

# TM1N/D

# One stage electronic thermostat



# TM1N/D is an electronic thermostat for the control of heating or cooling applications.

- One stage, closing relay contact, 16 A, 230 V AC
- \* Supply voltage 230 V or 24 V AC
- \* Built-in or external setpoint

- Adjustable night setback and hysteresis
- Several TM1N/D can be connected to one sensor
- \* Selectable between heating/cooling function

# **Function**

TM1N/D is an electronic thermostat to be used in conjunction with Regin NTC temperature sensors. The thermostat has a changeover relay contact and is able to control *both* heating or cooling functions.

TM1N/D is supplied in standard casing for DIN-rail mounting with all settings accessible on the front.

# Supply voltage

The thermostat requires supply voltage of 230 V AC or 24 V AC. See model specifications overleaf.

#### **Sensors**

The TM1N/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.

TM1N/D has one output available for connection to sensor input on another TM1N/D or TM2-24/D, when several thermostats are controlled by the same sensor.

#### Setpoint

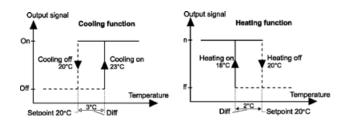
This is set by means of the built-in setpoint knob on the front or with an external setting device. Other scales adapted for other sensor ranges are available.

# **External setpoint**

When using external setpoint TG-R430 or TBI-30, the built-in setpoint knob should be set at 0° thereby eliminating the effect of the built-in setpoint knob. The setpoint knob itself can be removed to avoid the danger of the setting being changed by mistake.

### **Hysteresis**

This is set by means of the knob marked DIFF and is defined as the difference between the relay's on and off points.



#### Night set-back

Night set-back can be initiated by means of an external time switch. When the time switch closes night set-back of 0...10 K from the setpoint value is obtained. Several TM1N/D can be connected to the same external time switch.

#### Models

TM1N/D Electronic one-stage thermostat with supply voltage 230 V AC TM1N-24/D Electronic one-stage thermostat with supply voltage 24 V AC

#### **Technical data**

General

Supply voltage 230 V AC +/- 15% 50-60 Hz or 24 V AC +/- 15% 50-60Hz

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 EN50081-1 and EN 50082-1, European LVD standards IEC 669-1 and

IEC 669-2 and carries the CE mark.

Inputs

Sensor 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 For potential free closing contact from external time switch.

**Outputs** 

Relay contact One 16 A 230 V AC, closing contact

Sensor signal Output for connecting to another TM1N/D sensor input

Settings

Setpoint 0...30°C, Setpoint
DIFF 0...10 K, Hysteresis
NIGHT SETBACK 0...10 K, Night setback

HEAT-COOL Choice of heating or cooling function

Indications

Supply voltage Red LED

Relay output Red LED comes on when relay is activated

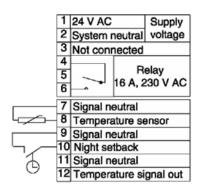
# Wiring and dimensions

#### TM1N/D

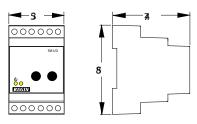
# 1 230 V AC Supply 2 Neutral voltage 3 Not connected 4 Relay 16 A, 230 V AC 7 Signal neutral 8 Temperature sensor 9 Signal neutral 10 Night setback 11 Signal neutral 12 Temperature signal out

Terminal 2 - neutral and terminal 7, 9, 11 - signal neutral are not connected internally.

#### TM1N-24/D



Terminal 2 - neutral and terminal 7, 9, 11 - signal neutral are connected internally.



Measurements in mm

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