

RWD62 Universal Controller

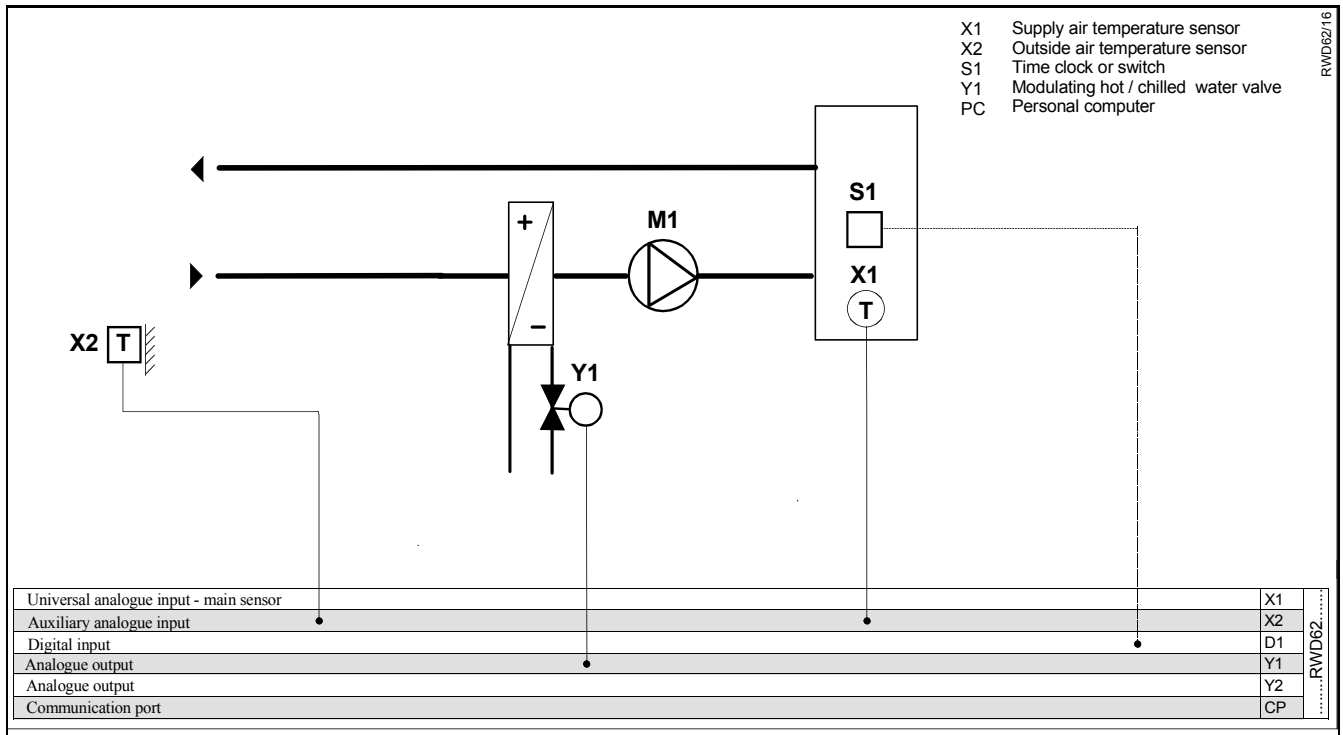
Room temperature control

Application 16

Hot water control valve

W / S mode selection - digital

- Control (P or PI)
- Room temperature control
- Proportional control (0..10Vdc) of the hot water valve.
- Winter / summer mode selection of Y1 as determined by digital input (X2)
- Optional day / night set point adjustment .



Supplemental features

Control

- Room temperature sensor can be selected as Ni1000, Pt1000, or active sensor.
- Adjustable proportional band of analogue output Y1.
- Adjustable Integral action function selection and adjustment for Y1.
- Outside air thermostat provides the digital 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 Y1 output, and heating / cooling set point as selected by digital 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.

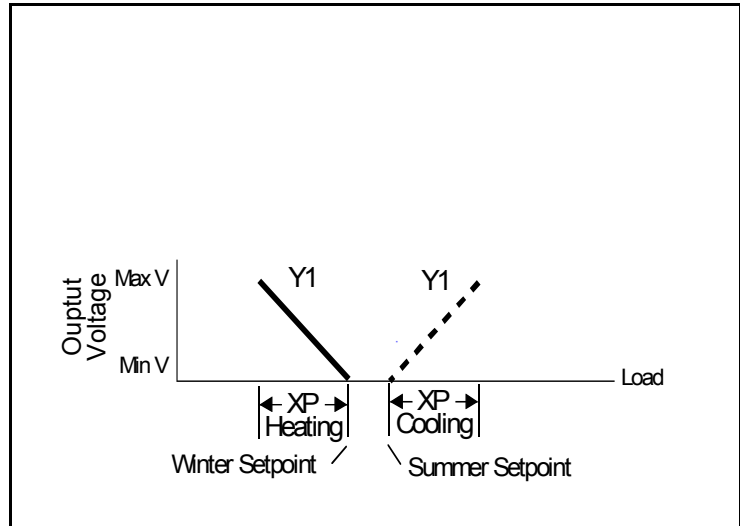
Description of operation

The temperature sensor senses the room conditions and on a fall in temperature the RWD62 via Y1 analogue output modulates the hot water valve as determined by the heating set point and proportional band (XP) setting.

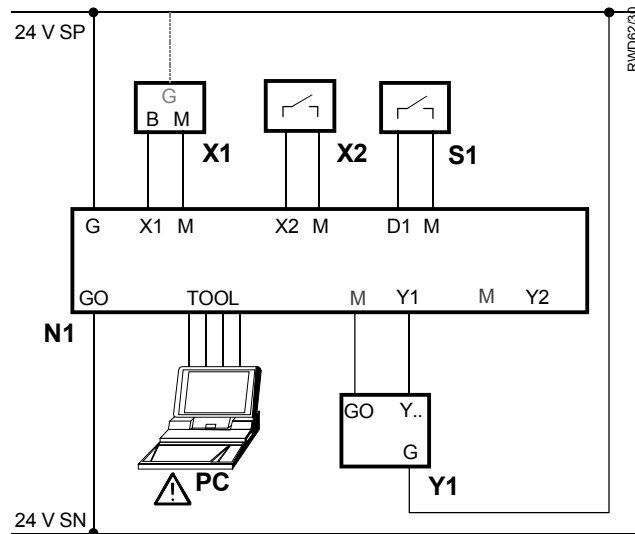
The auxiliary thermostat connected to (X2) senses the outside air temperature, and when the temperature exceeds the thermostat set point, the controller summer set point is selected, and Y1 output is changed from heating to cooling.

Heating sequence

Function diagram



Connection diagram



RWD62

- N1 RWD62 controller
- X1 Room temperature sensor
- X2 Outside air thermostat
- S1 Time clock or switch
- Y1 Heating / cooling control valve with 0..10Vdc input
- PC Personal computer

Main Display

The main display shows ,

- Y1 output in Volts dc. (0..10V = 0..100% range)
- Whether day or night set point is selected. (☒ = day, ☒ = 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 ▲ + 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.

Press buttons	Action	Current display	Selected display	Selected display comments.
▲	Push + button	Y1 ☒ X1	SP – h ☒ 25.0c	heating day set point. (winter)
▲	Push + button	SP – h ☒ 25.0c	SP – c ☒ 21.0c	cooling day set point. (summer)
▲	Push + button	SP – c ☒ 21.0c	SP – h ☒ 16.0c	heating night set point. (winter)
▲	Push + button	SP – h ☒ 16.0c	SP – c ☒ 13.0c	cooling night set point. (summer)
▲	Push + button	SP – c ☒ 13.0c	X1 21.0c	X1 - main temperature sensor reading
▲	Push + button	X1 21.0c	Y1 5.0	Y1 – heating analogue output value in Vdc to one decimal point
▲	Push + button	Y1 5.0	WIN/SUM 16 DIG	Control sequence diagram and application number display.
▲	Push + button	WIN/SUM 16 DIG	Y1 ☒ X1	Back to main display.

Values shown are either default values or nominated for information only

Alternatives

- Proportional control of electric heater bank via SEM61.4 signal converter with SEA 41.2 current valve.