

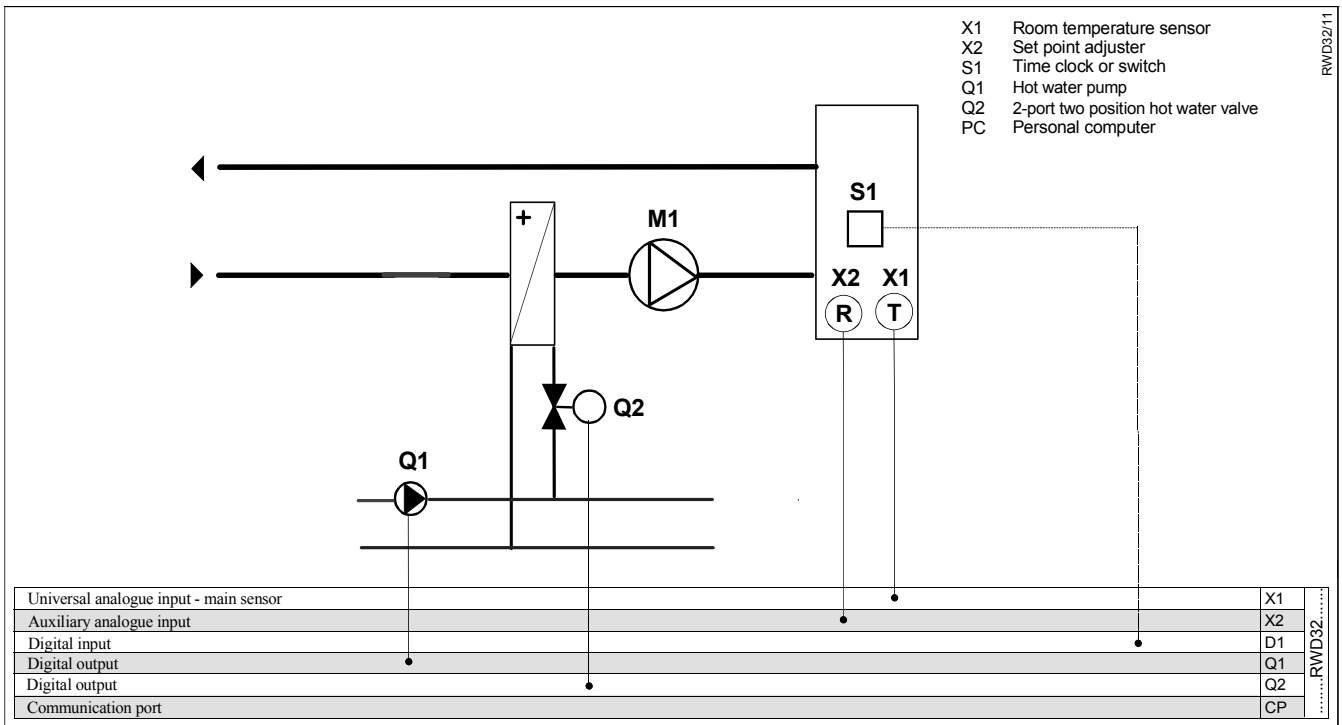
RWD32 Universal Controller

Room temperature control

**Application 11
Remote set point**

Hot water control valve
Hot water pump output

- Control two stage(2 position)
- Room temperature control
- 2 position control of the hot water control valve
- Digital output to energise hot water pump (dependent)
- Remote set point adjustment
- Optional day / night set point adjustment .



Supplemental features

Control

- Room temperature sensor can be selected as Ni1000, Pt1000, or active sensor.
- Combined adjustable differential of digital outputs Q1 and Q2.
- Adjustable ON position of Q1.
- 230Vac controller supply voltage
- 230Vac two position control valve
- Remote set point adjustment via auxiliary analogue input X2.

Operating modes

- Day / night set points can be selected via time clock or switch.
- Dependent mode for the two heating outputs, meaning that there is one set point only, one differential adjustment across combined Q1 and Q2, with the ON position of Q1 adjustable.

Description of operation

The temperature sensor senses the room conditions and on a fall in temperature the RWD32 via Q1 digital output energises the hot water pump.

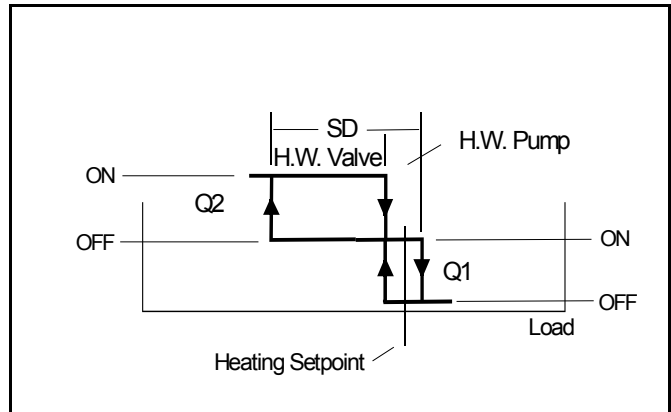
A further fall in temperature Q2 opens the two position hot water valve.

In this application the Q1 – ON position should be set to 5 – 10% of the SD differential setting.

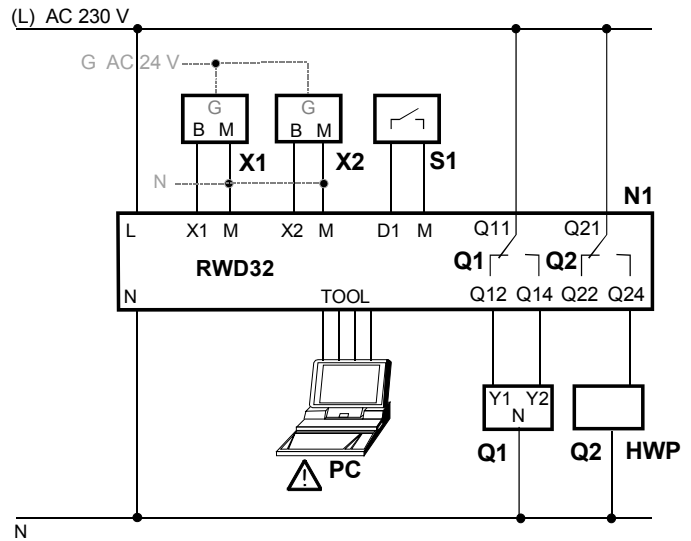
The remote set point adjuster is connected X2 and adjusts the day set point for Q1, Q2 outputs. The night set point is set on the controller.

Function diagram

Heating sequences



Connection diagram



RWD32

- N1 RWD32 controllers
- X1 Main temperature sensor
- X2 Remote set point adjuster
- S1 Time clock or switch
- Q1 Hot water pump output
- Q2 230Vac two position valve actuator
- HWP Hot water pump contactor
- PC Personal computer

Main Display



The main display shows ,

- a) Whether Q1 is On or Off (◻ = off, ◼ = on)
- b) Whether Q2 is On or Off (◻ = off, ◼ = on)
- c) Whether day or night set point is selected. (☒ = day, ◻ = night)
- d) X1 value (room temperature) in ° C.
- e) Auxiliary application selected (REM for remote set point adjustment)

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	REM Q1 Q2 ☒ X1	SP - h ◻ 16.0c	heating night set point.
▲	Push + button	SP - h ◻ 16.0c	X1 18.0c	X1 - main temperature sensor reading
▲	Push + button	X1 18.0c	X2SP 25.0c	X2 - actual remote set point setting (day set point)
▲	Push + button	X2SP 25.0c	Q1 ON	Q1 – hot water pump digital output, display on or off.
▲	Push + button	Q2 ON	Q2 ON	Q2 – heating valve digital output, display on or off.
▲	Push + button	Q2 ON	 REM 11	Control sequence diagram and application number display.
▲	Push + button	 REM 11	REM Q1 Q2 ☒ X1	Back to main display

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