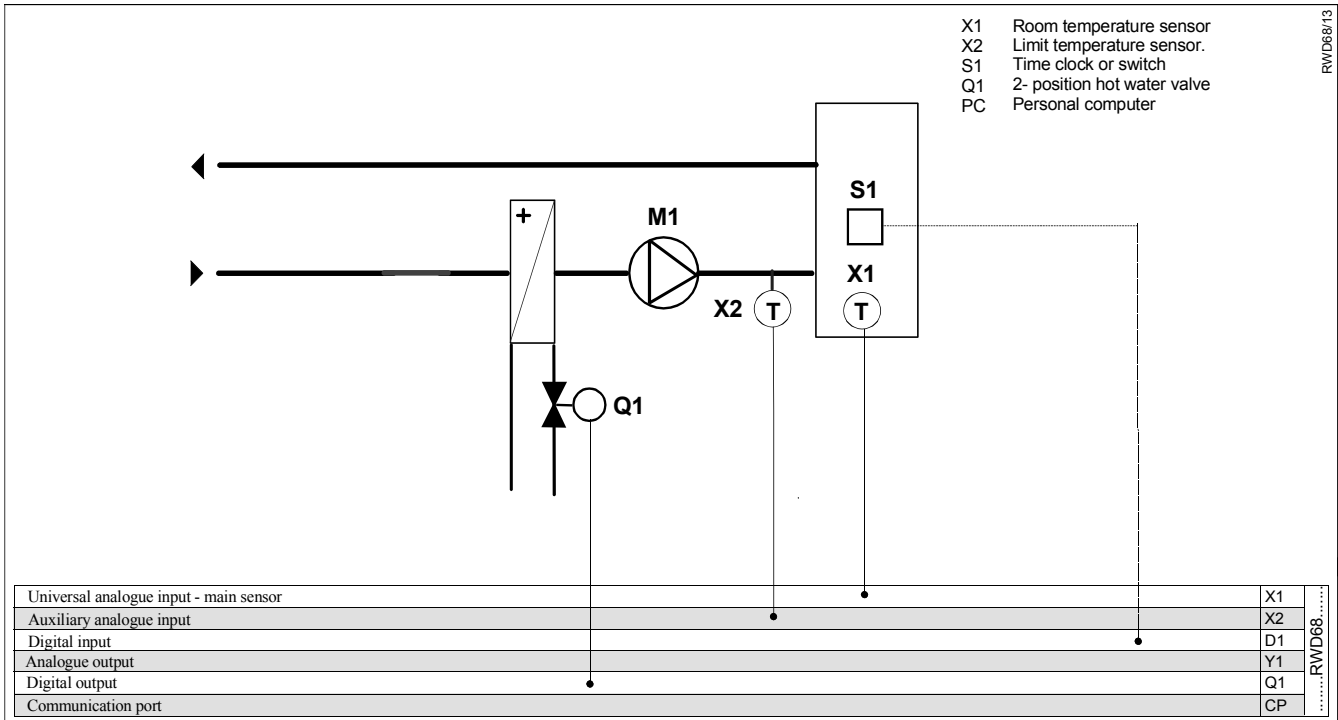


RWD68 Universal Controller
Application 13
Relative limit control

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 .
- Relative maximum and / or minimum limit control of the supply air.



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
- Duct temperature sensor can be selected as Ni1000, Pt1000, or active sensor.(X2)
- Relative maximum and / or minimum supply air temperature control.

Operating modes

- Day / night set points can be selected via time clock or switch.

Description of operation

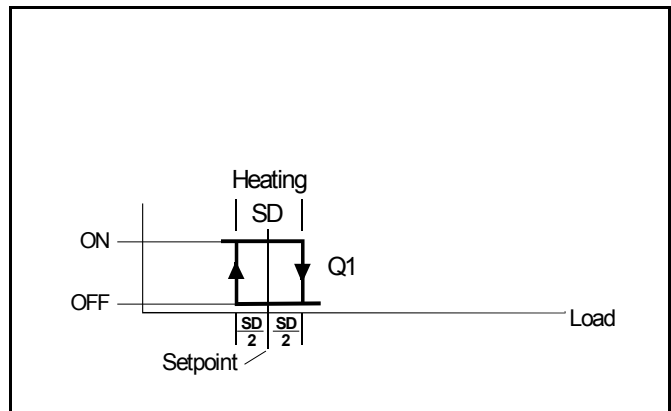
The temperature sensor senses the room conditions and on a fall in temperature the RWD68 via Q1 digital output opens and closes the hot water 2-position valve as determined by the heating set point and Q1 differential settings.

Relative supply air control is maintaining maximum and/or minimum difference between supply air and room temperature setpoint when the temperature difference drops below or exceeds the limiter setpoints.

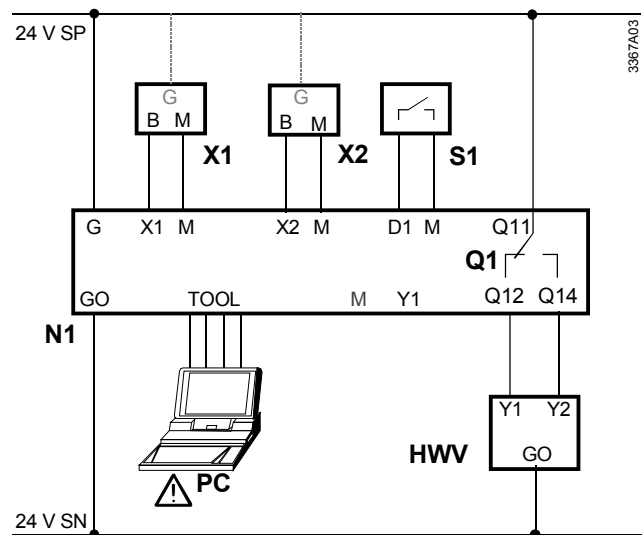
The limiter function overrides the standard control function to maintain the limiter setpoints.

Function diagram

Heating sequence



Connection diagram



RWD68

- N1 RWD68 controllers
- X1 Main temperature sensor
- X2 Limit temperature sensor
- S1 Time clock or switch
- Q1 Potential-free relay contacts for 2-position output
- HWV Two position hot water valve
- PC Personal computer

Main Display

The main display shows ,

- a) Whether Q1 is On or Off (= off, = on)
- b) Whether day or night set point is selected. (☉ = day, ☾ = night)
- c) 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 ▲+ button or decrease the value by pressing the ▼- 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
▲	Push + button	Q1 ☉ X1	SP – h ☉ 25.0c	Q1-heating day set point.
▲	Push + button	SP – h ☉ 25.0c	SP – h ☾ 16.0c	Q1- heating night set point.
▲	Push + button	SP – h ☾ 16.0c	X1 18.0c	X1 - main temperature sensor reading
▲	Push + button	X1 18.0c	X2 19.0c	X2 - limit temperature sensor reading
▲	Push + button	X2 19.0c	Q1 ON	Q1 – heating digital output, display on or off.
▲	Push + button	Q1 ON	LIM <input type="checkbox"/> 13 REL	Control sequence diagram and application number display.
▲	Push + button	LIM <input type="checkbox"/> 13 REL	Q1 ☉ X1	Back to main display

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

Alternative

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