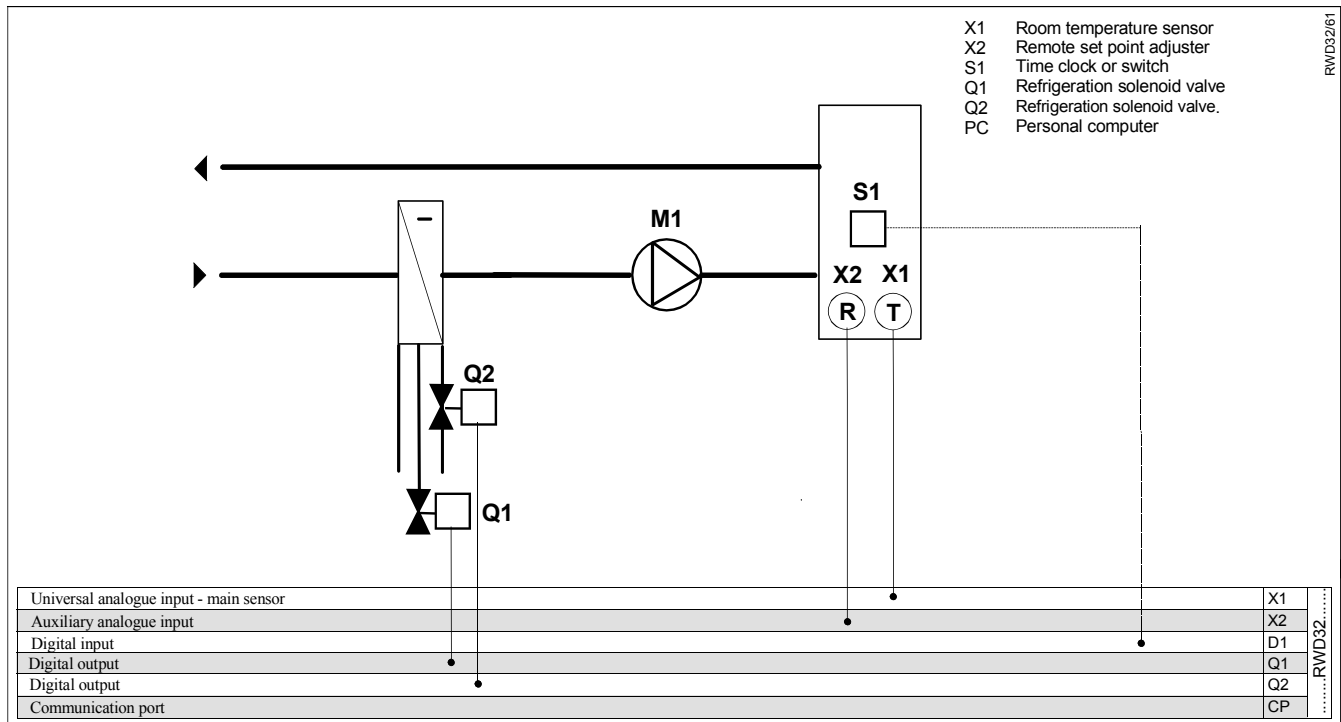


**RWD32 Universal Controller**

Room temperature control  
Refrigeration solenoid valves

**Application 61  
Remote set point**

- Control 2 stage digital
- Room temperature control
- Two stage ON / OFF refrigeration cooling
- 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.
- Two stage on / off cooling
- Adjustable differential of digital output Q1.
- Adjustable set point of Q1.
- Adjustable differential of digital output Q2.
- Adjustable set point of Q2.
- 230Vac controller supply voltage
- Remote set point adjustment via auxiliary analogue input X2.

**Operating modes**

- Day / night set points can be selected via time clock or switch.
- Independent mode for the two cooling outputs.

**Description of operation**

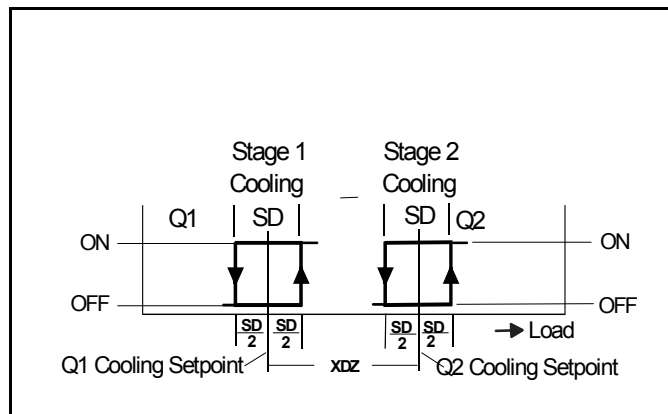
The temperature sensor senses the room conditions and on a rise in temperature the RWD32 via Q1 digital output opens and closes the stage 1 refrigeration solenoid valve as determined by the cooling set point and differential setting.

On a further rise in temperature the RWD32 via Q2 digital output opens and closes the stage 2 refrigeration solenoid valve as determined by the cooling set point and differential settings.

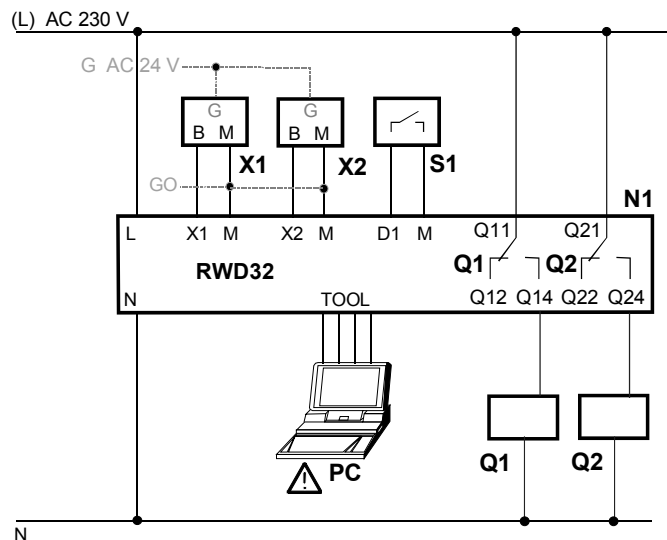
The remote set point adjuster is connected X2 and adjusts the day set point for Q1 output. Q2 set point is adjusted by XDZ that sets the dead zone between Q1 and Q2 set points. The night set points are set on the controller.

**Function diagram**

Cooling sequences



**Connection diagram**



**RWD32**

- N1 RWD32 controller
- X1 Main temperature sensor
- X2 Remote set point adjuster
- S1 Time clock or switch
- Q1 230Vac refrigeration solenoid valve
- Q2 230Vac refrigeration solenoid valve
- PC Personal computer

## Main Display

The main display shows ,

- Whether Q1 is On or Off (  = off,  = on )
- Whether Q2 is On or Off (  = off,  = on )
- Whether day or night set point is selected. (☒ = day, ☒ = night)
- X1 value ( room temperature) in ° C.
- 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	Q1 SP – c ☒ 16.0c	Q1 cooling night set point.
▲	Push + button	<b>Q1 SP – c ☒ 16.0c</b>	Q2 SP – c ☒ 32.0c	Q2 cooling night set point.
▲	Push + button	Q2 SP – c ☒ 32.0c	REM Q2 XDZ ☒ -3c	XDZ to set Q2 day set point
▲	Push + button	REM Q2 XDZ ☒ -3c	X1 21.0c	X1 - main temperature sensor reading
▲	Push + button	X1 21.0c	X2SP 21.0c	X2 - actual remote set point setting (Q1 day set point)
▲	Push + button	X2SP 21.0c	Q1 ON	Q1 – cooling digital output, display on or off.
▲	Push + button	Q1 ON	Q2 OFF	Q2 – cooling digital output, display on or off.
▲	Push + button	Q2 OFF	REM <input type="checkbox"/> <input type="checkbox"/> 51	Control sequence diagram and application number display.
▲	Push + button	REM <input type="checkbox"/> <input type="checkbox"/> 51	REM Q1 Q2 ☒ X1	Back to main display

Values shown are either default values or nominated for information only