatically to the status window after about 50 seconds).
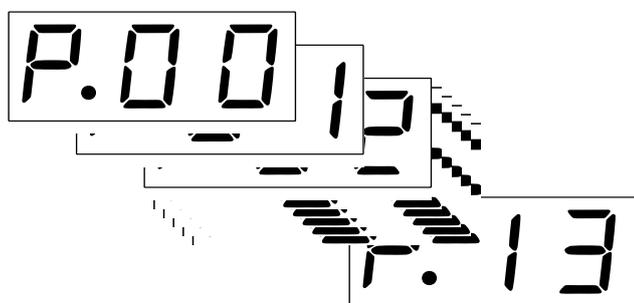
Parametrar description

P.00 Temperature difference heating steps
Sets the difference between the fan steps (in auto mode where the thermostat also controls the fan speed steps)

P.01 Overheating alarm ON/OFF
Possibility to block the alarm (only valdid for units with internal temperature sensor).

P.02 Over run time
Time when the fan continue to run when the heat has been activated (only valid for units with internal temperature sensor).

P.03 Temperature limit for over run
Over run time is cancelled if the internal temperature drops below this set value (only valid for units with internal temperature sensor).

P.04 Fan control
Choose manul (0) or auto (1) mode, read more under section Operating mode.

P.05 Internal temperature
Prevailing internal temperature. Only the peak value is shown when several units are connected (only valid for units with internal temperature sensor).

P.06 - P.13 Run time
Run time for fan and heating steps.

List of parameters

Parameter-number	Description	Setting range	Factory setting
P.00	Temp. diff. between heating steps	0,5-10	1.0 °C
P.01	Overheting alarma ON/OFF ON=1; OFF=0	1/0	1
P.02	Over run time when heat has been activated	10-300	180 seconds
P.03	Temperature limit for fan over run	10-40	30 °C
P.04	Fan control: Manul rorAuto; 0=Manul, 1 = Auto	0/1	0
P.05	Display of unit internal/outlet temperature	0-100	
P.06	Run time fan step 1	0-99999	
P.07	Run time fan step 2	0-99999	
P.08	Run time fan step 3	0-99999	
P.09	Run time fan step 4	0-99999	
P.10	Run time fan step 5	0-99999	
P.11	Run time heating step 1	0-99999	
P.12	Run time heating step 2	0-99999	
P.13	Run time heating step 1+2	0-99999	

Alarm and error codes

Overheat protection

Only applies to units with internal sensor. The over heating protection is intended to restrict the exhaust temperature to +90 °C. At +90 °C the actuator for heat supply will close. Actuator will open again if the internal temperature drops below +85 °C. If the temperature continues to rise despite this, for example because of a faulty valve/ actuator, the fan will start to spin at +95 °C to keep the temperature down. At the same time there is an over heating alarm Aot. At internal temperatures of +100 °C the fan runs at maximum speed.

   If the unit cools the heat is engaged again. The alarm remains in the control unit's display. If the unit overheats twice within an hour, the alarm must be reset before the heating can be engaged again, the fan operates until the alarm is reset.

   Note! In event of repeated alarms and over heating alarms, carry out a thorough check and if the fault cause cannot be found contact authorised service personnel or Frico.

Displaying alarm and error codes

In event of alarm or error the alarm/error code and the unit it applies to is shown in the status window. Alarm error codes see Table - next page. The status window alternate the display of the alarm/error code and faulty unit ID causing the problem.

A.o.t.	u.0 2

Reset alarm

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

   When the fault is rectifed, the alarm is reset according to description below.

   If "wrong" button is pressed the alarm display disappears but returns in status window after about 20 seconds.

   At the first start up alarm and error codes can occur, these can usually be reset without action.
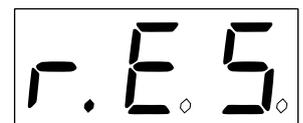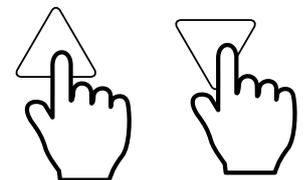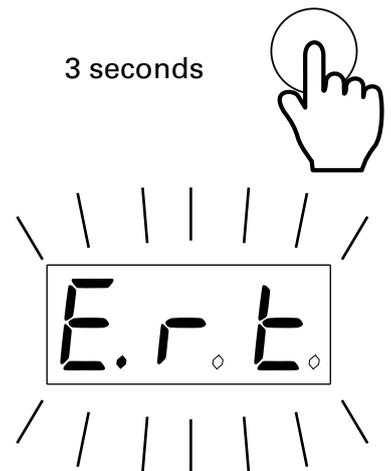
3 seconds

Alarm code starts to flash

| E.r.t. |

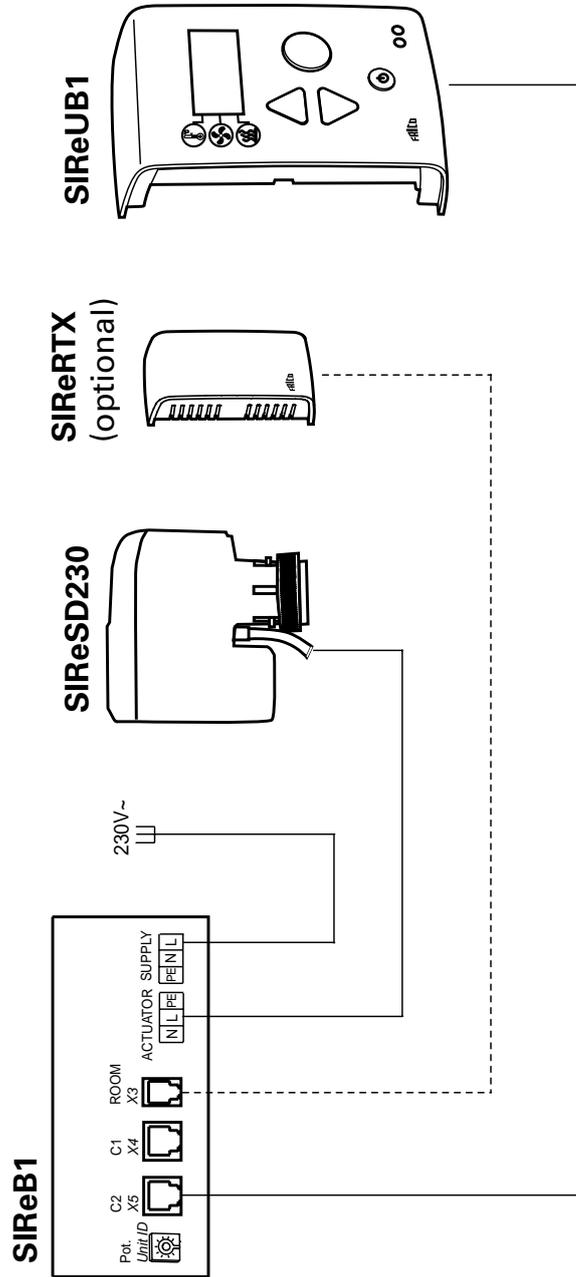| r.E.5. |

Table - Alarm

Alarm		Cause	Action
A.FA	Motor alarm	Thermal switch has deployed. One or several motors have overheated. (Only units with withdrawn thermal switches.)	Check that nothing is obstructing the unit's air intake and exhaust. When the overheated motor has cooled the thermal switch shuts again and the alarm can be reset. At repeated alarms, check the motors, replace damaged motors.
A.ot	Over heating alarm	The temperature in the unit has exceeded the alarm limit for overheating. (Only applies to units with internal unit temperature.)	Check that nothing is obstructing the unit's air intake and exhaust, the function of the actuator/valve, return water and internal temperature sensors in the unit

Table - Error codes

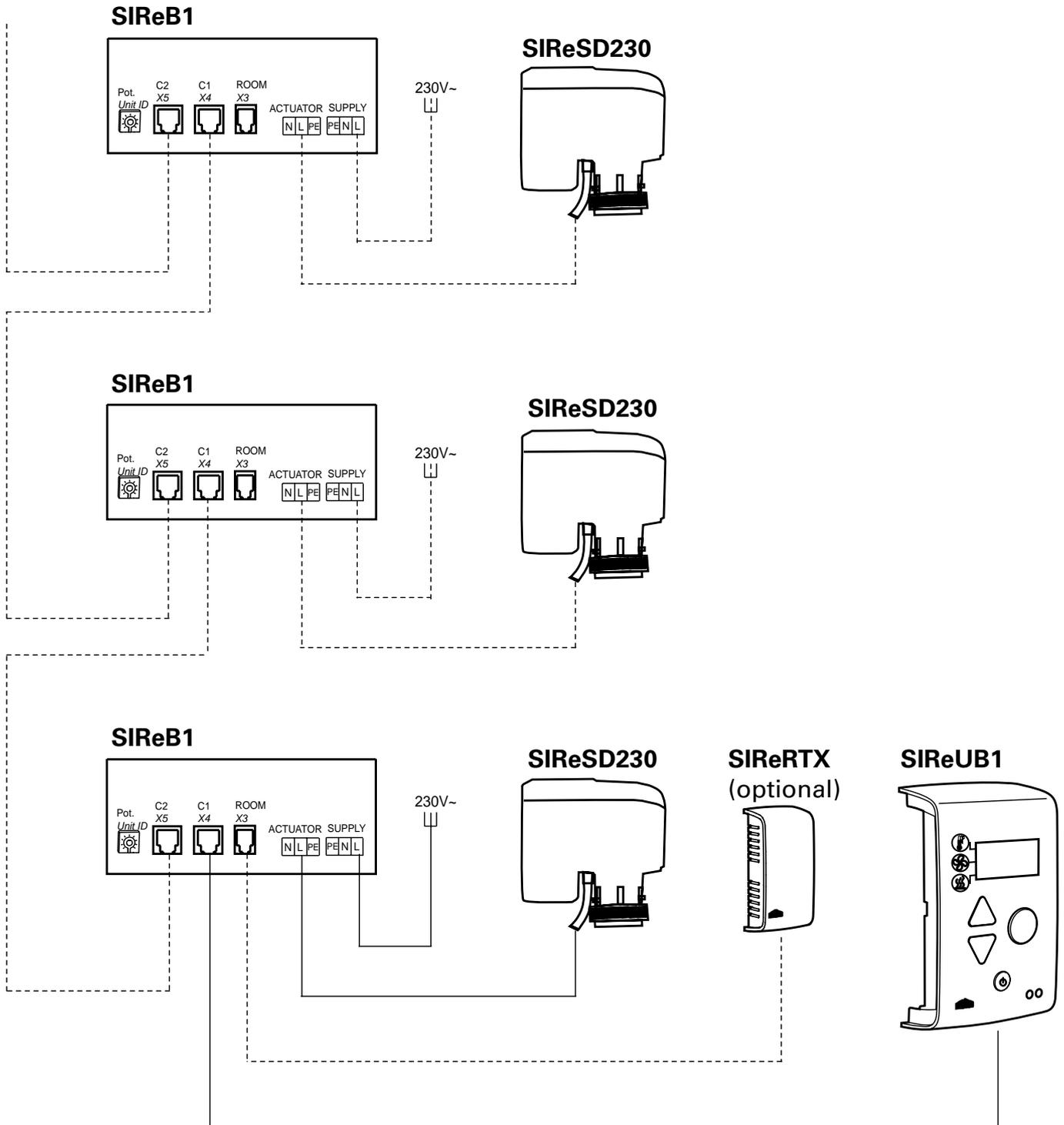| Error code		Cause	Action
E.co	Communication	SIReB1(X) has no contact with SIReUB1.	Check connection between the SIReB1(X) and SIReUB1. Replace any modular cables.
		PC board SIReB1(X) has no ID = 0	Interrupt the power supply and select different ID numbers for all SIReB1(X) in the system.
		Two or more SIReB1(X) have the same ID-number.	Interrupt the power supply and select different ID numbers for all SIReB1(X) in the system.
		One or more SIReB1(X) do not have programs.	Contact Frico for support.
E.cF	ID Error	Two or more SIReB1(X) in the system have different programs.	Contact Frico for support.
E.rt	Room sensor error	Error in or missing external room sensor SIReRTX connected to SIReB1(X).	Always disconnect the power supply when connecting or disconnecting sensors. Check connection of the sensor.
E.lt	Internal sensor error	Fault on or missing internal sensor in the unit (applies to units with internal sensor).	Check connection of the sensor. If there is no sensor, contact Frico for support.
E.ru	Room sensor error	Fault on internal room sensor in the control unit SIReUB1.	Check connections between SIReUB1 and SIReB1(X). Replace any modular cables. Check if an external sensor SIReRTX is working. If the error is not rectified the SIReUB1 must be replaced.

Wiring diagram

Basic

Wiring diagram

Basic parallell

SIReB1

SIReSD230

Pot.
Unit ID

C2
X5

C1
X4

ROOM
X3

ACTUATOR SUPPLY

N L PE   PE N L

230V~

SIReB1

SIReSD230

Pot.
Unit ID

C2
X5

C1
X4

ROOM
X3

ACTUATOR SUPPLY

N L PE   PE N L

230V~

SIReB1

SIReSD230

SIReRTX
(optional)

SIReUB1

Pot.
Unit ID

C2
X5

C1
X4

ROOM
X3

ACTUATOR SUPPLY

N L PE   PE N L

230V~

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