

## Room Units

for use with heating controllers

## QAW50...



**Multi-functional room unit for operating heating controllers from the living room.**

**A setting knob and an economy button allow straightforward adjustment of the room temperature setpoint.**

**Addressable for one to three heating zones (QAW50.03).**

### Use

Depending on the type of controller used, the room unit is specifically suited for:

- single-family houses
- holiday houses
- control loops with addressable PPS (QAW50.03)

### Functions

- Slider for selecting the main operating modes
- Economy button for overriding the normal heating program, either permanently or temporarily, to save energy
- Address selector for selecting the heating zones to be controlled (QAW50.03)

### Type summary

Room unit, pure-white (RAL9010)	<b>QAW50</b>
Room unit, pure-white (RAL9010) addressable for controllers with PPS	<b>QAW50.03</b>

### Ordering

When ordering, please give type reference according to "Type summary".

### Mechanical design

The room unit is comprised of terminal base and operating section. The base can be fitted to most commercially available recessed conduit boxes or directly on the wall, and is then wired up before fitting the operating section. Casing and base are made of plastic.

### Disposal

The major plastic components bear the material references in compliance with ISO 11469 to facilitate environment-friendly disposal.

## Operation

The QAW50... room unit is a combination of a room temperature detector and an operating unit.

To enable the QAW50... to act on the heating controller, the latter must be in AUTO mode.

All operating elements for normal operation are directly accessible:

- Slider for selecting the operating mode
- Knob for readjustment of the room temperature setpoint ( $\pm 3$  °C)
- Economy button

### Operating modes



#### Automatic mode:

The heating program controls switchover of the setpoints. The economy button can be used to temporarily override the heating program. Overriding remains active to the next switching action by the heating program (refer to "Economy button").



#### Manual operation:

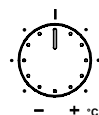
The economy button is used to switch to the required temperature (normal / reduced) (refer to "Economy button").



#### Standby:

The room temperature is limited to a minimum level, which is preset by the controller.

### Setting knob



Using the **setting knob**, the nominal room temperature setpoint can be readjusted by  $\pm 3$  °C. If a readjustment is made, it is added to or subtracted from the programmed nominal setpoint. This has no effect on the reduced setpoint.

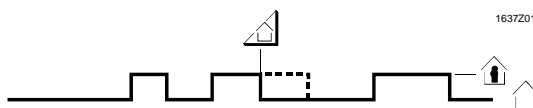
### Economy button



The **economy button** is used to switch from the nominal room temperature to the reduced temperature, and vice versa. The effect of the economy button is as follows, depending on the selected operating mode (automatic or manual):



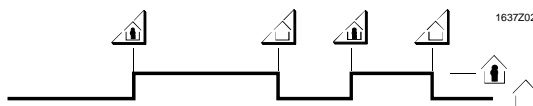
In **automatic mode**, the current setpoint is **temporarily** overridden by pressing the button. The next time the heating program switches over, the controller resumes operation according to the programmed heating periods.



1637201 Effect of economy button in automatic mode



In **manual operation**, the selected setpoint acts **permanently** until the presence button is pressed again to initiate switchover.



1637202 Effect of economy button in manual operation

### Address selector (QAW50.03)



The QAW50.03 has an address selector inside, which can be used to address one to three heating zones. In that case, the controller must feature addressable PPS control. To access the selector, the base of the QAW50.03 must be removed.

The room unit is supplied with the address selector in position 1. Selector positions 4...0 are inactive.

## Generation of setpoint

Both the nominal and the reduced room temperature setpoint are adjusted on the heating controller. The readjustment made with the setting knob is added to or subtracted from the basic nominal setpoint setting.

## Operational faults

The LED does not light up when pressing the economy button:

- No voltage present at the controller
- Faulty wiring
- The room unit is not suited for the type of heating controller used

The LED flashes briefly and then remains dark:

- The heating controller is not in AUTO mode

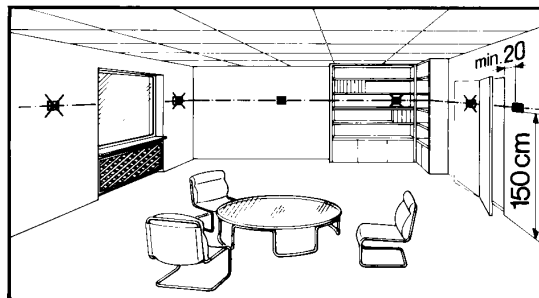
## Technical data

Operating voltage		Perm. ambient humidity	
Safety extra low voltage to EN 60730	DC 10 ... 15 V	Operation	Class G, DIN 40040
		Transport / storage	Class E, DIN 40040
Overvoltage protection		Temperature sensor	NTC
Max. permissible voltage	AC 24 V	Time constant	10 min
<b>CE</b> conformity to		Coupling to the wall	50 %
EMC directive	89/336/EEC	Perm. cable lengths	
low voltage directive	73/23/EEC	Copper cable 0.6 mm <sup>2</sup>	25 m max.
		Copper cable > 0.8 mm <sup>2</sup>	50 m max.
Safety class to EN 60730	III	Weight	0.16 kg
Degree of protection to EN 60529 (when mounted on a closed wall)	IP 30	Room temperature measuring range	0 ... 32 °C
Electromagnetic compatibility		Setting ranges	
Immunity	EN 50082-2	Temperature readjustment	±3 °C
Emissions	EN 50081-1	Resolution	0.5 °C
Perm. ambient temperatures		Selectable addresses (QAW50.03)	1 ... 3
Operation	0 ... 55 °C		
Transport / storage	-25 ... +65 °C		

## Notes

### Engineering

The room unit should be mounted in the main living room.



It should be located such that it 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 QAW50... can be fitted on a recessed conduit box or directly to the wall.

### Installation

For wall mounting, the cable holes must be knocked out.

First, fit the base and wire it up. Then, fit the casing and use a special label if required.

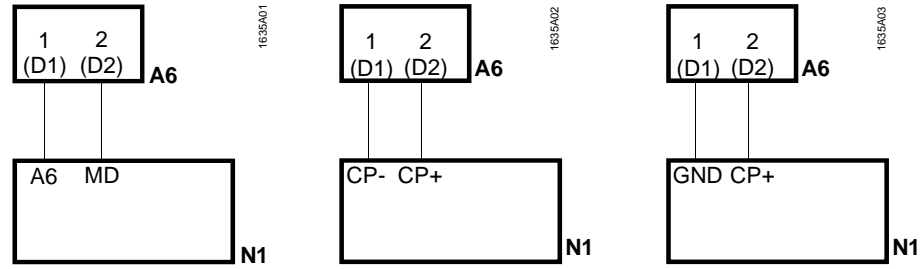
### Commissioning

When power is supplied to the unit, startup is automatically initiated.

In the case of weather compensation with room temperature influence (controller setting!), thermostatic radiator valves - if fitted - must be set to their maximum flow rate.

Prior to commissioning the QAW50.03, the appropriate address must be set with the address selector.

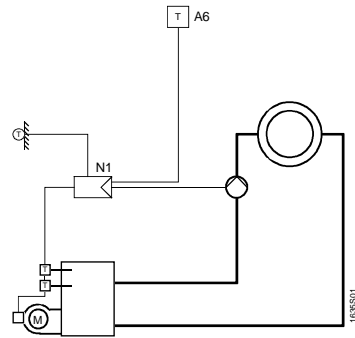
## Connection diagram



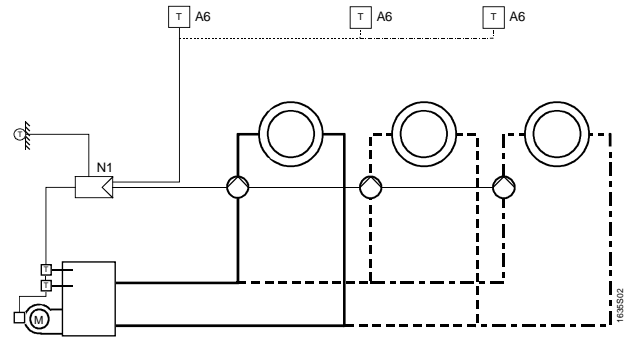
1 (D1) Terminal 1 / data room unit  
 2 (D2) Terminal 2 / data room unit  
 A6, CP+ Room unit  
 MD, CP-, GND Ground data  
 N1 Heating controller

## Application examples

QAW50



QAW50.03



A6 QAW50...: Room unit in reference room  
 QAW50.03: 1...3 room unit(s)  
 N1 Heating controller with time switch

## Dimensions

