



Zone Room Unit

QAW810

for RRV817 Control System

Digital zone control unit as an installer and end-user interface for use with the RRV817 temperature controller for underfloor heating systems

Use

Plants

Room unit in combination with the RRV817 temperature controller for underfloor heating systems in:

- Apartments
- Detached houses
- Light commercial applications
- Conjunction with district heating schemes or local heat sources

Application

1 QAW810 per zone 2 to 7, in conjunction with the RRV817 temperature controller and the QAX810 (master) room unit, in water-based heating plant.

Functions

Primary functions

- Zone control and monitoring in combination with an RRV817 plus QAX810
- Zone addressing by the installer
- Room temperature acquisition

Operator functions

- Local zone control and monitoring
- Temporary setpoint adjustment
- Zone comfort, energy saving, auto-timer and standby selection
- Display of operating mode and zone temperature

Type summary

Type reference	Description	Compatible with*
QAW810	Zone room unit	<ul style="list-style-type: none"> • Master room unit QAX810 • Temperature controller RRV817

* Not suited for use with the Designo RX range of controllers

Product documentation

Document	Document number
Data sheet	N2724
Mounting Instructions	M2723
Operating Instructions	B2723

Mechanical design

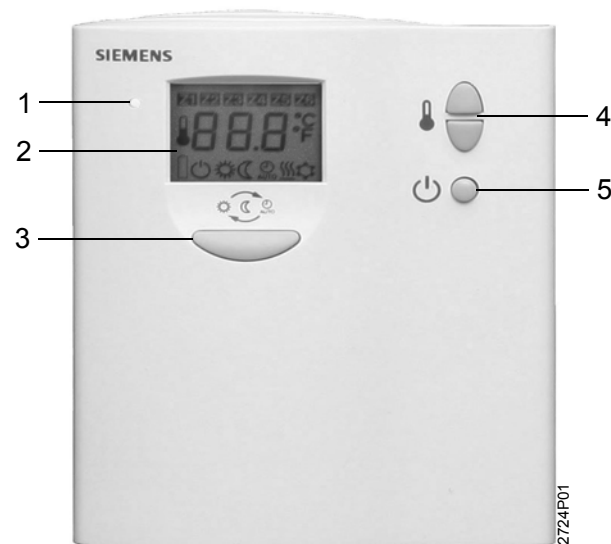
Type of unit

The QAW810 is the end-user zone MMI for RRV817 controllers.

The unit consists of the following components:

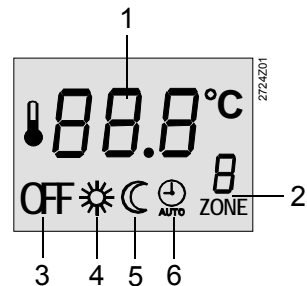
- Room unit with integrated electronics and operating elements
- Built-in temperature sensor
- Base with connection terminals for wall mounting
- Operator interface buttons

Operating elements



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

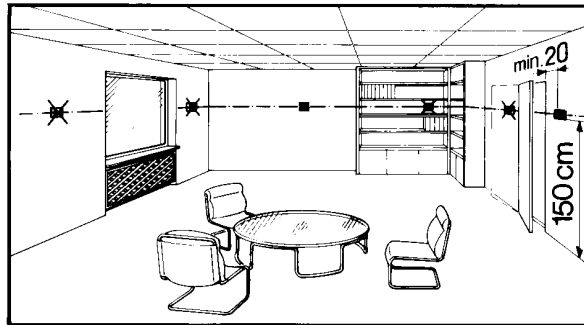
LCD



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

Mounting and installation notes

The QAW810 should be mounted in a location where the air temperature can be acquired as accurately as possible without getting adversely affected by direct solar radiation or other heating or 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 observed.
- Only authorized staff may remove the QAW810 unit from its base.
- Do not mount in recesses, shelves, or behind curtains or doors.
- Refer to the Mounting Instructions included in the packaging box.

When mounting the unit, fit the base first and then make the electrical connections. To avoid damage during construction work, install the QAW810 only when all construction work is completed. The QAW810 must be mounted on a flat surface and in compliance with local regulations.

Local regulations for installation must be observed



Note!

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

Commissioning notes

Response on startup

When powering up, the QAW810 will display all LCD symbols for approximately 2 seconds. The LCD 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 the sensor. However, the room temperature displayed can be calibrated if there is a deviation from the actual temperature measured by a certified thermometer.

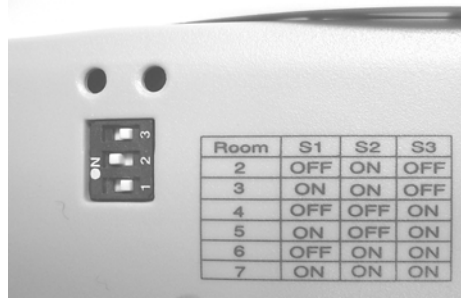
The calibration function can be accessed by pressing the \blacktriangle and \blacktriangledown buttons simultaneously for 2 seconds. The displayed value can then be readjusted, using the same buttons, in 0.5 K increments. The readjustment range is ± 2 K.

Commissioning

Initial installation-specific application setup 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 features DIP switches for zone addressing. In addition to the QAX810 master zone, using the QAW810, up to 6 further zones can be connected to the RRV817 controller. The QAX810 master room unit is always zone 1 (automatic - no address setting necessary).

DIP switches



DIP switches at the rear of the QAW810

They allow setting the address in cases where several room units are connected to 1 RRV817 controller.

The room units are delivered with default positions = zone 2.

DIP switch	Function	S1	S2	S3	Room
1...3	Zone identity	OFF	ON	OFF	2
		ON	ON	OFF	3
		OFF	OFF	ON	4
		ON	OFF	ON	5
		OFF	ON	ON	6
		ON	ON	ON	7

BOLD = default setting

Technical data

Interfaces (S+, SG)	HCC bus	proprietary protocol
	Bus power supply voltage	DC 12 V, +10, -15% (supply RRV817 controller)
	Baud rate	9.6 kbit/s
	Room unit power consumption	2 VA
Permissible cable lengths	For bus communication	
	A ≥ 0.5 mm ²	max. 60 m
	A ≥ 1 mm ²	max. 100 m
	Type of cable	2-wire standard installation cable (unshielded)
	Note:	Twisted pair (unshielded) is recommended for enhanced immunity to external electromagnetic interference, e.g. in the vicinity of radio transmitters or variable speed drives
Electrical connections (HB+, HB-)	Connection terminals	screw terminals
	For wires	0.6 mm dia. ... 2.5 mm ²
Degrees of protection	Degree of protection of housing to IEC 60 529	IP 30
	Safety class to EN 60 730	device suited for use with equipment of safety class II
Environmental conditions	Operation to	IEC 721-3-3
	Climate conditions	class 3K5
	Temperature (housing and electronics)	0...50 °C
	Humidity	5...95 % r. h. (non-condensing)
	Mechanical conditions	class 3M2
	Transport to	IEC 721-3-2
Classification to EN 60 730	Climate conditions	class 2K3
	Temperature	-25...+70 °C
	Humidity	<95 % r. h.
	Mechanical condition	class 2M2
	Mode of operation, automatic controls	type 1B
Degree of contamination, controls Environment	2	

Rated surge voltage	4000 V
Software class	A

Materials and colors

Top housing	Polycarbonate, RAL 9003 (signal-white)
Bottom housing and base plate	Polycarbonate, RAL 7035 (lightgrey)
Packaging	corrugated cardboard

Norms and standards

Product safety	
Automatic electrical controls for household and similar use	EN 60 730-1
Special requirements for temperature sensing controls	EN 60 730-2-9
Electromagnetic compatibility	
Immunity domestic section, light industry	EN 61 000-6-1
Emissions domestic section, light industry	EN 61 000-6-3
CE-conformity	
EMC directive	89/336/EEC
Low-voltage directive	73/23/EEC
N474 conformity to	
Australian EMC framework	Radio Communication Act 1992
Radio interference emission Standard	AS/NZS 4251.1

Room temperature measurement

Measuring range	0...49 °C
Setpoint range	5...35 °C
Accuracy at 20 °C	max. ±0.5 K
Temperature calibration range	max. ±3.0 K in increments of 0.5 K
Room temperature display resolution	0.5 K

Weight

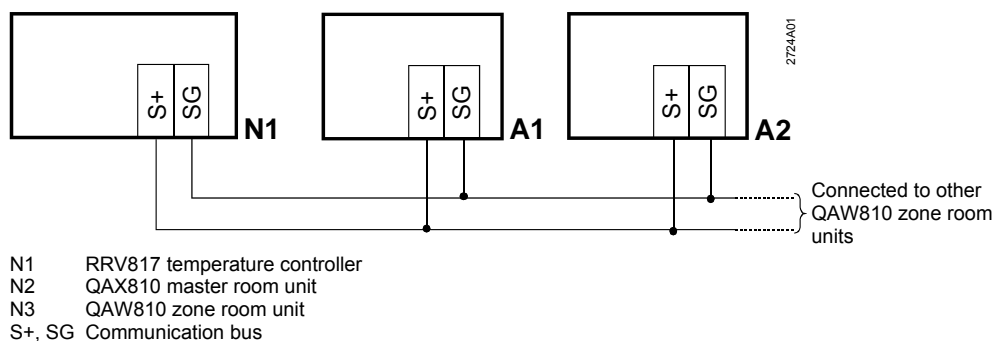
Excluding packaging	approx. 0.1 kg
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Notes

Product liability

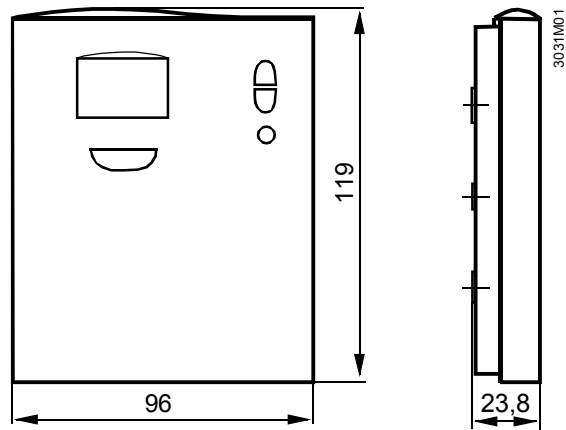
- The products may only be used in building services plant and applications as described above.
- When using the products, all requirements specified under "Technical data" must be observed.
- Local regulations for electrical installations must be complied with.

Connection diagram

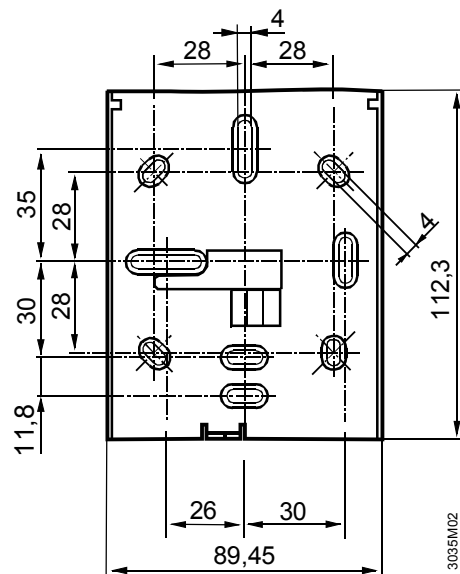


Dimensions

Controller



Base



Dimensions in mm