



Room Unit

QAW70

for use with heating controllers

Digital, multi-functional room unit for the convenient operation of heating controllers from the living room.

A setpoint knob and an economy button allow straightforward adjustment of the room temperature setpoint. The unit features a 7-day heating program, adjustable temperature setpoints, operating mode selection and an info button.

Use

Depending on the type of heating controller used, the QAW70 is specifically suited for

- Single-family homes
- Holiday houses

Functions

- Ergonomic and function-specific assignment of operation to 3 operating levels
- Info button for fast retrieval of important information
- Buttons for direct selection of operating mode
- Occupancy button for influencing the heating system temporarily or continuously
- Setting knob for straightforward readjustment of the room temperature setpoint
- Entry of room temperature and d.h.w. temperature setpoints
- Heating program with 3 heating periods per day; each day can be individually selected
- Holiday function
- Resetting the parameters to their default values

- PPS interface for the heating controller (with selectable device address)
- Protection of setting values against tampering (operating lock)
- Connection facility for an external switch (telephone switch)
- Connection facility for an external room temperature sensor
- Selectable display format for the setpoint (absolute / relative)

Ordering

When ordering, please give type reference **QAW70** and the language code letter (-A or -B) for the Operating Instructions in the requested language:

-A for English, French, Italian, German (e.g. QAW70-A for English)

-B for Dutch, Swedish, Greek, Polish (e.g. QAW70-B for Dutch)

If an external room temperature sensor is required, it must be ordered as a separate item.

Equipment combinations

Suitable heating controllers

The QAW70 is suited for use with all types of heating controllers from SBT .HVAC Products featuring a PPS interface.

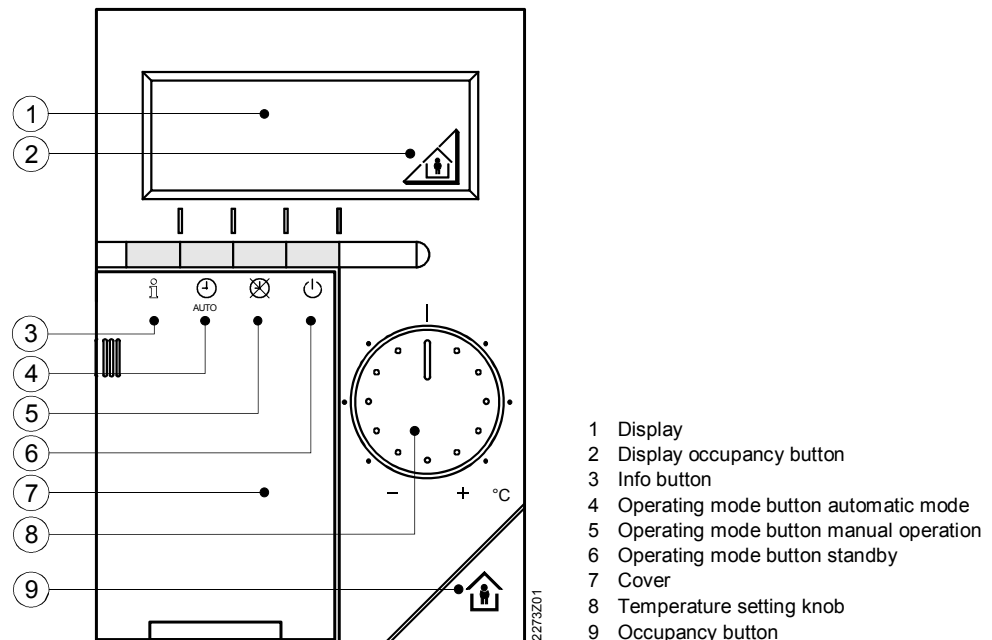
External sensor

Room temperature sensor: **QAW44**

Mechanical design

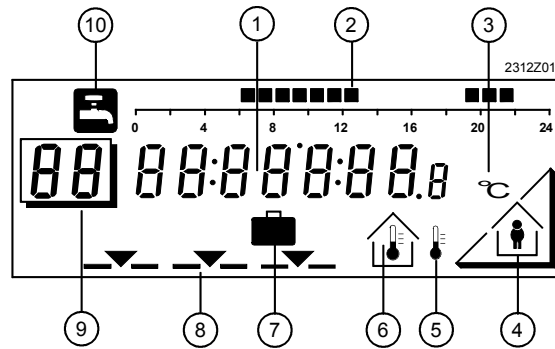
The room unit consists of base and operating section. The base can be mounted and wired before the operating section is fitted. Casing and base are made of plastic. The major plastic components bear the material references to facilitate environmental-friendly disposal.

Operating elements



- 1 Display
- 2 Display occupancy button
- 3 Info button
- 4 Operating mode button automatic mode
- 5 Operating mode button manual operation
- 6 Operating mode button standby
- 7 Cover
- 8 Temperature setting knob
- 9 Occupancy button

Display



- 1 Digits, clock
- 2 Heating program
- 3 Units (°C)
- 4 Display occupancy button
- 5 Outside temperature
- 6 Room temperature
- 7 Holiday function
- 8 Operating mode
- 9 Line number
- 10 D.h.w. temperature

Technical design

Operating levels

The QAW70 features ergonomic and function-specific assignment of operation to 3 operating levels.

Operation by the end-user:

- Unit cover closed
- Operation via info button, operating mode buttons, occupancy button and setting knob for setpoint readjustments

Programming by the end-user:

- Unit cover open
- Programming via the 4 programming buttons on operating lines 1...17

Service level:

- Unit cover open
- This level can only be accessed by pressing a certain combination of buttons. Parameterization / programming is made possible via 4 programming buttons on operating lines 51...58

Info button

Using the info button, the end-user can retrieve the following key data:

- Weekday and time of day
- Outside temperature
- Time of day and room temperature

The value selected last is maintained on the display.

Operating modes

Three buttons are used to select the 3 available operating modes:

- Automatic mode (change between the nominal room temperature and the reduced temperature according to the time switch settings)
- Manual operation (nominal room temperature or reduced room temperature continuously)
- Standby (frost / holiday temperature)

Occupancy button

The occupancy button is used to switch from the nominal room temperature to the reduced room temperature, and vice versa.

The action depends on the selected operating mode.

Automatic mode

Changeover is only temporary; after the next switching point of the heating program, the controller will resume operation according to the settings made

Manual operation

Changeover is on a continuous basis until the button is pressed again

Setpoint readjustment

The temperature setting knob can be used to readjust the nominal room temperature setpoint by ± 3 K. If required, the setting knob's readjustment range can be mechanically limited.

Setpoints

The following setpoints can be entered on the unit:

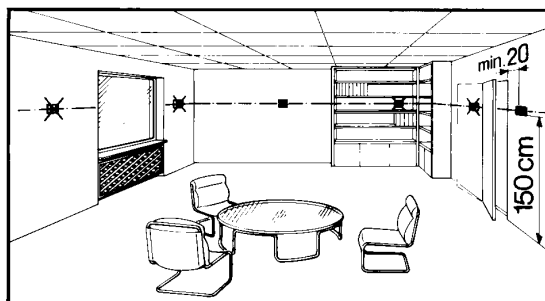
- Nominal setpoint of the room temperature
- Reduced setpoint of the room temperature
- Setpoint of the d.h.w. temperature

| | |
|----------------------------|---|
| Heating program | The heating program is provided by a 7-day time switch. Each day may have a maximum of 3 heating periods whereby each weekday can be individually programmed. The heating program of the current weekday appears on the display in graphic form. |
| Holiday function | When the holiday period starts, the duration in days can be entered. During the holiday period, the room temperature is maintained at the standby level, ensuring protection against frost. If active, the holiday function is shown on the display. |
| Default values | The temperature setpoints, the heating program and the holiday function can be reset to their default values at any time. |
| PPS interface | For heating controllers that operate 2 room units via their PPS interface, the device address can be set on the QAW70. |
| Operating lock | On the service level, an operating lock can be activated. When activated, it is no longer possible to change operating lines. |
| External sensor | The QAW70 can also be used with an external temperature sensor. The authority of that sensor can be set to between 0 and 100 %. |
| External switch | The use of an external switch allows changeover of the operating mode by some other device (e.g. a telephone switch). On the QAW70, it is possible to select whether the reduced room temperature or the frost / holiday mode temperature shall be maintained when the switch has closed its contact. With analog heating controllers only frost / holiday mode temperature is possible. The operating action of the switch can also be selected. |
| Display of setpoint | It is possible to select whether display of the setpoint shall be absolute or relative. |

Notes

Engineering

- All connection terminals carry extra low voltage
- The local regulations for electrical installations must be complied with
- Sensor cables should not be run parallel to mains cables
- The room unit should be installed in the main living room
- If the control system uses room temperature influence, the room unit should be installed in a room that is representative of the entire house (reference room). If that room is equipped with thermostatic radiator valves, they must be set to their fully open position
- The mounting location should be such that the room unit can sense the room temperature as accurately as possible. This means that it should not be exposed to direct solar radiation or to other heat or refrigeration sources
- The room unit should be fitted about 1.5 m above the floor
- The room unit can be fitted on most commercially available recessed conduit boxes or directly on the wall



Commissioning

Every unit is supplied with mounting and commissioning instructions

Disposal



The devices are considered electronics devices for disposal in term of European Directive 2012/19/EU and may not be disposed of as domestic waste.

- Dispose of the device via the channels provided for this purpose
- Comply with all local and currently applicable laws and regulations.

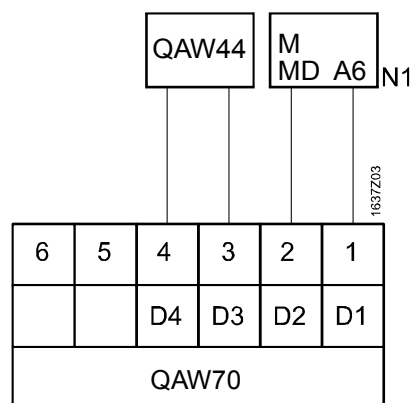
Technical data

| | |
|---|---|
| Operating voltage | DC 10...15 V |
| Perm. ambient temperature | |
| Transport and storage | -25...+65 °C |
| Operation | 0...35 °C |
| Degree of protection (when mounted on a closed wall) | |
| Protection class | III according to EN 60730-1 |
| Protection degree of housing | IP 30 according to EN 60529 |
| Overvoltage protection: max. permissible voltage | |
| Terminals D1/D2 | 24 V |
| Terminals D3/D4 (sensor / switch) | -13...+5 V |
| Room temperature sensor | |
| Time constant | 10 min |
| Coupling to the wall | 50 % |
| Measurement range | 0...32 °C |
| Perm. cable lengths to the heating controller (PPS interface) | |
| Copper cable 0.25 mm ² | max. 25 m |
| Copper cable from 0.5 mm ² | max. 50 m |
| Perm. cable lengths to the external switch or sensor | |
| Copper cable 0.6 mm dia. | max. 20 m |
| Copper cable from 1.0 mm ² | max. 50 m |
| Directives and Standards | |
| Produkt Standard | EN 60730-1 Automatic electrical controls for household and similar use |
| Electromagnetic compatibility (Applications) | For use in residential, commerce, light-industrial and industrial environments |
| EU Conformity (CE) | CE1T1637xx ^{*)} |
| Environmental compatibility | The product environmental declaration CE1E1637en ^{*)} contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). |
| Reserve of clock | min. 12 h |
| Weight (net) | 0.22 kg |
| Color of front | RAL 9010 (pure-white) |

*) The documents can be downloaded from <http://siemens.com/bt/download>.

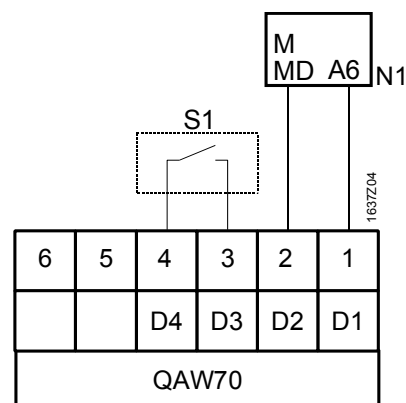
Connection diagrams

With an external QAW44 sensor

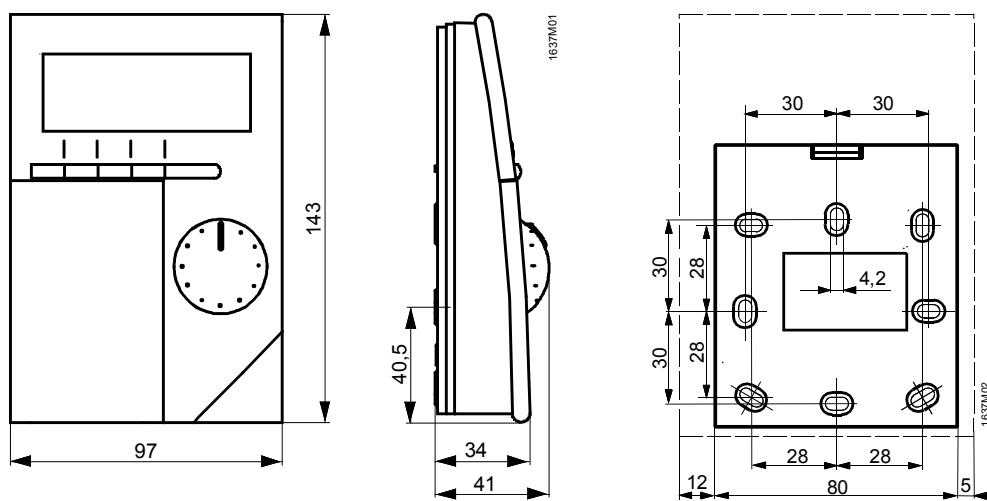


D1...D4 Terminals of QAW70
 N1 Controller
 S1 External switch

With an external switch
 (remote telephone switch)



Dimensions



Dimensions in mm