

SIEMENS



Synco™ living Operating instructions



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QAX9x3 Series A
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Building Technologies

Congratulations ...

... on choosing the Siemens Synco™ living system and thank you for purchasing the central apartment unit!

These operating instructions describe how to operate the central apartment unit and other system components.

Symbols used

The symbols on the central apartment unit are explained in section "Symbols on the display" on page 23. In addition, the following symbols are used in this document:



This symbol draws your attention to important information you must observe to ensure safe operation of the plant.



The info symbol refers to additional information, notes and practical tips on settings and operation of the various units and the system.



This symbol refers to disposal issues.

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Table of contents

Safety notes	10
System overview	11
System functions	11
Central unit	11
Heating/cooling.....	11
Models/Combinations	11
Heating/cooling mode	11
Room temperature setpoints.....	12
Heating control	12
Cooling	13
Ventilation control.....	14
DHW heating (QAX913 only)	14
Weather station	15
Lighting and blinds control (QAX913 only).....	15
Lighting control.....	15
Blinds control	15
Operation of lights and blinds	16
Supervisory functions (QAX913 only)	16
Remote operation via handheld control (QAX913 only)	16
Consumption data acquisition	17
Alarms	17
Device supervision	17
System components	17
Central apartment unit QAX9x3	20
Operating elements	20
Display	22
Backlit display.....	22
Display.....	22
Navigate on the display/information about paths	23
Display symbols	23
Operation	25
Quiescent picture	25
Info pages.....	25
Menu levels	26
Setting principle.....	26
General rules	26
Set a numerical value	26
Set via selection list	27
Select options	27
Create/edit text.....	27
Setting values and predefined settings	27
Access levels.....	28
User level	28
Service level 	28
Expert level 	28
Settings.....	28

General	29
Supervision (QAX913 only).....	29
Trigger supervision at the central apartment unit	29
Bypass open doors and windows	29
Activate supervision via external contact (e.g. key switch).....	30
Activate supervision via handheld control.....	30
Activate supervision via web.....	30
General notes	30
Deactivate supervision.....	31
Absence	31
Apartment	32
Apartment timer function	32
Apartment operating mode.....	33
Operating mode via contact	33
Summer operation of heating.....	34
State of winter/summer operation	34
Start/end of summer.....	34
Cooling enable	35
Cooling mode enabled	35
Cooling enable start/end	35
Anti-lime function.....	36
Outside temperature heating limit	36
Outside temperature cooling limit.....	36
Rooms 1 – 12	37
Room operating modes.....	37
State of room operating mode.....	37
Reason for room operating mode	37
Plant operating mode	38
Room operating mode during absence.....	39
Release of air conditioner	39
Room temperature setpoints.....	40
Readjust room unit.....	40
Set the time switch of a room.....	41
Actual value of the room temperature	43
Room temperature setpoint current	43
Valve position.....	43
Cooling release output	43
Air conditioner	43
Plant operation	44
Economy increase.....	44
Setpoint limitation.....	44
Apartment timer influence	44
Optimum start/stop control.....	44
Room temperature supervision.....	45
Window airing function.....	46
Silent mode	46
Actuator calibration	47
Sensor readjustment.....	47
Room group	47

Room groups	47
Return temperature actual value.....	47
Flow temperature actual value.....	48
Flow temperature setpoint.....	48
Room group pump.....	48
Room valve position max.....	48
Ventilation	48
Stage selection.....	48
Forced ventilation.....	49
State.....	49
Reason.....	49
Operating mode for absence.....	50
Stage assignment to operating modes.....	50
Stage assignment to window states.....	51
Stage assignment for smoke.....	51
Stage assignment for ventilation contact.....	51
Switching times.....	51
Ventilation stage.....	52
Reason.....	52
HR bypass.....	52
Indoor air quality.....	52
Air humidity.....	53
Fireplace mode.....	53
Ventilation contacts.....	53
Service interval.....	53
Operating hours since maintenance.....	53
Indoor air quality setpoints.....	54
Stage setpoint for humidity limitation.....	54
Humidity limit value.....	55
Stage setpoint for night cooling.....	56
Precooling time max.....	56
Holiday mode time.....	56
Holiday mode period.....	56
Runtime forced ventilation.....	57
Impact of window switches.....	57
DHW (QAX913 only)	57
DHW operating mode.....	57
Forced DHW charging.....	57
State of DHW operating mode.....	58
Reason for DHW operating mode.....	58
DHW operating mode during absence.....	58
Operating mode via contact.....	59
DHW temperature setpoint.....	59
DHW time switch.....	59
Actual value of the DHW temperature.....	60
DHW temperature setpoint.....	60
Operating state of charging pump and electric immersion heater.....	60
Plant operation.....	60
Reason.....	60
Limitation of charging time.....	60

Changeover to electric immersion heater	61
Supervision of the DHW temperature	61
Switching groups (QAX913 only)	61
Operate switching groups	61
Scenes	62
Create scenes	63
Trigger switching groups via an event	63
Trigger switching groups via handheld control	64
Time switch for switching groups	64
Time switch release	65
Time switch to simulate presence	65
Activate simulation of presence	65
Release	66
Function	67
Supervision (QAX913 only)	67
Supervision delay	67
Change absence	68
Release of supervision	68
Windows	68
Doors	69
Message delay for doors	69
Event buzzer and status output	70
Signal duration buzzer and status output	70
Confirm supervision for buzzer and status output	70
Consumption data	71
Current meter reading	71
Meter reading for current heat	71
Meter reading for current cooling	71
Due day	72
Due day heat	72
Due day cooling energy	72
Monthly values	73
Monthly values heat	73
Monthly values cooling energy	73
Holidays/special days	74
Setting holidays/special days	74
Holidays and absence simultaneously	75
Apartment operating mode during holidays	75
Holidays DHW operating mode (QAX913 only)	75
Time settings	76
Date/time of day	76
Faults	76
Error/fault status messages	76
Fault status messages bus	77
Acknowledge faults	77

Inputs/Outputs	77
Display input signals.....	77
Display output states.....	78
Settings	78
Language.....	78
Altitude above sea level.....	78
Time format.....	79
Backlit display/contrast.....	79
Display format.....	79
Temperature display.....	80
Service level password.....	80
Direct selection of info pages.....	80
Fault inputs.....	81
Fault text.....	82
Acknowledge faults.....	82
Fault priority.....	82
Fault release.....	82
Fault status message delay.....	83
Fault outputs 1 and 2.....	83
Fault priority.....	83
Fault source.....	83
Plant name.....	84
Room names 1 – 12.....	84
Switching group names 1 – 8 (QAX913 only).....	84
Door names 1 – 2 (QAX913 only).....	84
Lamp names 1 – 4 (QAX913 only).....	84
Names for temperatures 1 – 3 (QAX913 only).....	85
Handheld control names 1 – 5 (QAX913 only).....	85
Button assignment handheld control 1 – 5.....	85
Device information	86
Info lines.....	86
Room unit QAW910	87
Operation.....	87
Room operating modes.....	87
Room timer function.....	88
Readjust the room temperature setpoint.....	88
Display.....	89
Full display.....	89
Possible displays.....	90
Error messages.....	91
AFK914/C01 handheld control	92
Operation.....	92
Radio plug adapter	94
Operation KRF960 (switching).....	94
Operation KRF961 (dimming).....	94

Service	95
Function test for water detector QFP910	95
Calibrate DELTA reflex smoke detector	95
Monitor batteries	95
Room unit QAW910	96
AFK914/C01 handheld control	96
Door/window contact wave AP 260	96
DELTA reflex smoke detector	96
Manual capacity check	96
Change batteries	97
Room unit QAW910, room sensor QAA910, meteo sensor QAC910 and water detector QFP910	97
Display after battery change	98
Radiator control actuator SSA955	98
AFK914/C01 handheld control	100
Door/window contact wave AP 260 and DELTA reflex smoke detector	101
Binding tests	101
Function button on the room unit, room sensor, meteo sensor, radio repeater, water detector and radiator control actuator	101
Function button on heating circuit controllers RRV912/RRV918, on multi-controller RRV934 and on consumption data interface WRI982	102
Binding test for AFK914/C01 handheld control	102
Maintenance and cleaning	102
Disposal	103
Index	104

Safety notes

Product liability



- Use these products only in building services plant and only for the applications described.
- Comply with all local safety rules and regulations (installation, etc.).
- Do not open the devices. Opening the devices will void warranty by Siemens.
- If a device is defective or damaged, disconnect it from power immediately and replace it.
- Application-related technical data are only guaranteed in connection with the Siemens Synco™ living system. When using together with third-party products not specified by Siemens, user must ensure functionality. In that case, Siemens does not provide any services or warranty.

System overview

System functions

The Synco™ living system offers you a number of choices. In addition to room climate and DHW heating control, the system enables you to control a ventilation system, lighting and blinds, monitor smoke detectors and door/window contacts and water detector, issue alarm message using sirens, release air conditioners as well as acquire and display consumption data.

Central unit



Central apartment unit QAX903 or QAX913

The heart of the system is the central apartment unit. It allows for operating the entire system and ensures communication between the different devices.

Heating/cooling

Models/Combinations

Heating and/or cooling can be performed in different models and combinations:

Heating

- Radiator heating (per room)
- Floor heating (per room)
- Air conditioner (per room)

Cooling

- Central (entire apartment) via common 2-pipe heating/cooling system
- Cooling release output for external component (per room)
- Air conditioner (per room)
- Radiator/floor cooling (per room) via common 2-pipe heating/cooling system.

Heating/cooling mode

The individual rooms can be configured for pure heating or cooling mode or for automatic changeover between the two operating modes.

The central apartment unit switches the apartment or individual rooms to cooling or heating mode as per the settings.



Plants with rooms comprising controllable air conditioners (e.g. air conditioner via Zennio module) can heat or cool rooms independent of each other.

The rooms are grouped into one apartment. The operating modes and a holiday/special day program can be set for the apartment. The apartment operating mode allows for overriding the individual room operating modes.

Room temperature setpoints

The room temperature setpoints for heating and cooling can be set individually for each room and for each room operating mode (Comfort, Precomfort, Economy and Protection).

The room operating mode can be set or change over automatically based on the respective room time switch.



The room time switch influences heating and cooling.
Separate time switches are available for ventilation and DHW.

Heating control

The central apartment unit collects the heat requests per room group from the various rooms to deliver the total heat request to the heat generation controller.

The unit transmits the information for precontrol of the respective room group, flow temperature setpoints and the desired minimum or maximum limitation of the return temperatures to the multi-controller.

In addition, it transmits the actual values of the room temperatures and the room temperature setpoints to the heating circuit controllers and radiator control actuators which then calculate the positioning signals required for the actuators.

The positioning signals for the multifunctional relays of the heating circuit controllers/multi-controllers are generated by the central apartment unit.

For room temperature control, the following system components are available:



Room unit QAW910

On the room unit, the required room operating mode can be selected, the room setpoint temperature readjustment can be made, and the room timer function can be set. The room unit also acquires the current room temperature.

All data are transmitted to the central apartment unit via radio.



Room temperature sensor QAA910

The sensor acquires the room temperature and sends it to the central apartment unit via radio signal.



Heating circuit controllers RRV912 and RRV918

The controllers receive the setpoints and actual values of the various rooms from the central apartment unit (via radio signal) and forward the resulting positioning signals to the wire-bound actuators.



They also facilitate the direct connection of an apartment pump and of DHW heating.



Multi-controller RRV934

Receives the flow temperature setpoints of the assigned room groups from the central apartment unit (radio) and controls the flow temperatures accordingly.

To do this, the controller measures the flow temperatures and controls the wired actuators of the respective room group.

The precontroller additionally allows for minimum or maximum limitation of the return temperature.



Radiator control actuator SSA955

The actuator receives the setpoint and the actual value (provided a room sensor or room unit is present) of the respective room from the central apartment unit via radio signal and readjusts the radiator valve accordingly.

If no room sensor or room unit is installed, the radiator control actuator uses its own measured value of the room temperature as the actual value.



Door/window contact wave AP 260

When a door or window is left open, the stroke of the radiator valves in the respective room is limited to the current position in order not to waste energy. If the window remains open after the set window airing hold time, the room operating mode is lowered to Protection mode. The function acts on the wire-bound actuators used with the RRV912/RRV918 heating circuit controllers and the wireless SSA955 radiator control actuators.

Cooling

Cooling is released based on the respective room operating mode and mixed outside air temperature. The room may not be in heating mode.

When door and window contacts are open, the central apartment unit can lock cooling of the respective room.

Cooling is released for individual rooms or for the entire apartment (with central cooling).

The setpoint is determined by the current room operating mode (manual or as per room time switch). The room unit serves as room temperature sensor with a possible option to adjust the setpoint.

With central cooling (entire apartment) or radiator/floor cooling (per room) via a common 2-pipe heating/cooling system, cooling is accomplished using the same components as heating control.

Ventilation control

The central apartment unit has a ventilation time switch providing 6 switching points for each day for 7 weekdays and one special day. Each switching point allows for changing over between the ventilation operating modes (Comfort, Precomfort and Economy).

Ventilation stage control is carried out via air quality, relative room humidity, current apartment operating mode (Comfort, Precomfort, Economy, Protection) or ventilation stage selection. The stage setpoints are changed based on the ventilation time switch which is independent of heating and cooling.

Short-term room air pollution can be remedied via the forced ventilation function.

For brief absences, an absence operating mode is available. Extended absences are covered by a holiday program.

Ventilation control responds to open windows (if they have the associated window contacts), smoke (if smoke detectors are connected) and external ventilation contacts.

Night cooling can be used for cooling with possible control of a heat recovery bypass to avoid heat recovery.



Multi-controller RRV934

The multi-controller allows for controlling ventilation stages and heat recovery bypass. It has inputs to connect an air quality and humidity sensor. The other inputs and outputs are universal.

DHW heating (QAX913 only)

The QAX913 central apartment unit controls DHW heating of a locally connected DHW storage tank or facilitates remote operation of a DHW storage tank connected to the heat generation controller or some other central apartment unit.

For that purpose, the central apartment unit is equipped with a DHW 7-day time switch with 6 switching times per day for changeover between Normal mode and Reduced mode.

The central apartment unit can also be used for triggering manual forced charging of the DHW storage tank. The current DHW temperature appears on the display of the central apartment unit.

Weather station

The central apartment unit receives the outside temperature and the atmospheric pressure from the meteo sensor.



Meteo sensor QAC910

The meteo sensor acquires the outside temperature and the absolute atmospheric pressure and transmits both via radio signal to the central apartment unit.

The current measured values of outside temperature and atmospheric pressure as well as the pressure trend can be shown in the quiescent picture. The change of atmospheric pressure over the last 3 hours is displayed with an arrow.

In addition, based on the changes and the absolute value of the atmospheric pressure, the weather trend (sunny, partly cloudy, rainy) is determined and shown with a symbol in the quiescent picture. The entered altitude above sea water of the facility is considered as well.

The progression of outside temperature and atmospheric pressure over the last 24 hours can be made to appear on 2 info pages.

Lighting and blinds control (QAX913 only)

The QAX913 central apartment unit allows for controlling lighting and blinds.

Lighting control

Connected lamps can be dimmed and switched either via the central apartment unit or external switches (transmitters).

All the various light settings can be stored as a scene and retrieved at a later point in time, if required.

In addition to manual light settings, the settings can also be made via the built-in time switch, presence simulation or events.

Blinds control

Using the central apartment unit or external switches (transmitters), blinds can be adjusted in steps, or they can be fully closed or opened by pressing a button.

All blind positions (fully open or fully closed) can be stored as a scene and retrieved at a later point in time, if required.

The blinds can be adjusted manually or via the internal time switch or events.



The light settings and blind positions can be jointly stored as a scene or jointly readjusted when calling up a scene.

Operation of lights and blinds

The lights and blinds can be controlled with the central apartment unit's soft-keys.



Prerequisite for this operation is that the light and blind actuators used have a binding facility for KNX-RF (KRF960, KRF961, Siemens GAMMA wave or Hager tebis TX radio) or KNX TP1.

Supervisory functions (QAX913 only)

The QAX913 central apartment unit supervises connected door and window contacts, smoke, gas, CO and water detectors, and switches the corresponding safety shutoff device as needed.



QFP910 water detector

The water detector detects water via 2 contacts and triggers an alarm.

A radio signal is used to pass on the water alarm to the central apartment unit.



Door/window contact wave AP 260 (radio)

The door/window contacts detect an open door or open window and transmit this information via radio signal to the central apartment unit. They can also be used as detached digital inputs (e.g. for monitoring the door of a domestic freezer).



DELTA reflex smoke detector with smoke detector module wave UNI M 255

The smoke detector detects instantly the smoke generated by a fire and sets off an alarm (flashing LED and acoustic signal on the device, smoke signal via radio to the central apartment unit).

Remote operation via handheld control (QAX913 only)

A handheld control allows for remote plant operation. Users can configure the function of each button (supervision On/Off, emergency alarm, panic alarm, switching group 1 – 8).



AFK914/C01 handheld control

Handheld control allows for remote control of 4 functions on the QAX913 central apartment unit.

The handheld control sends a radio telegram to the central apartment units as soon as the corresponding button is pressed. The central apartment unit then sends a corresponding confirmation telegram to the handheld control and the LED on the control is lit.

Consumption data acquisition

The consumption data interface allows for connecting both M-bus meter and pulse meter to acquire consumption data. The acquired data is displayed on the central apartment unit and sent to the web server for remote reading via KNX TP1 (optional).



WRI982 consumption data interface

Max 3 M-bus meters and 2 pulse meters can be connected with each consumption data interface.

The consumption data are sent to the central apartment unit via KNX radio.

Alarms

An error is displayed on the central apartment unit. In addition, the central apartment unit can generate an acoustic signal and forward the error message via the bus (KNX TP1).

The central apartment unit QAX913 also allows for contacts to activate external signaling devices (e.g. indoor or outdoor siren).

Device supervision

The connected wireless, communicating devices are monitored at regular intervals. When there is no transmit signal or when batteries are close to exhaustion, an error message is displayed on the central apartment unit.

System components

The following components can be used in the Synco™ living system or combined with it:

Synco



QAX903 Central apartment unit
or
QAX913



QAW910 Room unit



QAA910 Room temperature sensor



QAC910 Meteo sensor



RRV912 Heating circuit controller
Controls 3-position or two 2-position actuators



RRV918 Heating circuit controller
Controls up to eight 2-point actuators



RRV934 Multi-controller
Controls up to 3 fan speeds and the HR bypass, or controls 2 independent room groups. Universal inputs and outputs.



SSA955 Radiator control actuator



ERF910 RF repeater (retransmitter)



KRF960 Radio plug adapter, switching



KRF961 Radio plug adapter, dimming
(QAX913 only)



AFK914/C01 Handheld control (QAX913 only)



QFP910 Water detector (QAX913 only)



WRI982 Consumption data interface

GAMMA wave



DELTA reflex smoke detector with smoke detector module wave UNI M 255 (QAX913 only).



Door and window contact wave AP260 (wireless)



GAMMA wave light and blind actuators, switchable sockets and handheld transmitters can also be used (QAX913 only).

Hager tebis TX radio



Lighting and blinds actuators from Hager can be used (QAX913 only).



The central apartment unit QAX913 can also control lighting and blinds actuators via KNX TP1 (S-mode). This requires configuration with ETS (EIB tool software).

Use system-specific media couplers for direct data exchange between KNX TP1 and RF lighting and blinds components.

Central apartment unit QAX9x3

Operating elements

All operating elements are located on the front of the unit.

Example: Central apartment unit QAX913



The buttons provide the following functions:



Ventilation button, DHW button (QAX913 only)

The button is used to operate ventilation and DHW. If both ventilation and domestic hot water are configured, a selection menu to choose the desired function is displayed after pressing the button. To set the **ventilation stage** (Auto, Off, Stage 1, 2, 3) and to trigger forced ventilation (extended pressure on button). QAX913 only: To select the **DHW operating mode** (Auto/Normal/Reduced/Protection), and to manually trigger one-time forced charging of the DHW storage tank (press button longer).



Absence/Supervision button (QAX913 only)

The Absence/Supervision button allows you to set both absence (present/absent) and supervision (inactive/partly monitored/all monitored). For details, see pages 31 and 29 (absence, supervision).



Apartment timer button

For selecting and activating the timer function for specific rooms. While the timer function is active, the rooms are heated or cooled to the selected setpoint (Comfort, Precomfort or Economy), and ventilation is controlled to the corresponding stage setpoint.



Mode button

For selecting the mode for the apartment (Auto / Comfort / Precomfort / Economy / Protection). The apartment mode applies to room control and ventilation.

**Info button**

To scroll through the info pages, and open Help at the menu level.

**Arrow up button**

To navigate up within a menu level, to scroll back within the info pages, and to set (increase) values.

**Arrow down button**

To navigate down within a menu level, to scroll forward within the info pages, and to set (decrease) values.

**Esc button**

To navigate back to the next higher menu level, to quit the main menu, and to cancel value entry.

**Menu/ok button**

To enter the main menu, to navigate to a lower menu level, and to confirm value entry.

**Pair of softkeys 1 – 4 (QAX913 only)**

To trigger the switching group functions defined during commissioning (e.g. switching or dimming lights), or open predefined info pages.

Universal buttons on central apartment unit QAX913:



- 1A, 1B Softkeys 1A and 1B
- 2A, 2B Softkeys 2A and 2B
- 3A, 3B Softkeys 3A and 3B
- 4A, 4B Softkeys 4A and 4B

Display

Backlit display

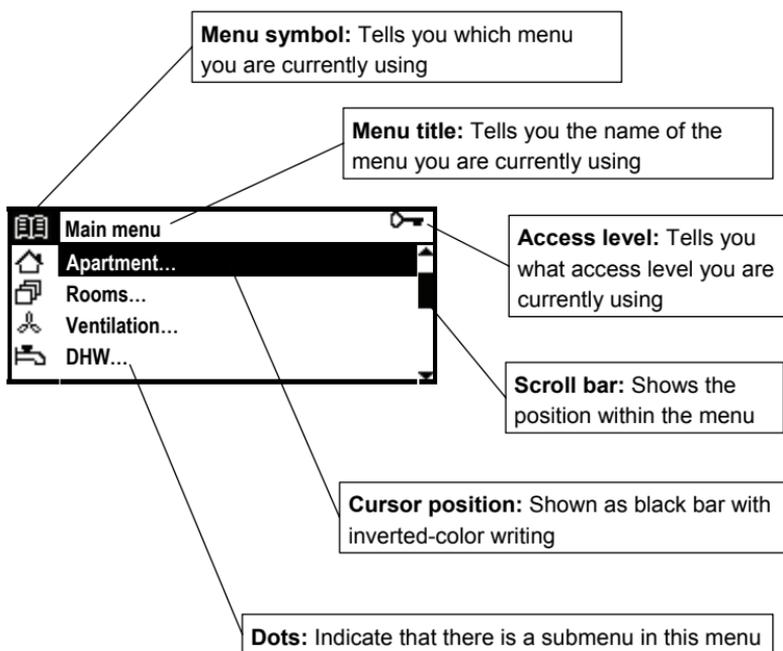
When pressing any of the buttons, the backlit display is switched on for a certain period of time.

i When pressing the **Esc** button, the **Menu/ok** button, the **Arrow** button or **Info** button, the backlit display is switched on with no impact on the display itself.

i The brightness of the backlit display can be adjusted to suit individual needs (refer to page 79).

Display

The display offers a choice of presentations. The example below shows a menu.



Navigate on the display/information about paths

Use the 2 **Arrow** buttons, the **Menu/ok** button and the **Esc** button to navigate (refer to description of the operating elements on page 20).

In the description of functions, the location of the function is given in *Italics* in the form of a path.

Example: *Main menu > Time of day/date*

To reach the function from the quiescent picture, press the **Menu/ok** button first (you reach the main menu). Then, select menu entry "Time of day/date" with the Arrow buttons and press the Menu/ok button.

You are now in function "Time of day/date" and you can select the parameter to be changed (time of day, date, year) using the **Arrow** buttons. The parameter setting principle is described on page 26 ff.

You return to the quiescent picture by pressing the **Esc** button several times.

Display symbols

Heating states/cooling states

	Comfort mode		Automatic operation
	Precomfort mode		Manual operation
	Economy mode		Heating mode
	Protection		Cooling mode
	Apartment timer function active		Summer operation
	Setpoint limitation		Flow temperature

Ventilation states

	Ventilation off		Automatic operation
	Fan speed 1 operating *		Comfort mode
	Fan speed 2 operating *		Precomfort mode
	Fan speed 3 operating *		Economy mode
	fireplace mode		Protection

* If forced ventilation is active, the corresponding speed symbol flashes

DHW states (QAX913 only)

	Normal operation		Automatic operation
	Reduced operation		Manual operation
	DHW Protection		Flashing: Manual forced charging of DHW active
	DHW heating enabled		

Other operating states

	Fault		Absent
	Flashing: Fault, acknowledgement required		Present
	Holiday mode		Special day

Supervision (QAX913 only)

	Door open		Window open
	Flashing: Supervised door opened		Flashing: Supervised window opened
	Door state unknown		Window state unknown
	Windows/doors Partly monitored		Windows/doors All monitored

Temperatures, atmospheric pressure and weather trend

	Room temperature		Atmospheric pressure steady
	Outside temperature		Atmospheric pressure rising
	Weather trend: Sunny		Atmospheric pressure strongly rising
	Weather trend: Partly cloudy		Atmospheric pressure falling
	Weather trend: Rainy		Atmospheric pressure strongly falling



The symbols used for the weather trend only indicate the direction in which the weather will change. For reliable weather trends, the altitude of the location must be entered at the service level.

Universal softkey assignment (QAX913 only)

I	Switching group on		Light on/brighter
O	Switching group off		Light off/darker
S	Scene		Blinds opening
i	Info page selection		Blinds closing

Device directory

	Device in order		Device faulty
	Battery low		

Menu levels

	Main menu		Holidays/special days
	Apartment		Time of day/date
	Rooms		Faults
	Room groups		Inputs/Outputs
	Ventilation		Settings
	DHW		Device information
	Switching groups		Data backup
	Supervision		Commissioning
	Consumption data		

Access levels

	Service level		Expert level
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Operation

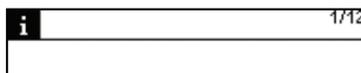
Quiescent picture

The display shows the quiescent picture as long as no button is pressed. Various quiescent picture formats are available with different degrees of detail. The settings required for the desired quiescent picture format are described on page 79 ff.

Info pages

The info pages give an overview of the plant's most important data. Values cannot be readjusted on the info pages.

The info pages can be called up with the **Info** button. Each time the **Info** button is pressed the next info page appears. The **Arrow** buttons can be used to scroll forward and backward. Press the **Esc** button to return to the quiescent picture.



When you are on the info level, the respective symbol appears in the corner at top left.

At top right, the current info page plus the total number of available info pages are displayed.

The following info pages are available:

- Windows/doors (configurable)
- Progression of outside temperature (configurable)
- Progression of atmospheric pressure (configurable)
- Lighting state (configurable, QAX913 only)
- Temperatures (QAX913 only)
- Apartment
- Ventilation
- Room (configurable)

...
...

- DHW (configurable, QAX913 only)
- Consumption data (configurable)
- Business card (configurable)
- Button assignment (QAX913 only, except for quiescent picture format = 5)
- Device state
- Fault status message bus (configurable)



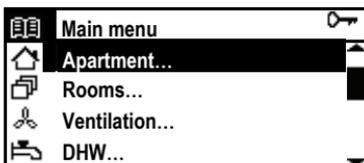
The type and number of available info pages depend on your plant (number of rooms, ventilation, etc.).



The info pages on the QAX913 can also be called up via **softkeys** assigned accordingly (refer to page 61).

Menu levels

Press the **Menu/ok** button to go from the quiescent picture or the info page to the menu level (main menu). Press the **Esc** button to return to the quiescent picture.



The menu header "Main menu" and the associated symbol are displayed followed by a list of available menus.

Setting principle

General rules

Values are always readjusted in an additional window on the display (edit pop-up). The range of action (cursor) always appears inverse.

Readjustments are made in individual steps with the **Arrow** buttons (up/down). Longer pushes on the buttons speed up the process. Confirm the setting by pressing the **Menu/ok** button. To cancel the process or to navigate back to the next higher menu level, press the **Esc** button.

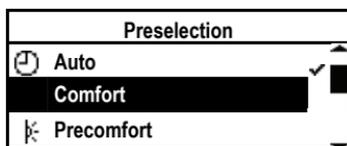
The following examples illustrate the different setting choices.

Set a numerical value



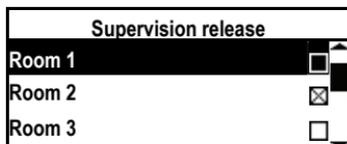
With numerical values, the setting range is shown on the left (upper and lower limit). The current setting value is displayed inverted on the right.

Set via selection list



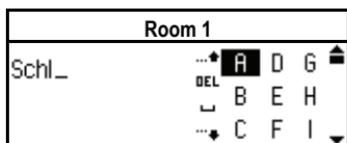
For a number of functions, a selection list is available. The selection made is identified by a tick "✓". Only one element of the list can be activated at a time.

Select options



Press the **Menu/ok** button on the option list to enter a crossmark in one or several options. When you press the **Esc** button, a final dialog is displayed to store the new value (**Menu/ok** button) or to cancel the setting (**Esc** button).

Create/edit text



Use the **Arrow** buttons to select the individual characters from the character set and the 4 permanently displayed special fields. Press the **Menu/ok** button to confirm the characters or special fields.

The special fields have the following functions:

- ...↑ Scrolls up the character set by 9 characters.
- DEL Deletes the last character in the current text.
- ␣ Inserts a space.
- ...↓ Scrolls down the character set by 9 characters.

When pressing the **Esc** button, a final dialog is displayed to save the new text (**Menu/ok** button) or to cancel the text (**Esc** button).

Setting values and predefined settings

When commissioning the system, the activated parameters are loaded as predefined settings. The documentation differentiates between guide values and factory settings.

- | | |
|-----------------|--|
| Guide value | Setting recommended for most types of plant. |
| Factory setting | Setting to be adapted depending on user- or plant-specific requirements. |

Access levels



Press the **Esc** button and the **Menu/ok** button simultaneously to select the access level. A pop-up window is displayed. Press the **Arrow** buttons to select the required access level and confirm the selection with the **Menu/ok** button.

User level

The user level shows the settings most frequently used. Normally, these settings are sufficient for operating the plant.

Service level

This operating level contains extended settings that are only rarely used. A password is required to change to the service level, provided such a password has been assigned (refer to page 80). Confirm entry of your password with the **Menu/ok** button.

Expert level

The settings of the expert level can only be accessed after entering a password. For a description of the functions, refer to document "Mounting and Commissioning" (CE1C2740en).

 If no button is pressed on the expert level for a certain period of time, the central apartment unit automatically returns to the user level.

 Keep the passwords of the service and expert level in a safe place where you can easily find them again.
Contact the expert if you lose the service password.
Loss of the expert password requires new configuration of the central apartment unit, or a service visit!

Settings

 Enter the settings described below only after the Synco™ living system has been commissioned by the expert.

 The operating lines actually displayed are dependent on the Synco™ living plant's basic configuration. Operating lines not required for the configured plant are hidden.

 If, with a selected parameter, the **Info** button is pressed, the path and full text of the respective parameter are displayed.

General

Supervision (QAX913 only)

Trigger supervision at the central apartment unit

Briefly press the **Absence/Supervision button** to open the supervision window. This window allows you to select between the following supervision patterns by pressing the **Absence/Supervision** or the **Arrow** buttons:

Inactive	Supervision function is inactive.
Partly monitored 	The windows (rooms) and doors selected in the "Partly monitored" option lists are supervised.
All monitored 	The windows (rooms) and doors selected in the option lists "All monitored" are supervised.



The supervision window is displayed only if windows or doors are enabled for supervision.
See "Release of supervision" page 68.

When supervised windows and doors are open and supervision is activated, an associated display reads "Please close or OK?" and a constant signal is sounded.

During the set supervision delay, you can close the corresponding doors and windows.

After all supervised windows are closed, the constant signal sound turns into a beep whose interval doubles during the last 15 seconds of the set supervision delay.



Supervision delay starts only after all displayed windows are closed.

If supervision delay is set to indefinite, supervision is activated upon closing the first door (without delay time).



Both doors can be used to activate supervision, where the first door to be closed triggers supervision.

Bypass open doors and windows

If open doors and windows should not be supervised, a list of all open windows and doors is displayed in a supervision and absence window on the central apartment unit along with the following message: **"Please close or OK?"** After pressing the **OK button**, the following warning appears on the central apartment unit: **"Caution! Open windows are not supervised"**. Pressing the **OK button** again excludes the related windows and doors from supervision.

Activate supervision via external contact (e.g. key switch)

A pulse from an external contact triggers supervision. Supervision "All monitored" is activated either immediately depending on the set supervision delay (delay set to indefinite "---") or after a set time (see page 67). Windows and doors open when supervision is activated are excluded from supervision (see page 29).

Supervision status can be indicated e.g. via LED on the external contact to make sure supervision is active.



"Partially monitored" cannot be activated via external contact.

Activate supervision via handheld control

Press a button on the handheld control to activate "All monitored". Supervision delay is skipped and all windows and doors open at this time are automatically excluded from supervision. The central apartment unit sends confirmation to the handheld control after supervision is activated (see page 92).

A corresponding color pattern on the handheld control's LED indicates if supervision is active or not and if windows and doors were open at the time of activation.



"Partially monitored" cannot be activated via handheld control.

Activate supervision via web

Supervision ("All monitored" and "partially monitored") can be triggered remotely via web. Supervision is activated immediately (no delay). Windows and doors open when supervision is activated are excluded from supervision (see page 29).

Supervision status can be queried via the web to make sure supervision is active.

General notes

If a supervised window or door is opened during the supervision period, an associated fault message is triggered and other predefined actions are initiated (with an adjustable message delay for doors).



Fault messages caused by open doors/windows can be disabled by:

- Adjusting the supervision type (Inactive/partially monitored/all monitored).
- Reactivating an external contact.
- Handheld control.
- Web.

Depending on the setting, this also interrupts triggered, predefined actions.



A window open at the time of supervision activation can be opened and closed any number of times (e.g. by wind) without triggering an alarm.

A door open at the time of supervision activation can be left open without triggering an alarm. However, the door is monitored as soon as it is closed.



Detailed descriptions:

Handheld control, page 92

Trigger a switching group via an event, page 63.

Set the supervision delay, page 67.

Event buzzer and status output, page 70.

Buzzer signal duration and status output, page 70.

Deactivate supervision

Supervision can be deactivated via:

- Central apartment unit
- External contact
- Handheld control
- Web

Absence

If you leave the house for a few hours, you can press the **Absence/Supervision** button to inform the central apartment unit about your departure. If supervision is configured, pressing the **Absence/supervision button** briefly opens the supervision window allowing you to enter "Inactive", "All monitored" or "Partly monitored" using the **arrow buttons**.

The Absence window is then displayed allowing you to enter either "Absent" or "Present". If "Absent" is entered, only the absence symbol is displayed.

Pressing the **Absence/supervision button** again reopens the supervision window followed by the absence window. Press the **Absence/Supervision** button longer than 0.4 s to open the absence window immediately. Selecting "Present" rescinds the Absence function and any related measures.

Your absence has the following impact on the system:

- During this time, heating, cooling, ventilation and DHW are controlled in accordance with the operating mode selected for absence.
- A presence simulation program – if selected – is started.
- Switching groups set for the event "Absence on" (= leaving) operate accordingly (switching, blinds open/closed, scenes).



For additional descriptions, refer to the following pages:

Room mode during absence, page 39.

Ventilation operating mode upon absence, page 50.

DHW operating mode during absence, page 58.

Trigger a switching group via an event, page 63.

Presence simulation for switching groups, page 65.

Absence can be activated and deactivated not just via the central apartment unit but also via (see page 68):

- External contact (key switch)
- Handheld control
- Web

Apartment

Apartment timer function

Pressing the **Apartment timer** button () allows you to force heating/cooling and ventilation to maintain the selectable operating mode Comfort, "Precomfort" or "Economy" for an adjustable period of time. Pressing the button opens the apartment timer window. Use the **arrow** buttons or the **Apartment timer** button to set the required period of time (0..96 h) on the timer function for the apartment.

The Timer operating mode window opens allowing you to enter the desired operating mode "Comfort", "Precomfort" or "Economy".

 You can select for each room if the apartment timer function should be performed (see "Apartment timer influence" on page 44).

The apartment timer function can also be selected via the following operating lines:

Main menu > Apartment > Apartment operating mode > Apartment timer:

Main menu > Apartment > Apartment operating mode > Timer optg mode:

Comfort 	The selected rooms and ventilation control to the corresponding Comfort setpoint during the set timer period.
Precomfort 	The selected rooms and ventilation control to the corresponding Precomfort setpoint during the set timer period.
Economy 	The selected rooms and ventilation control to the corresponding Economy setpoint during the set timer period.

If you want to switch off the apartment timer before the adjusted period of time expires, press the **Apartment timer** button again and set the time to "0 h".

 The apartment timer function is ended without optimum start/stop control.

In case of a manual change of operating mode via the **Mode** button, the apartment timer function also is deactivated.

 The apartment timer function takes priority over Absence.

Apartment operating mode

Pressing the **Mode** button opens an additional window (Mode pop-up). You can now select the required apartment operating mode (heating, cooling, ventilation) with the **Arrow** buttons or the **Mode** button.



The central apartment unit display shows MAN for manual mode and the symbol for a manually set apartment operating mode. The selected apartment operating mode is valid until reset manually to Auto.

The apartment operating mode can also be selected via the following operating line:

Main menu > Apartment > Apartment operating mode > Preselection:

Auto 	The room control loops and ventilation maintain their setpoints in accordance with the respective operating modes. The associated time programs and the holiday/special day program are active.
Comfort 	All rooms and ventilation maintain their respective Comfort setpoints.
Precomfort 	All rooms and ventilation maintain their respective Precomfort setpoints.
Economy 	All rooms and ventilation maintain their respective Economy setpoints.
Protection 	All rooms and ventilation maintain their respective Protection setpoints.



The individual room operating modes are only active in apartment operating mode "Auto".

Operating mode via contact

You can select the apartment operating mode to which the controller should change when the external operating mode switch closes its contact (e.g. teleswitch for remote control via the telephone).

When the operating mode contact is closed, the set operating mode is activated for heating/cooling and ventilation.

Operating mode changeover via external contact overrides all other operating mode settings.



The input function "operating mode contact" must be configured during commissioning.

The same operating mode contact is used for heating/cooling, ventilation and DHW.

☛ *Main menu > Apartment > Apartment operating mode > Optg mode contact:*

---	The operating mode contact has no influence on the apartment operating mode.
Comfort 	All rooms and ventilation maintain their respective Comfort setpoints when the contact is closed.
Precomfort 	All rooms and ventilation maintain their respective Precomfort setpoints when the contact is closed.
Economy 	All rooms and ventilation maintain their respective Economy setpoints when the contact is closed.
Protection 	All rooms and ventilation maintain their respective Protection setpoints when the contact is closed. (factory setting)

Summer operation of heating

Select the when and if your heating system should switch to summer mode. In summer mode, all room operating modes switch to Protection, the valves travel to the position defined for summer operation and DHW heating switches to the electric immersion heater, if installed.



This parameter has no impact (hidden) in case of summer changeover via external switch.

Input function "Summer operation" must be appropriately configured when commissioning the plant.

Main menu > Apartment > Summer operation > Preselection:

Auto	Automatic summer/winter changeover when outside temperature heating limit is exceeded or the date (beginning/end of summer, see page 34) is reached (factory setting).
Winter	Continuous winter operation.
Summer	Continuous summer operation.

State of winter/summer operation

The current operating state of the heating system (summer/winter operation) can be queried:

Main menu > Apartment > Summer operation > State:

Start/end of summer

From the beginning to the end of summer, the heating system maintains summer operation, provided summer operation preset is set to "Auto" (see page 34) and no other changeover criterion (e.g. outside temperature heating limit) is active.

 *Main menu > Apartment > Summer operation > Summer start:*

Factory setting	01.01. (inactive)
-----------------	-------------------

☛ *Main menu > Apartment > Summer operation > Summer end:*

Factory setting	01.01. (inactive)
-----------------	-------------------

 If the date settings for the beginning and end of summer coincide, there is no date-dependent changeover to summer operation.

Cooling enable

Select if and when you want to enable cooling mode.

 This parameter has no impact (hidden) in case of cooling release via external contact.
The input function "Cooling enable" must be configured during commissioning.

Main menu > Apartment > Cooling enable > Preselection:

Auto	Automatic cooling mode enabling if either the outside temperature cooling limit is exceeded or the date is reached (cooling enable start/end, see page 35) (factory setting).
Disabled	Cooling mode disabled.
Enabled	Cooling mode enabled.

Cooling mode enabled

The current state (disabled/enabled) for cooling enabling can be queried as follows:

Main menu > Apartment > Cooling enable > State:

Cooling enable start/end

Cooling mode is enabled from the start to the end of cooling enable, provided cooling enable is preset to "Auto" (see page 35) and no other changeover criterion (e.g. outside temperature cooling limit) is active.

☛ *Main menu > Apartment > Cooling enable > Cooling enable start:*

Factory setting	01.01. (inactive)
-----------------	-------------------

☛ *Main menu > Apartment > Cooling enable > Cooling enable end:*

Factory setting	01.01. (inactive)
-----------------	-------------------

 No date-dependent cooling enable is carried out if the dates for cooling enable start and end coincide.

Anti-lime function

To prevent valves and pumps from seizing, the controller periodically drives all valves to their fully open positions and activates all connected pumps in a stepwise fashion at predefined points in time.

☛ *Main menu > Apartment > Antilime > Antilime function:*

---	Never: Antilime function inactive.
All-year	Anti-lime function carried out all year (factory setting)
In winter operation	Anti-lime function carried out only in winter
In summer operation	Anti-lime function carried out only in summer

☛ *Main menu > Apartment > Antilime > Weekday:*

Monday	Anti-lime function carried out on Monday (factory setting)
...	
Sunday	Anti-lime function carried out on Sunday

☛ *Main menu > Apartment > Antilime > Time of day:*

Factory setting	10:00
-----------------	-------

Outside temperature heating limit

Set the outside temperature (-5..25 °C) below which heating mode is enabled. Heating mode is locked above the set temperature. The outside temperature heating limit also serves to change over to summer operation.

☛ *Main menu > Apartment > Settings > OT heating limit:*

Factory setting	--- (Inactive – no heating limit)
-----------------	-----------------------------------

Outside temperature cooling limit

Set the outside temperature (0..50 °C) above which cooling mode is enabled. Cooling mode is locked below the set temperature.

☛ *Main menu > Apartment > Settings > OT cooling limit:*

Factory setting	--- (Inactive – no heating limit)
-----------------	-----------------------------------

Rooms 1 – 12

Room operating modes

In addition to the operating mode for the entire apartment, each room has its own operating mode which you can select to suit your needs.

Main menu > Rooms > Room X > Room operating mode > Preselection:

Auto 	The room is controlled in accordance with the time program and the holiday/special day program.
Comfort 	The room is maintained at the Comfort setpoint.
Precomfort 	The room is maintained at the Precomfort setpoint (for short periods of absence, e.g. when shopping).
Economy 	The room is maintained at the Economy setpoint (e.g. for night setback).
Protection 	The room is maintained at the Protection setpoint (for longer periods of absence, e.g. during holidays).



The individual room operating modes are only active in apartment operating mode "Auto".

State of room operating mode

The state of the current room operating mode can be displayed.

Main menu > Rooms > Room X > Room operating mode > State:

Reason for room operating mode

If the current room operating mode of a specific room does not satisfy your needs, you can have the reason for the operating mode displayed:

Main menu > Rooms > Room X > Room operating mode > Cause:

The following functions and situations can have an impact on the operating mode of the room:

- Commissioning
- Absence / holidays / special day
- Time switch
- Room operating mode / apartment operating mode / operating mode contact
- Room timer / apartment timer
- Summer
- Optimum start control / optimum stop control
- Window ventilation
- Cooling disabled

Plant operating mode

The individual rooms can be configured merely for heating/cooling operation, or for automatic changeover between the two operating modes.

Main menu > Rooms > Room X > Room operating mode > Plant optg mode:

Auto	The plant operating mode is changed over automatically based on room temperature and mixed outside temperature. (factory setting)
Heating	The plant is in heating mode.
Cooling	The plant is in cooling mode.

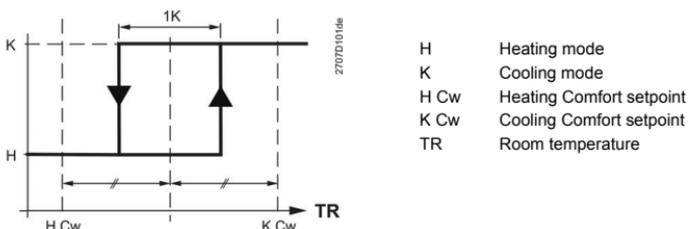
- i** Plants with rooms featuring controllable air conditioners can heat or cool the rooms independent of each other.
The individual air conditioners are controlled via infrared interface and a Zennio module (KNX S-mode).

H/C-changeover in Auto plant operating mode

In case of automatic changeover, the central apartment unit checks first the room temperature and compares it to the average value from the heating Comfort setpoint and the cooling Comfort setpoint ($(H\text{ Cw} + K\text{ Cw}) / 2$).

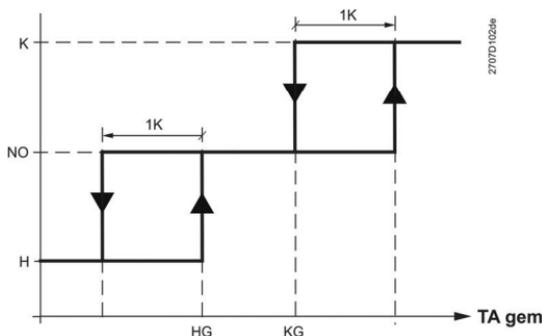
If the room temperature is at least 0.5 °C below the average value, heating mode is released

If the room temperature is at least 0.5 °C above the average value, cooling mode is released



- i** To change over between the plant operating modes heating and cooling, the preset H/C changeover locking time must be expired. This avoids frequent changeover.

The central apartment unit checks the mixed outside air temperature as a second criterion and compares it to the outside temperature heating limit and the outside temperature cooling limit (see page 36).



- H Heating mode
- K Cooling mode
- NO Heating and cooling mode locked
- HG Outside temperature heating limit
- KG Outside temperature cooling limit
- TA gem Mixed outside temperature

Changeover between operating modes heating and cooling takes place only after both criteria are met.

Room operating mode during absence

The room operating mode required during absence (see page 31) can be selected for each room.

☛ *Main menu > Rooms > Room X > Room operating mode > Optg mode absence:*

---	Absence has no influence on the room operating mode.
Comfort ☀	The room controls to the corresponding Comfort set-point during absence.
Precomfort ⚙	The room controls to the corresponding Precomfort set-point during absence (factory setting).
Economy ⌚	The room controls to the corresponding Economy set-point during absence.
Protection 🏠	The room controls to the corresponding Protection set-point during absence.



Changeover of the respective room operating mode takes place only if the room operating mode during absence is set to a lower level than the room operating mode for normal operation.

Release of air conditioner

Set the room operating mode that is to be released for cooling by the air conditioner. Room cooling is locked below the set room operating mode.

☛ *Main menu > Rooms > Room X > Room operating mode > Rel air conditn from:*

Comfort 	The air conditioning unit is enabled for room operating mode Comfort (factory setting).
Precomfort 	The air conditioning unit is enabled for room operating modes Precomfort or Comfort.
Economy 	The air conditioning unit is enabled for room operating modes Economy, Precomfort or Comfort.
Protection 	The air conditioning unit is enabled for all room operating modes.

Room temperature setpoints

You can adjust the room temperature setpoint for each individual room and for heating and cooling (Comfort, Precomfort, Economy, Protection). The central apartment unit maintains the respective setpoint, depending on the selected apartment/room operating mode and/or time program.

Main menu > Rooms > Room X > Room setpoints > ...

Heating mode setpoints				
Operating mode	 Comfort	 Precomfort	 Economy	 Protection
Guide values	21 °C	20 °C	15 °C	12 °C



When adjusting the Protection setpoint, give consideration to domestic animals and delicate materials or objects in the house (plants, paintings, etc.). Extremely low room temperatures can cause damage beyond repair!

High room temperature setpoints lead to higher heating costs.

Cooling mode setpoints				
Operating mode	 Comfort	 Precomfort	 Economy	 Protection
Guide values	24 °C	28 °C	35 °C	40 °C



When adjusting the Protection setpoint, give consideration to domestic animals and heat sensitive materials or objects in the house (plants, paintings, etc.). Extremely high room temperatures can cause damage beyond repair!

Low room temperature setpoints result in higher cooling costs.

Readjust room unit

The room temperature setpoint readjustment (+/- 3 K) made on the room unit can be displayed on the central apartment unit for each room:

Main menu > Rooms > Room X > Room setpoints > Readjustm room unit:



The readjustment made on the room unit only acts on the Comfort and the Precomfort setpoint.

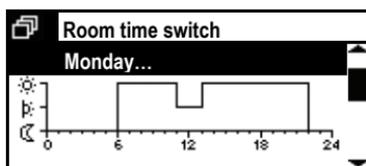
Set the time switch of a room

In automatic mode, the central apartment unit controls the heating and cooling of the individual rooms based on the respective room operating mode and/or the time switch, the holiday or special day program.

Select weekday

If you want to set the time switch, select first the weekday for the respective room for which the settings should apply:

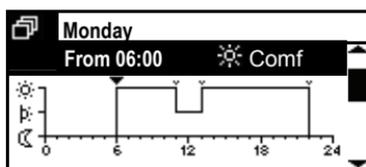
Main menu > Rooms > Room X > Room time switch > Weekday:



In addition to the weekdays (Mo - Su), a special day is made available. Use the **Arrow** buttons for navigation.

Display switching times

At the required weekday, press the **Menu/ok** button to display the associated switching times and setpoints.



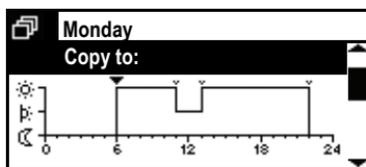
Use the **Arrow** buttons to change between the individual switching points.



The factory settings of the switching times of all weekdays are 06:00 (changeover to Comfort mode) and 22:00 (changeover to Economy mode).

Copy switching times

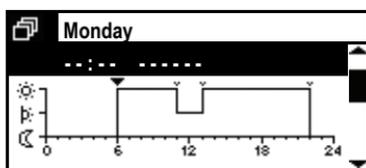
When you scroll to the end of the switching point list, option "Copy to:" is displayed.



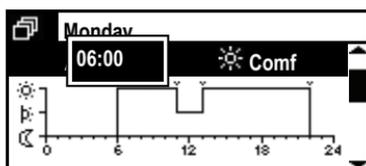
You can copy the switching times of the respective day to any other weekday (including the special day) or to a number of weekdays (Mo to Fr or Mo to Su).

Set new switching points

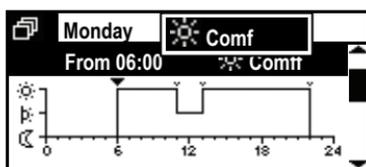
For every weekday and the special day, you can set and define up to 6 switching points where the room temperature setpoint should change.



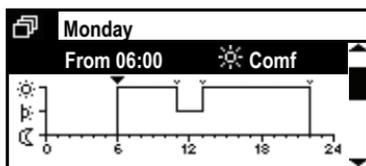
To define a new switching point, press the **Arrow down** button until an empty switching point appears (---, after the existing switching points). Now press the **Menu/ok** button.



Use the **Navigation** buttons to set a value between 00:00 and 23:59. Confirm the setting with the **Menu/ok** button.

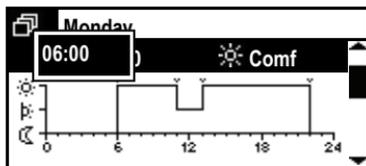


Adjust the room temperature setpoint (Comfort, Precomfort or Economy) that should apply after this switching time.

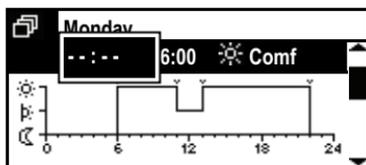


To complete the setting, press again the **Menu/ok** button. The display returns to the menu.

Adapt and delete switching points



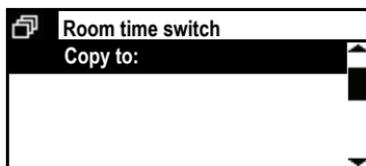
To change an existing switching point, select it with the **Arrow** buttons and then press the **Menu/ok** button. Use the **Arrow** buttons to change the value.



To delete a switching point, press the **Arrow** buttons until " - : - " is displayed (before 00:00 and after 24:00).

Copy room time switch to another room

When you scroll to the end of the weekday list for a room time switch, option "Copy to:" is displayed.



You can copy the time switch of the corresponding room to any other room (Room 1 – Room 12).

Actual value of the room temperature

The central apartment unit can display the actual value of the room temperature:

Main menu > Rooms > Room X > Room state > Act val room temp:

Room temperature setpoint current

The present room temperature setpoint can be queried:

Main menu > Rooms > Room X > Room state > Current RT setpoint:

Valve position

The current valve position (open 0..100%) in each room can be queried:

Main menu > Rooms > Room X > Room state > Valve position:

Cooling release output

The current cooling release output state (Off/On) can be queried for each room:

Main menu > Rooms > Room X > Room state > Cooling release outp:

Air conditioner

The current operating state (Off/On) of the air conditioner can be queried for each room:

Main menu > Rooms > Room X > Room state > Air conditioner:

Plant operation

The current plant state (Auto / Heating / Cooling) can be queried for each room:

Main menu > Rooms > Room X > Room state > Plant operation:

Economy increase

The state of the Economy increase (Inactive/Active) can be queried for each room:

Main menu > Rooms > Room X > Room state > Eco increase:

Setpoint limitation

This operating line indicates if a setpoint limitation is currently active in the room (Inactive/Active).

Main menu > Rooms > Room X > Room state > Setpoint limitation:

Apartment timer influence

Specify if you want the apartment timer function of the central apartment unit (see page 32) to act on the selected room.

☞ *Main menu > Rooms > Room X > Room settings > Ap timer influence:*

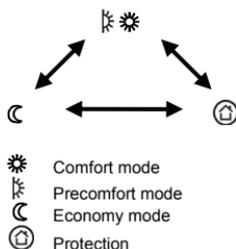
No	The apartment timer does not act on the room.
Yes	The apartment timer acts on the room (factory setting).

Optimum start/stop control

Optimum start/stop control moves up changeover of the operating level against the programmed times, so that a building's thermal dynamics (heat up and cooling down times) are considered. This ensures that the required temperature level is reached at exactly the programmed time (e.g. at the end of the holiday period).

If that is not the case (too early or too late), a new changeover time is calculated, which is used on the next day.

Optimum start/stop control acts between all operating levels, except when switching between Precomfort and Comfort:



The optimization time (forward shift) can be limited to a maximum value, separately for optimum start and optimum stop control (optimum start control 48 hours / optimum stop control 06.00 hh.mm).

When setting the optimization time to ---- or 00.00, the function is deactivated.

- ☛ *Main menu > Rooms > Room X > Room settings*
 > *OptStartCtrl max:*

Factory setting	--- (none)
-----------------	------------

- ☛ *Main menu > Rooms > Room X > Room settings*
 > *OptStopCtrl max:*

Factory setting	00.00 (none)
-----------------	--------------



The apartment timer function is ended without optimum start/stop control.

Room temperature supervision

The controller is capable of continuously monitoring the individual room temperatures. If the room temperature exceeds "Max temp alarm" (0..35 °C) or falls below "Min temp alarm" (0..35 °C), an error message is displayed. Setting "----" deactivates temperature supervision of the respective room.

- ☛ *Main menu > Rooms > Room X > Room settings*
 > *Max temp alarm:*

Factory setting	--- (none)
-----------------	------------

- ☛ *Main menu > Rooms > Room X > Room settings*
 > *Min temp alarm:*

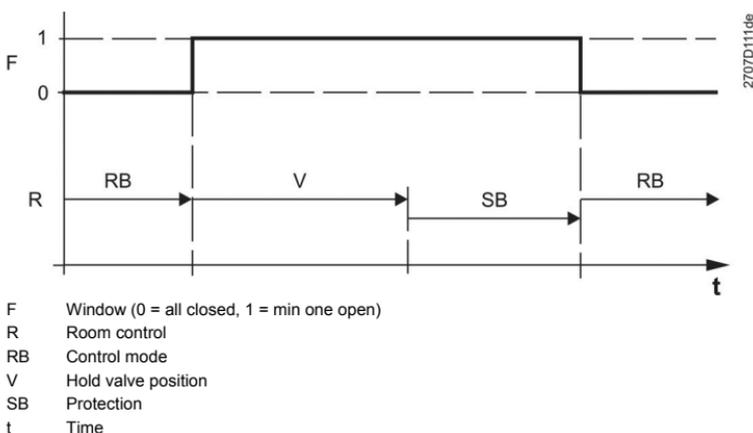
Factory setting	--- (none)
-----------------	------------

Window airing function

As soon as the central apartment unit detects an open window, the window airing function is activated in the corresponding room. In that case, the radiator control valve is limited to its current travel, even if the room temperature drops.

If the window remains open after the set window airing hold time, the room operating mode is lowered to Protection mode.

The window airing function is aborted as soon as all window contacts in the respective room have closed again



The desired window airing hold time (00.00..06.00 hh.mm) can be defined for each room.

☛ *Main menu > Rooms > Room X > Room settings > Window airing:*

Factory setting	00.30 hh.mm.
-----------------	--------------

i Setting "00.00" deactivates the window airing function. The window contacts do not influence room control.

Silent mode

The SSA955 radiator control actuator can also be operated in silent mode when used in noise-sensitive rooms (e.g. in the sleeping room).

i Silent mode increases the actuator's power consumption, thus reducing battery life.

☛ *Main menu > Rooms > Room X > Room settings > Silent mode:*

Off	Silent mode is off (factory setting).
On	Silent mode is on.

Actuator calibration

The radiator control actuators are automatically calibrated when commissioning the plant or when changing batteries. If desired, calibration can also be triggered via the following operating line:

- ☛ *Main menu > Rooms > Room X > Room settings > Actuator calibration:*

Stop	Actuator calibration is stopped or completed. (factory setting)
Start	Actuator calibration is started.



Actuator calibration is started within 5 minutes after manual triggering and ended automatically.

Sensor readjustment

In case your room temperature sensor is installed in an unfavorable location, you can match it to the specific room conditions via sensor readjustment (-4.5..4.5 K).

- ☛ *Main menu > Rooms > Room X > Room settings > Sensor readjustment:*

Factory setting	0 K
-----------------	-----

Room group

This parameter shows the room group to which the corresponding room was assigned during commissioning (additional configuration).

- ☛ *Main menu > Rooms > Room X > Room settings > Room group:*

Room groups

States

The following paths can be used to display the various states of the room group.

Return temperature actual value

Shows the current return temperature actual value of the corresponding room group.

- ☛ *Main menu > Room groups > Room group X > State > Actual value RET:*

Flow temperature actual value

Shows the current flow temperature actual value of the corresponding room group.

☛ *Main menu > Room groups > Room group X
> State > Actual value FT:*

Flow temperature setpoint

Shows the current flow temperature setpoint for the corresponding room group.

☛ *Main menu > Room groups > Room group X
> State > Flow temp setpoint:*

Room group pump

Shows the current operating state (Off/On) of the corresponding room group pump.

☛ *Main menu > Room groups > Room group X
> State > Room group pump:*

Room valve position max

Determines the room within the room group whose valve is open the widest. The opening value (calculated value for heat demand without influence of other functions) is displayed in this operating line.

☛ *Main menu > Room groups > Room group X
> State > Room valve pos max:*

Ventilation

Operating mode

Stage selection

The stage selector allows for either defining automatic stage selection or setting the ventilation plant to a fixed stage.

A fixed setting of the ventilation stage via stage selector overrides automatic stage selection by the ventilation operating mode or room air quality / room humidity.



The stage selection settings can also be entered via the ventilation button on the central apartment unit.

Main menu > Ventilation > Operating mode > Stage selection:

Auto	Automatic stage selection (factory setting).
Off	Ventilation off.
Stage 1	Ventilation constant on stage 1.
Stage 2	Ventilation constant on stage 2.
Stage 3	Ventilation constant on stage 3.

Forced ventilation

Forced ventilation switches the ventilation plant to maximum ventilation regardless of the current ventilation operating mode and the actual values for room air quality and room humidity.

After the set forced ventilation time expires (see page 57), the ventilation plant returns to the ventilation stage corresponding to the current operating mode.



Forced ventilation can also be triggered by pressing the ventilation button on the central apartment unit a bit longer.

Main menu > Ventilation > Operating mode > Forced ventilation:

No	Do not start forced ventilation.
Yes	Start forced ventilation. After forced ventilation is started, "No" is displayed again.

State

Displays the current ventilation operating mode (Comfort, Precomfort, Economy, Protection).

Main menu > Ventilation > Operating mode > State:

Reason

Displays the reason for the current ventilation operating mode (state).

Main menu > Ventilation > Operating mode > Cause:

Possible reasons:

- Commissioning
- Absence
- Holidays
- Time switch
- Apartment operating mode
- Operating mode contact
- Apartment timer
- Special day

Operating mode for absence

The desired ventilation operating mode for absence (see page 31) is set via the following operating line.

☛ *Main menu > Ventilation > Operating mode > Optg mode absence:*

---	Absence has no influence on the ventilation mode. (factory setting)
Comfort 	Ventilation runs on Comfort stage setpoint during absence.
Precomfort 	Ventilation runs on Precomfort stage setpoint during absence.
Economy 	Ventilation runs on Economy stage setpoint during absence.
Protection 	Ventilation runs on Protection stage setpoint during absence.

 Changeover of the ventilation operating mode occurs only if the ventilation operating mode for absence is below that for normal operation.

 The setting for the ventilation mode for absence does not depend on the setting for room operating mode for absence. However, both operating modes can be changed over via the absence button.

Stage setpoints

Stage assignment to operating modes

The individual ventilation operating modes can be assigned to the corresponding ventilation stages via stage setpoints.

 This setting has no influence, if ventilation is controlled by relative humidity or air quality.

Off	Ventilation off.
Stage 1	Ventilation on stage 1.
Stage 2	Ventilation on stage 2.
Stage 3	Ventilation on stage 3.

☛ *Main menu > Ventilation > Stage setpoints > Comfort:*

Factory setting	Stage 1
-----------------	---------

☛ *Main menu > Ventilation > Stage setpoints > Precomfort:*

Factory setting	Stage 1
-----------------	---------

☛ *Main menu > Ventilation > Stage setpoints > Economy:*

Factory setting	Off
-----------------	-----

☛ *Main menu > Ventilation > Stage setpoints > Protection:*

Factory setting	Off
-----------------	-----

Stage assignment to window states

Specify the stage for ventilation when the central apartment unit detects an open window (see page 57).

☛ *Main menu > Ventilation > Stage setpoints > Window open:*

Factory setting	Off
-----------------	-----

Stage assignment for smoke

Determine the stage at which ventilation runs when the central apartment unit's smoke detector detects smoke.

☛ *Main menu > Ventilation > Stage setpoints > Smoke:*

Factory setting	Off
-----------------	-----

Stage assignment for ventilation contact

Determine the stage at which ventilation is supposed to run when the ventilation contact is closed.

☛ *Main menu > Ventilation > Stage setpoints > Ventilation contact:*

Factory setting	Off
-----------------	-----

Ventilation time switch

Switching times

The central apartment unit controls the ventilation stages based on a ventilation time switch for automatic ventilation operation mode (stage selection: Auto).

Main menu > Ventilation > Ventilation time switch > ...

You can set up to 6 switching points for each weekday plus one special day. In addition, you can specify the ventilation operating mode (Comfort, Precomfort, Economy) the system should change over for each switching point.

The switching points can be set, deleted or copied to some other weekday. The settings are made analogously to the room time switch settings (see page 41).



The factory setting contains the switching times for all weekdays at 06:00 (changeover to Comfort) and 22:00 (changeover to Economy).

Ventilation state

Ventilation stage

Shows the active ventilation stage (Off, Stage1, Stage2, Stage3).

Main menu > Ventilation > Ventilation state > Vent stage:

Reason

Display the reason for the current ventilation stage.

Main menu > Ventilation > Ventilation state > Cause:

Possible reasons:

- Commissioning
- No request
- Operating mode
- Indoor air quality
- Ventilation contact
- Humidity limitation
- night cooling
- Stage selector
- Window open
- Smoke
- Forced ventilation
- CO alarm

HR bypass

Shows if HR bypass (e.g. for night cooling) is active.

Main menu > Ventilation > Ventilation state > HR bypass:

Indoor air quality

Shows the current indoor air quality (0..2000 ppm) on the sensing element.

Main menu > Ventilation > Ventilation state > IAQ:

Air humidity

Shows the relative air humidity (0..100%) on the sensing element.

Main menu > Ventilation > Ventilation state > Air humidity:

Fireplace mode

Shows if ventilation was switched via external contact to open fireplace operation (Off, On).

Main menu > Ventilation > Ventilation state > Fireplace mode:

Ventilation contacts

Shows the current state of the two ventilation contacts (Off, On).

Main menu > Ventilation > Ventilation state > Ventilation contact1:

Main menu > Ventilation > Ventilation state > Ventilation contact2:

Service

Service interval

Specify after how many hours (0..99,999) ventilation needs service (e.g. change air filter). The central apartment unit shows a corresponding message when the set number of hours is reached.



Setting 0 h means that the service interval and the associated message are disabled.

☛ *Main menu > Ventilation > Service > Service interval:*

Factory setting	0 h
-----------------	-----

Operating hours since maintenance

Shows the number of ventilation operating hours since last maintenance.



The operating hours must be reset to 0 after service to delete the service message "Service ventilation".

The operating hours since service can be set to 0 or any value.

☛ *Main menu > Ventilation > Service > O'hrs since service:*

Indoor air quality control

Indoor air quality is controlled to the setpoint of the current ventilation operating mode. The central apartment unit acquires air pollution, compares it to the setpoint and switches between the ventilation stages as needed. The switching between the ventilation stages depends on the number of existing ventilation stages.

The current room air pollution (ppm) is displayed on the central apartment unit.



The stage selection setting must be set to Auto (see page 48). Air quality control overrides the setting "Stage assignment to operating modes" (see page 50).

Indoor air quality setpoints

Specify the desired indoor air quality (room air pollution 0..2000 ppm) for operating modes Comfort and Economy.

The Comfort settings acts on ventilation operating modes Comfort and Pre-comfort, the Economy setting on ventilation operating modes Economy and Protection.



The permitted air pollution in Comfort mode cannot be greater than in Economy mode.

☛ *Main menu > Ventilation > IAQ controller > Comfort setpoint:*

Factory setting	1000 ppm
-----------------	----------

☛ *Main menu > Ventilation > IAQ controller > Economy setpoint:*

Factory setting	1600 ppm
-----------------	----------

Humidity limitation

The central apartment unit measures relative humidity at the connected humidity sensor and starts ventilation as needed.

The humidity limitation function is ended when the room air humidity is a switching differential below the humidity limit value or when the set ventilation running time has expired.

The current relative room humidity (% r.h.) is displayed on the central apartment unit.

Stage setpoint for humidity limitation

If the measured humidity exceeds the humidity limit value, ventilation is started at the stage set here.

☛ *Main menu > Ventilation > Humidity limitation > Stage setpoint:*

Off	Ventilation off.
Stage 1	Ventilation on stage 1 (factory setting).
Stage 2	Ventilation on stage 2.
Stage 3	Ventilation on stage 3.

Humidity limit value

Specify the desired humidity limit value (1..99% r.h.).

☛ *Main menu > Ventilation > Humidity limitation > Humidity limit:*

Factory setting	85% r.h.
-----------------	----------

Night cooling

If there is cooling demand, ventilation can precool the rooms while vacant (e.g. at night). This saves cooling energy during occupancy.

When night cooling is active, HR bypass for the ventilation unit can be activated.



Night cooling needs an outside temperature sensor and a room temperature sensor in the desired reference room. The reference room must be preset.

The outside air dampers of the ventilation plant must be open when night cooling is active.

For night cooling, several conditions must be met at the same time:

- Heating must be in summer mode.
- The apartment operating mode must be Auto and the time switch in the Economy phase (absence).
- A reference room must be preset.
- The reference room temperature must be min 1K above the Comfort heating setpoint.
- The outside air temperature must be below the reference room temperature by a preset value.
- The outside air temperature must not be below the preset outside temperature limit value.
- The time to the next regular switch-on of ventilation (as per time switch / holiday program / special day) must be shorter than the set max precooling time.

Night cooling ends if one of the release criteria is not met or when the Comfort heating setpoint is reached.

Stage setpoint for night cooling

Specify here the stage for the ventilation plant when night cooling is active.

☛ *Main menu > Ventilation > Night cooling > Stage setpoint:*

Off	Ventilation off.
Stage 1	Ventilation on stage 1 (factory setting).
Stage 2	Ventilation on stage 2.
Stage 3	Ventilation on stage 3.

Precooling time max

Night cooling is released only during the set maximum precooling time (0..2880 min). When the setting is 0 min, night cooling is disabled.

☛ *Main menu > Ventilation > Night cooling > Precool time max:*

Factory setting	0 min
-----------------	-------

Ventilation settings

Holiday mode time

If the central apartment unit is in holiday mode (as per the settings in menu Holidays/Special days), ventilation is reduced.

Ventilation uses the current apartment operating mode from the holiday program and selects the required ventilation stage based on it.

This ventilation stage is operated daily at the set time (00:00..24:00) for the specified duration.

Use this operating line to select the time to start ventilation while on holidays.



To start ventilation in holiday mode, the stage selection (page 48) must be set to Auto.

☛ *Main menu > Ventilation > Ventilation settings > Holiday mode time:*

Factory setting	10:00 a.m.
-----------------	------------

Holiday mode period

Ventilation in holiday mode runs every day for the period set here (00.00..06.00 hh.mm).

☛ *Main menu > Ventilation > Ventilation settings > Holiday mode period:*

Factory setting	00.30 hh.mm.
-----------------	--------------

Runtime forced ventilation

Forced ventilation is active for the runtime set for forced ventilation (0..60 min). After expiration of this time, ventilation returns to the ventilation stage prior to forced ventilation.

☛ *Main menu > Ventilation > Ventilation settings > Runtime forced vent:*

Factory setting	30 min
-----------------	--------

Impact of window switches

If at least one window is open in one of the set rooms, the ventilation stage is activated as per the setting (see page 51).

☛ *Main menu > Ventilation > Ventilation settings > Imp window switches:*

Factory setting	--- (no influence by window switches)
-----------------	---------------------------------------

DHW (QAX913 only)

DHW operating mode

To change the DHW operating mode, press the **DHW** button on the central apartment unit. In the DHW pop-up window, you can now select the required DHW heating mode:

Auto 	DHW is heated up to the Normal setpoint, the Reduced setpoint or the Protection setpoint in accordance with the DHW time program or the holiday program (factory setting).
Normal 	DHW temperature is maintained at the Normal setpoint.
Reduced 	DHW temperature is maintained at the Reduced setpoint.
Protection 	DHW temperature is maintained at the frost Protection setpoint.

The selection can also be made via the menu:

Main menu > DHW > Operating mode > Preselection:

Forced DHW charging



A long push on the central apartment unit's **DHW** button triggers a one-time forced charge of the DHW storage tank to the Normal setpoint. While forced charging is active, the DHW symbol on the display flashes .

Manual forced charging of the DHW storage tank can also be triggered via the following operating line:

Main menu > DHW > Operating mode > Forced charging man:

No	Do not start manual forced charging.
Yes	Start manual forced charging. After forced charging is started, "No" is displayed again.

State of DHW operating mode

The present state of the DHW operating mode can be displayed (Auto, Normal, Reduced, Protection).

Main menu > DHW > Operating mode > State:

Reason for DHW operating mode

If the current DHW operating mode does not meet your needs, the reason for the operating mode can be displayed:

Main menu > DHW > Operating mode > Cause

Possible reasons for the current operating state:

- Commissioning
- Electrical heating
- Forced charging
- DHW charging lock
- Legionella program
- DHW operating mode (if not "Auto")
- Special day / holidays / absence
- DHW time switch
- Summer operation

DHW operating mode during absence

The DHW operating mode required during absence can be selected:

☞ *Main menu > DHW > Operating mode > Optg mode absence:*

---	Absence has no influence on DHW operating mode. (factory setting)
Normal 	DHW temperature is heated to Normal setpoint during absence.
Reduced 	DHW temperature is heated to Reduced setpoint during absence.
Protection 	DHW temperature is heated to Protection setpoint during absence.

Operating mode via contact

Specify the type of DHW operating mode the controller is to change over to when an external operating mode contact is connected (e.g. teleswitch for remote operation by phone).

Operating mode changeover via external contact overrides all other operating mode settings.



The input function "operating mode contact" must be configured during commissioning.

The same operating mode contact is used for heating/cooling, ventilation and DHW.

☛ *Main menu > DHW > Operating mode > Optg mode contact:*

---	The external operating mode contact has no influence on DHW operating mode (factory setting).
Normal 	DHW is heated to Normal setpoint when the contact is closed.
Reduced 	DHW is heated to Reduced setpoint when the contact is closed.
Protection 	DHW is heated to Protection setpoint when the contact is closed.

DHW temperature setpoint

You can change the setpoint if the DHW temperature is too high or low:

Main menu > DHW > Setpoints > Normal setpoint:

Factory setting	55 °C
-----------------	-------

Main menu > DHW > Setpoints > Reduced setp:

Factory setting	40 °C
-----------------	-------

DHW time switch

In DHW operating mode "Auto", the central apartment unit controls DHW charging in accordance with the DHW time program.

Main menu > DHW > Time switch > Weekday X:

You can set up to 6 switching points for each weekday plus one special day. You can also define the DHW temperature setpoint (Normal or Reduced) to be used at each switching point.

The switching points can be set, deleted or copied to some other weekday. The settings are made analogously to the room time switch settings (see page 41).



The central apartment unit is supplied with the following factory settings for all weekdays: 05:00 for changeover to the Normal setpoint, 22:00 for changeover to the Reduced setpoint.

Actual value of the DHW temperature

The actual value of the DHW temperature can be displayed:

Main menu > DHW > DHW state > Act val DHW temp:

DHW temperature setpoint

The current DHW temperature setpoint can be queried:

Main menu > DHW > DHW state > DHW temp setpoint:

Operating state of charging pump and electric immersion heater

The current operating state of the charging pump and the electric immersion heater can be displayed:

Main menu > DHW > DHW state > Charging pump:

Main menu > DHW > DHW state > El immersion heater:

Plant operation

The current operating state of DHW heating (Off / Ready / Charging) can be displayed:

☛ *Main menu > DHW > DHW state > Plant operation:*

Reason

The reason for the current DHW plant operation can be displayed (commissioning / frost / legionella function / time switch):

☛ *Main menu > DHW > DHW state > Cause:*

Limitation of charging time

This display shows whether limitation of the charging time is currently inactive or active. The maximum permissible charging time was preset when the plant was commissioned.

☛ *Main menu > DHW > DHW state > Charging time limit:*

Changeover to electric immersion heater

Select whether in summer operation the DHW should be heated by the electric immersion heater.

☛ *Main menu > DHW > Settings > Change el imm heat:*

Yes	When the plant switches to summer operation (see page 34), the DHW is heated by the electric immersion heater. This means that heat generation can be switched off in the summer. (factory setting)
No	DHW is heated by the heat source in the summer also. This means that heat generation in the summer remains in operation (emergency operation).



If no charging pump is defined, the electric immersion heater is always released (no charging via the heat source).

Supervision of the DHW temperature

The controller is capable of continuously supervising the DHW temperature. If the DHW temperature exceeds "Max temp alarm", or falls below "Min temp alarm", an error message is displayed.

When using setting "----", temperature supervision is deactivated.

☛ *Main menu > DHW > Settings > Max temp alarm:*

Factory setting	--- (none)
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☛ *Main menu > DHW > Settings > Min temp alarm:*

Factory setting	--- (none)
-----------------	------------

Switching groups (QAX913 only)

Operate switching groups

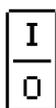
Switching groups 1 – 4 can be operated via the 4 pairs of softkeys on the central apartment unit.

The functions of the switching groups (e.g. switching or dimming lights, opening or closing blinds, calling up info pages or scenes) were defined when the plant was commissioned.



Switching groups 5 – 8 have no buttons for direct access. Manual triggering of these switching group functions is only possible via the respective operating lines on the central apartment unit.

The selected function of the pairs of softkeys is displayed in the form of a symbol.



Switching group function **Switch**

When pressing the key at the top or bottom, the light is switched on or off.



Switching group function **Dim**

Pressing the key at the top or bottom briefly switches the light on or off. Pressing the keys for > 0.4 seconds increases or decreases the intensity of light.



Switching group function **Blind**

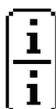
Pressing the keys briefly adjusts the blinds in steps. Pressing the keys for > 0.4 seconds fully opens or closes the blinds.



Switching group function **Scene**

When pressing the keys for < 0.4 seconds, all actuators are driven to the positions set for the respective scene (A or B).

The upper button stands for Scene A, the lower for Scene B. Pressing the button longer (> 3 s) saves the current states of the actors for the corresponding scene (A or B). A brief acoustic signal confirms storage.



Switching group function **Info**.

When pressing the key at the top or bottom, the info page assigned to the key is displayed.

The switching groups can also be triggered via the operating lines.

You operate a switching group configured for **Switch**, **Dim** or **Blind** under:

Main menu > Switching groups > Switching group X > Trigger:

You operate a switching group defined as **Scene** under:

Main menu > Switching groups > Switching group X > Scene A or B > Trigger scene:



The text displays for scenes A and B can be adjusted to suit your needs (see page 63).

Scenes

When commissioning the plant, the **softkeys** of the central apartment unit (switching groups 1 – 4) can be programmed for triggering scenes (scene symbol appears on the display of the key assignment).

Scenes can be used to store certain states of all actuators involved and to retrieve them again, if desired. One example would be the differently dimmed lights and the blind positions that you would consider adequate for a certain event / at certain times.



Depending on the types of blinds used, you may only be able to save and query the two blinds states fully open and fully closed for some scenes.

Create scenes

For the switching groups, a scene A and scene B can be created. Enter the required name of the scene at the central apartment unit:

☛ *Main menu > Switching groups > Switching group X > Scene X > Scene X:*

Then, use local actuator control to drive all actuators to the required position.

After that, store the scene by pressing the respective softkey for at least 3 seconds. Storage is confirmed by the central apartment unit in the form of a short acoustic signal.

You trigger the stored scenes by a short push on the respective softkey.

The scenes can also be stored and retrieved via operating parameters:

Main menu > Switching groups > Switching group X > Scene X > Trigger scene:

Trigger switching groups via an event

In addition to manual triggering, the function of a switching group can be automatically triggered via one or several events.

Select the event (or the events) that triggers a switching group configured for **Switch** or **Dim**:

Main menu > Switching groups > Switching group X > Events on cmd:

Main menu > Switching groups > Switching group X > Events off cmd:

Select the event (or the events) that triggers a switching group configured for **Blind**:

Main menu > Switching groups > Switching group X > Events up cmd:

Main menu > Switching groups > Switching group X > Events down cmd:

Select the event / events that trigger(s) a switching group configured for **scenes**:

Main menu > Switching groups > Switching group X > Scene A or B > Events scene:

Absence on	Execution of command when changing from "Absence OFF" to "Absence ON" (= going).
Absence off	Execution of command when changing from "Absence ON" to "Absence OFF" (= coming).
Twilight switch dark	Execution of command when the twilight switch changes from BRIGHT to DARK.

Twilight switch bright	Execution of command when the twilight switch changes from DARK to BRIGHT.
Twilight switch Dark + absent	Execution of command when the twilight switch changes from BRIGHT to DARK and when "Absence ON", or when changing from "Absence OFF" to "Absence ON" and twilight switch signals DARK.
Twilight switch Bright + absent	Execution of command when the twilight switch changes from DARK to BRIGHT and when "Absence ON".
Smoke	Execution of command when the smoke detector detects smoke.
Window/door supervision	Execution of command when window/door supervision is triggered (see page 68).
Water leakage	Execution of command as soon as a water leak is detected.
Gas leakage	Execution of command as soon as a gas leak is detected.
CO alarm	Execution of command as soon as a CO alarm is detected.
Panic	Execution of command as soon as a fault input is triggered via the panic function.
Emergency	Execution of command as soon as a fault input is triggered via the emergency function.
Fault X (1 – 3)	Execution of command when an event is detected via function fault X (1 - 3) (contact not in normal position).

Trigger switching groups via handheld control

A switching group function (e.g. switch on/off light, open/close blinds, retrieve scene) can be triggered via a button on handheld control AKF914/C01. Only one switching group function (e.g. Light On) can be assigned to a button.



The handheld control does not allow for dimming light and individually adjust blinds.

Time switch for switching groups

Control of the individual switching groups takes place either manually or according to the associated time switch. Available for each switching group are 7 weekdays and one special day, each with up to 8 switching points.

Main menu > Switching groups > Switching group X > Time switch >...



The time switch settings are made analogously to those of the room time switch (see page 41).

Time switch release

Define for each switching group if the time switch is to be enabled always or only for absence.

Main menu > Switching groups > Switching group X > Time switch release:

Always	The time switch of the switching group is always considered (factory setting).
If absent	The time switch of the switching group is considered only for absence.

 The setting "If absent" allows you to prevent from being locked out by automatically closing blinds when you are sitting on the balcony or in the yard for example.

Presence simulation (QAX913 only)

Time switch to simulate presence

During absence (absence function activated), you can control the switching groups via a special time switch (T'swi) in a way that presence is simulated. When presence simulation is activated, the switching groups are switched on and off randomly in dependence of the selected function (Random/Continuously On).

 This function is only available with switching groups that afford **Switch** or **Dim**.

The time program defines the periods of time during which presence simulation is active. Available are 7 weekdays and one special day, each with up to 6 switching points per day.

Main menu > Switching groups > Time swi presence simulation >...

 The central apartment unit is supplied with the following factory-set switching times for all weekdays: 06:00 (start of presence simulation), 08:00 (end of presence simulation), and 17:00 (start of presence simulation), 23:00 (end of presence simulation).

 Using the special day, define whether and for what periods of time during holidays and special days you want presence simulation.

The periods of time defined apply jointly to all switching groups.

Activate simulation of presence

The effect of presence simulation (release and function) can be set individually for each switching group:

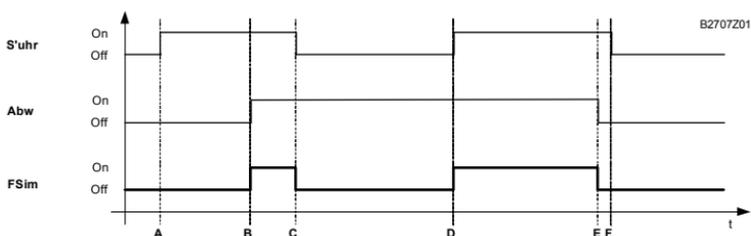
Release

“Release” allows you to control switching groups in dependence of a time switch or as a combination of time switch and twilight switch.

Main menu > Switching groups > Switching group X
> Presence simulation > Release:

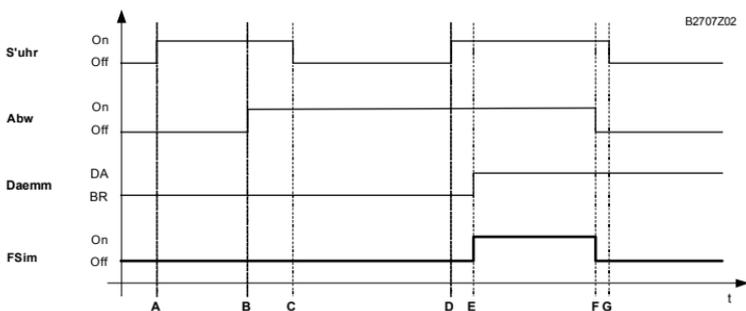
---	Inactive – no presence simulation for this switching group (factory setting).
With time switch	Presence simulation enabled according to “Time swi presence simulation”.
With time swi + twilight swi	Presence simulation enabled according to “Time swi presence simulation” and twilight switch signals DARK.

Example of release according to the time switch:



T'swi Time program presence simulation (On, Off)
 Abw Absence (On, Off)
 FSim Simulation release (On, Off)
 t Time

Example of release according to the time switch and the twilight switch:



T'swi Time program presence simulation (On, Off)
 Abw Absence (On, Off)
 Daemm Twilight (DA = DARK, BR = BRIGHT)
 FSim Simulation release (On, Off)
 t Time

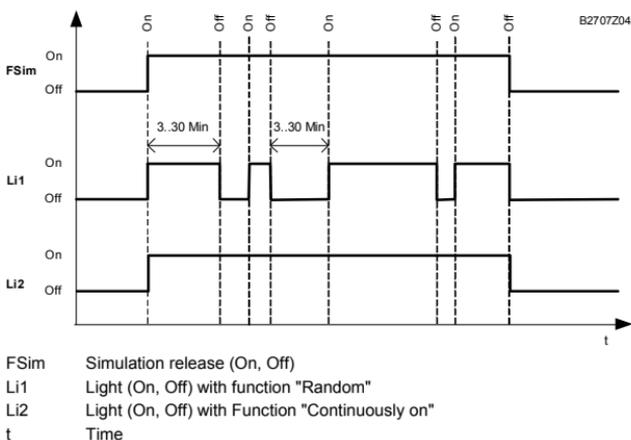
Function

"Function" allows you to control switching groups by at random or constant switch-on of a switching group. The setting is effective only if the presence simulation of the corresponding switching group as described above is enabled.

*Main menu > Switching groups > Switching group X
> Presence simulation > Function:*

Random	The switching group actors are switched on or off within the set period at random intervals of 3 to 30 minutes. The first switch-on of each switching group also is at random. The switching points of the individual switching groups differ (factory setting).
Continuously on	The switching group is switched on constantly. This allows you to ensure that at least one light is on during the presence simulation.

The settings Release and Function become effective as soon as the central apartment unit is set to "Absent" via **Absence/Supervision** button":



The presence simulation is ended as soon as the central apartment unit is set to "Present".

Supervision (QAX913 only)

Supervision delay

You can set a supervision delay to avoid generating a message upon supervision activation and simultaneously open window/door.

If supervised windows are open when supervision is activated, a constant beep is sounded. The Info page Windows/Doors provides information on which rooms contain open windows or doors.

Any open windows and doors can now be closed.

After you close the supervised window, the constant signal becomes a beep that doubles in the last 15 seconds of supervision delay. The remaining supervision delay time is also displayed on the central apartment unit.

The desired delay time (00.00..59.55 m.s, "---" indefinite) can be set via the following commands and applies to all windows and doors:

☛ *Main menu > Supervision > Supervision delay:*

Factory setting	05.00 m.s
-----------------	-----------



If supervision delay is set to indefinite "---", supervision is activated upon closing the first door (without delay time). See page 68.

You can set the volume of the signal/beep as desired (0..100%). When you set the volume, a permanent beep is sounded at the corresponding volume.

☛ *Main menu > Supervision > Volume supervisory:*

Factory setting	15 %
-----------------	------

Setting 0% deactivates the signal sound/beep during supervision delay .

Change absence

Determine if the absence function is to be activated together with supervision.

☛ *Main menu > Supervision > Change absence:*

No	Activate/deactivate supervision has no influence on absence.
Yes	Activate/deactivate supervision influences absence (factory setting) <ul style="list-style-type: none">• Setting supervision to "All monitored" starts the absence function (absent).• Setting supervision to "Partly monitored" or "Inactive" ends the absence function (present).

Release of supervision

Indicate in the central apartment unit the doors and windows that are to be "partly monitored" or "all monitored".

These two functions provide for two different types of supervision, e.g. for short absences when you want to keep open some windows for ventilation and thus exclude them from supervision. And for longer absences (e.g. vacation) when you want to supervise all windows and doors.

Windows

The option list contains all rooms. Select the rooms with windows to be supervised.

If a supervised window is opened, the message "Window open" appears. In addition, the buzzer, status output and a switching group function can be activated.



The "Window open" fault message remains active until supervision is changed, even after all supervised windows are closed.

☞ *Main menu > Supervision > Windows > Rel "Partly monit":*

☞ *Main menu > Supervision > Windows > Rel "All monit":*

Factory setting	---- (none)
-----------------	-------------

Doors

Up to two doors can be supervised. You can select the doors to be supervised in the options list.

☞ *Main menu > Supervision > Doors > Rel "Partly monit":*

☞ *Main menu > Supervision > Doors > Rel "All monit":*

Factory setting	---- (none)
-----------------	-------------

Message delay for doors

If a supervised door is opened, the fault message "Door open" appears only after expiration of a set message delay time.

In addition, the buzzer, status output and a switching group function can be activated.



The "Door open" fault message remains active until supervision is changed, even after all supervised doors are closed.

You can set the duration of the message delay time (00.00..59.55 ms):

☞ *Main menu > Supervision > Doors > Message delay:*

Factory setting	05.00 m.s
-----------------	-----------



You must deactivate supervision before the message delay time has expired to avoid the fault message "Door open" and the alarm sound. To do this, set the message delay time to ensure that you have sufficient time to go to the central apartment unit and deactivate supervision when returning home.

When a supervised door is opened, a beep is sounded whose frequency doubles in the last 15 seconds of the message delay time.

You can set the volume of the beep (0..100%) or deactivate it by entering setting 0%.

When you set the volume, a permanent beep is sounded at the corresponding volume.

☞ *Main menu > Supervision > Doors > Volume mess delay:*

Factory setting	15 %
-----------------	------

If event "Window/door supervision" is activated for the buzzer or at the status outputs, the alarm is sounded at the central apartment unit and/or the corresponding status output is activated (e.g. siren) after the delay time has expired.

Event buzzer and status output

Determine the event for which the buzzer and/or the status output is to be activated (smoke, window/door supervision, water leak, gas leak, CO alarm, panic, emergency or fault 1 – 3).

It is possible to select several simultaneous events:

☞ *Main menu > Supervision > Signaling > Events buzzer:*

☞ *Main menu > Supervision > Signaling > Status output X > Events:*

Factory setting	<input checked="" type="checkbox"/> Smoke
	<input checked="" type="checkbox"/> Window/door supervision

 A separate output is available to close the water shutoff valve in case of a water leak or to close the gas safety shutoff valve in case of a gas leak.

Signal duration buzzer and status output

Signal duration for the buzzer and the status outputs can be selected (1 – 60 minutes, "----" unlimited). When the set signal time has elapsed, the buzzer stops and the status output's relay drops out again, even if the triggering event is still pending.

☞ *Main menu > Supervision > Signaling > Buzzer > Signal duration:*

☞ *Main menu > Supervision > Signaling > Status output X > Signal duration:*

Factory setting	3 minutes
-----------------	-----------

 The buzzer and status outputs are deactivated as soon as a button is pressed on the central apartment unit, provided the signal duration is not set to indefinite "----".

 If the signal duration for the buzzer or status output is set to indefinite "----", the fault must be acknowledged before the buzzer goes silent or the relay drops off.

 The same-name status output in gas or water leaks remains closed until the alarm is acknowledged (see page 77).

Confirm supervision for buzzer and status output

Determine if the buzzer or status output is to be activated for a short time (pulse) when supervision is active.

- ☛ *Main menu > Supervision > Signaling > Buzzer > Supervision confirm:*
- ☛ *Main menu > Supervision > Signaling > Status output X > Supervision confirm:*

No	No supervision confirmation (factory setting).
Yes	Supervision is confirmed.



Note that brief activation of an outdoor siren (up to 120 dBA) may be considered a nuisance by neighbors.

Consumption data

Display current meter states

The current meter states can be queried via menu "Consumption data" and the corresponding info pages (is configured accordingly) for each meter. A meter status for the read heating and cooling consumption is displayed for combined heat/cooling energy meters.



The central apartment unit updates the meter states every 4 hours. The values displayed on the central apartment unit may thus deviate slightly from those on the meters. A radio connection test on the consumption data interface WRI982 allows for triggering reading out of meter states outside the 4-hour cycle (see page 101).

Current meter reading

Shows the current meter reading.

Main menu > Consumption data > ... > Reading curr:

Meter reading for current heat

Shows the current meter reading for heat consumption of a combined heat/cooling energy meter.

Main menu > Consumption data > ... > Reading heat curr:

Meter reading for current cooling

Shows the current meter reading for cooling consumption of a combined heat/cooling energy meter.

Main menu > Consumption data > ... > Reading cool curr:

Display of due day values

The current meter readings are saved together with the due date for each meter on the set due day. A due day value for heating and cooling is displayed for combined heat/cooling energy meters.



Due day values generated in meters or consumption data interface are updated once a day by the central apartment unit. After reaching the due day, it may take up to two days in some cases to display the new due day values on the central apartment unit.

If no due day value is available, "---" is displayed.

Due day

Shows the last due day value (= meter reading on due day) as well as the last due date.

Main menu > Consumption data > ... > Due day > Due day value:

Main menu > Consumption data > ... > Due day > Due day date:

Main menu > Consumption data > ... > Due day > Due day year:

Due day heat

Shows the last due day value (= accumulated heat consumption on due day) as well as the last due date for a combined heat/cooling energy meter.

Main menu > Consumption data > ... > Due day heat > Due day value:

Main menu > Consumption data > ... > Due day heat > Due day date:

Main menu > Consumption data > ... > Due day heat > Due day year:

Due day cooling energy

Shows the last due day value (= accumulated cooling consumption on due day) as well as the last due date for a combined heat/cooling energy meter.

*Main menu > Consumption data > ... > Due day cooling energy
> Due day value:*

*Main menu > Consumption data > ... > Due day cooling energy
> Due day date:*

*Main menu > Consumption data > ... > Due day cooling energy
> Due day year:*

Monthly value display

The current meter readings are saved at the end of each month for each meter as monthly values. The last 15 monthly values can be queried at the central apartment unit. 15 monthly values for heating and cooling are displayed for combined heat/cooling energy meters.



Monthly values generated in meters or consumption data interface are updated once a day by the central apartment unit. The previous month's values may be displayed on the central apartment unit only after the 3rd day of the new month.

If no monthly values are available, "---" is displayed.

Monthly values

Shows the last 15 monthly values (= meter reading at the end of the month) and the corresponding month.

Main menu > Consumption data > ... > Monthly values > [Read. X] Status:

Main menu > Consumption data > ... > Monthly values > [Read. X] Date:

Monthly values heat

Shows the last 15 monthly values (= accumulated heat consumption at the end of the month) and the corresponding month for a combined heating/cooling meter.

*Main menu > Consumption data > ... > Monthly values heat
> [Read. X] Status:*

*Main menu > Consumption data > ... > Monthly values heat
> [Read. X] Date:*

Monthly values cooling energy

Shows the last 15 monthly values (= accumulated cooling energy consumption at the end of the month) and the corresponding month for a combined heating/cooling meter.

*Main menu > Consumption data > ... > Monthly values cooling energy
> [Read. X] Status:*

*Main menu > Consumption data > ... > Monthly values cooling energy
> [Read. X] Date:*

Holidays/special days

Calendar

Setting holidays/special days

If you are absent for one or several days, or if your occupancy pattern is different on certain days (e.g. on public holidays), you can define a holiday period or a special day. For each of the possible 16 entries made, start, end and the reason (holidays or special day) can be entered.

In that case, you can also define whether the event is repeated every year (* with entry of year), or whether it should be deleted again after the event took place (entry with indication of year).

Every entry can be deleted.

Main menu > Holidays/special days > Calendar > Entry X:

During holiday periods, the selected apartment operating mode and the holiday DHW operating mode apply.



For a description of the apartment operating mode settings required and the DHW operating mode during holidays, see page 75.

During special days, the special day time program of the respective rooms and of DHW is used.



The special days with room, ventilation and DHW time switches can be used e.g. to program public holidays during the week (Mo to Fr).

For these days, you may want to use a temperature profile similar to Sunday.

The special day of the switching group time switches allows you to determine which functions to be triggered during special days and **holidays**.

Main menu > Rooms > Room X > Room time switch > Special day:

Main menu > DHW > Time switch > Special day:

Main menu > Ventilation > Ventilation time switch > Special day:

*Main menu > Switching groups > Time swi presence simulation
> Special day:*

*Main menu > Switching groups > Switching group X > Time switch
> Special day:*



If the supervisory functions, presence simulation, etc., are available during holidays/special days, the absence function must also be activated (see the following section).

Holidays and absence simultaneously

The holiday program acts on the room, ventilation and the DHW operating mode. Also press the **Absence** button if, in addition to the holiday program, you want to take advantage of the absence functions (presence simulation, supervisory function, etc.).

-  When the holiday and absence functions are simultaneously active, the central apartment unit controls room temperature, ventilation and DHW heating in accordance with the holiday operating mode.

At the end of the holidays/special day, the operating mode for room, ventilation and DHW switches from "Holidays" to "Absence".

Thus, on return from holidays, the absence function must be deactivated again by pressing the **Absence** button.

-  During absence, make sure the temperature level is not too low ("Pre-comfort" or "no impact") to allow for quickly reaching the Comfort setpoint again following absence. Slow heating systems (e.g. floor heating) require more time for reheating.

Holiday operating mode

Apartment operating mode during holidays

Select the required operating mode for the apartment during the holiday period. The apartment operating mode during holidays applies to heating/cooling and ventilation.

-  Do not set the air conditioning release mode higher than the apartment operating mode during holidays (see page 39) to be able to release cooling in holiday mode.

Main menu > Holidays/special days > Ap optg mode holid:

Economy 	Heating/cooling and ventilation control to the corresponding Economy setpoints during holidays (guide value).
Protection 	Heating/cooling and ventilation control to the corresponding Protection setpoints during holidays.

Holidays DHW operating mode (QAX913 only)

Determine the required DHW operating mode for the holidays or special day:

Main menu > Holidays/special days > DHW optg mode holid:

---	Holidays or special days have no influence on DHW operating mode.
Normal 	DHW is heated to Normal setpoint during holidays and special days.
Reduced 	DHW is heated to Reduced setpoint during holidays and special days.
Protection 	DHW is heated to Protection setpoint during holidays and special days (guide value).

Time settings

Date/time of day

Enter the settings for the date and time of day using the following paths:

Main menu > Time of day/date > Time of day:

Main menu > Time of day/date > Date:

Main menu > Time of day/date > Year:

Faults

Error/fault status messages

The central apartment unit stores up to 10 current fault status messages according to priority. They can be retrieved at any time. The lowest fault status message number represents the fault with the highest priority. If priorities are equal, the faults are listed in chronological order.

Both the central apartment unit's internal faults and the faults of the other devices contained in the system are taken into consideration.



Each device only transmits its most severe fault to the central apartment unit. As soon as that fault has been rectified, the next fault is transmitted.

The faults acquired are written to the "Current list of faults".

Main menu > Faults > Faults current > Fault X:

With each fault status message, a fault number and fault text are displayed.



In the QAX913, faults can be connected with internal or external fault status relay and to status outputs to a certain degree. The corresponding relay closes when the fault appears.
(See page 83).

Fault status messages bus

The fault that occurred last on the wire-bound bus is saved with the fault number, fault text and the associated device address.

These fault status messages are only visible if they were enabled at the time of configuration:

Main menu > Faults > Fault status message bus

Acknowledge faults

The current fault status messages can be jointly acknowledged.

Main menu > Faults > Acknowledge faults:



A fault that has not yet been acknowledged is displayed with a flashing fault symbol. As soon as the fault is acknowledged, the fault symbol stops flashing.



All pending faults are acknowledged simultaneously and any activated status outputs deactivated.

If no more water or gas leaks are detected, fault acknowledgement reopens the water or gas safety shutoff valve.

Inputs/Outputs

Inputs

Display input signals

The current input signals can be displayed via the following operating line:

Main menu > Inputs/outputs > Inputs > ...

The following values – if available – are displayed:

- Actual value of the outside temperature
- Outside temperature mixed
- Outside temperature attenuated
- Operating mode contact
- Summer operation
- Cooling enable
- H/C changeover
- Dew point
- Absence
- Twilight (QAX913 only)
- Fault input X (per fault input 1 – 8, QAX913 only)

Outputs

Display output states

The states of the outputs can be displayed via the following operating line:

Main menu > Inputs/outputs > Outputs > ...

The following values – if available – are displayed:

- Switching group X (relay per switching group 1 – 8 QAX913 only)
- Fault output X (per fault output 1 – 2, QAX913 only)
- Heat demand relay
- Heat demand DC 0..10 V
- Cooling demand relay
- Cooling energy demand DC 0..10 V
- Summer operation
- Cooling enable
- Water safety shutoff valve (QAX913 only)
- Gas safety shutoff valve (QAX913 only)
- Status output X (per status output 1 – 4, QAX913 only)
- Window/door state
- Exhaust hood
- Supervision (QAX913 only)

Settings

Device

Language

The unit is supplied with English as default operating language. However, you can select the language you want:

☛ *Main menu > Settings > Device > Language:*

The path is now presented in the language you selected.

☛ *Main menu > Settings > Device > Language:*

Altitude above sea level

To ensure display of accurate weather forecasts in the quiescent picture, the absolute atmospheric pressure acquired by the meteo sensor is converted to pressure at sea level.

For this reason, the plant's altitude above sea level must be known. Enter the plant's altitude on the following operating line:

☛ *Main menu > Settings > Device > El above sea level:*

Factory setting	0 m above sea level
-----------------	---------------------

Time format

You can set the time format.

☛ *Main menu > Settings > Device > Time format:*

24 hours	Time format 00:00..24:00 (factory setting)
12 hours (am/pm)	Time format:12 a.m..12 p.m..12 a.m.

Backlit display/contrast

Adjust the brightness of the backlit display and the display contrast to suit your needs:

☛ *Main menu > Settings > Device > Backlit display:*

Factory setting	100 %
-----------------	-------

☛ *Main menu > Settings > Device > Display contrast:*

Factory setting	50 %
-----------------	------

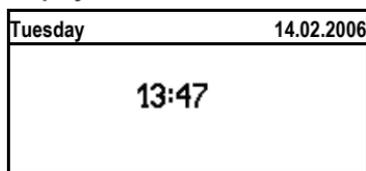
Quiescent picture

Display format

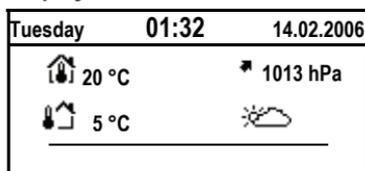
You can select the display format required for the quiescent picture.

☛ *Main menu > Settings > Quiescent picture > Display format:*

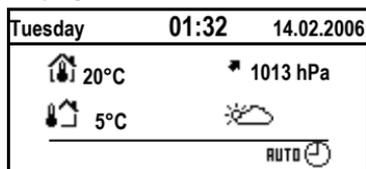
Display format 0



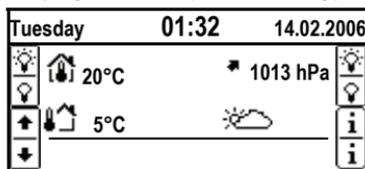
Display format 1



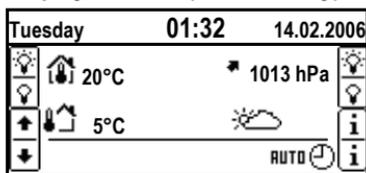
Display format 2



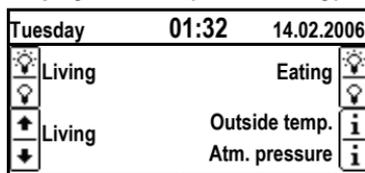
Display format 3 (QAX913 only)



Display format 4 (QAX913 only)



Display format 5 (QAX913 only)



Factory setting QAX903	Display format 2
Factory setting QAX913	Display format 4

Temperature display

Select the room (rooms 1 – 12) whose temperature you want to display on the quiescent picture.

☛ *Main menu > Settings > Quiescent picture > Temp display:*

Factory setting	Room 1
-----------------	--------

Passwords

Service level password

The unit comes without password protection at the service level. Password protection is available as an option (1 – 9999). Use the following path to enter your password and confirm it by pressing the **Menu/ok** button:

☛ *Main menu > Settings > Passwords > Service:*

Factory setting	---
-----------------	-----



For more information about the various access levels, see page 28.

Info page selection (QAX913 only)

Direct selection of info pages

When commissioning the plant, the **softkeys** of the QAX913 central apartment unit (switching groups 1 – 4) can be programmed to display info pages (the info symbol is displayed in the key assignment display).



Note that the number of info pages – and thus the info page number of a certain component/function – depends on the configuration of the central apartment unit. You can see the current numbering of the info pages when scrolling with the **Info** button.

See the following illustration for **softkey** numbering (switching groups 1 – 4):



- 1A, 1B Softkeys for switching group 1
2A, 2B Softkeys for switching group 2
3A, 3B Softkeys for switching group 3
4A, 4B Softkeys for switching group 4

For **softkeys** defined as info pages, you can select the info pages to be displayed when pressing the keys.

- ☞ *Main menu > Settings > Info page selection > Info page button 1A:*
- ☞ *Main menu > Settings > Info page selection > Info page button 1B:*
- ☞ *Main menu > Settings > Info page selection > Info page button 2A:*
- ☞ *Main menu > Settings > Info page selection > Info page button 2B:*
- ☞ *Main menu > Settings > Info page selection > Info page button 3A:*
- ☞ *Main menu > Settings > Info page selection > Info page button 3B:*
- ☞ *Main menu > Settings > Info page selection > Info page button 4A:*
- ☞ *Main menu > Settings > Info page selection > Info page button 4B:*

Faults (QAX913 only)

Fault inputs

External plant component faults can be communicated to the central apartment unit by closing a contact. Eight fault inputs are available, each assigned to one of the following fault types:

- Water leak
- Gas leak
- CO alarm
- Panic
- Emergency
- Fault 1 – 3 (user-defined)



The fault inputs must be activated during plant commissioning, and the required input must be connected to the central apartment unit to allow for the settings described here. See document "Mounting and Commissioning (CE1C2740en)" for descriptions.

You can only set a fault message delay for water/gas leak and CO alarms.



Faults Panic and Emergency do not require settings.

Fault text

Enter the text for faults 1 – 3 that you want displayed when a fault occurs on the corresponding fault input.

☛ *Main menu > Settings > Faults > Fault X > Fault text:*

Acknowledge faults

Specify if fault acknowledgement is needed for faults 1 – 3.

☛ *Main menu > Settings > Faults > Fault X > Fault ackn:*

No	The fault does not need to be acknowledged. The fault message disappears automatically as soon as the cause is resolved (factory setting).
Yes	The fault must be acknowledged even after it is resolved to make the message disappear.

Fault priority

Specify the priorities for fault 1 – 3.

☛ *Main menu > Settings > Faults > Fault X > Fault priority:*

Urgent	Priority for faults putting the plant at risk or when trouble-free plant operation no longer can be guaranteed.
Not urgent	Priority for faults not putting plant operation at risk. (factory setting)

Fault release

Specify if fault 1 – 3 is released always or only on absence.

☛ *Main menu > Settings > Faults > Fault X > Fault release:*

Always	The fault message is generated when the contact at the fault input is not in a normal position (factory setting).
If absent	The fault message is generated only during absence when the contact at the fault input is not in a normal position.

Fault status message delay

The fault status message delay is the time (00.00..60.00 ms) elapsed until a pending fault generates a message.

☛ *Main menu > Settings > Faults > ... > Fault stat mess dly:*

Factory setting	00.05 m.s
-----------------	-----------

Fault outputs 1 and 2

Two fault outputs can be configured to forward fault status messages or to indicate them on the control panel with a lamp. The fault output remains closed until the fault is acknowledged.



The fault outputs must be activated during plant commissioning, and the required relay output connected to the central apartment unit to enter the settings described here. See document "Mounting and Commissioning (CE1C2740en)" for descriptions.

For each fault output, the following settings can be entered.

Fault priority

Set the fault message priority at which the fault output is activated.

☛ *Main menu > Settings > Faults > Fault output X > Fault priority:*

Urgent	Fault output closed if at least one urgent fault message is pending.
Not urgent	Fault output closed if at least one non-urgent fault message is pending.
All	Fault output closed if a fault message (urgent or non-urgent) is pending (factory setting).

Fault source

Defines if the fault output should respond only to internal faults or only to external faults (faults sent via bus).

☛ *Main menu > Settings > Faults > Fault output X > Fault source:*

Internal	Fault output signals only internal fault messages.
Bus	Fault output signals only bus fault messages.

	Fault output 1	Fault output 2
Factory setting	Internal	Bus



Maximum one bus fault status message can be handled. If both fault outputs are set to fault source Bus with different priorities, only one fault output can be activated simultaneously even if several fault messages with different priorities are pending at the bus!
We thus recommend to set only fault source Bus for a fault output.

Texts

Plant name

Assign the plant or the apartment a self-explanatory name, e.g. "Main street 22":

☛ *Main menu > Settings > Texts > Plant name:*

Room names 1 – 12

Assign the rooms self-explanatory names, e.g. Living, Eating, Kitchen, Bathroom, etc.:

☛ *Main menu > Settings > Texts > Rooms > Room X:*



Predefined room names are provided for quick and easy entry of room names. You can adjust a predefined room name.

Switching group names 1 – 8 (QAX913 only)

Assign the switching groups self-explanatory names, e.g. Light Living, Blinds Eating, etc.:

☛ *Main menu > Settings > Texts > Switching groups > Switching group X:*

Door names 1 – 2 (QAX913 only)

Assign a meaningful name to the doors, e.g. entry door, garage door, etc.

☛ *Main menu > Settings > Texts > Doors > Door X:*

Lamp names 1 – 4 (QAX913 only)

Assign the lamps self-explanatory names, e.g. Living, Eating, etc.:

☛ *Main menu > Settings > Texts > Light state > Lamp X:*

Names for temperatures 1 – 3 (QAX913 only)

Assign meaningful names to the temperatures, e.g. basement, swimming pool, etc.

☛ *Main menu > Settings > Texts > Temperature display > Temperature X:*

Handheld control names 1 – 5 (QAX913 only)

Assign meaningful names to the handheld controls, e.g. Dad, Mom, etc.

☛ *Main menu > Settings > Texts > Handheld control
> Handheld control X:*

Handheld control (QAX913 only)

Button assignment handheld control 1 – 5

Assign each button the desired function on the handheld control AFK914/C01.

☛ *Main menu > Settings > Handheld control > Handheld control X
> Button top left:*

☛ *Main menu > Settings > Handheld control > Handheld control X
> Button top right:*

☛ *Main menu > Settings > Handheld control > Handheld control X
> Button bottom left:*

☛ *Main menu > Settings > Handheld control > Handheld control X
> Button bottom right:*

---	Button has no function (factory setting).
Supervision on	Supervision on (= All monitored).
Supervision off	Supervision off (= Inactive).
Trigger emergency alarm	Emergency alarm activated.
Trigger panic alarm	Panic alarm activated.
Trigger switching group 1A	Command A of switching group 1 triggered (ON / OFF / retrieve Scene A).
Trigger switching group 1B	Command B of switching group 1 triggered (OFF / DOWN / retrieve Scene B).
...	
Trigger switching group 8A	Command A of switching group 8 triggered (ON / OFF / retrieve Scene A).
Trigger switching group 8B	Command B of switching group 8 triggered (OFF / DOWN / retrieve Scene B).

Device information

Info lines

The central apartment unit provides information for readout:

Main menu > Device information > Plant name:

Main menu > Device information > File name:

Main menu > Device information > Device type:

Main menu > Device information > Software version:

Main menu > Device information > Hardware version:

Room unit QAW910

Operation



All operating elements are located on the front of room unit QAW910.

The function button is located in the battery compartment. The room unit communicates via radio signals and has no connection terminals.

Settings on the room unit only impact the room to which the room unit is assigned. They do not influence any other rooms. Settings on the room unit are automatically synchronized with those of the central apartment unit.

Room operating modes



Press the **Mode** button to select the required room operating mode. The display shows an hourglass which disappears as soon as the central apartment unit and the room unit have adopted the new settings.

AUTO	The room is controlled in accordance with time program and special day program.
MAN ☀	The room is maintained at the Comfort setpoint.
MAN ⌚	The room is maintained at the Precomfort setpoint.
MAN Ⓞ	The room is maintained at the Economy setpoint.
MAN ⚠	The room is maintained at the Protection setpoint.
☀	Override by the central apartment unit to maintain the Comfort setpoint.
⌚	Override by the central apartment unit to maintain the Precomfort setpoint.
Ⓞ	Override by the central apartment unit to maintain the Economy setpoint.
⚠	Override by the central apartment unit to maintain the Protection setpoint.



The time program and the special day program are set on the central apartment unit.

In case of central apartment unit override, the display shows the central apartment unit symbol  as well as the symbol for the active operating level.

Room timer function



The Room timer button  allows you to force the system to maintain the Comfort temperature for an adjustable period of time.

Pressing the button displays the room timer symbol, the Comfort setpoint symbol and the duration of the selected Comfort mode (00:00).



Every pressing of the **Room timer** button extends the duration of Comfort mode by 30 minutes. Continuous pressure on the **room timer** button speeds up setting.

If no button is pressed for 4 seconds, the setting is adopted and Comfort mode is displayed.



The display shows the hourglass which disappears as soon as the central apartment unit takes over the settings entered on the room unit.

When the room timer function is active and the **Room timer** button is pressed, the timer's remaining time is displayed. It can be set to 30 minutes by pressing again the **Room timer** button and each additional push of the button extends the time by another 30 minutes.

An active room timer function can be aborted by setting the extension time to 00:00, or by pressing the **Mode** button.



For the room timer function to be activated, the apartment operating mode must be set to "Auto". In addition, no absence or holiday function for the apartment may be active.

Readjust the room temperature setpoint



Room temperature setpoint readjustments by a maximum of +/- 3 K can be made with the setting knob. When turning the knob one step, the display shows the current room temperature setpoint readjustment. Each step represents another readjustment of 0.5 K.

The room temperature setpoint adjustment acts on the heating and cooling setpoint.

-  Readjustments on the individual room units can be displayed on the central apartment unit (see page 40).



The room temperature setpoint readjustment is displayed with a readjustment bar.

When controlling to the Precomfort or Comfort setpoint, the readjustment bar continues to be displayed also after leaving the room temperature setpoint re-adjustment.

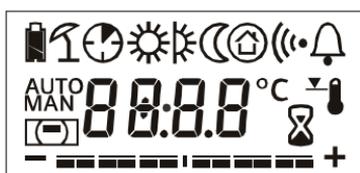


If no button is pressed for 4 seconds, the room unit returns to the normal display.

-  The room temperature setpoint readjustment made only acts on the Comfort or the Precomfort setpoint.

Display

Full display



During commissioning, the full display appears for 2 seconds. This allows for fault testing the display.

Possible displays

	Status display of battery: If the battery is sufficiently charged, the symbol is briefly displayed when pressing the function button.
	Status display of battery: If the battery charge drops below a certain percentage, the symbol is constantly displayed, independent of the unit's operating state.
	Summer operation active.
	Room timer function active.
AUTO	Display of automatic mode. Current operating level in accordance with the central apartment unit's time program.
MAN	Display of manual mode. Current operating level in accordance with the settings entered on the room unit.
	Control to Comfort setpoint.
	Control to Precomfort setpoint.
	Control to Economy setpoint.
	Control to Protection setpoint.
	Override by the central apartment unit: Apartment operating mode different from "AUTO" (e.g. due to active holiday program, absence, active apartment timer, or summer operation).
	Connection test, communication error, binding.
	Device fault: Sensor with short-circuit or open-circuit, communication error.
	Room setpoint limitation active (see page 44).
	Updating the room operating mode. Hourglass displayed when sending / retrieving the current / resulting room operating mode.
°C	Room temperature unit.
	Readjustment bar indicates active room temperature setpoint readjustment.

Error messages

Device faults are sent to the central apartment unit as error messages and are displayed with the error symbol. Device faults are communication breakdowns or short-circuits / open-circuits of sensors in the room unit.

The error symbol disappears as soon as device errors are no longer present.



If communication with the central apartment unit is interrupted, the connection and error symbols are displayed until communication is reestablished.



In the event of communication errors, check the central apartment unit's power supply. If power supply is in order, a radio repeater might be required.

AFK914/C01 handheld control

Operation



All operating buttons are located on the front of the handheld control AFK914/C01.

The handheld control communicates via radio with the central apartment unit.

A handheld control button can be assigned the following functions:

- Activate (all monitored) / deactivate supervision.
- Trigger switching group command.
- Activate emergency alarm.
- Activate panic alarm.

The LED is lit blue for max. 2s as soon as a button is pressed on the handheld control for more than 0.7 s. A corresponding telegram is sent to the central apartment unit and associated actions are triggered. The central apartment unit returns a confirmation telegram to the handheld control.

Receipt of the confirmation telegram is optically indicated on the handheld control. The LED color pattern depends on the function activated.

 The button must be pressed for more than 0.7 s for a telegram to be set from the handheld control to the central apartment unit. This prevents unwanted commands by inadvertent button pressure (e.g. in pant pocket).

 The buttons on the handheld control are disabled until a reply is received from the central apartment unit and displayed optically on the handheld control (LED). During this time, all buttons are disabled, i.e. no action is triggered if a button is pressed.

No feedback from central apartment unit:

If the handheld control does not receive a confirmation from the central apartment unit within 2 s (e.g. distance between control and central apartment unit is too great), the blue LED briefly blinks 3 times.

Activate supervision (all windows and doors closed):

If the supervision button is pressed and all windows and doors to be supervised are closed, the blue LED is lit for max. 2 s and then the red LED for 2 s.

 Supervision delay is off, i.e. all doors and windows enabled for supervision are supervised with immediate effect.

Activate supervision (all windows and doors are open):

If you press the supervision button and some of the windows and doors enabled for supervision are still open, they are excluded automatically from su-

pervision. The blue LED first is lit for max. 2 s; the red LED then briefly blinks 3 times.



A window open at the time of supervision activation can be opened and closed any number of times (e.g. by wind) without triggering an alarm.

A door open at the time of supervision activation can be left open without triggering an alarm. However, the door is supervised as soon as it is closed.



Supervision delay is off, i.e. all doors and windows are supervised with immediate effect.

Deactivate supervision:

If supervision is deactivated, the blue LED first is lit for max. 2 s; then the green LED is lit for 2 s.

Trigger switching group / trigger panic and emergency alarm:

The blue LED is off (after max. 2 s) after receiving the confirmation telegram, when a switching group, panic or emergency alarm is triggered.

Battery soon empty:

The LED on the handheld control is lit yellow rather than blue if the battery will soon be empty.

Radio plug adapter

Operation KRF960 (switching)



LED display functions:

- LED lit: Contact closed
- LED off: Contact open.

Pressing the button can locally reverse the contact state:

- LED lit (contact closed) and press button → LED off (contact open)
- LED off (contact open) and press button → LED lit (contact closed)

Operation KRF961 (dimming)



LED display functions:

- LED lit: Output active
- LED off: Output off

Press the button to locally reverse the current output state:

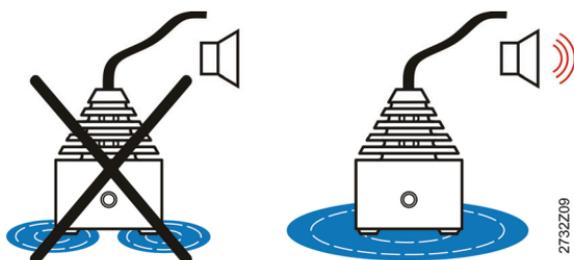
- LED lit (output active) and press button → LED off (output off)
- LED off (output off) and press button → LED lit (output 100%)

The local button does not allow for dimming the output.

Service

Function test for water detector QFP910

Check the function of the water detector once a year. To do this, immerse both water detector contacts in water.



A corresponding action is triggered depending on the central apartment unit's configuration; e.g.:

- The safety shutoff valve of the main line is closed => no more water in the entire building.
- The buzzer of the central apartment unit is activated.

The pending alarm must be acknowledged on the central apartment unit to allow the safety shutoff valve to reopen, the buzzer to turn off and the alarm to be resolved:

Main menu > Faults > Acknowledge faults:

-  The alarm cannot be acknowledged for as long as the water detector is immersed in water, or the alarm is reactivated immediately.

Calibrate DELTA reflex smoke detector

We recommend that you press the test button monthly on the smoke detector to avoid false alarms. This calibrates the detector or sensing elements in addition to automatic calibration of the smoke detector via battery charge drop-off.

-  In the event of a false alarm, e.g. after forgetting to press the test button, wait for at least one hour until you press the test button for calibration (1 hour calibration lock).

Monitor batteries

The battery-powered devices (room unit, room temperature sensor, meteo sensor, radiator control actuator, water detector, handheld control, door/window contact, smoke detector and M-bus meter) constantly monitor battery charge. If batteries are low, a message is forwarded to the central apartment unit.

In that case, the central apartment unit switches from the quiescent picture to info page "Device state" to show the device with the exhausted batteries (provided there is no more severe fault). After a certain period of time, the display returns to the quiescent picture and displays error symbol .

The result of automatic battery monitoring is not displayed on the battery-powered devices, with the exception of room unit, handheld control, door/window contact and smoke detector .

Room unit QAW910

The room unit indicates when its batteries are close to empty.



The symbol for empty is constantly displayed if the batteries are empty in about 3 months.

AFK914/C01 handheld control

The LED on the handheld control indicates a required battery change. All action patterns turn **yellow** rather than the standard blue.

Door/window contact wave AP 260

The LED briefly blinks every 10 seconds if batteries must be replaced.

DELTA reflex smoke detector

The LED briefly blinks 3 times every 48 seconds and a short acoustic signal is sounded if batteries must be replaced.

Manual capacity check

With the room temperature sensor, the meteo sensor and the radiator control actuator, battery charge is also checked during a binding test (see page 101).

If, during the binding test, the green LED of the respective device is lit, battery charge is sufficient.

If, during the binding test, the red LED of the respective device is lit or is dark, battery charge is insufficient.

Change batteries

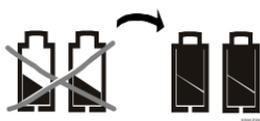
To ensure trouble-free operation of the battery-powered devices, replace the batteries as soon as they are close to empty.

 Avoid complete discharge of batteries, as otherwise batteries may leak. For this reason, replace the battery as soon as the display tells you to.

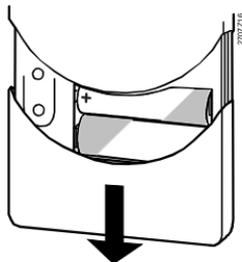
 Contact your building's supervisor if your central apartment unit on the info page shows a low battery charge for a meter under "Device status".
Only authorized staff may exchange meter batteries. To do this, the entire meter often must be exchanged.

Room unit QAW910, room sensor QAA910, mete sensor QAC910 and water detector QFP910

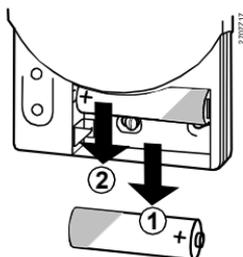
Make 2 new Alkaline AA batteries ready for insertion (LR6/1.5 V).



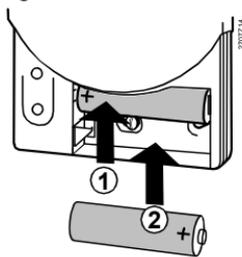
Remove the battery compartment cover.



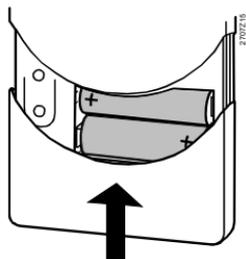
Remove the old batteries.



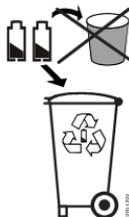
Insert the new batteries. Make sure polarity is right!



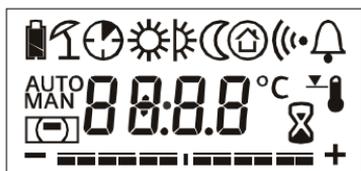
Replace the battery compartment cover.



Dispose of the old batteries in compliance with environmental regulations.



Display after battery change



After inserting new batteries, the full display appears for 2 seconds. The room unit then returns to Normal operation.

-  The central apartment unit queries the room operating mode settings. Active room timer functions are not reactivated.

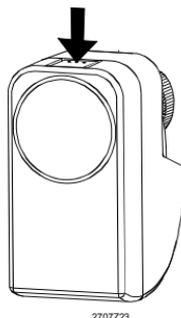
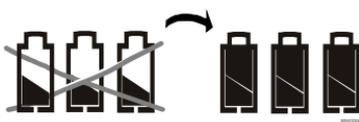
After inserting the new batteries, the battery charge is checked at the room temperature sensor QAA910 and meteo sensor QAC910 as well as water detector QFP910. During the check, the green LED lights up for 2 seconds, provided the batteries are charged sufficiently.

After the battery check, the devices directly switch to Normal operation. The LED goes out again.

Radiator control actuator SSA955

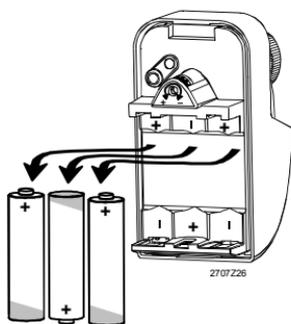
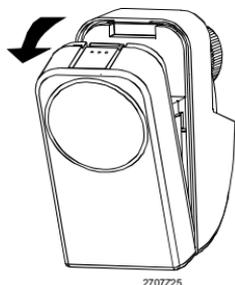
Make 3 new Alkaline AA batteries ready for insertion (LR6/1.5 V).

Press on the snap-on cover...



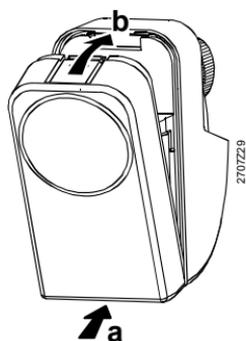
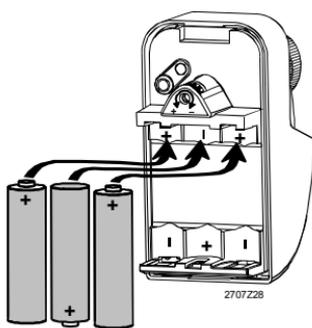
... and remove the battery compartment cover.

Remove the old batteries.



Insert the new batteries. Make sure polarity is right!

Replace the battery compartment cover.



Dispose of the old batteries in compliance with environmental regulations.

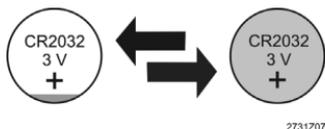


After inserting the new batteries, the battery charge is checked. During the check, the green LED lights up for 2 seconds, provided the batteries are charged sufficiently.

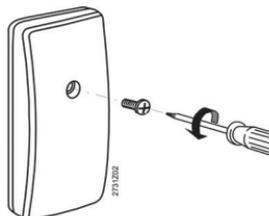
After the check, the radiator control actuator checks its settings as master or slave. If set as master, the red and green LED blinks 3 times; if set as slave, the LED remains dark. The device then automatically calibrates. Afterwards, the device assumes Normal operation.

AFK914/C01 handheld control

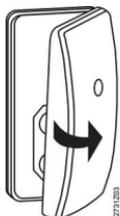
Ready a new coin cell of type CR2032.



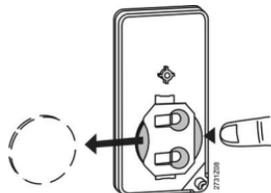
Unscrew the rear of the handheld control.



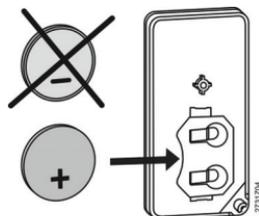
Remove the housing rear.



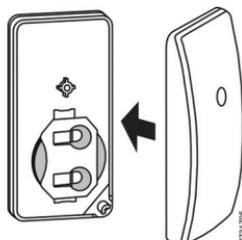
Remove the old batteries.



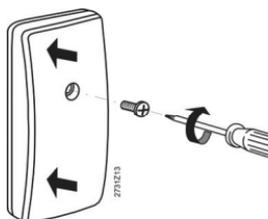
Insert the new battery and make sure polarity is right.



Put the rear of the housing back in place.



Tighten the screw.



Dispose of the old battery in compliance with environmental regulations.



After inserting the new battery, test the battery by pressing a button (e.g. Light on). The LED of the handheld control is lit for max. 2 s in blue provided the battery charge suffices.

Door/window contact wave AP 260 and DELTA reflex smoke detector

The mounting and operating instructions for the DELTA reflex smoke detector as well as the door/window contact wave describe how to change batteries.

Binding tests

Briefly press the function button (located under the battery compartment cover) to trigger binding tests on the individual devices. Press simultaneously the two upper buttons on the handheld control.

On the central apartment unit, every successful binding test is confirmed by 3 short acoustic signals. Also, the display shows an additional window with information about the test just made.

The additional window remains open until confirmed with the **Menu/ok** button or the **Esc** button, or until replaced by the new additional window next time the binding test is made.

During the binding tests, the LED on the individual devices is used to indicate battery charge or, in the case of the radio repeater, to indicate mains voltage (see page 96).

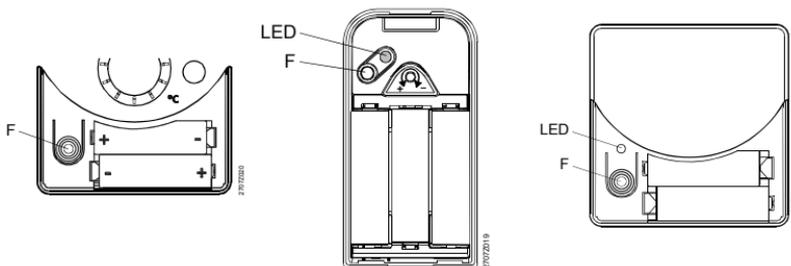
- i** Binding tests can be triggered on the following types of devices: Room unit, room temperature sensor, meteo sensor, radio repeater, radiator control actuator, heating circuit controller, multi-controller, consumption data interface, water detector, and handheld control.
After the binding test, the radio repeater indicates telegram traffic with an orange LED blinking for 2 hours.

Function button on the room unit, room sensor, meteo sensor, radio repeater, water detector and radiator control actuator

Room unit QAW910

Radiator control actuator SSA955

Room temperature sensor QAA910,
meteo sensor QAC910,
radio repeater ERF910,
water detector QFP910



F = Function button
LED = Light emitting diode

Function button on heating circuit controllers RRV912 / RRV918, on multi-controller RRV934 and on consumption data interface WRI982

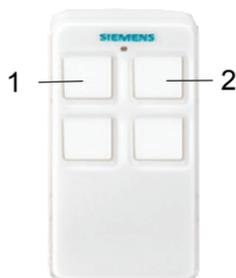
The binding test of the heating circuit controller / multi-controller / consumption data interface is carried out for each channel. With the multi-controller, the test can also be carried out for a channel group. Use the channel selection button to select the channel whose binding you want to check. The LED associated with the selected channel blinks. Briefly press the function button.

E.g. on the RRV912 heating circuit controller:



LED = Light emitting diode
F = Function button
CH = Channel selection button

Binding test for AFK914/C01 handheld control



Simultaneously press the upper two buttons 1 and 2 on the handheld control. Stop pressing as soon as the LED is lit.

Maintenance and cleaning

When cleaning the central apartment unit, use a soft cloth, slightly moistened with water. Never use alcohol.

Disposal



Dispose of the central apartment unit and the associated partner devices as electronic scrap in compliance with European directive 2002/96/EEC (WEEE) and not together with municipal waste. Observe all relevant national regulations using correct disposal channels. Comply with local and currently valid legislation. Dispose of discharged batteries in compliance with relevant environmental regulations.

Index

A

Absence 31, 39
 Button 20
 Operating mode ventilation .. 50
Absence and holidays 75
Access levels 25, 28, 80
Acknowledge faults 77
Actual value
 DHW 60
 Flow temp room group 48
 Return temp room group 47
 Room temperature 43
Actuator calibration 47
AFK914 .. 16, 18, 92, 96, 100, 102
Air conditioner 43
Air humidity 53
Air quality setpoints 54
Airing function 46
Alarms 17
Altitude above sea level 78
Anti-lime function 36
AP260 13, 16, 19, 96, 101
Apartment operating mode 33
 Holidays 75
Apartment settings 32
Apartment timer 32
 Button 20
 Influence 44
Arrow buttons 21
Atmospheric pressure 15
 Symbols 24
Auto - room operating mode ... 37

B

Backlit display 22, 79
Battery monitoring 95
Binding tests 101
Blinds control 15
Brightness 79
Button handheld 1 - 5 85
Button handheld control 1 – 5 .. 85
Buzzer 70
Bypass HR 52

C

Calibration actuator 47
Calibration smoke detector 95
Change absence 68

Change batteries 97
Changeover H/C 38
Charging pump state 60
Cleaning 102
Comfort 37
Communication error 91
Components 17
Confirm supervision
 Buzzer/status output 70
Consumption data 71
 Acquisition 17
 Interface 17
Contact ventilation 53
Contrast 79
Control
 Air quality 54
 Blinds 15
 Domestic hot water 14
 Heating 12
 Lighting 15
 Ventilation 14
Cooling 13
Cooling enable 35, 39
Cooling enable start/end 35
Cooling limit 36
Cooling release output 43
Cooling/heating 11
 Mode 11
Correction room setpoint 40
Current meter reading 71

D

Date 76
Delay Supervision 67
DELTA reflex 96, 101
Device
 Information 86
 Settings 78
 State symbols 24
 Supervision 17
DHW
 Absence 58
 Button 20, 57
 Forced charging 57
 Heating 14
 Operating mode 57
 Preselection 57

Settings	57	Display	77
State	23, 58	Inputs	81
Time switch	59	Outputs	83
DHW operating mode		Priority	82, 83
Holidays	75	Release	82
Reason	58	Source	83
DHW plant operation	60	Text	82
DHW temperature		Fault status message	
Actual value	60	Bus	77
Setpoint	59, 60	Delay	83
Supervision	61	Device	76
Display	22	Fireplace mode	53
Contrast	79	Flow temperature	
Format	79	Actual value room group	48
Outputs	78	Room group	48
Room unit	89	Setpoint room group	48
Symbols	23, 90	Forced charging	57
Door		Forced ventilation	49
Contact	96	Function	
Name 1 - 2	84	Anti-lime	36
Supervision	69	Button	101
Door/window contact	16	Supervision	16
Due date	72	System	11
Due day	72	Function test water detector	95
Cooling	72		
Heat	72	G	
Value	72	Gamma wave	19
Duration		Guide value	27
Buzzer, status output	70		
E		H	
Eco	37	H/C changeover	38
Economy increase	44	Hager tebis	19
Electric immersion heater		Handheld control	16, 96
Changeover	61	Binding test	102
State	60	Operation	92
Enable cooling	13	Trigger swi groups	64
ERF910	18	Handheld control 1 – 5 name	85
Error messages	76, 91	Heating control	12
Esc button	21	Heating limit	36
Events		Heating/cooling	11
Buzzer	70	Heating/cooling mode	11
Status output	70	Holiday mode time	56
Switching groups	63	Holiday mode ventilation	56
Expert level	28	Holidays	74
External contact	33, 59	and absence	75
F		Apartment operating mode	75
Factory setting	27	DHW op mode	75
Fault		HR bypass	52
Acknowledge	82	Humidity limit value	55
		Humidity limitation	54

I		Switching group	84
Impact of window switches	57	Temperatures 1 - 3	85
Indoor air quality	52	Navigation	23
Indoor air quality control	54	Night cooling	55
Info button	21		
Info lines	86	O	
Info pages	25	Operate central apartment unit ..	25
Query	61	Operate switching groups	61
Selection	80	Operating elements	20
Input signals	77	Operating hours ventilation	53
		Operating mode	
K		Absence DHW	58
KRF960	18, 94	Apartment	33
KRF961	18, 94	DHW	57
		Plant	38
L		Reason	37
Lamp names 1 - 4	84	Room	37, 39, 87
Language	78	Ventilation	48, 49
Lighting control	15	Ventilation stages	50
Limitation		via contact	33, 59
Charging time DHW	60	Operating mode ventilation	
Room setpoint	44	Absence	50
		Operation Handheld control	92
M		Optimum start	44
M255	16, 19	Optimum stop	44
Maintenance	102	Outputs	78
Manual capacity check	96	Outputs, charging pump	
Menu levels	25	electric immersion heater	60
Menu levels (main menu)	26	Outside temperature	15
Menu/ok button	21	Cooling limit	36
Message delay	69	Heating limit	36
Meteo sensor	15		
Meter reading for		P	
Current cooling	71	Path	23
Current heat	71	Period	
Meter states	71	Holiday mode ventilation	56
Mode button	20, 87	Plant	
Monitor batteries	95	Name	84
Monthly values	73	Operating mode	38
Cooling	73	Operation	44
Date	73	Operation DHW	60
Heat	73	Precomfort	37
Meter reading	73	Precooling time	56
		Presence simulation	65
N		Time switch	65
Name		Product liability	10
Doors 1 - 2	84	Protection	37
Handheld control 1 - 5	85	Pump room group	48
Lamps 1 - 4	84		
Plant	84	Q	
Room 1 - 12	84	QAA910	12, 17, 97

QAC910	15, 18, 97	RRV918.....	12, 18, 102
QAW910 ..	12, 17, 87, 96, 98, 101	RRV934.....	13, 14, 18, 102
QAX903	17, 20	Runtime forced ventilation.....	57
QAX913	17, 20		
QFP910.....	16, 18, 95, 97		
Quiescent picture	22, 25, 79		
R		S	
Radiator control actuator.....	98	Safety	10
Radio plug adapter.....	94	Scenes	62
Reading		Sensor readjustment.....	47
Current	71	Service	95
Current cooling.....	71	Interval ventilation	53
Current heat	71	Ventilation.....	53
Date.....	73	Service level.....	28
Meter.....	73	Password.....	80
Readjust room temp setpoint...	88	Setpoint	
Readjustment sensor	47	Air quality.....	54
Reason		DHW.....	59, 60
DHW mode.....	58	Flow temp. room group	48
DHW plant op.....	60	Humidity	54
for room operating mode.....	37	Limitation	44
Ventilation state	52	Room.....	40
Release		Room temperature	43
Air conditioner	39	Setting knob	88
Supervision	68	Setting principle.....	26
Time switch	65	Signal duration	
Remote operation	16	Buzzer/status output.....	70
Return temperature		Silent mode	46
Actual value room group	47	Smoke detector	96
Room group	47	Calibration	95
Room		Wireless.....	16
Group	47	Smoke ventilation stage	51
Group pump	48	Softkey assignment symbols....	24
Name 1 - 12	84	Special day.....	41
Operating mode	37, 39, 87	Special days.....	74
Setpoint.....	40	SSA955	13, 18, 98, 101
Setting.....	37	Stage assignment	
Time switch	41	for ventilation	50
Timer function	88	Stage selection.....	48
Unit.....	96	Stage setpoint	
Unit settings	87	for night cooling	56
Valve position.....	48	Stage setpoints	50
Room temperature		Start/end of summer.....	34
Actual value.....	43	State	
Setpoint.....	12	Air condition.....	43
Setpoint correction	40	Cooling enabled	35
Setpoint current.....	43	Cooling release output	43
Setpoint readjustment	88	DHW.....	58
Supervision	45	Economy increase.....	44
RRV912	12, 18, 102	Heating	23
		Operating mode ventilation ..	49
		Plant operation	44
		Room groups.....	47

Room operating mode.....	37	Timer function.....	32
Summer/Winter	34	Timer influence on rooms.....	44
Various	24	Timer operating mode	32
Status output.....	70	Timer room	88
Summer operation.....	34	Trend calculation	15
Supervision	29		
Button	20	U	
Change absence	68	User level	28
Delay	67		
Devices.....	17	V	
DHW temp.....	61	Valve position	43
Room temperature	45	Ventilation	
Symbols.....	24	Button	20
Supervisory functions.....	16	Contact stage	51
Switching groups		Contacts	53
Events	63	Control	14
Handheld control	64	Impact window switches	57
Names	84	Service.....	53
Time switch	64	Settings.....	48
Switching times	41	Stage	52
Symbols	3	Stage assignment.....	50
Central apartment unit.....	23	State	23
Synco	17	Time switch.....	51
System			
Central unit.....	11	W	
Components	17	Water detector	16
Functions.....	11	Function test	95
Operation.....	11	Weather	
Overview	11	Trend	15
		Trend symbol.....	24
T		Weather station	15
Temperature display	80	Window	
Names 1 – 3	85	Airing function.....	46
Temperature symbols	24	Contact	16, 96
Time	76	States	51
Time format	79	Supervision	69
Time switch		Winter operation	34
DHW.....	59	Wireless smoke detector	16
Release	65	WRI982	17, 18
Switching groups.....	64		
to simulate presence	65	Y	
Ventilation.....	51	Year.....	76

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