

SIEMENS



Synco™ living Mounting and commissioning



Edition 1.0
QAX9x3 Series A
CE1C2740en
13.12.2010

Building Technologies

Congratulations ...

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

The present document describes how to mount and commission the central apartment unit and the other system components.

First, please familiarize yourself with the operating philosophy of the central apartment unit. Operation itself is covered by the operating instructions (CE1B2740en).

Symbols used

The symbols used on the central apartment unit are explained in Section "Display symbols" in the operating instructions. 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.

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 that can be changed to meet user- or plant-specific requirements.

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Safety notes

Product liability



- Use these products only in building services plant and only for the applications described.
- Comply with all local safety 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.

Mounting and installation

Mount the central apartment unit

Mounting rules

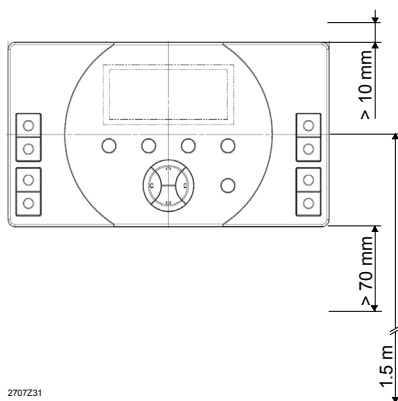
- The central apartment unit is designed in compliance with safety class II and must be mounted accordingly.
- Power may be applied to the unit only when completely mounted. Otherwise, there is a risk of electric shock by the connection terminals.
- Do not expose the unit to dripping water.
- Adhere to the permissible ambient conditions as stated in the technical data (see data sheets N2740en (QAX913) or N2741en (QAX903)).
- Sufficient space must be provided for fitting/removing the unit cover and for connecting the service tool (>70 mm below and >10 mm above the unit).

Mounting location

The central apartment unit consists of electronics section and base.

The base is designed for wall mounting (on an interior wall of the apartment).

We recommend mounting the unit in an easily accessible space (e.g. in the living room or the lobby). For convenient operation, the recommended mounting height is 1.5 m above the floor.



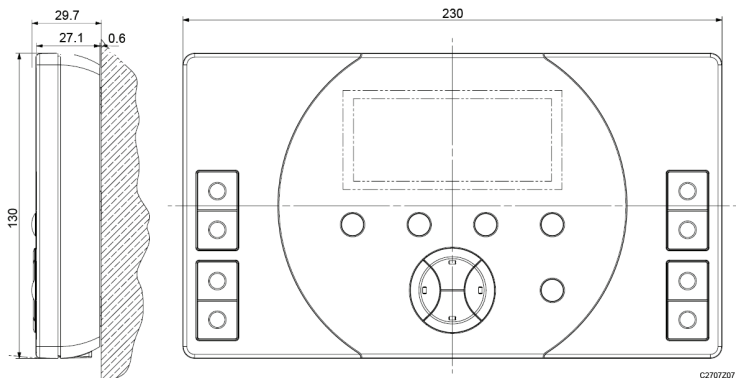
The central apartment unit communicates with most system components via radio. To ensure optimum radio coverage, the following points should be observed:

- The distance to devices with electromagnetic emissions, such as wireless telephones, TV sets, PCs, microwave appliances, etc., should be at least 1 m.
- Larger items made of steel or construction elements with metal meshes (e.g. special glass or concrete), or metal foils in thermal insulation materials, mirrors or metal-coated heat absorbing glass, can have an impact on the range.
- The typical range between transmitter and receiver in residential buildings is 30 m, or across 2 floors, or 2 concrete ceilings. But depending on the type

of house or building and the materials used, the effective range can be considerably greater or smaller.

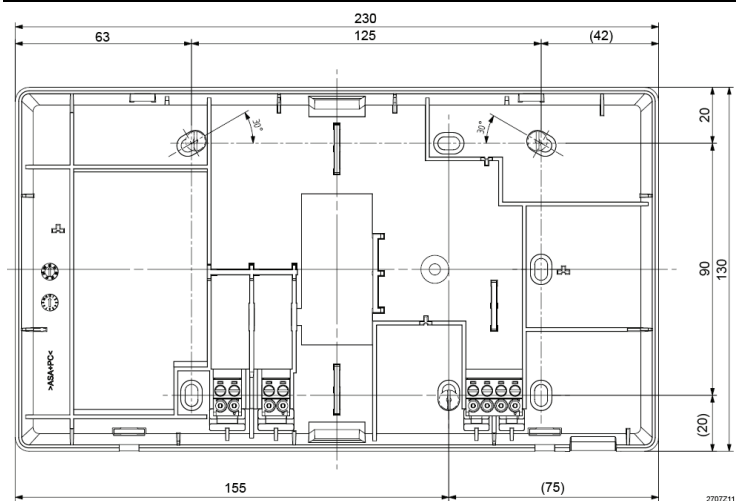
If greater distances are to be covered, RF repeaters should be used.

Central apartment unit QAX913 dimensions



Dimensions in mm

Dimensions of the base

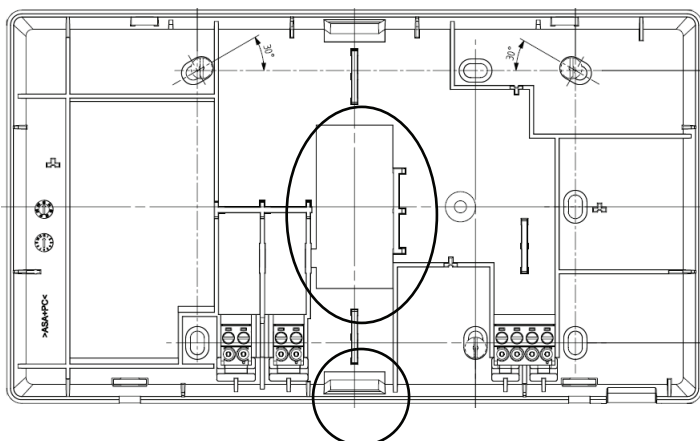


Dimensions in mm

Mounting procedure

Mounting method / knockout holes

The base of the central apartment unit can be mounted directly on the wall or on a recessed conduit box. It has an opening at the rear and 2 knockout holes (one at the top and one at the bottom). If required, the hole(s) must be knocked out before securing the base to the wall.

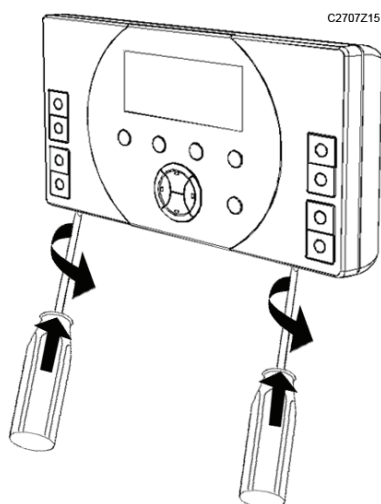


Holes

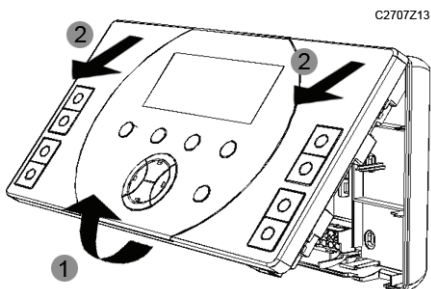
Secure the base to the wall with at least 3 screws. To determine the positions of the holes in the wall, hold the base horizontally against the wall and mark the required positions.

Remove the electronics section from the base

Insert a screwdriver (size 3) in the first and then in the second slot at the bottom of the unit, slightly push it and then turn to unlock.

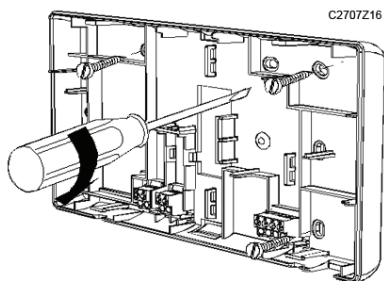


Swing the electronics section 45° upward and pull it towards you to remove it.



Fit the base

Secure the base to the wall using at least 3 fixing screws.



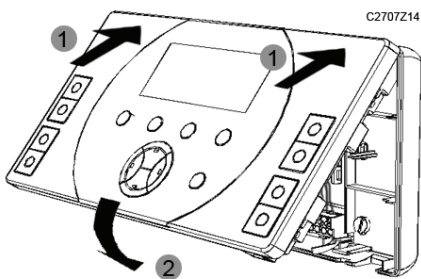
Wiring

Wiring is described under "Connection terminals/wiring" (see page 16).

Replace the electronics section

Insert the electronics section at an angle of about 45° in the base (left and right). Then, swing it downward until it engages.

The central apartment unit is now ready for commissioning.



Electrical installation of the central apartment unit

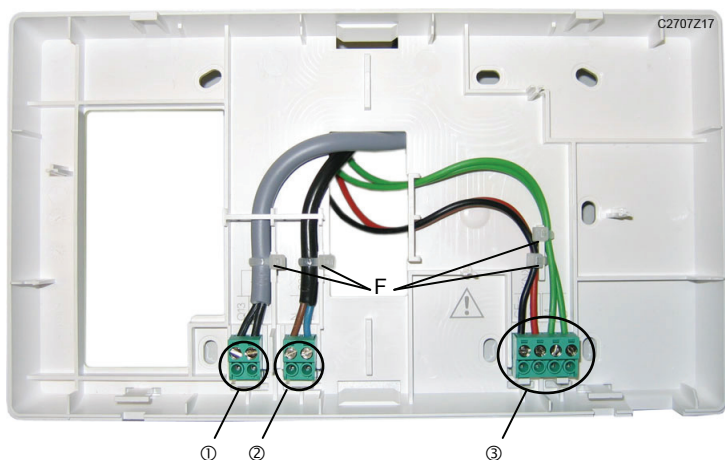
Installation rules

- Comply with all local safety regulations (installation, etc.).
- Only qualified staff may carry out electrical installations.
- Prior to installation, disconnect the central apartment unit from power!
- The connection terminals for low-voltage and mains voltage are arranged on different sides of the unit.
- When wiring the unit, satisfy requirements of safety class II.
- Provide cable strain relief.

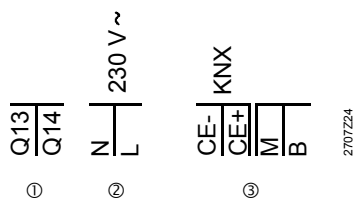
Connection terminals/wiring

The connection terminals can be accessed from the front of the base. Connect the low-voltage and mains voltage cables to the respective terminals on the base.

Run the cables under the straps provided and – after connection – ensure strain relief with the help of cable ties.



Detail view



Key

① Mains voltage or protective extra low-voltage

Q13, Q14 Potential-free, universal relay output

② Mains voltage

N Operating voltage, neutral conductor AC 230 V

L Operating voltage, live conductor AC 230 V

③ Protection by extra-low voltage

CE-, CE+ Connection data bus KNX TP1- and KNX TP1+

M Ground for universal input

B Universal input

F Strap for cable ties

Commissioning the system

Prerequisites

Prior to commissioning the system, check to ensure that the following prerequisites are met:

- You are familiar with the different operating elements and operating levels of the central apartment unit.
- All system components are correctly installed.
- Mains-powered components are connected to power.
- New batteries are ready to be inserted in the battery-powered devices *.
- Wired devices are connected to the KNX TP1 data bus.
- Meters are integrated correctly and connected to the consumption data interface WRI982.



* To extend battery life, insert the batteries only prior to connecting the device to the central apartment unit (for procedures, see the mounting instructions of the associated device).

Procedure

Commission the system in steps:

1. Commission the meters (if available):
2. Enter the basic configuration for the central apartment unit.
3. Enter extra configurations for the central apartment unit.
4. Switch on and connect the devices communicating via radio (KNX RF).
5. Test the wiring.
6. Configure the wired bus communication (KNX TP1).
7. Set the central apartment unit parameters.

Basic configuration of the central apartment unit

You must first enter the basic configuration at the central apartment unit to connect devices.

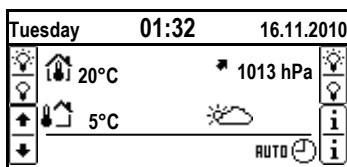
Switch on the central apartment unit

The central apartment unit must be switched on to enter the basic configuration.



The unit switches on as soon as power is supplied. A brief function test is carried out while the hourglass is displayed.

- i** When you first commission the central apartment unit, you must select the language, time of day, year, and date. The display then changes to the default picture. You can also select both language and time format during operation. See the operating instructions for a description.



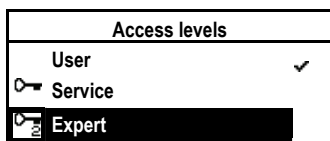
If the central apartment unit was operated previously (e.g. after a power failure), the default picture appears after the function test.

Change to the expert level

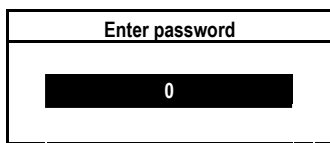
You must be at the expert level to enter the basic configuration.



Simultaneously press the **Esc** and **Menu/ok** button to go from the default picture to the expert level. The "Access levels" window opens.



Use the **arrow** buttons to select the expert level and confirm your selection by pressing the **Menu/ok** button.

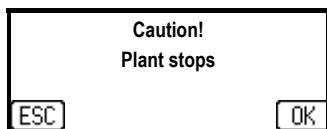


To change to the expert level, you must enter a password (factory setting = 9). Confirm the password by pressing the **Menu/ok** button.

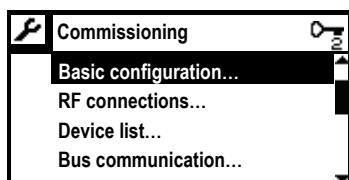
- i** If no button is pressed on the expert level for a certain period of time, the central apartment unit automatically returns to the user level.

Select the Commissioning menu

From the "Main menu" of the central apartment unit, select submenu "Commissioning" and confirm the selection by pressing the **Menu/ok** button.




You are notified that the plant is being stopped. Confirm by pressing the **Menu/ok** button to shut down the plant and go to the "Commissioning" menu.



You are now in the "Commissioning" menu – the plant has been stopped. It is switched on again only when you manually exit the "Commissioning" menu by pressing the **Esc** button (no timeout).

Configure rooms


Activate the required rooms by selecting a heating/cooling type other than "---" or by activating function "Supervision only".

 *Main menu > Commissioning > Basic configuration
> Rooms > Room X > Heating type:*


---	Inactive – all relevant room heating information and all operating lines are hidden. (Factory setting)
Radiator heating slow	Radiator heating in buildings with massive walls, heavy construction.
Radiator heating fast	Radiator heating in buildings with light walls, light construction.
Floor heating slow	Floor heating in buildings with massive walls, heavy construction and massive floor construction.
Floor heating fast	Floor heating in buildings with light walls, light construction and light floor construction.
Rad/floor user-defined	Control parameters can be manually set.
Air conditioner (S-mode)	For rooms with an air conditioner used for heating.



Usually, the standard heating types are enough. Customize settings only in plants with greatly differing control behavior (see page 99).


 *Main menu > Commissioning > Basic configuration
> Rooms > Room X > Cooling type:*

---	Inactive – all relevant room cooling information and operating lines are hidden. (Factory setting)
Release output	For rooms with externally controlled cooling triggered via a release output.
Air conditioner (S-mode)	For rooms with an air conditioner used for cooling.
Radiator/floor cooling	For rooms with radiators or floor heating used for cooling.

 *Main menu > Commissioning > Basic configuration
> Rooms > Room X > Supervision only:*

---	Inactive – all relevant room information and operating lines are hidden. (Factory setting)
Active	For rooms with no heating or cooling, but with window contacts or smoke detector to be supervised.

You can assign an unambiguous room name to every room of the apartment. The names can also be entered or changed after commissioning.

 *Main menu > Commissioning > Basic configuration
> Rooms > Room X > Room X:*

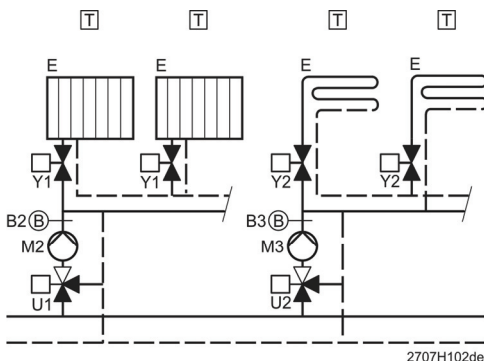


Predefined room names are provided for quick and easy entry of room names. You can adjust a predefined room name.

Configure room groups

Any number of rooms can be combined to form one room group. Two independent room groups can be formed.

The flow temperature can be controlled, a room group pump defined, and the return temperature limited for each room group.




U1	Mixing valve for room group 1 (radiators)
U2	Mixing valve for room group 2 (floor heating)
B2/B3	Flow sensors room groups 1 and 2
M2/M3	Room group pumps 1 and 2
T	Room unit or room temperature sensor
Y1	Radiator control actuator
Y2	Heating circuit valve (2-position)



If Synco Living controls all rooms with actuators, operating states without flow may exist in the precontroller. Use suitable hydraulic measures (e.g. overflow or bypass) to avoid this and prevent the precontroller during operation to oscillate without flow.


Room group name

You can assign a name to each room group. You can also enter or change the room group's name after commissioning.

 *Main menu > Commissioning > Basic configuration > Room groups > Room group X > Room group X:*

Function

Define the function needed for the room group.

 *Main menu > Commissioning > Basic configuration > Room groups > Room group X > Function:*

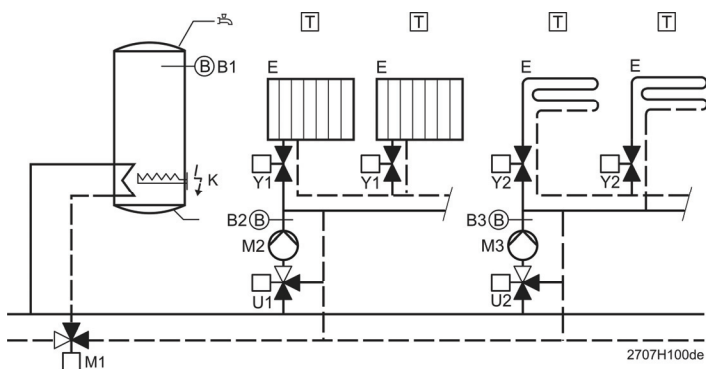
---	Inactive – room group not available.
No primary controller	Room group available without precontroller function.
With primary controller	Room group available with precontroller function.
Prim controller + return sensor	Room group with precontroller and additional return flow temperature sensor available for return flow temperature limitation.

	Factory setting
Room group 1	No primary controller
Room group 2	--- (Inactive)

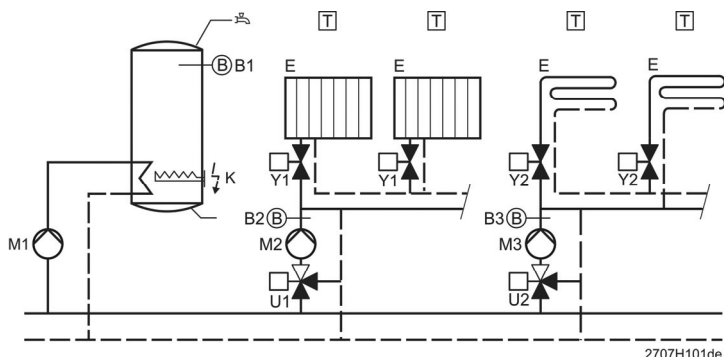
Room group pumps

The room group pump is commissioned when the relevant output terminal closes.

Room group pumps and DHW diverting valve:




Room group pumps and DHW charging pump:



- M1 DHW pump/diverting valve
- B1 DHW sensor
- K Electric immersion heater
- E Consumer (radiator or floor heating)
- T Room temperature sensor or room unit
- M2/M3 Room group pumps 1 and 2
- B2/B3 Flow sensors room groups 1 and 2
- U1 Mixing valve for room group 1 (radiators)
- U2 Mixing valve for room group 2 (floor heating)
- T Room unit or room temperature sensor
- Y1 Radiator control actuator
- Y2 Heating circuit valve (2-position)

Specify if room group pumps are installed and how they are controlled.

 *Main menu > Commissioning > Basic configuration > Room groups > Room group X > Room group pump:*

---	Inactive --- no room group pump installed (factory setting).
Via RF	Room group pump connected to relay output Qx of a RRV91... heating circuit controller or RRV934 multi-controller.
Q1 (local)	Room group pump connected to relay output Q1 of the central apartment unit.

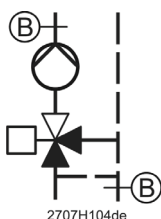
Return temperature limitation

The return temperature of both room groups can be limited: Minimum or maximum limitation.



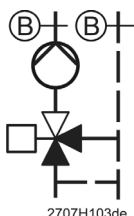
A return sensor is needed for return temperature limitation. Set the room group's "function" to "Primary controller + return sensor".

Minimum limitation of the return temperature



Minimum limitation of the return temperature (maintained boiler return temperature) ensures protection of the boiler by preventing the return temperature from falling below a certain level. Minimum limitation is accomplished by reducing the flow temperature setpoint. As a result, a smaller volume of boiler water is supplied to the room group and more to the return via the bypass.

Maximum limitation of the return temperature



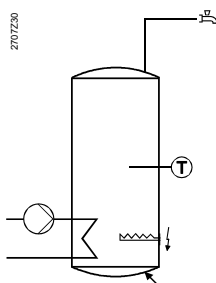
Maximum limitation of the return temperature prevents the return temperature from exceeding a certain level, thus ensuring better efficiencies of boilers and heat pumps.

Maximum limitation is accomplished by supplying a smaller volume of boiler water to the room group (valve position).

🔑 *Main menu > Commissioning > Basic configuration
> Room groups > Room group X > Return temp limit:*

---	Inactive – no return temperature limitation (factory setting).
Minimum	Minimum limitation of the return temperature.
Maximum	Maximum limitation of the return temperature.

Configure domestic hot water (QAX913 only)



If you want the central apartment unit to directly control DHW charging, activate the required DHW plant components (DHW sensor, pump/valve, electric immersion heater).

If you want KNX TP1 to remotely control external DHW heating, activate "Operation external DHW".



If there is a request for DHW, the room group pumps are not put into operation. For this reason, DHW must from a hydraulics point of view always be installed upstream of the room groups.

The type of DHW heating depends on the installed DHW components according to the following table:

DHW sensor	DHW pump/valve	Electric immersion	Resulting type of DHW heating
---	---	---	Inactive: No local DHW heating.
Installed	Installed	---	Controlled storage tank charging with DHW pump/valve only.
Installed	Installed	Installed	Controlled alternating storage tank charging: DHW pump/valve in winter, electric immersion heater in summer.
Installed	---	Installed	Controlled storage tank charging with electric immersion heater only.
---	---	Installed	Uncontrolled storage tank charging with electric immersion heater only. Set DHW setpoint on the electric immersion heater.
---	Installed	---	Configuration error: DHW sensor missing.
Installed	---	---	Configuration makes no sense; storage tank charging not possible.



External DHW heating can be operated remotely only if there is no local DHW heating.

DHW sensor

Specify if a DHW temperature sensor is used and from where the central apartment unit receives the actual value.

Main menu > Commissioning > Basic configuration > DHW > DHW sensor:

---	Inactive – no DWH sensor available (factory setting).
Via RF	DHW sensor connected to universal input B of an RRV91... heating circuit controller or universal input Xx of an RRV934 multi-controller.
B (local)	DHW sensor connected to universal input B of the central apartment unit.

DHW charging pump/diverting valve


Specify if a DHW charging pump or DHW diverting valve is used and how it is controlled.

Main menu > Commissioning > Basic configuration > DHW > DHW pump/valve:

---	Inactive – no DHW charging pump/diverting valve installed (factory setting).
Via RF	DHW charging pump/diverting valve connected to relay output Qx of an RRV91... heating circuit controller or RRV934 multi-controller.
Q1 (local)	DHW charging pump/diverting valve connected to relay output Q1 of the central apartment unit.

Electric immersion heater


Specify if an electric immersion heater is used and how it is controlled.

 *Main menu > Commissioning > Basic configuration > DHW > EI immersion heater:*

---	Inactive – no electric immersion heater available (factory setting).
Via RF	Electric immersion heater connected to relay output Qx of an RRV91... heating circuit controller or RRV934 multi-controller.
Q1 (local)	Electric immersion heater connected to relay output Q1 of the central apartment unit.

Operation of external DHW heating

You can use the central apartment unit for remote control of DHW heating of another KNX TP1 device.

 *Main menu > Commissioning > Basic configuration > DHW > Op external DHW:*

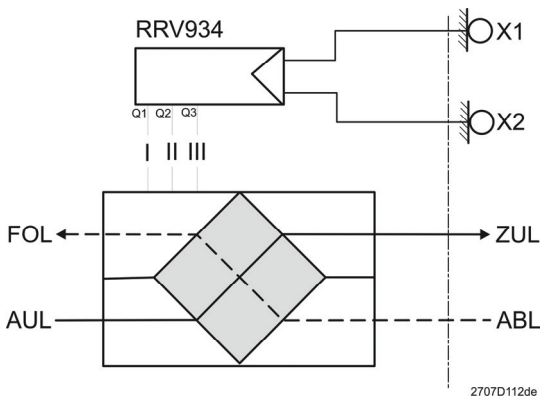
---	Inactive – no remote operation of external DHW heating (factory setting).
Yes, without time switch	Remote control of DHW operating mode and forced charging of DHW.
Yes, with time switch	Remote control of DHW operating mode and forced charging of DHW. In addition, the DHW time switch of the central apartment unit can override the DHW time switch of external DHW heating (master/slave).



Enter the corresponding settings (e.g. DHW zone and time switch slave) on the unit with connected DHW heating (e.g. controller for heat generation). For more detailed information, see the technical documentation of the respective product.

Configure ventilation


The central apartment unit facilitates control of apartment ventilation via the multi-controller. For the other settings, see page 50 as well as the operating instructions in section "Ventilation".



- RRV934 Multi-controller
- Q1 – Q3 3-stage step switch of ventilation plant
- X1 Indoor air quality sensor
- X2 Humidity sensor
- ZUL Supply air
- ABL Extract air
- AUL Outside air
- FOL Exhaust air

Function

Tell the central apartment unit about the number of stages (speeds) of the fan used for ventilation.

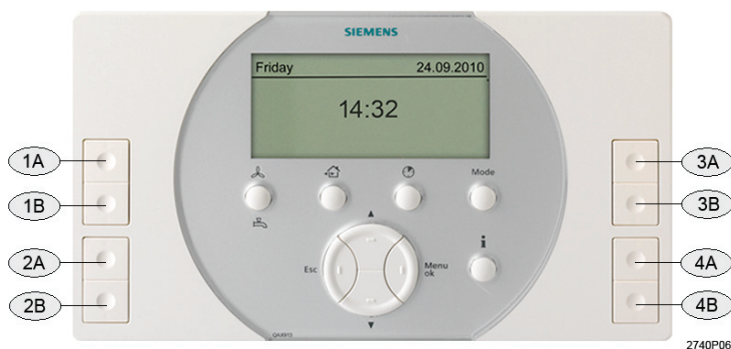
 *Main menu > Commissioning > Basic configuration > Ventilation > Function:*

---	Inactive – no ventilation (factory setting).
1-stage	1-stage ventilation.
2-stage	2-stage ventilation.
3-stage	3-stage ventilation.

Configure switching groups (QAX913 only)

Lighting and blinds control as well as scenes and info pages are operated via switching groups.


8 switching groups are available. Switching groups 1 – 4 can also be operated via **softkey** pairs 1 – 4 of the QAX913 central apartment unit. Switching groups 5 – 8 are always operated via the relevant operating lines.




- 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

To be able to assign devices for lighting and blinds control, scenes or info pages to switching groups, the latter must be given names and be activated.

Assign an unambiguous name to a switching group.


-  **2** *Main menu > Commissioning > Basic configuration > Switching groups > Switching group X > Switching group X:*


A switching group is activated as soon as a function other than "---" is selected.

-  **2** *Main menu > Commissioning > Basic configuration > Switching groups > Switching group X > Function:*

---	Inactive – all relevant switching group information and operating lines are hidden.
Switch	Control of switching and/or dimming devices, switching group relays plus RF adapter plugs KRF96...
Dim	Control of dimming devices and RF adapter plugs KRF961.
Blind	Control of blinds devices.
Scene	Control of scene-compatible switching, dimming and blinds devices plus RF adapter plugs KRF96...
Info	For direct selection of info pages via the softkeys; only available with switching groups 1 – 4.

	Factory setting
Switching group 1 - 4	Info
Switching group 5 - 8	--- (Inactive)

 Prior to changing an already defined switching group function, all RF devices connected to the switching group must be disconnected (see page 86). Disconnect and deactivate any connected switching group relay before switching group function "Switch" can be changed.

 Per default, info pages 1 – 8 are assigned to the 4 pairs of softkeys. Changes to info page numbers are possible at the user level. (See operating instructions via info page direct selection).

The central apartment unit transmits the switching group commands to the switching group actors – via RF and the wired bus. The output signal can be forwarded to the following types of devices:


Switching group function	Supported types of devices/suppliers
Switch, Dim	Switching and dimming devices: <ul style="list-style-type: none"> • RF adapter plugs KRF96... • Siemens: GAMMA wave • Hager: tebis radio • Any brand: S-mode KNX TP1 *
Blind	Blinds devices: <ul style="list-style-type: none"> • Siemens: GAMMA wave • Hager: tebis radio • Any brand: S-mode KNX TP1 *
Scene	Scene-compatible switching and dimming devices: <ul style="list-style-type: none"> • RF adapter plugs KRF96... • Siemens: GAMMA wave • Hager: tebis radio • Any brand: S-mode KNX TP1 *

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Switching group relay

Switching groups with selected "Switch" function can be assigned a relay output.

Specify if a switching group relay is used and how it is controlled.


 *Main menu > Commissioning > Basic configuration > Switching groups > Switching group X > Relay output:*

---	Inactive – no switching group relay required (factory setting).
Via RF	Relay output Qx of an RRV91... heating circuit controller or RRV934 multi-controller used as a switching group relay.
Q1 (local)	Relay output Q1 of the central apartment unit used as a switching group relay.


Configure doors (QAX913 only)

The QAX913 central apartment unit can monitor up to two doors and display their status on the info page.

A name can be assigned to each door.

 *Main menu > Commissioning > Basic configuration > Doors > Door X > Door X:*

Activate a door by setting the function to "Active":

 *Main menu > Commissioning > Basic configuration > Doors > Door X > Function:*

---	Inactive – Door contact not needed (factory setting).
Active	Door to be monitored via door contact.


Configure meter

The central apartment unit can display consumption data from various meter types and provide them for readout.

Synergry

When partially migrating a Synergry plant (replace WRV8x or WRI80), the meter data can be sent to the Synergry OZW30 unit via the Synergry building bus.

Activate communication with the Synergry unit by setting Synergry to "Active":

 *Main menu > Commissioning > Basic configuration > Meter > Synergry:*

---	Inactive – no Synergry unit available (factory setting).
Active	Communication with Synergry unit active.

Allocation

The following allocation types are available for each meter:

Apartment	The consumption values from the meter are billed to the apartment user. (Factory setting)
General	General meter whose consumption data are acquired via this central apartment unit. Consumption data from general meters are visible only at the expert level and are not directly billed to the apartment user.

Source


Specify the source for the meter data for the central apartment unit:


---	Inactive – all relevant meter information and operating lines are hidden. (Factory setting)
Pulse input WRI9xx	Meters with pulse output are connected via a pulse input of a consumption data interface WRI982.
M-Bus WRI9xx	Meters with M-bus interface are connected via the M-bus input of consumption data interface WRI982.

Configure heat/cooling energy meter


You can record up to 4 heat/cooling energy meters with the central apartment unit. The meter may be a heat meter, a cooling energy meter, or a combined heat/cooling energy meter.

An allocation type and name is assigned to each heat/cooling energy meter.


 *Main menu > Commissioning > Basic configuration > Meter > Heat/cooling energy > Heat/cool X > Heat/cool X:*

 *Main menu > Commissioning > Basic configuration > Meter > Heat/cooling energy > Heat/cool X > Allocation:*

A heat/cooling energy meter is activated as soon as the source is set to unequal "----".

 *Main menu > Commissioning > Basic configuration > Meter > Heat/cooling energy > Heat/cool X > Source:*

Enter the desired metering medium.

 *Main menu > Commissioning > Basic configuration > Meter > Heat/cooling energy > Heat/cool X > Metering medium:*

Heat (inlet)	Heat meter installed in flow.
Heat (outlet)	Heat meter installed in return. (Factory setting)
Cooling energy (inlet)	Cooling energy meter installed in flow.
Cooling energy (outlet)	Cooling energy meter installed in return.
Heat and cooling energy	Combine heat/cooling energy meter. This setting makes sense only if an M-bus capable meter is used.





When using M-bus meters, it is important that the set metering medium agrees with the metering medium sent by the M-bus meter. Otherwise, the central apartment unit displays error message "Wrong metering medium".

Configure hot water meter


You can record up to 4 hot water meters with the central apartment unit.

An allocation type and name is assigned to each hot water meter.

 *Main menu > Commissioning > Basic configuration > Meter > Hot water > Hot water X > Hot water X:*

 *Main menu > Commissioning > Basic configuration > Meter > Hot water > Hot water X > Allocation:*


A hot water meter is activated as soon as the source is set to unequal "----".


 *Main menu > Commissioning > Basic configuration > Meter > Hot water > Hot water X > Source:*

Configure cold water meter


You can record up to 4 cold water meters with the central apartment unit.

An allocation type and name is assigned to each cold water meter.

 *Main menu > Commissioning > Basic configuration > Meter > Cold water > Cold water X > Cold water X:*

 *Main menu > Commissioning > Basic configuration > Meter > Cold water > Cold water X > Allocation:*


A cold water meter is activated as soon as the source is set to unequal "----".


 *Main menu > Commissioning > Basic configuration > Meter > Cold water > Cold water X > Source:*

Configure electricity meter


You can record up to 3 electricity meters with the central apartment unit.

An allocation type and name is assigned to each electricity meter.

 *Main menu > Commissioning > Basic configuration
> Meter > Electricity > Electricity X > Electricity X:*

 *Main menu > Commissioning > Basic configuration
> Meter > Electricity > Electricity X > Allocation:*


An electricity meter is activated as soon as the source is set to unequal "---".


 *Main menu > Commissioning > Basic configuration
> Meter > Electricity > Electricity X > Source:*

Configure gas meter


You can record up to 3 gas meters with the central apartment unit.

An allocation type and name is assigned to each gas meter.

 *Main menu > Commissioning > Basic configuration
> Meter > Gas > Gas X > Gas X:*

 *Main menu > Commissioning > Basic configuration
> Meter > Gas > Gas X > Allocation:*


A gas meter is activated as soon as the source is set to unequal "---".


 *Main menu > Commissioning > Basic configuration
> Meter > Gas > Gas X > Source:*

Configure other meters


You can record up to 2 other meters (e.g. oil, steam) with the central apartment unit.

An allocation type and name is assigned to each meter.


 *Main menu > Commissioning > Basic configuration
> Meter > Other > Other X > Other X:*

 *Main menu > Commissioning > Basic configuration
> Meter > Other > Other X > Allocation:*

A meter is activated as soon as the source is set to unequal "---".

 *Main menu > Commissioning > Basic configuration
> Meter > Other > Other X > Source:*

Enter the desired metering medium.

 *Main menu > Commissioning > Basic configuration
> Meter > Other > Other X > Metering medium:*

Other	Other medium if no specific medium applies. (Factory setting)
Oil	This meter is used for oil consumption.
Steam	This meter is used for steam consumption. (e.g. in district heating).




When using M-bus meters, it is important that the set metering medium agrees with the metering medium sent by the M-bus meter. Otherwise, the central apartment unit displays error message "Wrong metering medium".


Configure light state display (QAX913 only)

The QAX913 central apartment unit is capable of indicating the light status of 4 selected lamps.

Each of the 4 lamps can be assigned a name which appears on the info page.

 *Main menu > Commissioning > Basic configuration
> Light state > Light X > Light X:*

Activate one of the lamps by setting the function to "Active":

 *Main menu > Commissioning > Basic configuration
> Light state > Light X > Function:*

---	Inactive – no light state display required. (Factory setting)
Active	Lamp for light state display active:



Info page "Light state" is displayed only if at least one of the 4 lamps is activated.



To indicate the light status, switch or dim actuators of any manufacture can be used which, via S-Mode KNX TP1 *, communicate with the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Temperature display (QAX913 only)

The QAX913 central apartment unit can display 3 freely selectable temperatures. The following types of temperature sensors can be used:

- Room temperature sensors QAA910 via RF.
- Receive temperature as S-mode object via KNX TP1 *.



The 3 temperatures displayed cannot be used for control purposes (display only).

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Activate the required temperatures and enter the names to be used for their display.

Main menu > Commissioning > Basic configuration > Temperature display > Temperature X > Temperature X:

Main menu > Commissioning > Basic configuration > Temperature display > Temperature X > Function:

Inactive – no temperature display required (factory setting).

Active

Temperature display active.

Display fault status message bus

Specify if only the controller-internal faults lead to fault status messages on the central apartment unit or, in addition, the faults received via bus as well. This setting also impacts any fault output that may be activated.

Main menu > Commissioning > Basic configuration > Faults > Display fault bus:

No

Only the controller-internal faults result in fault status messages (factory setting).

Yes


Both controller-internal faults and faults received via bus result in fault status messages.

Configure fault input/output (QAX913 only)

Fault inputs 1 – 8

The fault contact of an external component can be connected to an appropriately defined fault input. Typical components are water detectors (e.g. defective water line), an alarm output of an intrusion alarm system, or a thermal switch.

Activate a fault input by assigning the corresponding fault type.

 *Main menu > Commissioning > Basic configuration > Faults > Fault input X:*

---	Inactive – Fault input not required (factory setting).
Water leakage	Fault input signals a water leak.
Gas leakage	Fault input signals a gas leak.
CO alarm	Fault input signals a CO alarm.
Panic	Fault input signals a panic alarm.
Emergency	Fault input signals an emergency alarm.
Fault 1 – 3	User-defined fault 1 – 3.

Fault text, fault priority, fault release, fault status message delay and the normal position can be separately set for faults 1 – 3. For a description of the relevant settings, see the Operating Instructions, section “Faults”.




Only a fault message delay can be set for fault types water leak, gas leak, and CO alarm.
Faults Panic and Emergency do not require settings.

Fault outputs 1 and 2

If system faults occur, they can be forwarded to an external component by closing a fault output. See the related section on page 40.

You can select the fault priority and origin of fault for the relay to close. For a description of these settings, see the Operating Instructions, section “Faults”.

Specify if a fault output is used and how it should be controlled.

 *Main menu > Commissioning > Basic configuration > Faults > Fault output X:*


---	Inactive – Fault output not needed (factory setting).
Via RF	Relay output Qx of an RRV91... heating circuit controller or RRV934 multi-controller used as a fault output.
Q1 (local)	Relay output Q1 of the central apartment unit used as a fault output.

Supervision (QAX913 only)

Supervision contact

Closing the related input terminal (e.g. via key switch) switches over the supervision state from "Inactive" to "All monitored" or from "All monitored" to "Inactive".

Specify if an external supervision contact is used and from where the central apartment unit receives its status.

 *Main menu > Commissioning > Basic configuration > Supervision > Supervision contact:*


---	Inactive – no input terminal available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">• Supervision contact connected to universal input B of an RRV91... heating circuit controller or universal input Xx of an RRV934 multi-controller.• Supervision signal received through S-Mode object via KNX TP1 *
B (local)	Supervision contact connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Supervision state

This output shows the status of supervision (e.g. on key switch). The relay output is closed when supervision state corresponds to "Partly monitored" or "All monitored".

Specify if a relay should be used to issue the supervision state and how it is controlled.

 *Main menu > Commissioning > Basic configuration > Supervision > Supervision state:*


---	Inactive – no supervision display (factory setting).
Via RF/S-mode	Supervision state issued via: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• S-mode object on KNX TP1 *.
Q1 (local)	Supervision state issued via relay output Q1 of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Water shutoff valve

Relay output for water shutoff valve is switched over from Off to On when the corresponding water detector detects water.

Specify if a water shutoff valve is available and how it is controlled.

 *Main menu > Commissioning > Basic configuration > Supervision > Water shutoff valve:*


---	Inactive – water shutoff valve output not needed (factory setting).
Via RF	Water shutoff valve connected to: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• RF adapter plug KRF960.• S-mode object on KNX TP1 *.
Q1 (local)	Water shutoff valve connected to relay output Q1 of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Gas shutoff valve

Relay output for gas shutoff valve is switched over from Off to On when the corresponding gas detector detects gas.

Specify if a gas shutoff valve is available and how it is controlled.

 *Main menu > Commissioning > Basic configuration > Supervision > Gas shutoff valve:*

---	Inactive – gas shutoff valve output not needed (factory setting).
Via RF	Gas shutoff valve connected to: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• RF adapter plug KRF960.• S-mode object on KNX TP1 *.
Q1 (local)	Gas shutoff valve connected to relay output Q1 of the central apartment unit.


* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Status output 1 – 4

When the appropriate output terminal closes, the central apartment unit indicates the occurrence of events via an external component (e.g. signal lamp or horn).

The events (smoke, window/door supervision, water leak, gas leak, CO alarm, panic, emergency, fault 1 - 3) leading to closure of the status output can be defined via parameter "Events status output". For a description of this parameter, see the Operating Instructions, section "Supervision".

Specify if a status output is used and how it is controlled.


 *Main menu > Commissioning > Basic configuration > Supervision > Status output X:*


---	Inactive – status output not needed (factory setting).
Via RF	Deliver state of status output via: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• RF adapter plug KRF960.• S-mode object on KNX TP1 *.
Q1 (local)	Relay output Q1 of the central apartment unit used as a status output.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Handheld control (QAX913 only)

Activate the required handheld control and enter the names to be used for their display.

 *Main menu > Commissioning > Basic configuration > Handheld control > Handheld control X > Handheld control X:*

 *Main menu > Commissioning > Basic configuration > Handheld control > Handheld control X > Function:*

---	Inactive – handheld control not needed (factory setting).
Active	Handheld control available.

Configure inputs

By closing a contact at the input terminal, the respective input function can be triggered.


Activate the respective input function by stating from where the central apartment unit receives the signal of the input terminal (Via RF/S-mode, B (local)).

Operating mode contact

When the respective input terminal closes, the current operating mode for the apartment and for DHW changes.

The desired operating modes can be defined when closing the contact using parameters "Apartment operating mode contact" and "DHW operating mode contact". (See section "Service level" in the operating instructions.)

Specify if an external operating mode contact is used and from where the central apartment unit receives its status.


 *Main menu > Commissioning > Basic configuration
> Inputs > Optg mode contact:*

---	Inactive – no input terminal available (factory setting).
Via RF	Operating mode contact connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller.
B (local)	Operating mode contact connected to universal input B of the central apartment unit.

Summer operation

When the contact closes, the heating switches to summer operation and when the contact opens, it switches to winter operation.

Specify if an external summer operation contact is used and from where the central apartment unit receives its status.

 *Main menu > Commissioning > Basic configuration
> Inputs > Summer operation:*


---	Inactive – summer operation contact not installed (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">• Summer operation contact connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller.• Summer operating state of an S-mode object is received via KNX TP1 *
B (local)	Summer operation contact connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Cooling enable

Cooling is enabled by closing the contact, or disabled when the contact opens.

Specify if an external cooling enable contact is used and from where the central apartment unit receives its status.

 *Main menu > Commissioning > Basic configuration
> Inputs > Cooling enable:*

---	Inactive – cooling enable contact not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">• Cooling enable contact connected to universal input B of an RRV91... heating circuit controller or universal input Xx of an RRV934 multi-controller.• Cooling enable signal received through S-mode object via KNX TP1 *.
B (local)	Cooling enable contact connected to universal input B of the central apartment unit.


* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Heating/cooling changeover

When the respective input terminal closes its contact, the system switches from heating mode to cooling mode. When the contact opens, changeover from cooling mode to heating mode takes place.

For additional settings, see page 49 ff.

Specify if an external H/C changeover contact is used and from where the central apartment unit receives its status.

 *Main menu > Commissioning > Basic configuration
> Inputs > H/C changeover:*

---	Inactive – H/C changeover contact not installed (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">• H/C changeover contact connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller.• H/C changeover signal of an S-mode object is received via KNX TP1 *.
B (local)	H/C changeover contact connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).




For the cooling function to become active when the input terminal closes, parameter "2-pipe heating/cooling system" must be activated (setting "Yes", see page 49).

Dew point

Radiator/floor cooling is disabled by closing the contact of an external dew point monitor, or enabled when the contact opens.

The dew point monitor closes the room group mixing valve if a room group precontroller is installed. If only a room group pump is installed, the dew point monitor shuts off the room group pump. If there is neither a precontroller nor a room group pump, the dew point monitor closes the room valves. The dew point monitor always acts on both room groups.

Specify if an external dew point monitor is used and from where the central apartment unit receives its status.

 *Main menu > Commissioning > Basic configuration
> Inputs > Dew point:*

---	Inactive – dew point monitor not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">• Dew point monitor connected to universal input B of an RRV91... heating circuit controller or universal input Xx of an RRV934 multi-controller.• Dew point monitor signal received through S-mode object via KNX TP1 *
B (local)	Dew point monitor connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Absence


“Absence” is triggered when the respective input terminal closes.

The room temperature setpoints are switched to the respective absence setpoint (per room) and any activated time program for presence simulation starts via the switching groups.

DHW heating, ventilation and cooling also operate according to the operating mode selected for the period of absence.

See the operating instructions for a detailed description of “Absence”.

Specify if an external absence contact is used and from where the central apartment unit receives its status.

 *Main menu > Commissioning > Basic configuration
> Inputs > Absence:*

---	Inactive – absence contact not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none"> • Absence contact connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller. • Absence signal of an S-mode object is received via KNX TP1 *.
B (local)	Absence contact connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Twilight (QAX913 only)

When the respective input terminal closes (e.g. initiated by a twilight switch), the twilight state changes from Bright to Dark, impacting the switching groups in accordance with the settings (e.g. for lighting and blinds control).



For a description of the settings required for the switching group responses, see the Operating Instructions, section "Trigger switching groups via an event".

Specify if an external twilight switch is used and from where the central apartment unit receives its status.

Main menu > Commissioning > Basic configuration > Inputs > Twilight:

---	Inactive – twilight switch not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none"> • Twilight switch connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller. • Twilight switch connected to external contact input of a door/window contact wave AP 260. • Twilight signal received through S-mode object via KNX TP1 *.
B (local)	Twilight switch connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Configure outputs


Outputs can transmit signals to external components.

Activate the required output function by defining how the central apartment unit delivers the signal (via RF, Q1 (local)).

Heat demand relay

When the appropriately defined output terminal closes, a heat demand signal is transmitted to the heat source.

Specify if a heat demand relay is used and how it is controlled.

 *Main menu > Commissioning > Basic configuration
> Outputs > Heat demand relay:*


---	Inactive – heat demand relay not needed (factory setting).
Via RF	Relay output Qx of an RRV91... heating circuit controller or RRV934 multi-controller used as a heat demand relay.
Q1 (local)	Relay output Q1 of the central apartment unit used as a heat demand relay.

Heat demand DC 0..10 V

The current heat demand can be transmitted to the heat source in the form of a DC 0..10 V signal.

The temperature values corresponding to DC 0 V and 10 V and the threshold value for a valid heat request can be set (see page 119).

Specify if the DC 0..10 V heat demand output is used and how it is controlled.


 *Main menu > Commissioning > Basic configuration
> Outputs > Heat dem DC 0...10 V:*

---	Inactive – DC 0..10 V heat demand output not required (factory setting).
Via RF	Universal output U of the RRV912... heating circuit controller or the RRV934 multi-controller used as a DC 0..10 V heat demand output.

Refrigeration demand relay

When the appropriately defined output terminal closes, a refrigeration demand signal is transmitted to the refrigeration source.

Specify if a refrigeration demand relay is used and how it is controlled.

 *Main menu > Commissioning > Basic configuration
> Outputs > Refrig demand relay:*


---	Inactive – refrigeration demand relay not needed (factory setting).
Via RF	Relay output Qx of an RRV91... heating circuit controller or RRV934 multi-controller used as a refrigeration demand relay.
Q1 (local)	Relay output Q1 of the central apartment unit used as a refrigeration demand relay.

Refrigeration demand DC 0..10 V

The current refrigeration demand can be transmitted to the refrigeration source in the form of a DC 0..10 V signal.

The temperature values corresponding to DC 0 V and 10 V and the threshold value for a valid refrigeration request can be set (see page 120).

Specify if the DC 0..10 V refrigeration demand output is used and how it is controlled.


 *Main menu > Commissioning > Basic configuration > Outputs > Refrig dem DC 0..10V:*

---	Inactive – DC 0..10 V refrigeration demand output not required (factory setting).
Via RF	Universal output U of the RRV912... heating circuit controller or the RRV934 multi-controller used as a DC 0..10 V refrigeration demand output.

Summer operation

When the respective output terminal closes, changeover of the central apartment unit to summer operation can be communicated to external components / controllers.

Specify if a summer operation relay is used and how it is controlled.

 *Main menu > Commissioning > Basic configuration > Outputs > Summer operation:*


---	Inactive – summer operation relay not needed (factory setting).
Via RF/S-mode	Summer operating state delivered via: <ul style="list-style-type: none"> • Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller. • S-mode object on KNX TP1 *.
Q1 (local)	Relay output Q1 of the central apartment unit used as a summer operation relay.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Cooling enable

When the respective output terminal closes, the cooling enable created by the central apartment unit can be communicated to external components/controllers.

Specify if a cooling enable relay is used and how it is controlled.

 *Main menu > Commissioning > Basic configuration
> Outputs > Cooling enable:*


	Inactive – cooling enable relay not needed (factory setting).
Via RF/S-mode	Cooling enable state issued via: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• S-mode object on KNX TP1 *.
Q1 (local)	Use relay Q1 of the central apartment unit as a cooling enable relay.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Window/door state

If at least one window/door is open, the respective output terminal is closed. As a result, an open window/door can be shown via an additional external component.

Specify if a window/door state output is used and how it is controlled.

 *Main menu > Commissioning > Basic configuration
> Outputs > Window/door state:*


---	Inactive – window/door state not needed (factory setting).
Via RF/S-mode	Window/door state delivered via: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• S-mode object on KNX TP1 *.
Q1 (local)	Relay output Q1 of the central apartment unit used as a window/door state.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Exhaust hood

To release the exhaust hood, at least one of the windows in the selected rooms must be open, thus making certain that operation of the exhaust hood does not produce underpressure in the room.

Specify if a relay should be used to release the exhaust hood and how it is controlled.

 *Main menu > Commissioning > Basic configuration
> Outputs > Exhaust hood:*

---	Inactive – release of exhaust hood not required (factory setting).
Via RF/S-mode	Release of exhaust hood via: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• S-mode object on KNX TP1 *.
Q1 (local)	Use relay output Q1 of the central apartment unit for release of the exhaust hood.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Configure RF repeater

Activate the required number of RF repeaters. For that, select every RF repeater required (1...3) and change the setting from “---” to “Active”.


 *Main menu > Commissioning > Basic configuration
> RF repeater > Repeater X:*

---	Inactive – RF repeater not required (factory setting).
Active	RF repeater available.

Configure info pages

Windows/doors


Specify if you want to display open doors/windows (info page).

 *Main menu > Commissioning > Basic configuration
> Info pages > Windows/doors:*

No	Do not show info page (factory setting).
Yes	Show info page.

Business card


Specify if the business card (info page) should be displayed.

 *Main menu > Commissioning > Basic configuration
> Info pages > Business card:*

No	Do not show info page (factory setting).
Yes	Show info page.

Progression of outside temperature


Specify if the progression of the outside temperature (info page) should be displayed.

 *Main menu > Commissioning > Basic configuration
> Info pages > Progress OT:*

No	Do not show info page (factory setting).
Yes	Show info page.

Progression of air pressure


Specify if progression of the atmospheric pressure (info page) should be displayed.

 *Main menu > Commissioning > Basic configuration
> Info pages > Progress air press:*

No	Do not show info page (factory setting).
Yes	Show info page.

Consumption data

Specify if consumption data (current meter states for all meters assigned to the apartment) should be displayed on the info pages. One info page is displayed per meter type.


 *Main menu > Commissioning > Basic configuration
> Info pages > Consumption data:*

No	Do not show info page (factory setting).
Yes	Show info page.

Configure cooling mode

2-pipe heating/cooling system

If, in addition to heating, the plant is used for cooling, communicate it to the central apartment unit via the following setting:

 *Main menu > Commissioning > Basic configuration
> Miscellaneous > 2-pipe H/C system:*

No	No 2-pipe system heating/cooling available (factory setting).
Yes	2-pipe heating/cooling system available.

Extra configuration

As the basic configuration does not cover all required settings, more detailed entries are required for the following topics via the "Extra configuration" menu:


- Rooms
- Ventilation
- Meters
- Faults

Rooms

Assign rooms to room groups

Per default, all 12 rooms are assigned to room group 1. For this room group, a common flow temperature is calculated.


You can assign individual rooms to a second room group for which an independent flow temperature is calculated.

 *Main menu > Commissioning > Extra configuration > Rooms > Room X > Room group:*

Room group 1	Room assigned to room group 1 (factory setting).
Room group 2	Room assigned to room group 2.

Cooling release output

Specify how the cooling release output of the respective room is controlled.

 *Main menu > Commissioning > Extra configuration > Rooms > Room X > Cooling release outp:*

---	Inactive – cooling release output not needed (factory setting).
Via RF/S-mode	Cooling release output via: <ul style="list-style-type: none">• Relay output Qx of an RRV91.. heating circuit controller or RRV934 multi-controller.• RF adapter plug KRF960.• S-mode object on KNX TP1 *.
Q1 (local)	Use relay Q1 of the central apartment unit as a cooling release output.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).


Configure ventilation


Step selector


These settings define which relays are to be controlled in which order/combination to put the respective ventilation stages into operation.

This way, the switching order can be matched to the brand-specific connection diagrams of the ventilation equipment used.

The relay to control the ventilation stages are available in the RRV934 multi-controller. This controller contains the coding for stages of the central apartment unit.

 *Main menu > Commissioning > Extra configuration > Ventilation > Step selector > Coding stage 1:*

 *Main menu > Commissioning > Extra configuration > Ventilation > Step selector > Coding stage 2:*

 *Main menu > Commissioning > Extra configuration > Ventilation > Step selector > Coding stage 3:*

Step relay 1	Step relay 1 active (contact closed).
Step relay 2	Step relay 2 active (contact closed).
Step relay 3	Step relay 3 active (contact closed).




When coding the stages, several step relays can be activated simultaneously. It is thus possible to define any step relay combinations. No step relays are activated as part of the factory setting.

Humidity sensor

Using a humidity sensor, the maximum air humidity can be limited to the set value.

Specify if a humidity sensor is installed and from where the central apartment unit receives the measured value.

 *Main menu > Commissioning > Extra configuration > Ventilation > Inputs > Humidity sensor:*


---	Inactive – humidity sensor not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">Humidity sensor (DC 0..10 V) connected to universal input Xx of an RRV934 multi-controller.Humidity sensor signal received through S-mode object via KNX TP1 *.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Indoor air quality sensor

An indoor air quality sensor helps control the ventilation plant based on the adjusted indoor air quality setpoints.

Specify if an indoor air quality sensor is installed and from where the central apartment unit receives the measured value.

 *Main menu > Commissioning > Extra configuration
> Ventilation > Inputs > IAQ sensor:*

---	Inactive – indoor air quality sensor not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">Indoor air quality sensor (DC 0..10 V) connected to universal input Xx of an RRV934 multi-controller.Indoor air quality sensor received through S-mode object via KNX TP1 *.


* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Fireplace mode

In apartments using controlled room ventilation, the external ventilation equipment must often be switched to a special operating mode (open fireplace mode) when the open fireplace is used, thus preventing underpressure and risk of harmful emissions.

Open fireplace mode of the ventilation equipment can be displayed on the central apartment unit by closing the respective input.

Specify if a contact for open fireplace mode is installed and from where the central apartment unit receives its state.

 *Main menu > Commissioning > Extra configuration
> Ventilation > Inputs > Fireplace mode:*


---	Inactive – no fireplace mode contact available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">Fireplace mode contact connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller.Fireplace mode signal received through S-mode object via KNX TP1 *.
B (local)	Fireplace mode contact connected to universal input B of the central apartment unit.

* Connection of the respective S-Mode objects of the central apartment unit to the relevant S-Mode devices on KNX TP1 via commissioning tool (ETS).

Ventilation contacts 1 and 2

You can set the ventilation plant to a define stage using the ventilation contacts. Two ventilation contacts are available. The plant operates at the defines stage for as long as at least one of the two contacts is closed.

Specify if ventilation contacts are installed and from where the central apartment unit receives their state.

 *Main menu > Commissioning > Extra configuration
> Ventilation > Inputs > Ventilation contact X:*

---	Inactive – ventilation contacts not available (factory setting).
Via RF/S-mode	<ul style="list-style-type: none">• Ventilation contact connected to universal input B of an RRV91... heating circuit controller or to universal input Xx of an RRV934 multi-controller.• Ventilation contact connected to the external contact input of a door/window contact wave AP 260.• Ventilation contact signal received through S-mode object via KNX TP1 *.
B (local)	Ventilation contacts connected to universal input B of the central apartment unit.

* Connection of the respective S-mode objects of the central apartment unit to the relevant S-mode devices on KNX TP1 via commissioning tool (ETS).

HR bypass

The HR bypass is used to circumvent heat recovery of the ventilation plant if not desired (e.g. when night cooling is active).

Specify if the HR bypass should be used and how it is controlled.

 *Main menu > Commissioning > Extra configuration
> Ventilation > Outputs > HR bypass:*


---	Inactive – HR bypass not needed (factory setting).
Via RF	HR bypass connected to the 3-position mixing valve output (Q4/Q5) of an RRV934 multi-controller.

Meters

The values to be set in the extra configuration for each meter are described in detail in the following sections.

Due date


This setting allows you to specify the date (day.month) when the meter values each year are saved on a due date for billing purposes. The due date applies to all meters.

 *Main menu > Commissioning > Extra configuration
> Meter > Due day date:*

Factory setting	31.12
-----------------	-------

Synergry apartment

In a partial migration of a Synergry plant, the unit (---, 1..96) must be set to the value of the address plug for the WRV8x or WRI80 you want to replace.

 *Main menu > Commissioning > Extra configuration
> Meter > Synergry apartment:*


Factory setting	--- (no unit, just general meters).
-----------------	-------------------------------------

Identification number

An 8-digit ID can be set for each meter. We recommend using the ID printed on the meter (serial number).

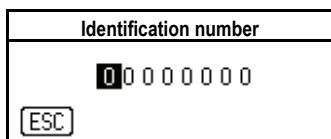


When using M-bus meters, the set ID must match that of the M-bus secondary address of the M-bus meter. The secondary address normally is identical to the printed serial number of the M-bus meter.

 *Main menu > Commissioning > Extra configuration
> Meter > ... > Ident number:*

Factory setting	00000000
-----------------	----------

Enter/edit ID number




Use the **arrow** buttons to set the selected number. Press **Menu/ok** to select the next digit of the 8-digit ID.

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).

Impulse sensor type

When connecting meters, use the impulse input to set the type of impulse sensor type.

 *Main menu > Commissioning > Extra configuration
> Meter > ... > Impulse sensor type:*

Reed contact with namur	Meter is connected via Reed contact with Namur wiring. Impulse sensor contacts with Namur wiring offer the advantage of monitoring the meter for interruption or short-circuit.
Reed contact	Meter is connected via Reed contact (factory setting).


Unit factor

The unit for the conversion factor required for correct meter display is set via the unit factor when connecting the meter via an impulse input.

Setting	Central apartment unit display
Wh	88888888 Wh
Wh x 10	888888.88 kWh
Wh x 100	8888888.8 kWh
kWh	88888888 kWh
kWh x 10	888888.88 MWh
kWh x 100	8888888.8 MWh
MWh	88888888 MWh
kJ	88888888 kJ
kJ x 10	888888.88 MJ
kJ x 100	8888888.8 MJ
MJ	88888888 MJ
MJ x 10	888888.88 GJ
MJ x 100	8888888.8 GJ
GJ	88888888 GJ
ml	88888888 ml
ml x 10	888888.88 l
ml x 100	8888888.8 l
Liter	88888888 l
Liter x 10	888888.88 m ³
Liter x 100	8888888.8 m ³
m3	88888888 m ³
No unit	88888888



The setting range for the unit factor is limited to meaningful values and depends on the meter type or medium.

 *Main menu > Commissioning > Extra configuration
> Meter > ... > Unit factor:*

	Factory setting
Heat/cooling energy Electricity	Wh
Hot/cold water Gas Other	ml

Pulse valency numerator and denominator

Each pulse corresponds to a specific amount of consumption when connecting meters via a pulse input. Pulse valency is printed on the meter. The pulse valency (numerator and denominator) and unit factor must match.

Procedure for entry:

If pulse valency (e.g. liters/pulse) and the unit factor (e.g. liters) are set, the nominator/denominator to be entered (1..9999 each) is determined as shown below:

1. example:

Pulse valency = 20 liters/pulse

Unit factor = Liters x 10

Your setting:

$$\frac{\text{Pulse valency}}{\text{Unit factor}} = \frac{20}{10} = \frac{2}{1}$$

→ Pulse valency numerator = 2 and pulse valency denominator = 1

2. example:


Pulse valency = 2.5 liters/pulse


Unit factor = Liters x 100

Your setting:

$$\frac{\text{Pulse valency}}{\text{Unit factor}} = \frac{2.5}{100} = \frac{1}{40}$$

→ Pulse valency numerator = 1 and pulse valency denominator = 40

 *Main menu > Commissioning > Extra configuration
> Meter > ... > P'valency num:*

 *Main menu > Commissioning > Extra configuration
> Meter > ... > P'valency denom:*

	Factory setting
P'valency num	1
P'valency denom	1

Start value

When connecting meters via a pulse input, the meter value must be entered as start value to match the central apartment unit display to that of the meter. Entry is in digits without commas. Eight digits are available (see page 54).



For the start value, you can only enter as many decimals as start value as displayed on the central apartment unit. The decimal places displayed on the central apartment unit are visible when setting the unit factor (see page 55).

Example:

Meter display = 2.375 m³

Unit factor = Liters x 10 = 888888.88 m³

Start value = 0000237 (without 3rd decimal place, as the value on the central apartment unit only uses 2 decimal places).



*Main menu > Commissioning > Extra configuration
> Meter > ... > Start value:*

Factory setting	00000000
-----------------	----------

Calibrate date and year

When partially migrating a Synergry plant, you can enter the date of the last calibration for each meter.



*Main menu > Commissioning > Extra configuration
> Meter > ... > Calibration date:*



*Main menu > Commissioning > Extra configuration
> Meter > ... > Calibration year:*

	Factory setting
Calibration date	1.1
Calibration year	2000

Synergry meter number

Assign a Synergry meter number to each meter when partially migrating a Synergry plant.



*Main menu > Commissioning > Extra configuration
> Meter > ... > Synergry meter no.:*

---	No Synergry meter number assigned (factory setting).
Meter 1	Heat meter in apartment.
Meter 2	Meter connected to the pulse input of the WRV8x or WRI80 to be replaced.
Meter 3	Meter connected to the 1st pulse input of the 1st pulse adapter AEW2.1 of the apartment.

Meter 4	Meter connected to the 2nd pulse input of the 1st pulse adapter AEW2.1 of the apartment.
Meter 5	Meter connected to the 1st pulse input of the 2nd pulse adapter AEW2.1 of the apartment.
Meter 6	Meter connected to the 2nd pulse input of the 2nd pulse adapter AEW2.1 of the apartment.
General meter 1	Meter connected to the 1st pulse input of the pulse adapter AEW2.1 with plug 121.
General meter 2	Meter connected to the 2nd pulse input of AEW2.1 with plug 121 or to the 1st pulse input of AEW2.1 with plug 124.
General meter 3	Meter connected to the 1st pulse input of the pulse adapter AEW2.1 with plug 122.
General meter 4	Meter connected to the 2nd pulse input of AEW2.1 with plug 122 or to the 1st pulse input of AEW2.1 with plug 125.
General meter 5	Meter connected to the 1st pulse input of the pulse adapter AEW2.1 with plug 123.
General meter 6	Meter connected to the 2nd pulse input of AEW2.1 with plug 123 or to the 1st pulse input of AEW2.1 with plug 126.



Value "Meter 1" to "Meter 6" must be set for meters allocated to billing in the apartment.
 For general meters, set value "General meter 1" to "General meter 6".
 In addition, a setting value can be used only for a meter.

Faults (QAX913 only)

Fault input source

Specify the source of the fault input state for central apartment unit QAX913.


Main menu > Commissioning > Extra configuration > Faults > Fault input X > Source:

---	Inactive – fault contact not available (factory setting).
Via RF	<ul style="list-style-type: none"> • Fault contact connected to universal input B of an RRV91...heating circuit controller or to universal input Xx of an RRV934 multi-controller. • Fault contact connected to external contact input of a door/window switch wave AP 260. • Use water detector QFP910 as fault input. • Fault status of an S-mode object is received via KNX TP1 *.
B (local)	Fault contact connected to universal input B of the central apartment unit.


* Connection of the respective S-mode objects of the central apartment unit to the relevant S-mode devices on KNX TP1 via commissioning tool (ETS).

Fault input normal position

Specify the normal position for the fault inputs.

 *Main menu > Commissioning > Extra configuration > Faults > Fault input X > Normal position:*

Open	An open contact is detected as "Not faulty" (factory setting).
Closed	A closed contact is detected as "Not faulty".


 When using water detector QFP910, keep the normal position on "Open".

Connect RF components

Notes

RF components are assigned to rooms or functions.

On the central apartment unit, configure first the required rooms (see page 20), then activate the required functions and set transmission mode to "Via RF" or "Via RF/S-mode" (see page 25 ff.).

 If you connect a device twice by mistake, the central apartment unit ignores the second connection and generates an error message. There is no beep.
After all devices are connected, check the number of channels and the connected device types on the device list. Missing or superfluous devices can also be added or removed later.


Connect RF room devices

The following RF devices can be assigned to a room:

- Room unit QAW910
- Room temperature sensor QAA910
- Radiator control actuator SSA955
- Heating circuit controller RRV91... (only heating circuit actuators)
- Door/window contacts wave AP 260

RF devices are connected room by room.

Inform the central apartment unit which room you want to assign RF room devices:

 *Main menu > Commissioning > RF connections > Rooms > Room X > Connect device:*

Confirm entry on submenu "Connect device" by pressing the Menu/ok button. To connect, the system asks you to press the binding button on the device to be connected.

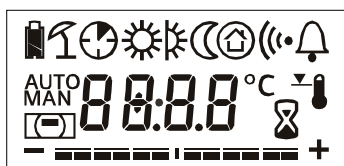
- i** You can connect all devices of the same room, one after the other, with having to enter additional information on the central apartment unit.

Continue by switching on all RF devices to be connected to the room and connect them. The order of connection is free. The only exception are the SSA955 radiator control actuators and the RRV91... heating circuit controllers where the control actuator / control channel of the room connected first serves as the lead controller / lead channel and the other control actuators / control channels as the lag controllers.

Every connection is displayed and confirmed by a beep. When all devices of a room / switching group or device class are connected, close the binding process by pressing the **Menu/ok** button.

Connect room unit QAW910

The room unit is automatically switched on as soon as the batteries are inserted.

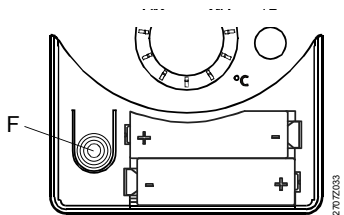


When the room unit is switched on, the full display appears for 2 seconds. If the batteries are almost empty, the low-battery symbol appears.



As long as the room unit is not connected, the display shows the binding symbol and the room temperature.

- i** A room unit previously connected changes directly to normal operation after the full display.




Keep pressing multifunction button F on the room unit until the binding symbol starts blinking. Release the button.

F = Function button



The binding symbol on the display of the room unit blinks and goes out after successful binding with the central apartment unit.

After successful connection, the room unit restarts and changes to normal operation. The binding symbol on the display disappears.


-  If the binding process with the central apartment unit is unsuccessful, the room unit switches to unbound state display after 1 minute.

Connect room temperature sensor QAA910

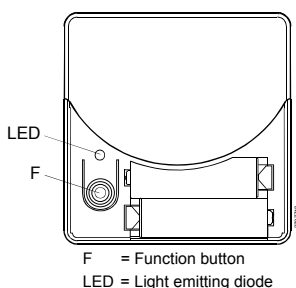
The room temperature sensor is automatically switched on as soon as the batteries are inserted.

When switching on (power-up), the battery charge is tested.

If charged sufficiently, the green LED is lit for 2 seconds during the test.

-  If charge is too low for operation, the LED is lit red for 2 seconds – provided there is enough charge.

After the battery test, the device changes directly to normal operation. The LED goes out again.




Press multifunction button F on the room temperature sensor. The LED lights up in accordance with the battery charge (green: Bat. ok, red: Bat not ok). Release the button when the LED starts blinking.

The binding LED on the device blinks green and goes out on successful binding with the central apartment unit.


The device is now connected and performs normal operation.

Connect SSA955 radiator control actuators

The radiator control actuator is automatically switched on as soon as the batteries are inserted. A short battery charge test is made. During the test, the LED lights up green for 2 seconds.

-  If charge is too low for operation, the LED is lit red for 2 seconds – provided there is enough charge.

As soon as the actuator is ready for connection, the LED starts to blink green.

-  Prior to connecting, the actuator must be fitted to a valve to ensure calibration is possible (error message).

- i** After the battery charge test, an actuator previously connected checks its settings as a lead controller (master) or lag controller (slave). For lead controller settings, the LED blinks 3 times red/green, for lag controller settings, the LED remains dark. Afterwards, the device assumes Normal operation.



Press the function button on the radiator control actuator. The LED lights up in accordance with the battery charge (green: Bat. ok, red: Bat not ok). Release the button when the LED starts blinking.

- i** If the room temperature is acquired with the built-in sensor of a radiator control actuator, the control actuator, whose sensor is to be used, must be connected first. The sensors of the other radiator control actuators of a room are not considered.

The binding LED on the device blinks green and goes out on successful binding with the central apartment unit.

- i** If binding with the central apartment unit is unsuccessful, flashing of the LED goes to blinking after 1 minute (status indication for unbound operation).

After successful connection, the radiator control actuator restarts and automatically starts self-calibration (see page 62).

The device is now connected and performs normal operation.

Calibrate the radiator control actuator

After successful connection of the control actuator, or after changing the batteries, the SSA955 automatically starts the calibration process. This ensures that the actuator is optimally matched to the radiator valve with which it is used. During calibration, the LED blinks green.

The SSA955 informs the central apartment unit if calibration was successful. If successful, the SSA955 automatically switches to control mode.

If unsuccessful, the LED flashes red. Retrigger calibration by pressing briefly the function button.

- i** Trigger manual calibration from the central apartment unit for all radiator control actuators assigned to a room:
Main menu > Rooms > Room X > Room settings
> Actuator calibration:

Connect RRV912 and RRV918 heating circuit controllers

The heating circuit controllers are automatically switched on as soon as power is applied.

The LEDs are tested. All LEDs light up for one second. The mains LED lights up when the unit is ready to operate.

If at this point none of the heating controller channels is connected, the binding LED flashes.

- i** Pressing the binding button displays the state of the individual channels. LEDs for connected channels are lit. The LEDs of the channels not connected remain dark. When releasing the button, the heating circuit controller returns to normal operation after 7 seconds. When a channel is selected, the binding LED indicates the status of the respective channel.

Example: Heating circuit controller RRV912



- (◀ = LED and function button to test connection, for binding and factory setting
 NC 3P NO = Actuator type selector switch
 CH = Channel selection button
 B = LED for universal input channel
 U = LED for 0..10 V universal output channel (RRV912 only)
 Q = LEDs for universal relay output channels
 Y = LEDs for heating circuit controller channels

The heating circuit controller is connected individually to each required channel.


The actuator type must be set at the actuator type selection switch of heating circuit controller RRV91.... prior to connecting the heating circuit controller channels (Yx).

NC	Thermal 2-position actuator, NC.
NO	Thermal 2-position actuator, NO.
3P	Electric motor-driven 3-position actuator (RRV912 only). Channel Y1 has the function Actuator OPEN and channel Y2 the function Actuator CLOSE. Both LEDs Y1 and Y2 are lit simultaneously during channel selection.


- i** The selection switch setting acts on all control circuit outputs of the heating circuit controller at the same time. You cannot configure different actuator types within a device for the control circuit outputs. Using the selection switch resets the device regardless of the heating circuit controller operating state.

- !** If the heating circuit controller channels of the RRV912 are connected to the central apartment unit, do not retroactively switch from 2 to 3-position actuators or vice-versa using the selection switch. Separate the heating circuit controller channels prior to switching the actuator type from 2 to 3-position. Switching between NC and NO works for previously connected heating circuit controller channels.


To connect a heating circuit controller channel, press the channel selection button (CH) to select a suitable channel (channels Y1 and Y2 with the RRV912, channels Y1 - 8 with the RRV918). The LED of the selected channel blinks. If the selected channel is not yet connected, the binding LED flashes.


-  If no button is pressed for 10 minutes, the heating circuit controller returns to normal operation.

Press the function button on the heating circuit controller. The LED lights up green. Release the button when the LED starts blinking.

-  The first channel of a room connected assumes lead control. The other channels of the same room connected are controlled in parallel.


The heating circuit controller restarts after successful connection. The heating circuit controller returns to channel selection mode and is ready for connecting another channel.

-  Heating circuit controller **RRV912**: At the controller outputs (Y1, Y2) **max. 4 2-position actuators** can be connected (max. 2 per controller output) or one 3-position actuator..
Heating circuit controller **RRV918**: **Max. 10 2-position actuators** can be connected (max 2 per controller output) at controller outputs (Y1...Y8).

-  The thermal actuators used must adhere to the following limit values:
 - Max. switch-on current 250 mA
 - Max. rated current 30 mA

Connect window contacts

The window/door contact wave AP 260 is ready to operate as soon as the inserted batteries supply power.


-  For detailed information, see the documentation for GAMMA wave products.

The door/window contact is connected by pressing the function button on the door/window contact for at least one second. After the learning telegrams are sent, the LED blinks for about 3 seconds.


To confirm successful connection, the central apartment unit beeps.

Connect smoke detector (QAX913 only)

Smoke detectors are always assigned to a room during connection. Inform the central apartment unit to which room you want to assign a smoke detector:


-  *Main menu > Commissioning > RF connections
> Smoke detector > Room X > Connect device:*

The DELTA reflex smoke detector is automatically switched on as soon as the inserted batteries supply power. Insert the batteries on site and when the smoke detector has assumed its future operating temperature.

 For detailed information, see the documentation supplied with the smoke detector.

The smoke detector is connected by pressing the test button on the front of the detector for at least 2 seconds and then pressing the binding button at the rear for at least 1 second. The LED at the rear blinks several times.

To confirm successful connection, the central apartment unit beeps.


 The smoke detector must have smoke detector module wave UNI M 255. For detailed information, see the documentation for GAMMA wave products.

Connect RRV934 multi-controller

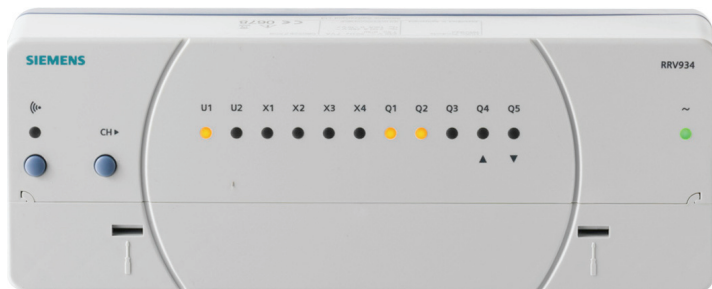
The multi-controller is automatically switched on as soon as power is applied.


The LEDs are tested. All LEDs light up for one second. The mains LED lights up when the unit is ready to operate.

If at this point no multi-controller channel is connected, the binding LED flashes.

 Pressing the binding button displays the state of the individual channels. The LEDs of the channels already connected light up while the LEDs of the non-connected channels remain dark. When releasing the button, the multi-controller returns to normal operation after 7 seconds. When one of the channels is selected, the binding LED indicates the state of the respective channel/channel group.

Front of RRV934 multi-controller



 = LED and function button to test connection, for binding and factory setting

CH = Channel selection button

U = LEDs for 0..10 V universal output channels


X = LEDs for universal input channels

Q = LEDs for universal relay output channels

The multi-controller is connected by channel or channel group.

Connect a channel

Use the channel selection button (CH) to select a suitable channel (channels U1..2, X1..4, Q1..4) to integrate a multi-controller channel. The LED of the selected channel blinks. If the selected channel is not yet connected, the binding LED flashes.

 If there is no user intervention for 10 minutes, the multi-controller returns to normal operation.

Press the binding button on the multi-controller. The LED lights up green. Release the button when the LED starts blinking.

The multi-controller restarts after successful connection.


The multi-controller is ready to connect another channel or channel group.


Connect a channel group

Functions requiring more than one channel are integrated as a channel group. In these cases, the connection is carried out for the entire channel group.

Channel groups can be created with multifunctional outputs Q1..3 and Q4/5.

When you select the first channel of a channel group not yet integrated with the channel selection button (CH), all LEDs of the channels available to that channel group blink, including e.g. Q1..Q3. If the channel group is not yet connected, the binding LED flashes.

 If one of the channel groups is already connected, the individual channels of this channel group can be no longer selected when navigating. On the other hand, no other channel group can be formed if an individual channel is already connected.

 If there is no user intervention for 10 minutes, the multi-controller returns to normal operation.

If you press the channel selection button again, the channel group selection is reduced by one channel (e.g. from Q1..Q3 to Q1..Q2, etc.).


When you reach the channel group size required for the desired function, press the binding button on the multi-controller. The LED lights up green. Release the binding button when it starts blinking.

The multi-controller restarts after successful connection.

The multi-controller is ready to connect another channel or channel group.

Connect cooling release outputs

After specifying the rooms with cooling release output via “*Extra configuration* > *Rooms* > *Room X*”, you can connect the respective cooling release output for each room.

 *Main menu > Commissioning > RF connections > Cooling release output > Room X > Connect device:*

Confirm subentry “Connect device” by pressing the **Menu/ok** button. Activate binding mode from one of the following devices or device channels:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).
- RF adapter plug KRF960 (see page 72).

Successful connection is displayed on the central apartment unit and confirmed with a beep.

Press the **Menu/ok** button to exit the binding process.

Connect room group devices

Inputs and outputs are assigned to the following room group devices:

- Mixing valve
- Flow sensor
- Return sensor
- Room group pump

The devices can be connected for room groups 1 and 2.



On the room group devices, the respective input and output functions must be set to "Via RF", enabling an input or output of a heating circuit controller or multi-controller to be assigned to them.

Connect output for the mixing valve

Inform the central apartment unit that you want to assign the output to control a mixing valve of a room group:



Main menu > Commissioning > RF connections > Room groups > Room group X > Mixing valve > Connect device:



Mixing valves can only be connected via an RRV934 multi-controller. Mixing valve, flow and return sensor of the same room group must be connected to the same multi-controller.

The following device channels can be connected:

- 0..10 V universal output Ux of a multi-controller (see page 65).
- 3-position output (channel group Q4/Q5) of a multi-controller (see page 65).

Connect input for flow sensor / return sensor

Inform the central apartment unit that you want to use an input as a flow or return temperature sensor input:



Main menu > Commissioning > RF connections > Room groups > Room group X > Flow temperature sensor > Connect device:




Main menu > Commissioning > RF connections > Room groups > Room group X > Return temperature sensor > Connect device:

The following device channels can be connected:

- Universal input Xx of a multi-controller (see page 65).

Connect output for room group pump

Inform the central apartment unit that you want to use an output to connect a room group pump:

 *Main menu > Commissioning > RF connections > Room groups > Room group X > Room group pump > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).

Connect ventilation components

The following ventilation components are assigned appropriate inputs or outputs:


- Humidity sensor
- Indoor air quality sensor (CO sensor)
- Fireplace mode
- Ventilation contacts 1 and 2
- Step selector 1-stage to 3-stage
- HR bypass




On the ventilation components, the respective input and output functions must be set to "Via RF", enabling an input or output of a heating circuit controller or multi-controller to be assigned to them.

Connect input for the humidity sensor / indoor air quality sensor

Inform the central apartment unit that you want to use an input as humidity sensor input or indoor air quality sensor input:

 *Main menu > Commissioning > RF connections > Ventilation > Inputs > Humidity sensor > Connect device:*


 *Main menu > Commissioning > RF connections > Ventilation > Inputs > Indoor air quality sensor > Connect device:*

The following device channels can be connected:

- Universal input Xx of a multi-controller (see page 65).

Connect input for open fireplace mode

Inform the central apartment unit that you want to connect an input for fireplace mode:


 *Main menu > Commissioning > RF connections > Ventilation > Inputs > Open fireplace mode > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for ventilation contacts 1 and 2

Inform the central apartment unit that you want to connect an input for ventilation contact 1 or 2:


 *Main menu > Commissioning > RF connections > Ventilation > Inputs > Ventilation contact X > Connect device:*

The following devices or device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).
- Door/window contact wave AP 260 (see page 64).

Connect outputs for the step selector

Inform the central apartment unit that you want to use the potential-free relay contacts to connect the step selector for fan control:

 *Main menu > Commissioning > RF connections > Ventilation > Outputs > Step selector > Connect device:*



Step selectors can only be connected via the universal relay outputs Q1..Q3 of a multi-controller.

Press the **Menu/ok** button to confirm subentry "Connect device". To connect, press the binding button on the multi-controller.

Use the channel selection button (CH) on the multi-controller to select the required channel group:

- | | |
|-----------|--|
| Q1 to Q3 | For a 3-stage step selector with 3 step relays. |
| Q1 and Q2 | For a 2-stage or 3-stage step selector with 2 step relays. |
| Q1 | For a 1-stage step selector with one step relay. |



Make sure you select the same number of step relays you defined in the extra configuration of the step selector when coding the stages.


The LEDs of the selected channel group start blinking. If the selected channel group is not yet connected, the binding LED starts flashing.

Press the binding button on the multi-controller. The LED lights up green. Release the button when the LED starts blinking.

Successful connection is displayed on the central apartment unit and confirmed with a beep.

Connect outputs for the HR bypass

Inform the central apartment unit that you want to use the potential-free relay contacts to connect the HR bypass:

 *Main menu > Commissioning > RF connections > Ventilation > Outputs > HR bypass > Connect device:*

The following device channel can be connected:

- Channel group Q4/Q5 of a multi-controller (see page 65).

Connect DHW components (QAX913 only)

The following DHW plant components are assigned appropriate inputs or outputs:

- DHW sensor
- DHW pump/valve
- El. immersion heater



On the DHW plant components, the respective input and output functions must be set to "Via RF", enabling an input or output of a heating circuit controller / multi-controller to be assigned to them.

Connect the input for the DHW sensor

Inform the central apartment unit that you want to connect a DHW sensor input:

 *Main menu > Commissioning > RF connections > DHW > DHW sensor > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect the output for the DHW pump/valve

Inform the central apartment unit that you want to connect a DHW pump/valve:

 *Main menu > Commissioning > RF connections > DHW > DHW pump/valve > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).

Connect the output for the electric immersion heater

Inform the central apartment unit that you want to use an output to connect an electric immersion heater:


 *Main menu > Commissioning > RF connections
> DHW > Electric immersion heater > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).

Connect meteo sensor

Inform the central apartment unit that you want to connect a meteo sensor:

 *Main menu > Commissioning > RF connections
> Meteo sensor > Connect device:*

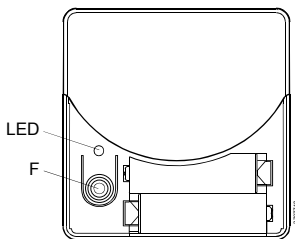
The QAC910 meteo sensor is automatically switched on as soon as the batteries are inserted.

When switching on (power-up), the battery charge is tested. If charged sufficiently, the green LED is lit for 2 seconds during the test.



If charge is too low for operation, the LED is lit red for 2 seconds – provided there is enough charge.

After the battery test, the device changes directly to normal operation. The LED goes out again.



F = Function button
LED = Light emitting diode


Press multifunction button F on the meteo sensor. The LED lights up in accordance with the battery charge (green: Bat. ok, red: Bat not ok). Release the button when the LED starts blinking.

The binding LED on the device blinks green and goes out on successful binding with the central apartment unit.


To confirm successful connection, the central apartment unit beeps.

The device is now connected and performs normal operation.


Connect lighting and blinds control (QAX913 only)

 RF adapter plugs and GAMMA wave lighting and blinds actuators can only be assigned to switching groups set up for the respective function. See page 29.

The lighting and blinds actuators are switched on as soon as power is applied.

 When commissioning GAMMA wave light actuators, a lamp must be connected. Otherwise, the actuators are not correctly powered, i.e. they cannot be connected.

On the central apartment unit, select the switching group which you want to assign actuators:

 *Main menu > Commissioning > RF connections
> Switching groups > Switching group X > Connect device*

Press the **Menu/ok** button to confirm subentry "Connect device". To connect press the binding button on the device to be connected.


Connect RF adapter plugs KRF960 and KRF961

If the RF adapter plug is not yet connected, the binding LED flashes.

Press the button on the RF adapter plug. The LED lights up permanently. Release the button when the LED starts blinking. Successful connection is displayed on the central apartment unit and confirmed with a beep.


Connect GAMMA wave actuator (QAX913 only)

Press the button on the GAMMA wave actuator until the LED on the actuator starts blinking (approx. 10 seconds). Successful connection is displayed on the central apartment unit and confirmed with a beep. The LED on the actuator goes out.

 You can connect all actuators of the same switching group without having enter further information on the central apartment unit. A switching group can be assigned any number of light actuators as they are not entered on the device list of the central apartment unit.


When all light actuators of a switching group are connected, close the binding process by pressing the **Menu/ok** button.

The process is required for every switching group.

 For detailed information on commissioning GAMMA wave components, see the documentation covering the GAMMA wave products.

Connect switching group relay (QAX913 only)

Inform the QAX913 central apartment unit that you want to connect an output as switching group relay:


 *Main menu > Commissioning > RF connections
> Switching group relay > Switching group X > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).

Connect meter

Inform the central apartment unit that you want to use pulse input Px or M-bus input Mx of a consumption data interface WRI982 to connect a meter:

 *Main menu > Commissioning > RF connections
> Meter > ... > Connect device:*

Confirm subentry “Connect device“ by pressing the **Menu/ok** button. To connect press the binding button on the device to be connected.

Connect WRI982 consumption data interface

The consumption data interface is automatically switched on as soon as power is applied.

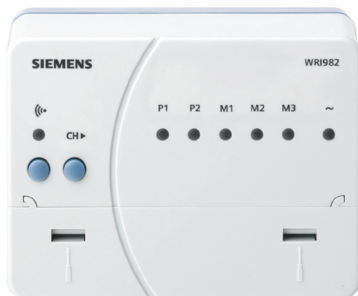
The LEDs are tested. All LEDs light up for one second. The mains LED lights up when the unit is ready to operate.

If at this point no consumption data interface channel is connected, the binding LED flashes.



When you press the binding button, the state of the individual channels is indicated. The LEDs of the channels already connected light up while the LEDs of the non-connected channels remain dark. When releasing the button, the consumption data interface returns to normal operation after 7 seconds. When a channel is selected, the binding LED indicates the status of the respective channel.

WRI982 consumption data interface display



 = LED and function button to test connection, for binding and factory setting

CH = Channel selection button

P = LEDs for pulse input channels

M = LEDs for M-bus channels

The consumption data interface is connected individually to each required channel.

To connect a channel, select a suitable channel (P1..2 (pulse inputs), M1..3 (M-bus inputs) with the channel selection button (CH)). The channel type must match the basic meter configuration source. The LED of the selected channel blinks. If the selected channel is not yet connected, the binding LED flashes.



If no button is pressed for 10 minutes, the consumption data interface returns to normal operation.


Press the function button on the consumption data interface. The LED lights up green. Release the button when the LED starts blinking.

The consumption data interface restarts after successful connection.

The consumption data interface returns to channel selection mode and is ready for connecting another channel.

Connect door contacts (QAX913 only)

Inform the QAX913 central apartment unit that you want to connect a door contact:


 *Main menu > Commissioning > RF connections
> Doors > Door 1 (or 2) > Connect device:*

The following device can be connected:

- Door/window contact wave AP 260 (see page 64).

Connect temperature sensor (QAX913 only)

Inform the central apartment unit that you want to connect a room temperature sensor to the temperature display:


 *Main menu > Commissioning > RF connections
> Temperature display > Temperature X (1 – 3) > Connect device:*

The following device can be connected:

- Room temperature sensor QAA910 (see page 61).

Connect fault inputs 1 – 8 (QAX913 only)

Inform the QAX913 central apartment unit that you want to connect a fault input:

 *Main menu > Commissioning > RF connections > Faults
> Fault input X (1 – 8) > Connect device:*


The following devices or device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).
- Door/window contact wave AP 260 (see page 64).
- Water detector QFP910 (see page 75).

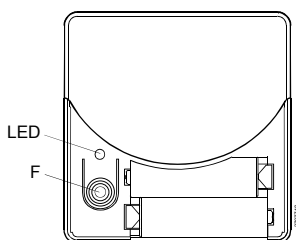
Connect water detector QFP910 (QAX913 only)

The water detector is automatically switched on as soon as the batteries are inserted.

When switching on (power-up), the battery charge is tested.
If charged sufficiently, the green LED is lit for 2 seconds during the test.

 If charge is too low for operation, the LED is lit red for 2 seconds – provided there is enough charge.

After the battery test, the device changes directly to normal operation. The LED goes out again.



F = Function button
LED = Light emitting diode


Press function button F on the water detector. The LED lights up in accordance with the battery charge (green: Bat. ok, red: Bat not ok). Release the button when the LED starts blinking.

The binding LED on the device blinks green and goes out on successful binding with the central apartment unit.

The device is now connected and performs normal operation.

Connect fault outputs 1 – 2 (QAX913 only)

Inform the QAX913 central apartment unit that you want to connect a fault output:

 *Main menu > Commissioning > RF connections > Faults > Fault output 1 (or 2) > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).


Connect supervision components (QAX913 only)

The following supervision components are assigned appropriate inputs or outputs:

- Supervision contact
- Supervision state
- Water shutoff valve
- Gas shutoff valve
- Status output 1 – 4

Connect supervision contact

Inform the QAX913 central apartment unit that you want to connect an input to connect a supervision contact:


 *Main menu > Commissioning > RF connections > Supervision > Supervision contact > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect supervision state

Inform the QAX913 central apartment unit that you want to connect an output to issue a supervision state:


 *Main menu > Commissioning > RF connections > Supervision > Supervision state > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).

Connect water shutoff valve

Inform the QAX913 central apartment unit that you want to connect an output to control a water shutoff valve:


 *Main menu > Commissioning > RF connections > Supervision > Water shutoff valve > Connect device:*

The following devices or device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).
- RF adapter plug KRF960 (see page 72).

Connect gas shutoff valve

Inform the QAX913 central apartment unit that you want to connect an output to control a gas shutoff valve:


 *Main menu > Commissioning > RF connections > Supervision
> Gas shutoff valve > Connect device:*

The following devices or device channels can be connected:

- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).
- RF adapter plug KRF960 (see page 72).

Connect status outputs 1 – 4

Inform the QAX913 central apartment unit that you want to connect a status output:


 *Main menu > Commissioning > RF connections > Supervision
> Status output X > Connect device:*

The following devices or device channels can be connected:

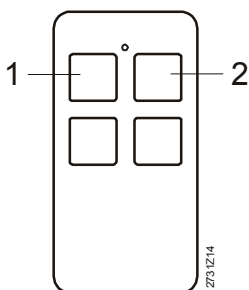
- Universal relay output Qx of a multi-controller (see page 65).
- Universal relay output Qx of a heating circuit controller (see page 62).
- RF adapter plug KRF960 (see page 72).

Connect handheld control

Inform the QAX913 central apartment unit that you want to connect a handheld control:

 *Main menu > Commissioning > RF connections > Handheld control
> Handheld control X > Connect device:*

Confirm subentry "Connect device" by pressing the **Menu/ok** button. To connect press the binding button on the device to be connected.




Simultaneously press the upper two buttons 1 and 2 on the handheld control. The LED lights up in accordance with the battery charge (blue: Bat. ok, yellow: Bat not ok). Release the buttons when the LED starts blinking.

Successful connection is displayed on the central apartment unit and confirmed with a beep. Press the **Menu/ok** button to exit the binding process.

Connect inputs

Connect inputs for operating mode contact

Inform the central apartment unit that you want to use an input to connect an operating mode contact:


 *Main menu > Commissioning > RF connections
> Inputs > Operating mode contact > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for summer operation

Inform the central apartment unit that you want to use an input to connect a summer operation contact:


 *Main menu > Commissioning > RF connections
> Inputs > Summer operation > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for cooling enable

Inform the central apartment unit that you want to use an input to connect a cooling enable contact:

 *Main menu > Commissioning > RF connections
> Inputs > Cooling enable > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for heating/cooling changeover

Inform the central apartment unit that you want to use an input to connect an H/C changeover mode contact:


 *Main menu > Commissioning > RF connections
> Inputs > H/C changeover > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for dew point

Inform the central apartment unit that you want to use an input to connect a dew point monitor contact:

 *Main menu > Commissioning > RF connections
> Inputs > Dew point > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for absence

Inform the central apartment unit that you want to use an input to connect an absence contact:


 *Main menu > Commissioning > RF connections
> Inputs > Absence > Connect device:*

The following device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).

Connect input for twilight (QAX913 only)

Inform the QAX913 central apartment unit that you want to connect an input to connect a twilight switch:

 *Main menu > Commissioning > RF connections
> Inputs > Twilight > Connect device:*


The following devices or device channels can be connected:

- Universal input B of a heating circuit controller (see page 62).
- Universal input Xx of a multi-controller (see page 65).
- Door/window contact wave AP 260 (see page 64).

Connect outputs

Connect output for heat demand DC 0..10 V

Inform the central apartment unit that you want to connect the heat demand output 0..10 V:

 *Main menu > Commissioning > RF connections
> Outputs > Heat demand DC 0...10 V > Connect device:*

The following device channels can be connected:

- Universal input U of a heating circuit controller RRV912 (see page 62).
- Universal output U of a multi-controller (see page 65).

Connect heat demand relay

Inform the central apartment unit that you want to connect a heat demand output:


 *Main menu > Commissioning > RF connections
> Outputs > Heat demand relay > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).

Connect output for refrigeration demand DC 0..10 V

Inform the central apartment unit that you want to connect the refrigeration demand output 0..10 V:


 *Main menu > Commissioning > RF connections
> Outputs > Refrigeration demand DC 0..10V > Connect device:*

The following device channels can be connected:

- Universal input U of a heating circuit controller RRV912 (see page 62).
- Universal output U of a multi-controller (see page 65).

Connect output for refrigeration demand relay

Inform the central apartment unit that you want to connect a refrigeration demand output:


 *Main menu > Commissioning > RF connections
> Outputs > Refrigeration demand relay > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).

Connect output for summer operation

Inform the central apartment unit that you want to connect a summer operation output:


 *Main menu > Commissioning > RF connections
> Outputs > Summer operation > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).

Connect output for cooling enable

Inform the central apartment unit that you want to connect a cooling enable output:


 *Main menu > Commissioning > RF connections
> Outputs > Cooling enable > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).

Connect the window/door state output

Inform the central apartment unit that you want to connect a window/door output:

 *Main menu > Commissioning > RF connections
> Outputs > Window/door state > Connect device:*

The following device channels can be connected:

- Universal relay output Qx of a heating circuit controller (see page 62).
- Universal relay output Qx of a multi-controller (see page 65).

Connect Hager tebis devices (QAX913 only)



Hager tebis lighting and blinds actuators can only be assigned to switching groups or lamps set up for the respective function. (See pages 29 and 35.)

The lighting and blinds actuators are switched on as soon as power is applied.

Hager tebis devices are commissioned and connected to the central apartment unit with the help of the TX100 configurator from Hager. To connect or remove Hager tebis products, select the following menu on the central apartment unit:

 *Main menu > Commissioning > RF connections > Hager Tebis*




Always use this menu when working with the TX100 configurator. Exit the "Hager tebis" menu only when configuration with the TX100 is completed. If you exit and reselect the "Hager tebis" menu while working with the TX100 configurator, the configurator's operating mode must briefly be switched to "Auto" and back to "Prog".


Numbering inputs

Switching groups are inputs from the configuration device TX100 perspective. To provide these inputs to the configurator and to assign a number, select the respective switching group on the central apartment unit and press the

Menu/ok button:


 *Main menu > Commissioning > RF connections
> Hager Tebis > Switching groups > Switching group X*

Successful dispatch of the respective telegrams is displayed briefly on the central apartment unit.

 For detailed information on commissioning Hager tebis components, see the documentation on Hager tebis products.

Connect RF repeaters

You can connect up to 3 RF repeaters.

 An RF repeater (1 – 3) must previously have been activated in the basic configuration to be connected (see 48).


An RF repeater is automatically switched on as soon as power is applied via the AC adapter included in the scope of supply.

The LED lights up green for 2 seconds.

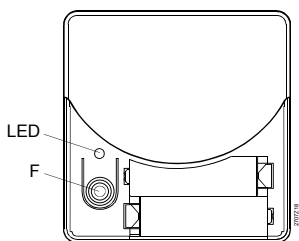
In the case of an RF repeater that is already connected, the LED then goes out. The repeater is ready for operation.

If the RF repeater has not yet been connected, the LED starts to blink green. The repeater is now ready for connection.

Inform the central apartment unit that you want to connect an RF repeater:

 *Main menu > Commissioning > RF connections > RF repeater
> RF repeater X > Connect device*

Confirm subentry “Connect device“ by pressing the **Menu/ok** button. To connect press the binding button on the device to be connected.




F = Function button
LED = Light emitting diode

Press function button F on the RF repeater to connect. The LED lights up green. Release the button when the LED starts blinking.

The binding LED on the RF repeater blinks green and goes out on successful binding with the central apartment unit. To confirm successful connection, the central apartment unit beeps. Press the **Menu/ok** button to exit the binding process.

The RF repeater is now connected and runs in normal operation.

 If the binding process with the central apartment unit was unsuccessful, blinking of the LED changes to flashing after 1 minute (status indication of unbound operation).

Assign devices to RF repeaters

You can specify for every individual device connected to the central apartment unit via which repeater the respective RF signals are to be forwarded.


 *Main menu > Commissioning > Device list
> Device X > RF repeater:*

---	No signal repetition (factory setting).
RF repeater 1	Repeat signals by RF repeater 1.
RF repeater 2	Repeat signals by RF repeater 2.
RF repeater 3	Repeat signals by RF repeater 3.

Signals from GAMMA wave devices (e.g. from wall-mounted transmitters) which cannot be assigned to a certain function of the central apartment unit can also be repeated. These devices can be made known to the QAX913 central apartment unit via the following path.



RF adapter plugs and GAMMA wave actuators connected to switching groups are not contained on the device list. However, if the signals from an RF adapter plug or a GAMMA wave actuator should be repeated by an RF repeater, the actuator can be included in the central apartment unit's device list according to the following description.

 *Main menu > Commissioning > RF connections > RF repeater
> Other RF devices > Connect device*

Press the **Menu/ok** button to confirm subentry "Connect device". To connect, press the binding button on the device to be connected.

Connect RF adapter plugs KRF960 and KRF961 (QAX913 only)

Press the button on the RF adapter plug. The LED lights up permanently. Release the button when the LED starts blinking.

Successful connection is displayed on the central apartment unit and confirmed with a beep.

Connect GAMMA wave actuator (QAX913 only)

Press the button on the respective GAMMA wave devices for at least 10 seconds. The central apartment unit beeps to confirm successful connection.



For detailed information on commissioning the GAMMA wave components, see the documentation on GAMMA wave products.

Test radio connections

The radio connections between the central apartment unit and the following devices can be tested at any time:

- Room temp sensor
- Room unit
- Radiator control actuator
- Heating circuit controller (per channel)
- Multi-controller (per channel)
- RF repeater
- Meteo sensor
- Water detector (QAX913 only)
- Handheld control (QAX913 only)
- Consumption data interface (per channel)

Press briefly the binding or the multifunction button on the device. Select first the desired channel on the heating circuit controller, multi-controller and consumption data interface using the channel selection button. For the handheld control, briefly press both upper buttons.

If connection works, the central apartment unit beeps three times. If the central apartment unit is on the default picture or one of the info pages, an additional window with the respective device information is displayed. The window can be hidden again by pressing the **Menu/ok** or the **Esc** button.

Wiring test

We recommend to carry out a wiring test on the connected components after completing configuration and connecting the devices.

The current states of the inputs are displayed:

- The current temperature value at the sensor inputs.
- 0/1 with input contacts (0: contact open, 1: contact closed).
- 0..100% at DC 0..10 V inputs.

During the wiring test, each of the outputs can be set to a certain value:

- 0..100% (corresponding to DC 0..10 V) for heat demand DC 0..10 V.
- Off/on with relay outputs (off: relay contact open, on: relay contact closed).



During the wiring test, the application is not active. Safety-related functions are switched off. Switch the relay outputs off again.



RF adapter plugs KRF96x do not react to the values set in the wiring test.


The RF adapter plug state, however, can be switched over any time using the local button on the RF adapter plu.

The wiring test for the different inputs and outputs is available in the following menus:


Room groups 1 and 2 (flow sensor, return sensor, mixing valve, room group pump):

 *Main menu > Commissioning > Wiring test
> Room groups > Room group X > ...*


Cooling release output (rooms 1 - 12):

 *Main menu > Commissioning > Wiring test
> Cooling release output > Room X*

Ventilation inputs (humidity sensor, indoor air quality sensor, fireplace mode, ventilation contacts 1 - 2):

 *Main menu > Commissioning > Wiring test
> Ventilation > Inputs > ...*


Ventilation outputs (step selector, HR bypass):

 *Main menu > Commissioning > Wiring test
> Ventilation > Outputs > ...*

DHW (QAX913 only): DHW sensor, DHW pump/valve and electric immersion heater):

 *Main menu > Commissioning > Wiring test > DHW > ...*

Switching group relay (QAX913 only): Switching group 1 – 8):

 *Main menu > Commissioning > Wiring test
> Switching group relay > Switching group X*

Faults (QAX913 only): Fault input 1 – 8, fault output 1 – 2):

 *Main menu > Commissioning > Wiring test > Faults > ...*

Supervision (QAX913 only): Supervision contact, supervision state, water shutoff valve, gas shutoff valve, status output 1 – 4):

 *Main menu > Commissioning > Wiring test > Supervision > ...*

Inputs (Operating mode, summer operation, cooling enable, H/C changeover, dew point, absence, QAX913 only: Twilight):

 *Main menu > Commissioning > Wiring test > Inputs > ...*




















Outputs (heat demand relay, heat demand DC 0..10 V, refrigeration demand relay, refrigeration demand 0..10 V, summer operation, cooling enable, window/door state, exhaust hood):


 *Main menu > Commissioning > Wiring test > Outputs > ...*

Disconnect devices

Using function "Disconnect device", devices connected to the central apartment unit can be removed again from the central unit. Disconnecting also deletes any binding information contained in the device.

Function "Disconnect device" is available in menu "Connect device":

-  *Main menu > Commissioning > RF connections > Rooms > Room X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Smoke detector > Room X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Cooling release output > Room X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Room groups > Room group X > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Ventilation > Inputs > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Ventilation > Outputs > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > DHW > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Meteo sensor > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Switching groups > Switching group X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Switching group relay > Switching group X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Meter > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Doors > Door X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Temperature display > Temperature X > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Faults > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Supervision > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Handheld control > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Inputs > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > Outputs > ... > Disconnect device:*
-  *Main menu > Commissioning > RF connections > RF repeater > RF repeater X > Disconnect device:*

 *Main menu > Commissioning > RF connections
> RF repeater > Other RF devices > Disconnect device:*

You are prompted to press the binding button on the device to be disconnected. The action required on the device is the same as that required for connecting.

Successful disconnection is displayed on the central apartment unit and confirmed with a beep. Close the disconnection process by pressing the **Menu/ok** button.

Replace devices

Inform the central apartment unit that you want to replace a meter via function "Replace device". You do not need to disconnect and reconnect the corresponding channel for the consumption data interface WRI982.

Function "Replace device" is available in the same menu as the function "Connect device" of a meter:


 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device:*


Submenu "Replace device" contains the settings needed to replace the meter depending on the type of meter.


Replace meter on pulse input


If the meter you want to replace is connected to pulse input Px of the consumption data interface WRI982, check and possibly enter the following settings (see page 54):


 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device > Ident number:*

 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device > Impulse sensor type:*

 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device > Unit factor:*

 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device > P'valency num:*

 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device > P'valency denom:*


 *Main menu > Commissioning > RF connections
> Meter > ... > Replace device > Start value:*




Adjusting one of the above variables is interpreted as change of meter and registered accordingly in the central apartment unit. All current values, due date values, monthly values of this meter are deleted and invalidated in the central apartment unit. The change of meter is also noted on the billing file.

Adjusting the pulse sensor type is not recorded as change of meter.

In addition, check the following settings when partially migrating a Synergys plant:

 *Main menu > Commissioning > RF connections > Meter > ... > Replace device > Calibration date:*

 *Main menu > Commissioning > RF connections > Meter > ... > Replace device > Calibration year:*



Changing the calibration date is not recorded as meter change.

Replace M-bus meter


If the meter you want to replace is connected to the M-bus connection of the consumption data interface WRI982, check and possibly enter the following settings (see page 54):


 *Main menu > Commissioning > RF connections > Meter > ... > Replace device > Ident number:*



Adjusting the identification number is interpreted as change of meter and registered accordingly in the central apartment unit. All current values, due date values, monthly values of this meter are deleted and invalidated in the central apartment unit. The change of meter is also noted on the billing file.

In addition, check the following settings when partially migrating a Synergys plant:

 *Main menu > Commissioning > RF connections > Meter > ... > Replace device > Calibration date:*


 *Main menu > Commissioning > RF connections > Meter > ... > Replace device > Calibration year:*





Changing the calibration date is not recorded as meter change.


Display the device list by function


To check the connections, you can display a list with all connected devices or device channels for each room or function.















 *Main menu > Commissioning > RF connections > Rooms > Room X > Device list:*

 *Main menu > Commissioning > RF connections > Smoke detector > Room X > Device list:*

 *Main menu > Commissioning > RF connections > Cooling release output > Room X > Device list:*




 *Main menu > Commissioning > RF connections > Room groups > Room group X > ... > Device list:*

 *Main menu > Commissioning > RF connections > Ventilation > Inputs > ... > Device list:*

-  *Main menu > Commissioning > RF connections > Ventilation > Outputs > ... > Device list:*
-  *Main menu > Commissioning > RF connections > DHW > ... > Device list:*
-  *Main menu > Commissioning > RF connections > Meteo sensor > Device list:*
-  *Main menu > Commissioning > RF connections > Switching group relay > Switching group X > Device list:*
-  *Main menu > Commissioning > RF connections > Meter > ... > Device list:*
-  *Main menu > Commissioning > RF connections > Doors > Door X > Device list:*
-  *Main menu > Commissioning > RF connections > Temperature display > Temperature X > Device list:*
-  *Main menu > Commissioning > RF connections > Faults > ... > Device list:*
-  *Main menu > Commissioning > RF connections > Supervision > ... > Device list:*
-  *Main menu > Commissioning > RF connections > Handheld control > ... > Device list:*
-  *Main menu > Commissioning > RF connections > Inputs > ... > Device list:*
-  *Main menu > Commissioning > RF connections > Outputs > ... > Device list:*
-  *Main menu > Commissioning > RF connections > RF repeater > RF repeater X > Device list:*
-  *Main menu > Commissioning > RF connections > RF repeater > Other RF devices > Device list:*

Display the device list for all devices

All connected devices (max. 94) are included in the device list. The device list shows the device state of every device.

	Device in order
	Battery low
	Device faulty

In addition, device number, device type and the KNX-ID of the individual devices are displayed also.


-  *Main menu > Commissioning > Device list > Device X:*

Press the **Menu/ok** button to display detailed device data.

Delete devices from the device list

If you want to remove a device, select if possible function "Disconnect device" (see page 86).

Defective devices may not be able to be disconnected. In this case, proceed as follows to remove the faulty device from the device list of the central apartment unit:

 *Main menu > Commissioning > Device list
> Device X > Delete device:*



Use function "Delete device" only if you cannot remove the device with function "Disconnect device".

Bus communication

Device address KNX TP1

You need to enter an unambiguous device address for the central apartment unit. After entry, the central apartment unit checks if the address entered has already been assigned. If the address is available, the display returns to the "Basic settings" menu. The value is adopted. Otherwise, you are prompted to enter a new address.


 *Main menu > Commissioning > Bus communication
> Basic settings > Device address:*



When using device address 255 (factory setting), no data is transmitted via bus. Use another device address.

Bus power supply

Specify if the central apartment unit is to supply power to the bus.

 *Main menu > Commissioning > Bus communication
> Basic settings > Bus power supply:*

Off	Bus supply for the central apartment unit switched off. An external supply supplies power to the KNX bus.
On	Bus supply for the central apartment unit switched on. The central apartment unit supplies power to the KNX bus. (Factory setting)




Caution: Only one central communication unit (OZW771 or OZW772) may be connected via KNX connection to the central apartment unit's bus supply.

If several or other devices are connected to the bus, you must switch off the bus power supply by the central apartment unit.

Programming mode


If you want to assign the device address in KNX system mode (with ETS), activate programming mode via the following operating line.

 *Main menu > Commissioning > Bus communication
> Basic settings > Programming mode:*

Off	Programming mode off (factory setting).
On	Addressing mode on.

Clock time operation

If the system should use a common time of day, one of the devices must be defined as the clock time master and the others as slaves.

 *Main menu > Commissioning > Bus communication
> Time of day/date > Clock time op:*

Autonomous	The central apartment unit clock runs autonomous. No time is received or sent. (Factory setting)
Slave	Central apartment unit clock is clock time slave and synchronized to the master clock time.
Master	Central apartment unit clock is clock time master.



Make sure that only one device in the system is defined as the clock time master.




In plants with consumption data acquisition, we recommend setting OZW772 as clock time master and all central apartment units to clock time slaves.


Remote setting clock slave

Function "Remote setting clock slave = Yes" allows you to also set the time of day and the date on a clock time slave.

The new values are transmitted to the clock time master via the KNX bus. The clock time master distributes the new time to all bus users. Thus, for the plant user, operation is the same as that on the clock time master.


 *Main menu > Commissioning > Bus communication
> Time of day/date > Rem set clock slave:*

No	Clock time and date cannot be adjusted on the clock time slave.
Yes	Clock time and date can be adjusted on the clock time slave. (Factory setting).

-  In plants with consumption data acquisition, we recommend setting the clock time remote setting to "Yes" only on the caretaker's central apartment unit. This prevents changes to the due data and monthly value generation due to changes to the clock time of any other central apartment unit..


Calendar zone (holidays and special days)

If several devices in the system are to use a common calendar, holiday/special day operation must be set to "Master" on every such device, and to "Slave" on the other devices.


 *Main menu > Commissioning > Bus communication > Holidays/special days > Hol/spec day op:*

Autonomous	The central apartment unit calendar runs autonomous. No calendar data is received or sent. (Factory setting).
Slave	The central apartment unit uses the calendar of the master calendar.
Master	The central apartment unit contains the calendar master and provides the calendar data to the calendar slaves.

In addition, with master/slave operation, set the required holiday/special day zone (1..31).


 *Main menu > Commissioning > Bus communication > Holidays/special days > Hol/spec day zone:*


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

-  Ensure that only one device per holiday/special day zone is defined as the holiday/special day master.

DHW zone


Use the following operating line to set the DHW zone for DHW heating (1..31):

 *Main menu > Commissioning > Bus communication > DHW > DHW zone:*

-  The DHW zone setting must be unambiguous. For example, DHW zone 1 must only have one DHW heating.

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


When operating external DHW heating, set the DHW zone of the central apartment unit to the same value as with external DHW heating.

 *Main menu > Commissioning > Bus communication > DHW > Time switch op:*

Autonomous	The central apartment unit DHW time switch runs autonomous. No DHW time switch data is received or sent. (Factory setting).
Slave	The central apartment unit uses the time switch data of the DHW time switch master.
Master	The central apartment unit contains the DHW time switch master and provides the time switch data to the DHW time switch slaves.

When using setting "Master", the time switch data is distributed in the DHW zone for common usage. Set the DHW heating system that is to use this time switch to "Slave".

In the case of "Time switch operation = Slave", use the following operating line to set the DHW zone of the time switch master (1..31):


 *Main menu > Commissioning > Bus communication > DHW > Time swi slave DHW:*


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


Set distribution zone


The system's devices exchange the data on the bus within their distribution zone. A heat source in heat distribution zone 1, for example, receives the heat demand signals from heat distribution zone 1. H/C changeover also acts only on the appropriately set distribution zones.

Set the outside temperature zone (1..31) and the heat distribution zone (1..31) and the refrigeration distribution zone (1..31) where the central apartment unit is located.


 When using setting "---", no data of the respective distribution zone is sent or received via bus.


 *Main menu > Commissioning > Bus communication > Distribution zones > Outside temp zone:*

 *Main menu > Commissioning > Bus communication > Distribution zones > Heat distr zone:*

 *Main menu > Commissioning > Bus communication > Distribution zones > Refrig distr zone:*

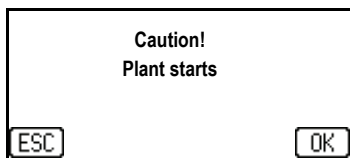
Distr.zone	Factory setting
Outside temperature and atmospheric pressure zone	---
Heat distr.zone	1
Refrig.distr zone	1

 The zone settings must be unambiguous. For example, only one outside sensor may have outside temperature zone 1 assigned.

-  Setting "Refrigeration distribution zone" is visible only when "Yes" was selected with parameter "2-pipe system heating/cooling" in the basic configuration, or "Radiator/floor cooling" was selected in a room for parameter "Cooling type".
Setting the refrigeration distribution zone enables the central apartment unit to respond to H/C changeover forwarded by a refrigeration source.

Exit the "Commissioning" menu

Press the **Esc** button to exit the "Commissioning" menu after commissioning.
The plant is not yet operating.



When you confirm this message by pressing the **Menu/ok** button, the plant starts operation according to the new settings and the display returns to the "Main menu".

Function settings

General

You must be at the expert level to enter function settings (see page 19).



Change these settings only if you are fully aware of their impact. Wrong settings can impair or even disable plant operation.

Buzzer volume

The volume of the buzzer (piezzo loudspeaker) integrated in the central apartment unit can be adjusted to suit individual needs (0..100%).



Main menu > Settings > Device > Buzzer volume:

Guide value	100 %
-------------	-------



If the buzzer volume is too low, you may not hear the acoustic signals (e.g. those of the binding test).

Password expert level

The unit is supplied with password "9" to access the expert level. For safety reasons, change the password to another value.



When you change the password, write it down and keep it in a safe place. If you forget your password, a service visit by the expert is required!

Enter the required new password (between 0 and 9999) using the following path and press the **Menu/ok** button to confirm.



Main menu > Settings > Passwords > Expert:

Apartment

Enable setpoint limitation

Specifies if setpoint limitation of the room temperatures is basically disabled or enabled. Only when setpoint limitation is enabled does the central apartment unit respond to the setpoint limitation signals received over the wired bus. The limitation setpoints act for as long as setpoint limitation is enabled provided no setpoint limitation signals were received via the bus.



Main menu > Apartment > Settings > Setpoint limitation:

Disabled	Setpoint limitation is disabled.
Enabled	Setpoint limitation is enabled (factory setting).

Heating setpoint limitation

Specifies the maximum permissible room temperature heating setpoint (5..35 °C) during an active setpoint limitation period.

 *Main menu > Apartment > Settings > Heat setp limit:*

Factory setting	35 °C
-----------------	-------

Cooling setpoint limitation

Specifies the maximum permissible room temperature cooling setpoint (0..50 °C) during an active setpoint limitation period.

 *Main menu > Apartment > Settings > Cool setp limit:*

Factory setting	0 °C
-----------------	------

Pump overrun time

The overrun time for the room group pump and the DHW pump can be set (0..30 min).

 *Main menu > Apartment > Settings > Pump overrun:*

Factory setting	6 min
-----------------	-------

Valve override

Valve override enables all room valves of the apartment to be jointly driven to the required valve position (0..100%, e.g. for hydraulic balancing).

 *Main menu > Apartment > Settings > Valve override:*

Guide value	--- (off)
-------------	-----------



Valve override must be manually switched off again. Otherwise, room temperature control remains deactivated. While valve override is active, status message "Valve override active" is displayed.



The impact of the setting also depends on the type of actuator used, as described on page 98.
Valve override does not act on the mixing valves of the room groups.

Economy increase

The Economy room setpoint for heating all rooms is increased depending on the composite outside temperature. The increase at low outside temperatures (e.g. end point -15 °C) is greater and negated at higher outside temperatures (e.g. starting point -5 °C).

This way, long heating up times when changing from Economy to Precomfort or Comfort setpoint can be prevented at low outside temperatures.

In the case of night setback to Economy setpoint, this function leads to outside temperature-compensated night setback.

If the settings for start and end point coincide, the function is deactivated.

An Economy setpoint raised through Economy increase is displayed on the central apartment unit.



If there is no valid outside temperature when the "Economy increase" function is active, the central apartment unit displays an error message.



Main menu > Apartment > Settings > Eco incr start point.:



Main menu > Apartment > Settings > Eco incr end point:

	Starting point	End point
Factory setting	0 °C	0 °C

Rooms

Room temperature increase

During optimum start control, the central apartment unit determines the room temperature increase (min/K) of the respective room and includes it the next time optimum start control is performed. The value calculated last can be viewed via an operating line and changed as needed:



Main menu > Rooms > Room X > Room settings > Room temp rise:

Proportion of room unit

If QAW910 room unit and 1 or 2 QAA910 room temperature sensors are connected to the same room, the room unit's weighting (0..100%) with regard to room temperature averaging can be set.

If 1 room unit and 1 room temperature sensor are used, the actual value of the average room temperature is determined based on the percentage proportion set.

If 1 room unit and 2 room temperature sensors are used, the average value of the 2 room temperature sensors is determined first. The actual value of the average room temperature is calculated based on the percentage proportion set for the room unit and the room temperature sensor.

When 2 room temperature sensors are used, the average value of the 2 sensors is delivered. The proportion of the individual sensors cannot be changed.



*Main menu > Rooms > Room X > Room settings
> Proportion room unit:*

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

Valve position cooling mode / summer operation

Specifies the position to which the valve of a room is driven (0..100%) when the plant is switched to cooling mode or summer operation. The amount of cooling energy drawn by the individual rooms can thus be influenced.



Rooms with high humidity levels also have a risk of condensation.



*Main menu > Rooms > Room X > Room settings
> Valve pos cooling:*

Factory setting	0 %
-----------------	-----



The setting has the following effect depending on the actuator type used:

RRV912: 3-position actuator

The actuator exactly arrives at the set position.

RRV918 / RRV912: 2-point actuator (NC/NO)

The actuator is not controlled with setting 0..49% and remains in the start position (for NC = 0%).

The actuator is controlled by a permanent pulse with setting 50..100% and thus remains in the end position (for NC = 100%).

SSA955

The actuator exactly arrives at the set position.

Minimum valve position Comfort

To prevent cold floors in the case of floor heating systems, a minimum valve position (0..100%) can be specified which is observed during Comfort periods, even if the room temperature is sufficiently high. It is accepted that in such cases the room may be overheated.



*Main menu > Rooms > Room X > Room settings
> Min valve pos comf:*

Factory setting	0 %
-----------------	-----

H/C changeover locking time

Changeover locking time prevents heating mode from changing to cooling mode (and vice versa) too quickly and too frequently.

This means that when changing over, heating or cooling mode is disabled.

They are enabled again only when the changeover locking time has elapsed.



*Main menu > Rooms > Room X > Room settings
> H/C changeover lock:*

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

Room controller settings



These settings are visible only if the user-defined heating type is set.
(See page 20).

P-band Xp

The room controller's P-band can be set for every room to suit individual needs.

Main menu > Rooms > Room X > Room controller > P-band Xp:

For your guidance, see the default settings (factory setting 2 K):

Room type	Guide value Xp
Radiator heating slow	2 K
Radiator heating fast	2 K
Floor heating slow	2 K
Floor heating fast	2 K

Integral action time Tn

The room controller's integral action time can be set for every room.


Main menu > Rooms > Room X > Room controller > Int action time Tn:

For your guidance, see the default settings (factory setting 5400 s):

Room type	Guide value Tn
Radiator heating slow	5400 s
Radiator heating fast	3600 s
Floor heating slow	7200 s
Floor heating fast	5400 s

Derivative action time Tv

The room controller's derivative action time can be set for every room.

 *Main menu > Rooms > Room X > Room controller > Der action time Tv:*

For your guidance, see the default settings (factory setting 450 s):

Room type	Guide value Tv
Radiator heating slow	450 s
Radiator heating fast	540 s
Floor heating slow	540 s
Floor heating fast	540 s

Neutral zone

For rooms using 3-position actuators, the room controller's neutral zone (0..20 K) can be set for every room.


 *Main menu > Rooms > Room X > Room controller > Neutral zone:*

For your guidance, see the default settings (factory setting 0.1 K):

Room type	Guide value neutral zone
Radiator heating slow	0.1 K
Radiator heating fast	0.1 K
Floor heating slow	0.1 K
Floor heating fast	0.1 K

Switching differential 2-position

For rooms using 2-position actuators, the room controller's switching differential (0..20 K) can be set for every room.

 *Main menu > Rooms > Room X > Room controller
> Switching diff 2-pos:*

For your guidance, see the default settings (factory setting 0.8 K):

Room type	Guide value switching differential
Radiator heating slow	0.8 K
Radiator heating fast	0.8 K
Floor heating slow	0.8 K
Floor heating fast	0.8 K

Actuator runtime

This defines the runtime of the actuator used. This is the time the actuator requires to travel from one end position to the other.



The setting only acts on 3-position actuators. It has no impact on 2-position actuators and SSA955 radiator control actuators.

The actuator running time (1..600 s) can be set separately for every zone valve.



Main menu > Rooms > Room X > Room controller > Act running time:

For your guidance, see the default settings (factory setting 150 s):

Room type	Guide value switching differential
Radiator heating slow	150 s
Radiator heating fast	150 s
Floor heating slow	150 s
Floor heating fast	150 s

Switching differential for cooling

For rooms using radiator/floor cooling, the switching differential (0..20 °K) of the 2-point cooling controller can be set for every room.



Main menu > Rooms > Room X > Room controller > Switching diff cool:

Factory setting	1.0 K
-----------------	-------

Room groups

Flow temperature limitation room heating

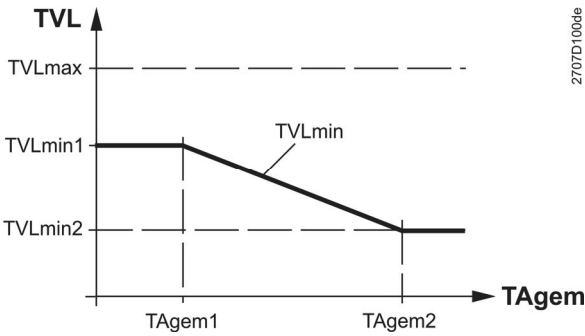
Based on the demand for heat, the central apartment unit determines the flow temperature heating setpoint for each room group. It can have a max. and min. limitation.

Minimum limitation

Minimum limitation limits the flow temperature heating setpoint of the room group at the bottom. Even if less heat is demanded, the flow temperature does not drop below the set limit value.

The minimum flow temperature heating setpoint can be raised depending on the composite outside temperature.

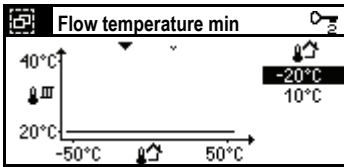
Using this function, a minimum flow temperature can also be guaranteed for uncontrolled rooms. In combination with "Min valve position Comfort", cold floors can thus be prevented.



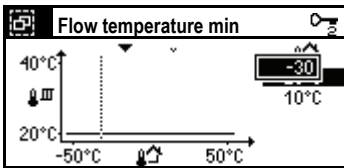
TVL	Flow temperature
TVLmax	Flow temperature – maximum limitation
TVLmin	Flow temperature – minimum limitation
TVLmin1	Flow temperature – minimum limitation (curvepoint 1)
TVLmin2	Flow temperature – minimum limitation (curvepoint 2)
TAgem	Composite (effectively acting) outside temperature
TAgem1	Composite outside temperature (curvepoint 1)
TAgem2	Composite outside temperature (curvepoint 2)

*Main menu > Room groups > Room group X
> Limitations space heating > Flow temp min*

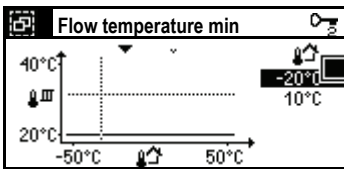
The curvepoints of the minimum flow temperature heating setpoint are set as follows (example shows curvepoint 1):



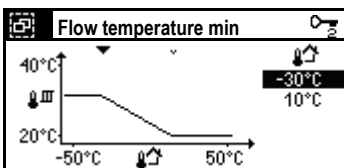
When selecting the parameter, the current setting is displayed. Press the **Menu/ok** button to go to the setting level for curvepoint 1.



Using the **arrow** buttons, you can set the composite outside temperature for curvepoint 1. Close the entry by pressing the **Menu/ok** button.



Set the minimum flow temperature that must not be exceeded at that composite outside temperature. Close the entry by pressing the **Menu/ok** button.



The settings are adopted and the display shows the resulting graph.

Use the **arrow** button to go to the setting for curvepoint 2. The setting procedure is the same as that with curvepoint 1.

Room group 1:

	Factory setting
[Curvepoint 1] outside temp	-20 °C
[Curvepoint 1] flow temp min	20 °C
[Curvepoint 2] outside temp	10 °C
[Curvepoint 2] flow temp min	20 °C

Room group 2:

	Factory setting
[Curvepoint 1] outside temp	-20 °C
[Curvepoint 1] flow temp min	20 °C
[Curvepoint 2] outside temp	10 °C
[Curvepoint 2] flow temp min	20 °C



If the minimum flow temperature heating setpoints at both curvepoints are set to the same value (factory setting), the composite outside temperature has no impact on the minimum flow temperature setpoint.

If the outside temperatures at both curvepoints are set to the same value, the minimum flow temperature heating setpoint at this composite outside temperature changes abruptly.

If the minimum flow temperature heating setpoints are set differently and there is no valid outside temperature, the central apartment unit displays an error message.

Maximum limitation

Maximum limitation limits the flow temperature heating setpoint at the top. Even if more heat is called for, the temperature level is not exceeded.



Maximum limitation cannot be considered to be a safety function as required with floor heating systems, for instance.



*Main menu > Room groups > Room group X
> Limitations space heating > Flow temp max:*

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

Return temperature limitation

Preselect here appropriate setpoints for the type of return temperature limitation selected in the basic configuration under "Configure room groups" (see page 24).



*Main menu > Room groups > Room group X
> Limitations space heating > Return temp min:*

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




*Main menu > Room groups > Room group X
> Limitations space heating > Return temp max:*

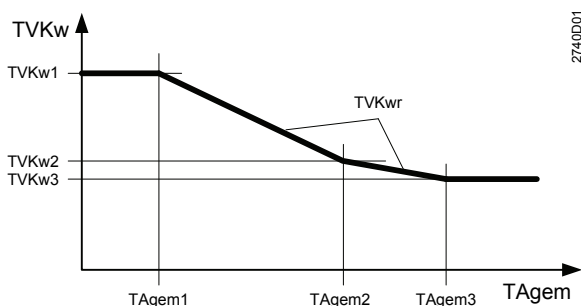
Factory setting	---
-----------------	-----

Cooling curve


The central apartment unit determines a flow temperature cooling setpoint for room cooling for each room group based on the cooling curve. The cooling curve determines the flow setpoint for room cooling based on the composite outside air temperature. The cooling curve in the central apartment unit depends on the room setpoints and thus requires parameterization as per the required cooling setpoints.

Five curvepoints are available for each room group to set the cooling curve. Curve point 1 determines the max. flow temperature cooling setpoint. The last active curvepoint determines the min. flow temperature cooling setpoint.

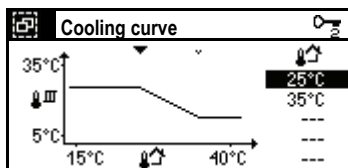
-  Set the last curvepoint and the resulting min. flow temperature cooling setpoint (example: curvepoint 3) so that apartment residents are comfortable (no cold feet).



TVKwr	Resulting flow temperature setpoint for cooling
TVKw1	Flow temperature cooling setpoint (curvepoint 1)
TVKw2	Flow temperature cooling setpoint (curvepoint 2)
TVKw3	Flow temperature cooling setpoint (curvepoint 3)
TAgem	Composite (effectively acting) outside temperature
TAgem1	Composite outside temperature (curvepoint 1)
TAgem2	Composite outside temperature (curvepoint 2)
TAgem3	Composite outside temperature (curvepoint 3)

 **Main menu > Room groups > Room group X > Cooling curve:**

The five curvepoints of the cooling curve are set analogous to the min. flow heating setpoint (see page 101):



If not needed, deactivate curvepoints 3 to 5 by setting the outside temperature to "---".

	Factory setting
[Curvepoint 1] outside temp	25 °C
[Curvepoint 1] flow temp	20 °C
[Curvepoint 2] outside temp	35 °C
[Curvepoint 2] flow temp	20 °C
[Curvepoint 3..5] outside temp	--- (inactive)
[Curvepoint 3..5] flow temp	--- (inactive)



If the minimum flow temperature cooling setpoints of the active curvepoints are set to the same value (factory setting), the composite outside temperature has no impact on the minimum flow temperature cooling setpoint.

If the outside temperatures at both curvepoints are set to the same value, the minimum flow temperature cooling setpoint at this composite outside temperature changes abruptly.

If the minimum flow temperature cooling setpoints are set differently and there is no valid outside temperature, the central apartment unit displays an error message.

Setpoint increase mixing valve

To enable the room group mixing valves in heat mode to offset the temperature variations of the heat source, the temperature of the main flow must be higher than the flow temperature required by the respective room group. Using this setting, you define the required increase (0..50 K).

*Main menu > Room groups > Room group X
> Settings > Setp incr mix valve:*

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

Setpoint decrease mixing valve

To enable the room group mixing valves in cooling mode to offset the temperature variations of the refrigeration source (e.g. heat pump), the temperature of the main flow must be lower than the flow temperature required by the respective room group. Using this setting, you define the required decrease (0..20 K).

*Main menu > Room groups > Room group X
> Settings > Setp decr mix valve:*

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

Temperature request winter operation

Specifies the validity of a heat request for room heating from a room group during winter operation:

*Main menu > Room groups > Room group X
> Settings > Temp request winter:*

Continuously	In winter operation, the heat request is constantly valid.
Switching	If the averaged valve position falls below a certain level, the heat request is set invalid. (Factory setting).

Valve position temperature request On/Off

If "Temperature request winter operation" is set to "Switching", the central apartment unit checks the averaged valve position of the respective room group.

If the averaged valve position is above the value set for "Valve position temp request On" (1..30%), the heat request to heat generation is forwarded.

If the averaged valve position lies below the value set for "Valve position temp request Off" (1..30%), the heat request to heat generation is suppressed.



To avoid frequent switching, set "Valve pos req On" to at least 2% above "Valve pos req Off".

*Main menu > Room groups > Room group X
> Settings > Valve pos req On:*

Factory setting	5 %
-----------------	-----

*Main menu > Room groups > Room group X
> Settings > Valve pos req Off:*

Factory setting	1 %
-----------------	-----

Actuator runtime

You can set the running time of the mixing valve's actuator for each room group (1..600 s).

*Main menu > Room groups > Room group X
> Primary controller > Act running time:*

Factory setting	150 s
-----------------	-------

P-band Xp


You can set the primary controller's P-band Xp for each room group depending on demand (1..100 K).

*Main menu > Room groups > Room group X
> Primary controller > P-band Xp:*

Factory setting	50 K
-----------------	------

Integral action time Tn

You can set the primary controller's integral action time Tn for each room group depending on demand (0..600 s).

 *Main menu > Room groups > Room group X
> Primary controller > Int action time Tn:*

Factory setting	60 s
-----------------	------

Ventilation

Indoor air quality control

The indoor air quality controller calculates a positioning signal based on the current setpoint (in accordance with the ventilation level) and the current indoor air quality.

From this, the linear step selector derives the ventilation stage presently required.

The ppm level of indoor air quality is displayed on the central apartment unit.


Indoor air quality at 0 V/10 V

Connect an indoor air quality sensor (DC 0..10 V) to provide indoor air quality control sensor.




The indoor air quality sensor must be located in the room itself, thus ensuring that air also circulates around the sensor when the ventilation system is off. Do not install the sensor in the extract air duct.

The ppm level for 0 V and 10 V (0..2000 ppm) can be set.

 *Main menu > Ventilation > IAQ controller > IAQ at 0 V:*

Factory setting	0 ppm
-----------------	-------


 *Main menu > Ventilation > IAQ controller > IAQ at 10 V:*

Factory setting	2000 ppm
-----------------	----------

P-band Xp indoor air quality

A P-controller is used to ensure that the indoor air quality is maintained at the required setpoint. The controller's P-band (0..2000 ppm) can be set here.

Within this range, all available stages are switched on and off.

 *Main menu > Ventilation > IAQ controller > P-band Xp:*

Factory setting	400 ppm
-----------------	---------

Humidity limitation

This function monitors the relative humidity of the air and compares it with the set "Humidity limit value".

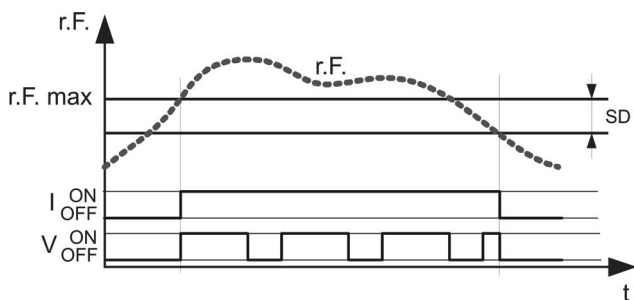
If the relative humidity exceeds the limit value, the ventilation system is switched on at the preselected stage to remain on until the humidity has dropped one switching differential below the limit value.

The relative humidity level (r.h.) is displayed on the central apartment unit.

In certain cases, the ventilation system is not capable of reducing the humidity to the required level.

To prevent the ventilation system from operating continuously in such cases, settings "Running time" and "Pause time" can be used to set an interval for operation.

Interval mode is switched off again when the relative humidity drops one switching differential below the limit value.




2707D103de

r.h.	Relative humidity
r.h. max	Humidity limit value
SD	Switching differential of humidity limitation
I	Interval mode active (ON/OFF)
V ON	Fan on, "Running time humidity limitation"
V OFF	Fan off, "Pause time humidity limitation"

Switching differential of humidity limitation


If the ventilation system was switched on because humidity in the room was too high, it is switched off again when humidity drops below the "Humidity limit value" by the switching differential set here (1..20%).

 *Main menu > Ventilation > Humidity limitation > Switching diff:*

Factory setting	5 %
-----------------	-----

Running time humidity limitation


The humidity limitation interval starts with the running time set here (0..720 min). During this period of time, the ventilation system operates at the preselected stage.

 *Main menu > Ventilation > Humidity limitation > Running time:*

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

Pause time humidity limitation

When the "Running time" has elapsed, the ventilation system is switched off for the pause time set here (0..720 min) before it resumes operation.

 *Main menu > Ventilation > Humidity limitation > Pause time:*

Factory setting	60 min
-----------------	--------


Air humidity at 0 V/10 V

Connect a humidity sensor (DC 0..10 V) to limit humidity.



The humidity sensor must be located inside the room to ensure that air also circulates around the sensor when the ventilation system is off. Do not install the sensor in the extract air duct.

The humidity value for 0 V and 10 V (0..100% r.h.) can be set here.

 *Main menu > Ventilation > Humidity limitation > Humidity 0 V:*

Factory setting	0 % r.h.
-----------------	----------

 *Main menu > Ventilation > Humidity limitation > Humidity 10 V:*

Factory setting	100 % r.h.
-----------------	------------

Minimum operating time night cooling

If all switch-on conditions for night cooling are met, it is switched on for at least the time set here (0..720 min).


 *Main menu > Ventilation > Night cooling > Operating time min:*

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

Reference room night cooling

To be able to determine the necessary temperature differential, the central apartment unit requires the room temperature plus the outside temperature.

Select the reference room to indicated to the controller which of the room sensors is the most suited for acquiring the reference value.

 *Main menu > Ventilation > Night cooling > Reference room:*

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

Outside temperature limit value night cooling


This setting defines the lowest outside temperature (0..50 °C) at which night cooling is allowed. Below this temperature level, night cooling is locked.

 *Main menu > Ventilation > Night cooling > OT limit:*

Factory setting	12 °C
-----------------	-------

Room outside temperature delta night cooling

Set here the by how much as a minimum the outside temperature must lie below the room temperature (0..20 K) for night cooling to be switched on.

 *Main menu > Ventilation > Night cooling > Room-outs delta:*

Factory setting	5 K
-----------------	-----

Startup delay

The startup delay (00.00..60.00 mm.ss) prevents the individual ventilation stages from switching on too quickly. Each time a stage is switched on, the delay time must elapse before the next stage can be switched on.

 *Main menu > Ventilation > Ventilation settings > Startup delay:*

Factory setting	00.00 mm.ss
-----------------	-------------

Locking time

After switching off, each ventilation stage remains locked for the period of time set here (00.00..60.00 mm.ss). It can be switched on again only when this time has elapsed.

The locking time is the same for all stages.

 *Main menu > Ventilation > Ventilation settings > Locking time:*

Factory setting	00.00 mm.ss
-----------------	-------------

Rundown time

As soon as a ventilation stage is switched off, the "Rundown time" (00.00..60.00 mm.ss) starts. The next lower stage is switched on only when this time has elapsed.


 *Main menu > Ventilation > Ventilation settings > Rundown time:*

Guide value	00.00 mm.ss
-------------	-------------

DHW (QAX913 only)

Frost protection setpoint

Set the DHW setpoint to be used in Protection mode.

 *Main menu > DHW > Setpoints > Frost prot setp:*

Guide value	5 °C
-------------	------

Legionella setpoint

Set the setpoint the DHW storage tank should maintain during the time the legionella function is performed.

 *Main menu > DHW > Legionella function > Legionella setpoint:*

Guide value	70 °C
-------------	-------

Legionella protection frequency

Specify how often the legionella function should be activated.

It can be performed daily or weekly. With the weekly legionella function, the weekday can be selected (Mo..Su).

 *Main menu > DHW > Legionella function > Legio prot freq:*

Never	Legionella protection is off.
Daily	Legionella protection carried out every day.
Monday	Legionella protection carried out every Monday. (Factory setting)
...	
Sunday	Legionella protection carried out every Sunday.

Legionella protection time

Specify the time of day (00:00..24:00) the legionella function should start.

 *Main menu > DHW > Legionella function > Legio prot time:*

Factory setting	05:00
-----------------	-------

Legionella protection period

When the legionella function is active, the DHW storage tank is maintained at the legionella protection setpoint for the period of time set here (0.00 – 6.00 hours).

 *Main menu > DHW > Legionella function > Legio prot period:*


Guide value	00.30 h.min
-------------	-------------

DHW priority

With DHW priority, preference can be given to DHW storage tank charging by reducing the amount of heat delivered to the heating circuits.


 *Main menu > DHW > Settings > Priority:*

None	No priority (factory setting): During DHW heating, there is no restriction with regard to the amount of heat delivered to the heating circuits. The highest temperature request (space heating or DHW) is forwarded to the heat demand controller.
Absolute	Absolute priority: During DHW heating, the heating circuits are not allowed to draw any heat. The temperature request for DHW charging is forwarded to the heat demand controller.

 In the case of DHW heating with a diverting valve, set the DHW priority to "Absolute".

Switching differential


The switching differential is used to control DHW charging. Charging is enabled when the DHW temperature drops below the DHW setpoint by the amount of the switching differential (1..20 K) set here. Charging is stopped as soon as the DHW setpoint is reached again.


 *Main menu > DHW > Settings > Switching diff:*

Factory setting	5 K
-----------------	-----

Charging time max

To prevent the heating circuit to be restricted or even locked for longer periods of time by DHW priority, "DHW charging with absolute priority" can be limited for a certain period of time (5..250 min).

 Setting "---" charges DHW with no limitation of the charging time.

 *Main menu > DHW > Settings > Charging time max:*

Factory setting	60 min
-----------------	--------

Forced charging

Normally, DHW storage tank charging is started only if the storage tank temperature drops below the switch-on point (DHW storage tank setpoint minus switching differential). Forced charging can enforce storage tank charging, even if this switch-on criterion has not been reached.


Starting

If forced charging is activated and the storage tank temperature lies at least 1 K below the normal setpoint, forced charging is started.

Ending

Forced charging is ended when the normal setpoint is reached.

You can decide when forced charging is performed:

 *Main menu > DHW > Settings > Forced charging:*

Never	Forced charging protection is deactivated. (However, manual triggering of forced charging is still possible via the DHW button). (Factory setting).
To Normal on 1. change	Forced charging is performed when, for the first time in a 24-hour period, the reduced setpoint changes to the normal setpoint. As a result, the DHW storage tank is completely charged at the beginning of the day
To Normal set-point with every change	Forced charging is performed every time the reduced setpoint changes to the normal setpoint



One-time manual forced charging of the DHW storage tank can also be triggered by a long push on the central apartment unit's **DHW** button. During manual forced charging, the DHW symbol on the display blinks.

Setpoint boost DHW charging

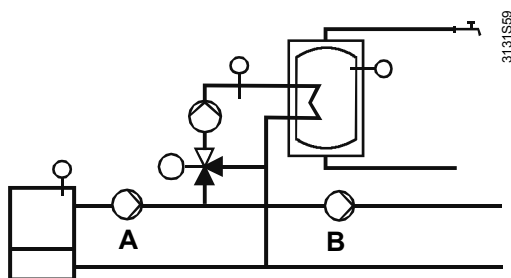
To allow for DHW charging, the flow temperature must be higher than the required DHW setpoint. Set the required setpoint boost here (0..50 K).

 *Main menu > DHW > Settings > Setp incr DHW charg:*

Factory setting	10 K
-----------------	------


System pump required

If the system pump is controlled by a KNX TP1-compatible controller, it can be selected whether the system pump should run during DHW charging (depending on the selected type of plant).



Case A System pump required for DHW charging (system pump: Yes)

Case B System pump not required for DHW charging (syst. pump: No)

 *Main menu > DHW > Settings > System pump:*

No	The system pump does not need to run during DHW charging.
Yes	The system pump must run during DHW charging. (Factory setting).

Summer operation electric immersion heater

Specify if the DHW time switch should be used for controlling the electric immersion heater.

 *Main menu > DHW > Settings > Summer operation electric immersion heater:*


Without time switch	The time switch has no impact on the control of the electric immersion heater in the summer. DHW temperature is maintained at the Normal setpoint.
With time switch	For control of the electric immersion heater in the summer, the controller gives consideration to the time switch and the holiday program (factory setting). DHW operating mode must be set to "Auto".

Switching groups (QAX913 only)

Scene number

The scenes defined during commissioning automatically is numbered (1..16).

To prevent scene numbers from overlapping with other existing scene buttons (e.g. GAMMA wave or Hager tebis), or to provoke them, the scene numbers of the central apartment unit can be changed, if required.

 *Main menu > Switching groups > Switching group X
> Scene A or B > Scene number:*



Please observe the different scene number ranges of the different product ranges:

- Radio plug adapter 1..16
- GAMMA wave: 1..16
- Hager tebis radio: 1..8
- KNX TP1 actuators: 1..64 (complete range)

When using scene numbers outside the supported range, the actuator does not respond to the respective scene commands.

Switching group	Scene	Factory setting
1	A	1
	B	2
2	A	3
	B	4
3	A	5
	B	6
4	A	7
	B	8
5	A	9
	B	10
6	A	11
	B	12
7	A	13
	B	14
8	A	15
	B	16

Consumption data

Actual consumption data are displayed at the end user level and are described in the operating instructions. The following information is displayed at the expert level for each meter.



Consumption data of general meters (allocation = general) are visible only at the expert level.

Operating hours

Shows the number of operating hours on the meter. If a pulse input of the consumption data interface WRI982 is used, the totaled number of operating hours of the WRI982 are displayed here.

 *Main menu > Consumption data > ... > Operating hours:*

ID number

Shows the ID of the meter.

 *Main menu > Consumption data > ... > Ident number:*

Metering medium

Shows the medium measured by the meter.

 *Main menu > Consumption data > ... > Metering medium:*

Allocation

Shows the type of allocation for the meter (Apartment/General).

 *Main menu > Consumption data > ... > Allocation:*

Meter replacement

Shows if the meter was replaced (Yes/No).

 *Main menu > Consumption data > ... > Meter replacement:*



Initial commissioning sets the meter replacement information to "Yes" and must thus be set to "No" after commissioning is complete or after the meter has been replaced.

The current meter status is sent with value "0" via S-mode while "Meter replacement" is set to "Yes".

Time of day/date

Start/end of daylight saving time


The change from daylight saving to standard time and vice versa is automatic. The earliest changeover date can be adjusted if the relevant standards change.

As a result of the dates set for the change from standard to daylight saving time, or vice versa, the time of day on the first Sunday after that date is ad-

vanced from 02:00 (standard time) to 03:00 (daylight saving time), or set back from 03:00 (daylight saving time) to 02:00 (standard time).

If both dates coincide on the same day, daylight saving / standard time changeover is deactivated.

 *Main menu > Time of day/date > Summer time start*


 *Main menu > Time of day/date > Winter time start*

	Summer time start	Winter time start
Guide value	25.03.	25.10.

Faults

Fault history


The fault history contains the last 10 fault status messages that occurred in the central apartment unit or the RF components assigned to it.

 *Main menu > Faults > Fault history > Fault X:*

Every time a fault status message is delivered, the fault number is displayed, also fault text, the time of day and the date the fault occurred, the device type and, if possible, the function group.

Delete faults

The current faults and the fault history can be deleted in one step.

 *Main menu > Faults > Delete faults:*

Inputs/Outputs

Simulate outside temperature

For test purposes, outside temperatures of between -50 and 50 °C can be simulated on the central apartment unit. In this case, the measured value of the outside sensor is overridden. The simulated outside temperature is also used for the composite and the attenuated outside temperature.

While simulation is active, fault status message "Outside temperature simulation active" is displayed.

Simulation must be manually reset (setting ---).



The simulated outside temperature is only used locally. The measured value of the connected outside sensor is forwarded to other controllers on the same bus.

 *Main menu > Inputs/outputs > Inputs > OT simulation:*

Factory setting	--- (no simulation)
-----------------	---------------------

Texts

The texts for "Plant name", "Rooms", "Switching groups", "Doors", "Light status" and "Temperatures" and "Handheld control" can be entered at the service level and are thus described in the operating instructions.

File name

A data set can be created with the ACS service tool and copied to the central apartment unit.

In this case, the file name of the data set is displayed on the following menu line:

 *Main menu > Settings > Texts > File name:*


Room group names 1 - 2

Assign clear names to the room groups (e.g. living space, adjoining rooms, etc.).

 *Main menu > Settings > Texts > Room groups > Room group X:*

Business card title and lines 1 – 4

The electronic business card is displayed in the form of an info page and has one title line and 4 text lines where, for example, information about the company or person responsible for the plant can be entered.

 *Main menu > Settings > Texts > Business card > Title:*

 *Main menu > Settings > Texts > Business card > BC line 1 – 4:*

Meter names

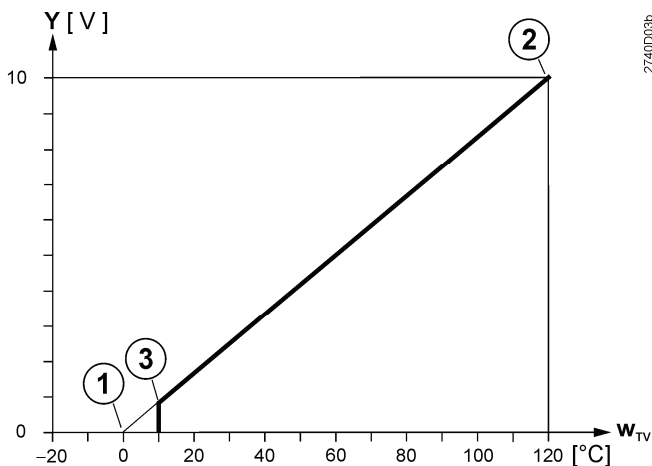
Assign clear names to the meters (e.g. kitchen, bathroom, etc.).

 *Main menu > Settings > Texts > Meter >:*

Heat request 0..10 V

To be able to transmit a temperature request (for space heating and DHW) to a heat demand controller by means of a 0..10 V signal, the temperature setpoint at 0 V and 10 V must be predefined for the central apartment unit. The values in between are interpolated in a linear way.

Temperature requests below the selected temperature request threshold are not forwarded to the heat demand controller (0 V).



- ① Setpoint in °C at DC 0 V
- ② Setpoint in °C at DC 10 V
- ③ Threshold value of temperature request (temperatures below this level are interpreted as "No demand for heat")

w_{TV} Current temperature setpoint

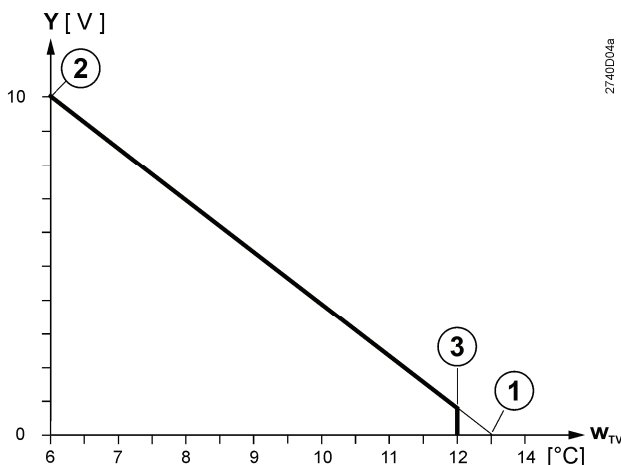
- Main menu > Settings > Heat request > Temp request 0 V:*
- Main menu > Settings > Heat request > Temp request 10 V:*
- Main menu > Settings > Heat request > Temp request thresh:*

	Factory setting
Temp request at 0 V	0 °C
Temp request at 10 V	100 °C
Temp request threshold	0 °C

Refrigeration request 0..10 V

To be able to transmit a temperature request (for room cooling) to a refrigeration request controller by means of a 0..10 V signal, the temperature setpoint at 0 V and 10 V must be predefined for the central apartment unit. The values in between are interpolated in a linear way.

Temperature requests above the selected temperature request threshold are not forwarded to the heat demand controller (0 V).



- ① Setpoint in °C at DC 0 V
- ② Setpoint in °C at DC 10 V
- ③ Threshold value of temperature request (temperatures above this level are interpreted as "No demand for refrigeration")

w_{TV} Current temperature setpoint

- Main menu > Settings > Refrigeration request > Temp request 0 V:**
- Main menu > Settings > Refrigeration request > Temp request 10 V:**
- Main menu > Settings > Refrigeration request > Temp request thresh:**

	Factory setting
Temp request at 0 V	35 °C
Temp request at 10 V	10 °C
Temp request threshold	25 °C

Exhaust hood

Impact of window switches

For operation of the exhaust hood, at least one of the windows in one of the rooms defined here must be open.

 *Main menu > Settings > Exhaust hood > Imp window switches:*

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

Handheld control (QAX913 only)

Buttons of the handheld control can be assigned already at the service level and are described in the operating instructions.

Function test water detector

To check the water detector function, dip both contacts in water.

The following actions are triggered e.g. depending on the configuration set during commissioning:

- Shutoff valve of main line closes.
- Indoor siren is sounded.
- An associated alarm is displayed on the central apartment unit.

The pending alarm must be acknowledged on the central apartment unit to allow the safety shutoff valve to reopen, the siren 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.

Device information

VVS-ID

From the current software and memory data (software version, EEPROM data, flash data) an unambiguous "Valid Version Set-ID" is produced.

This enables Siemens to unambiguously identify the software status of a central apartment unit e.g. when a problem occurs.

 *Main menu > Device information > VVS-ID:*


Device list repeater

When using RF repeaters, the list of devices to be repeated by the central apartment unit is loaded in the RF repeater. The device list is loaded when the assignment of RF repeaters or the device list is changed.

The following display shows if the device list has been loaded successfully in the RF repeater.

 *Main menu > Device information > Device list repeater:*

Loading..	Loading of the device list in the RF repeater in progress.
Up-to-date	Device lists are up to date, i.e. device data loaded successfully in all RF repeaters.

 While the device lists are loaded in the RF repeater, telegram repetition in the assigned devices by the RF repeater is not guaranteed.


Data backup


The current commissioning data can be saved, including the date and the year. The data saved or the factory settings can be retrieved, if required.


 *Main menu > Data backup > Storage date (read-only):*

 *Main menu > Data backup > Storage year (read-only):*

 *Main menu > Data backup > Restore:*

 *Main menu > Data backup > Save:*

 *Main menu > Data backup > Factory setting:*

 When saving the new data, any data previously saved in the backup memory is overwritten (cannot be retrieved).

When restoring data or factory settings, the current data set in the device's main memory is overwritten (cannot be retrieved).

When restoring data, certain bus settings and all set texts are not overwritten and are retained with their present state.

When restoring the factory settings, customized texts are also reset.

System limits

System limitations (TP1 bus)

126 Central apartment units

Limitations per central apartment unit

- 1 Meteo sensor
- 12 Rooms
- 2 Door contacts (supervised, QAX913 only)
- 4 Light actuators with status indication (only on KNX TP1 (S-mode) QAX913 only)
- 3 RF repeater
- 5 Handheld control (QAX913 only)
- 4 Heat meter (heat, cooling energy or combined)
- 4 Hot water meter
- 4 Cold water meter
- 3 Electricity meter
- 3 Gas meter
- 2 Other meters (e.g. oil, steam)
- 94 RF devices (total number, including the central apartment unit)



In addition to the above mentioned devices, switch, dim and blind actuators can be used in unlimited numbers.

Limitations per room

- 1 Room unit
- 2 Room temp sensor
- 1 Heating circuit controller
- 6 Radiator control actuators (one lead controller, 0...5 lag controllers) or heating circuit controller channels
- 6 Window contacts
- 1 Smoke detector (QAX913 only)



Radiator control actuators and heating circuit controllers cannot simultaneously be used in the same room.

Communication

Protocol

KNX is used as protocol (radio and/or wire).

KNX TP1 2-wire bus as per KNX TP1, with additional RJ45 plug connection to connect service tool.

KNX RF RF bus conforming to KNX RF

Maintenance/service

Peripheral devices

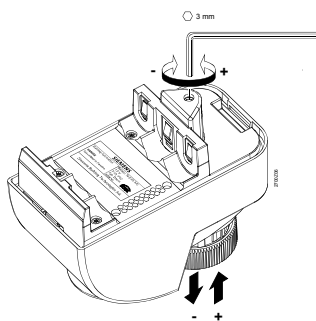
Restore factory settings

To restore the factory settings of the peripheral devices, press the multifunction or binding button on the device for at least 20 seconds. Press simultaneously the two upper buttons on the handheld control for at least 20 seconds.

The unit restarts. The factory settings are restored and the device is no longer connected to the central apartment unit.

Manual control of the radiator control actuator

For service work, or in the event of fault, the SSA955 can be brought into any position using a 3 mm hexagon socket wrench.



Disposal



Dispose of the central apartment unit and the associated partner devices as electronic waste in compliance with European directive 2002/96/EEC (WEEE), and not together with general garbage. Observe all relevant national regulations using correct disposal channels. Comply with local and currently valid legislation. Dispose of exhausted batteries in compliance with relevant environmental regulations.

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CE 0678



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