

Control equipment for air-water systems

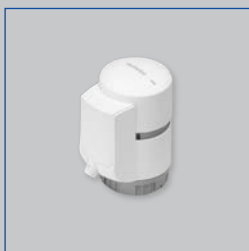
Type LWS control equipment



Control panel UP (flush mounted)



Control panel AP (surface mounted)



Valve actuator



Straight-way valve



Stand-alone single room control equipment to control the water-side components in air-water systems

Compact, easy-to-operate control panel, used with air-water systems (2-pipe or 4-pipe systems) and the connected valves and actuators to control the room temperature

- Control panel for surface mounting or flush mounting, including control unit and room temperature sensor
- Self-explanatory push buttons
- Backlit LC display
- Temperature is displayed in °C or °F
- 2-point or 3-point outputs
- Valve with valve actuator, normally closed
- Control valves with G $\frac{1}{2}$ " external thread and flat seal
- 230 V AC supply voltage

Optional equipment and accessories

- 7-day timer
- KNX or Modbus interface to the central BMS
- Amplifier, required if a control panel is used for the control of more than four induction units in a heating or cooling circuit

Type		Page
LWS control equipment	General information	LWS – 2
	Function	LWS – 3
	Technical data	LWS – 4
	Specification text	LWS – 5
	Order code	LWS – 6
	Variants	LWS – 7
	Installation details	LWS – 8

Application

Application

- Room control panel to be used in combination with air-water systems, e.g. induction units
- Control of the water circuits for heating and/or cooling a room
- Controller for surface mounting or flush mounting with optional timer as a bespoke solution for project-specific installation situations

Special characteristics

- Control panels for surface mounting or flush mounting

- Optional timer
- Valve with valve actuator, normally closed
- Valves with G½" external thread and flat seal
- Valves can be used for up to PN 16
- Connecting cable for valve actuator is available in various lengths (1.0 m as standard)
- Valve actuator with bayonet fixing

Nominal sizes

- RDGxxx: 128 × 93 × 31 mm (H × B × T)
- RDFxxx : 86 × 86 × 14 mm (H × B × T), visible part; total depth: 57 mm

Description

Components

- RDG100 - Surface mounted controller without timer
- RDG100T - Surface mounted controller with timer
- RDF600 - Flush mounted controller without timer
- RDF600T - Flush mounted controller with timer
- VVP47.10-x.xx - straight-way valve (K_{VS} 0.25; 0.4; 0.63 or 1.0)
- Electro-thermal actuator, including valve adapter for straight-way valve VVP 47.10-x.xx
- Lockshield

Construction

- Casing in RAL 9003, signal white

Accessories

- Amplifier (required if a control panel is used for the control of more than four induction units)

Maintenance

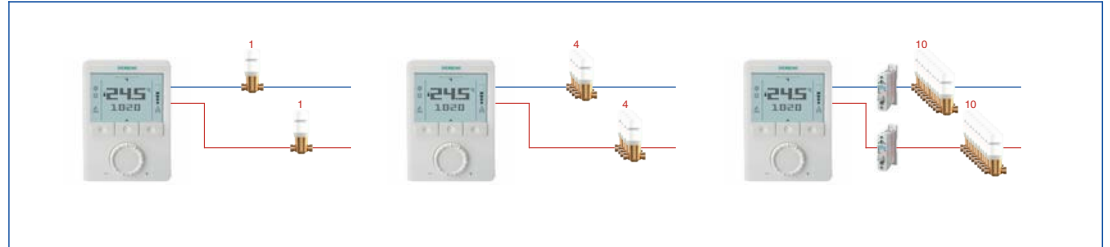
- Maintenance-free as construction and materials are not subject to wear

Functional description

The controller thermostat uses either the integral temperature sensor or an external temperature sensor to maintain the setpoint temperature for the room.

Operating modes can be set manually, using the push buttons, or automatically, using the timer. Two or three multifunctional inputs enable the connection of additional components.

Schematic illustration of the control system



Operating voltage	230 V AC (+10/-15%)
Frequency	50/60 Hz
Power consumption	Max. 18 VA (RDG 100), max. 8 VA (RDF 600)
Control outputs	230 V AC, 1 A max.

This specification text describes the general properties of the product.

Description

Compact, easy-to-operate control panel for surface mounting or flush mounting, with integral controller, for use with air-water systems and to control the water-side components.

Components

- RDG100 - Surface mounted controller without timer
- RDG100T - Surface mounted controller with timer
- RDF600 - Flush mounted controller without timer
- RDF600T - Flush mounted controller with timer
- VVP47.10-x.xx - straight-way valve (K_{VS} 0.25; 0.4; 0.63 or 1.0)
- Electro-thermal actuator (NO or NC), including valve adapter for straight-way valve VVP 47.10-x.xx
- Lockshield

Special characteristics

- Control panels for surface mounting or flush mounting
- Optional timer
- Valve with valve actuator, normally closed
- Valves with G $\frac{1}{2}$ " external thread and flat seal
- Valves can be used for up to PN 16
- Connecting cable for valve actuator is available in various lengths (1.0 m as standard)
- Valve actuator with bayonet fixing

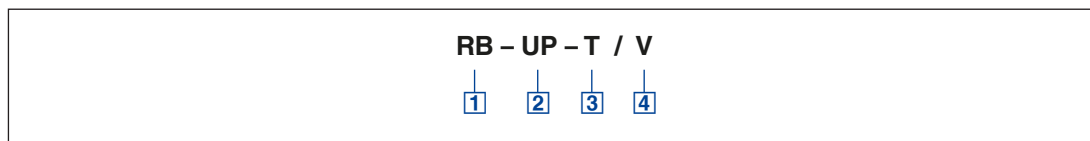
Construction

- Casing in RAL 9003, signal white

Technical data

- Supply voltage: 230 V AC (+10/-15 %)
- Frequency: 50/60 Hz
- Power consumption: Max. 18 VA (RDG 100), max. 8 VA (RDF 600)
- Control outputs: 230 V AC, 1 A max.

RB



1 Accessories (supplied separately)

RB Control panel

2 Variant

AP Surface mounted

UP Flush mounted

3 Timer

No entry: none

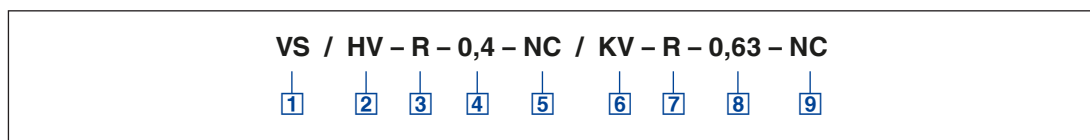
T With

4 Amplifier (supplied separately)

No entry: none

V With (required if a control panel is used for the control of more than four induction units)

VS



1 Accessories – valves and valve actuators

No entry: none

VS With valves and valve actuators

2 Valve – heating circuit

No entry: none

HV With heating valve

3 Lockshield – heating circuit

No entry: without lockshield

R With lockshield

4 K_{VS} -value – heating circuit

0.25

0.40

0.63

1.00

5 Valve setting – heating circuit

NO Normally open

6 Valve – cooling circuit

No entry: none

KV With cooling valve

7 Lockshield – cooling circuit

No entry: without lockshield

R With lockshield

8 K_{VS} value – cooling circuit

0.25

0.40

0.63

1.00

9 Valve setting – cooling circuit

NO Normally open

Product examples

Control panel UP (flush mounted)



Control panel AP (surface mounted)



Straight-way valve



Valve actuator



Installation and commissioning

- For surface mounting (RDGxxx) or flush mounting (RDFxxx)
- The controller should be mounted approx. 1.5 m above the floor
- Select an installation location where the control equipment is not affected by disturbances (e.g. solar gain, heating).
- Set the application using a DIP switch and before mounting the control equipment