



**TM2-24/D is an electronic thermostat designed for controlling heating and cooling applications**

- \* Two stage in sequence or binary (3 stage)
- \* For heating or cooling applications
- \* Internal or external adjustable setpoint
- \* Adjustable hysteresis and step difference
- \* Night set-back
- \* Compact form for easy mounting on a DIN-rail

## Function

TM2-24/D is an electronic thermostat to be used in conjunction with Regin temperature sensors. The thermostat has closing relay contacts and can be set for heating or cooling. TM2-24D is supplied in standard casing for DIN-rail mounting with all settings accessible on the front.

### Control modes

The following functions can be set by means of switches 1 to 3:

- One stage cooling and one stage heating
- Two stage cooling
- Two stage heating
- Three stage cooling binary
- Three stage heating binary

### Setpoint

The setpoint is set by means of the setpoint knob on the front or by means of the external setting device.

TM2-24/D has a standard scale of 0...30°C. Other scales adapted for other sensor ranges are available.

When an external setting device, e.g. TG-R430 or TBI-30, is used the built-in setpoint setting should be disconnected by setting switch no 4 to the A position.

### Sensors

The TM2-24/D is intended for a sensor temperature range 0...30°C. but other temperature ranges are available.

See leaflet 6-100 in the main catalogue for choice of sensors.

### Hysteresis

The difference in temperature between a relay's ON-point and OFF-point. Adjustable and the same for both relays.

### Step differential

The difference in temperature between the relays OFF-points. Adjustable and the same for all steps.

### Indicators

TM2-24/D has LEDs to indicate supply voltage on and relay output activation.

### Night Set-back

Night set-back can be initiated by means of an external time switch. On potential free closure night set-back of 3 K from setpoint value is obtained.

If adjustable night set-back is required the night set-back module NS/D should be used. See separate leaflet. This module allows night set-back to be set between 0 and 10 K.

## Technical data

### General

Supply voltage	24 V AC +/- 15 % 50-60 Hz
Power consumption	Max. 2 VA
Ambient temperature	0...50°C
Storage temperature	-40...+50°C
Ambient humidity	Max. 90% RH
Form of protection	IP20



This product conforms with the requirements of European EMC standards CENELEC EN 50081-1 and EN 50082-1, European LVD standards IEC 669-1 and IEC 669-2-1 and carries the CE mark.

### Inputs

Sensors	One input for main sensor. Only for Regin NTC-sensors. See leaflet 6-100 for choice of sensor.
Setpoint	When using an external setpoint the setpoint device should be connected in series with the sensor to the sensor input.
Night set-back	Fixed 3K on potential-free closing from an external switch. If adjustable night set-back is required the NS/D should be used.

### Outputs

Relays	Two closing relays, 230 V AC 10 A. When a relay is activated the corresponding LED comes on.
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### Settings

TEMPSetpoint	0...30°C. The choice of sensor determines the thermostat's setpoint range
DIFF Hysteresis	0,5...5 K
SDStep differential	0...5 K

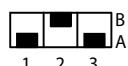
### Switches



R1 activated on decreasing temperature (heating application)

R2 activated on increasing temperature (cooling application)

*This is the factory setting.*



Two steps in sequence on increasing temperature (cooling application)

First R1, then R1 + R2



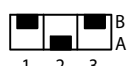
Two steps in sequence on decreasing temperature (heating application)

First R1, then R1 + R2



Three steps binary on increasing temperature (cooling application)

First R1, then R2 and then R1 + R2

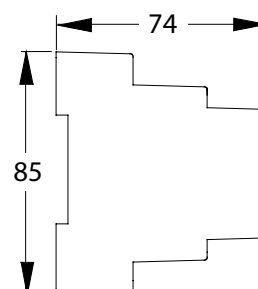
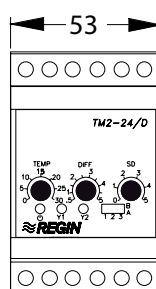
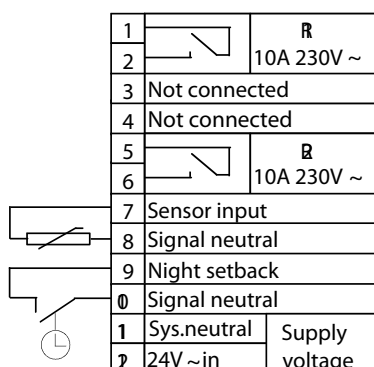


Three steps binary on decreasing temperature (heating application)

First R1, then R2 and then R1 + R2

Switch 4 is for choosing internal or external setpoint potentiometer. Position A = External setpoint. Position B = Internal setpoint. Factory setting position B = Internal setpoint.

## Wiring and dimensions



Measurements in mm

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