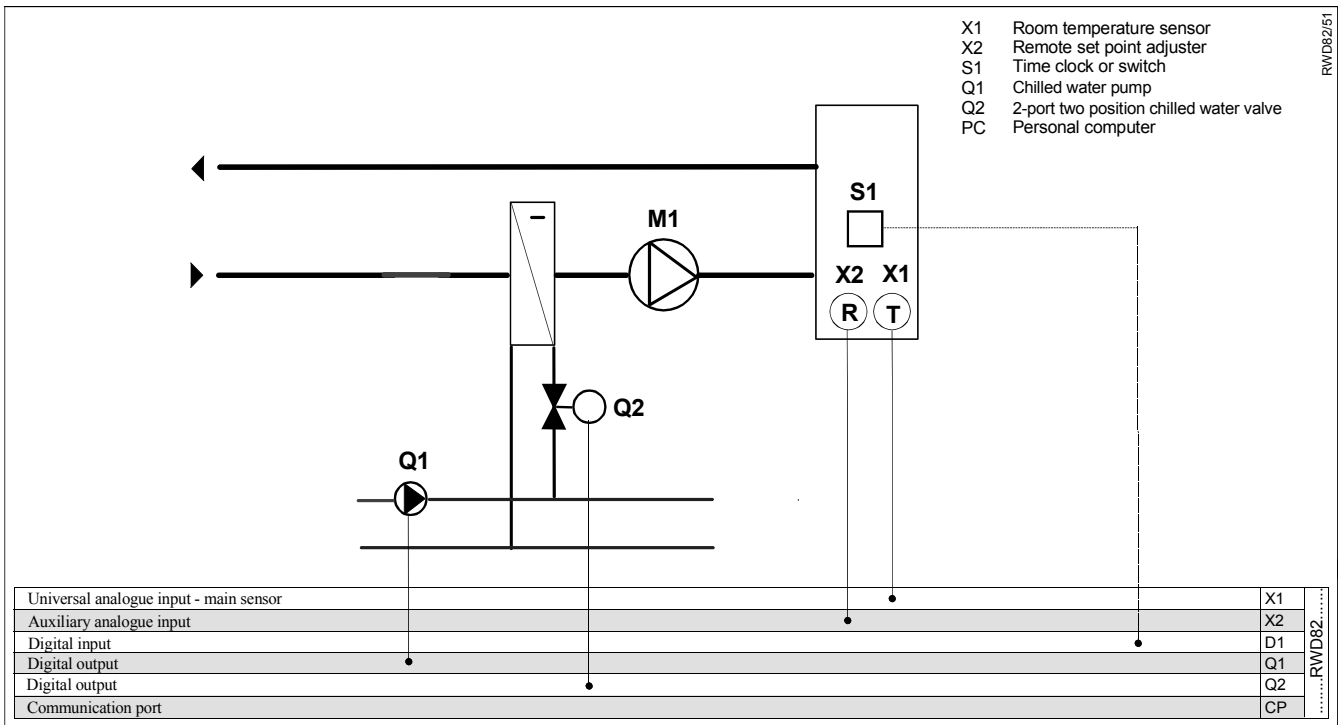


RWD82 Universal Controller

Room temperature control
Chilled water control valve
Chilled water pump output

**Application 51
Remote set point**

- Control two stage(2 position)
- Room temperature control
- 2 position control of the chilled water control valve
- Digital output to energise chilled 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.
- 24Vac controller supply voltage
- 24Vac two position control valve
- Remote set point adjustment via auxiliary analogue input X2.

Operating modes

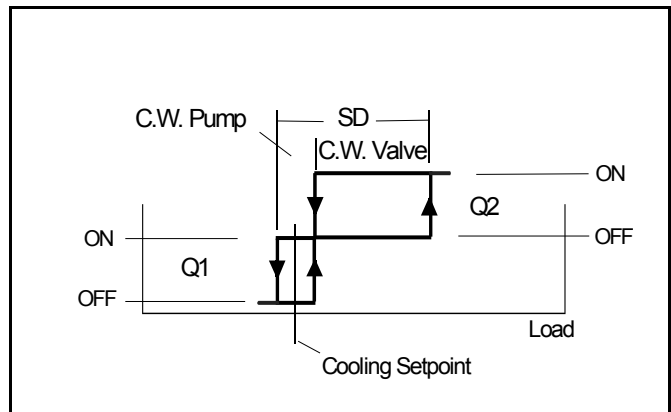
- Day / night set points can be selected via time clock or switch.
- Dependent mode for the two cooling outputs, meaning that there is one set point only, one differential adjustment across combined Q1 and Q2, with the ON position of Q1 adjustable.

Description of operation

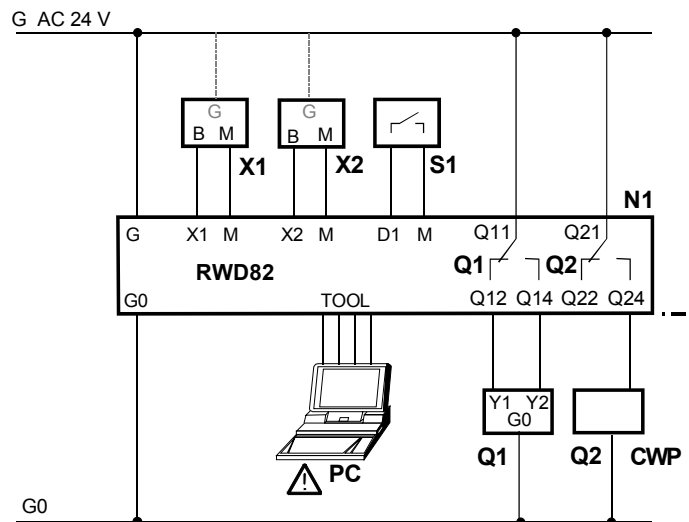
The temperature sensor senses the room conditions and on a rise in temperature the RWD82 via Q1 digital output energises the chilled water pump. A further rise in temperature Q2 opens the two position chilled water valve. In this application the Q1 – ON position should be set to 5 – 10% of the SD differential 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

Cooling sequences



Connection diagram



RWD82

- N1 RWD82 controllers
- X1 Main temperature sensor
- X2 Remote set point adjuster
- S1 Time clock or switch
- Q1 Chilled water pump output
- Q2 24Vac two position valve actuator
- CWP Chilled 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 - c ◻ 16.0c	cooling night set point.
▲	Push + button	SP - c ◻ 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 – chilled water pump digital output, display on or off.
▲	Push + button	Q1 ON	Q2 ON	Q2 – chilled water valve digital output, display on or off.
▲	Push + button	Q2 ON	REM  51	Control sequence diagram and application number display.
▲	Push + button	REM  51	REM Q1 Q2 ☒ X1	Back to main display

Values shown are either default values or nominated for information only