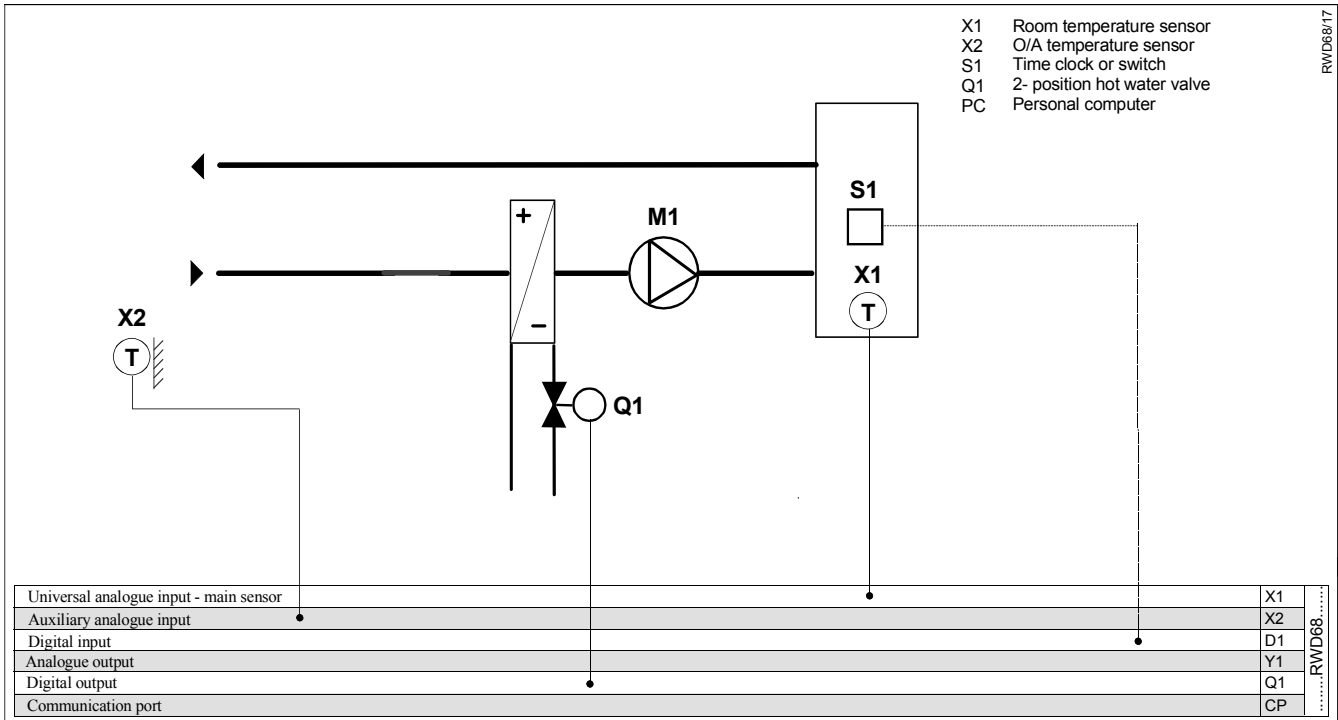


RWD68 Universal Controller
Application 17
W / S mode selection - analogue

Room temperature control
 Hot water control valve – 2 pos
 24Vac control system

- Control one stage .. two position
- Room temperature control
- On / off control of the 2 position hot water valve.
- Optional day / night set point adjustment .
- Winter / summer mode selection of Q1 as determined by analogue input (X2)



Supplemental features

Control

- Room temperature sensor can be selected as Ni1000, Pt1000, or active sensor.
- Adjustable differential of digital output Q1.
- Adjustable minimum switch off time.
- 24Vac controller supply voltage
- 24Vac two position control valves
- Outside air temperature sensor provides the analogue input for winter / summer selection.

Operating modes

- Day / night set points can be selected via time clock or switch.
- Winter / summer selection of heating and cooling mode of the Q1 output, and heating / cooling setpoint as selected by analogue input into auxiliary input X2.
- The water supplied to the coil must be changed from heating water to chilled water and interlocked with the winter / summer change over function.

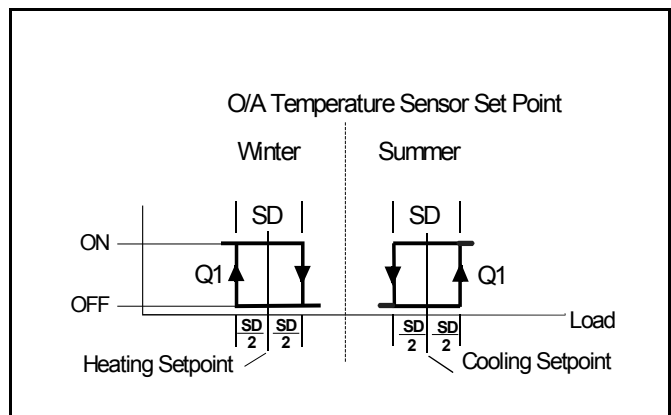
Description of operation

The temperature sensor senses the room conditions and on a fall in temperature the RWD68 via Q1 digital output opens and closes the hot water 2-position valve as determined by the heating set point and Q1 differential settings.

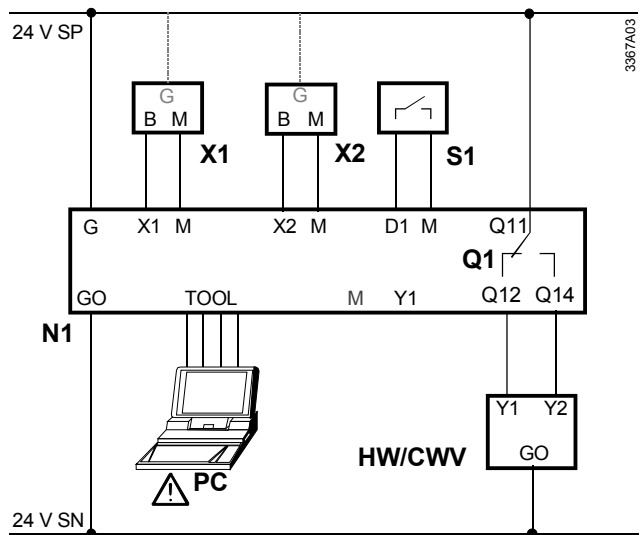
When the outside air temperature sensor senses the outside air temperature has exceeded summer set point, the controller set point for Q1 is adjusted to the cooling set point, and the Q1 output reverses it's action from heating to cooling mode.

Function diagram

Heating / cooling sequence



Connection diagram



RWD68

- N1 RWD68 controllers
- X1 Main temperature sensor
- X2 O/A temperature sensor
- S1 Time clock or switch
- Q1 Potential-free relay contacts for 2-position output
- HW/CCW Two position hot water / chilled water valve
- PC Personal computer

Main Display

The main display shows ,

- Whether Q1 is On or Off (= off, = on)
- Whether day or night set point is selected. (α = day, ζ = night)
- X1 value (room temperature) in ° C.

Other displays are available by pressing the + button, and the various displays are listed below in sequence from the main display.

On entering any of the four set point displays, the setpoint on display can be adjusted by pushing the enter/save button, increase value by pressing the \blacktriangle + button or decrease the value by pressing the \blacktriangledown - button, and when the required value is reached, press the enter/save button to save the new value.

The alternative displays return to the main display after 20 seconds duration.

Press buttons	Action	Current display	Selected display	Selected display comments
\blacktriangle	Push + button	Q1 <input type="checkbox"/> X1	SP – h α 25.0c	heating day set point. (winter)
\blacktriangle	Push + button	SP – h α 25.0c	SP – c α 28.0c	cooling day set point. (summer)
\blacktriangle	Push + button	SP – c α 28.0c	SP – h ζ 16.0c	heating night set point. (winter)
\blacktriangle	Push + button	SP – h ζ 16.0c	SP – c ζ 16.0c	cooling night set point. (summer)
\blacktriangle	Push + button	SP – c ζ 16.0c	X1 26.0c	X1 - main temperature sensor reading
\blacktriangle	Push + button	X1 26.0c	X2 26.0c	X2 – outside air temperature sensor reading
\blacktriangle	Push + button	X2 26.0c	Q1 OFF	Q1 – heating digital output, display on or off.
\blacktriangle	Push + button	Q1 OFF	WIN/SUM 17 <input type="checkbox"/> ANLG	Control sequence diagram and application number display.
\blacktriangle	Push + button	WIN/SUM 17 <input type="checkbox"/> ANLG	Q1 <input type="checkbox"/> X1	Back to main display

Values shown are either default values or nominated for information only.

Alternative

- One stage ON / OFF control of electric heater bank.