



## Zone room unit for RRV817 control system

## QAW810

2 wire bus connection

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**Digital zone control unit for installer and end-user interface with RRV817 underfloor heating control system.**

### Use

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Use	Room unit in combination with the RRV817 control system for underfloor heating plants in: <ul style="list-style-type: none"><li>• Residential apartments</li><li>• Residential single house</li><li>• Light commercial applications</li><li>• In conjunction with district-heating scheme or local heat generator</li></ul>
Application	One per zone 2 to 7, in conjunction with the RRV817 controller and the QAX810 (master) room unit, in water-based heating plants.

### Functions

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Primary functions	<ul style="list-style-type: none"><li>• Zone control and monitoring in combination with an RRV817 + QAX810</li><li>• Zone addressing by installer</li><li>• Room temperature measurement</li></ul>
Operator functions	<ul style="list-style-type: none"><li>• Local zone control and monitoring</li><li>• Temporary setpoint adjustment</li><li>• Zone comfort, energy saving, auto-timer and standby selection</li><li>• Display of operating mode and zone temperature.</li></ul>

## Type summary

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<i>ASN</i>	<i>Type reference</i>	<i>Compatible with</i>
QAW810	Zone room unit	RRV817, QAX810

Note Not usable with Desigo RX range of controllers.

## Mechanical design

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**Type of unit** The QAW810 is the end-user zone MMI for RRV817 controllers.

The unit consists of the following components:

- Room unit with integrated electronics and operating elements
- Internal temperature sensor
- Base for wall mounting with the connection terminals
- Operator interface buttons

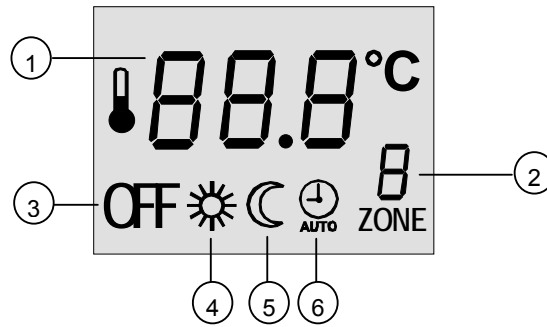
## Operating elements



### Legend

- 1 LED for zone valve command status (heat output status at the RRV817)
- 2 LCD display with EL backlight for control and monitoring of operation modes, setpoints, zone conditions etc
- 3 Operating mode selection – Comfort, energy saving and auto timer
- 4 Setpoint adjustment
- 5 Zone standby

## LCD display



### Legend

- 1 Actual temperature
- 2 Zone identification
- 3 Zone off
- 4 Comfort mode
- 5 Energy saving mode
- 6 Auto timer mode

## Commissioning notes

### Response on start-up

When powering up, the QAW810 will display all LCD icons for approximately 2 seconds. It will then revert to normal display. There will be a delay before operation commences due to polling of all values.

### Sensor calibration

Generally there is no need to calibrate sensor; however the displayed room temperature on the LCD can be calibrated if there is any discrepancy from the actual temperature measured by a certified thermometer. The calibration function can be accessed by pressing the  $\blacktriangle$  and  $\blacktriangledown$  buttons simultaneously for 2 seconds. The displayed value can then be adjusted, using the same buttons, in 0.5K steps. The adjustment range is +/- 2K.

### Commissioning

Initial installation specific application set-up is made by the setting of dip switch positions on the RRV817 controller. Dip switches are located at the top of the RRV817 controller's PCB.

The QAW810 includes dip switches for zone addressing. Additional to QAX810 master zone, using the QAW810, up to 6 further zones may be connected to the RRV817 controller. The master room unit QAX810 is always zone 1 (automatic - no address setting necessary).

### Dip switches



Dip switches on the back of QAW810.

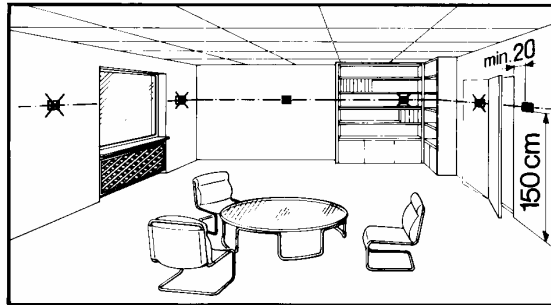
They allow setting the address in cases where several room units are connected to one RRV817 controller. The room units are delivered with default positions = zone 2.

Dip No.	Function	S1	S2	S3	Room
1-3	Zone identity	<b>OFF</b>	<b>ON</b>	<b>OFF</b>	<b>2</b>
		ON	ON	OFF	<b>3</b>
		OFF	OFF	ON	4
		ON	OFF	ON	5
		OFF	ON	ON	6
		ON	ON	ON	7

**BOLD** = Default setting

## Mounting and installation notes

The QAW810 should be mounted in a location where the air temperature can be measured as accurately as possible without getting adversely affected by direct solar radiation or other heating/cooling sources.



- Mounting height is about 1.5 m above the floor.
- The unit can be fitted to a recessed conduit box.
- The specified ambient conditions must be complied with.
- Only authorized staff may disconnect the QAW810 unit from base plate.
- Do not mount in recesses, shelves, behind curtains or doors.
- Refer to mounting instructions included in packaging box.

When mounting the unit, fix the base-plate first and then make the electrical connections. To avoid any damage during construction works only install QAW810 unit when all construction works have been completed. The QAW810 must be mounted on a flat surface and in compliance with local regulations.



Local installation regulations must be observed.



**Note!**

**The room unit is not protected against connection to AC 230 V.**

## Technical data

Interfaces	HCC bus	Proprietary
	Baud rate	9.6 kbit/s
	Permissible cable length	Max. 60m where $A \geq 0.5\text{mm}^2$ Max. 100m where $A \geq 1\text{mm}^2$
	Cable type	2-wire standard installation cable (unshielded)
Note: Twisted pair (unshielded) is recommended for enhanced immunity to external electromagnetic interference, for example, in the vicinity of radio transmitters or frequency inverters		
Protection	Safety class	III to EN 60730 (when mounted correctly)
	Degree of protection	IP 30 to EN 60529
Environmental conditions	Operation	IEC 721-3-3 class 3K 5
	Temperature	0...50 °C
	Humidity	< 85 % r.h. (non condensing)
	Transport	IEC 721-3-2 class 2K 3
	Temperature	-25...60 °C
	Humidity	< 95 % r.h. (non condensing)
	Storage	IEC 721-3-1 class 1K 3
	Temperature	-25...60 °C
Humidity	< 95 % r.h. (non condensing)	
Standards	 -conformity	
	EMC directive	89/336/EEC
	Immunity and Emissions	EN 60730-1, EN 50081-1, EN 61000-6-2
	Low-voltage directive	73/23/EEC
	Electrical safety	EN 60730-1, EN 60730-2-9
	 <sup>N474</sup> conformity to	
	Australian EMC Framework Radio Interference Emission Standard	Radio communication act 1992 AS/NZS 4251.1
Room temperature measurement	Measuring range	0...49 °C
	Setpoint range	5...35 °C
	Maximum power	2VA
	Accuracy at 20°C	± 0.5K max.
	Temperature calibration range	± 3.0K max in step of 0.5K.
	Room temperature display resolution	0.5K
	Other features	Software class
Weight		Approx. 0.1 Kg

## Notes

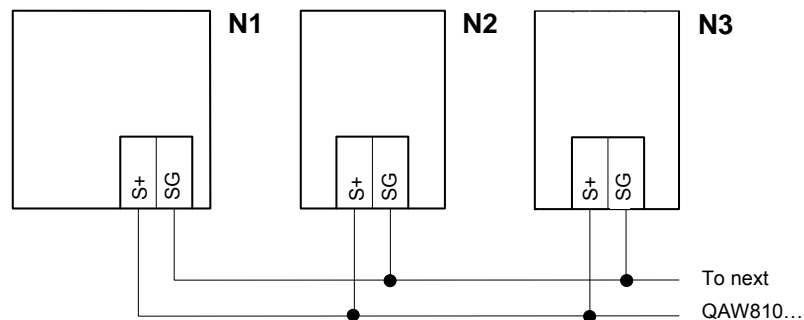
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### Product liability

- The products may only be used in building services plant and applications as described above.
- When using the products, all requirements specified under "Technical data" must be observed.
- The local regulations for electrical installation must be complied with.

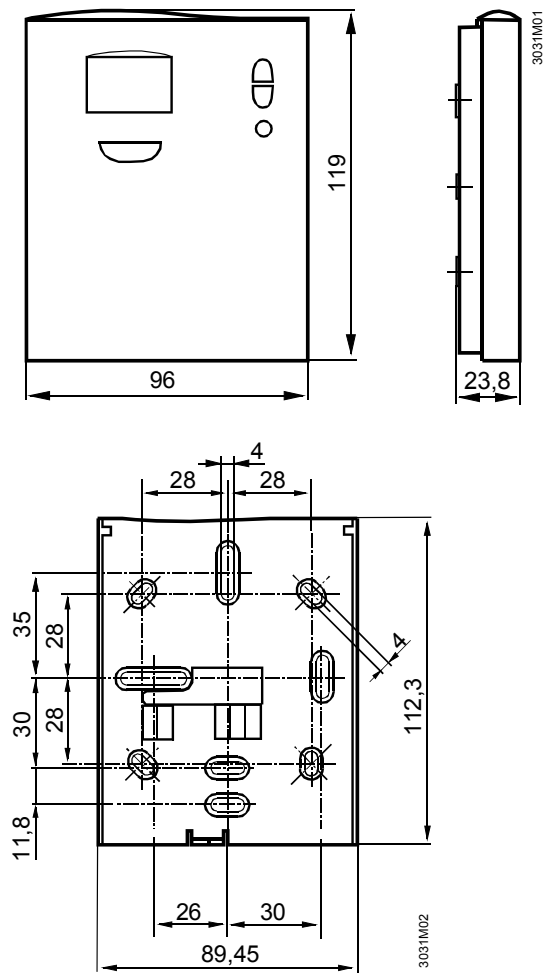
## Connection diagram

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N1            RRV817 controller  
N2            QAX810 master room unit  
N3            QAW810 zone room unit  
S+, SG        Communication bus

Dimensions



Dimensions in mm