DIN-1TSTAT8
DIN 8-Zone Thermostat
Installation Guide

Description

The Crestron® DIN-1TSTAT8 is an 8-zone, DIN-rail mounted thermostat. DIN rail mounting provides a means for easily mounting the thermostat separately from the temperature sensors. This allows for small, low-profile temperature sensors to be installed locally in each zone using a home-run wiring scheme back to the thermostat.

The DIN-1TSTAT8 is a heat only thermostat. The DIN-1TSTAT8 controls up to eight heat zone valves (zones 1-8), with output for one main valve.

The DIN-1TSTAT8 has 8 captive screw terminals to accept up to eight temperature sensors (CHVI-RTS-1G-SM-W, CHVI-RTS-1G-N-W, CHV-RTS, or CHV-RSS, all not included) that correspond to the 8 zone valve outputs.

Two Cresnet® ports are provided for integration with Crestron® control systems, and for easy daisy-chaining with other Crestron devices.

The zone valves must be rated for 240 Vac 50/60 Hz, 1/2 HP maximum. The zone valves may be normally closed (NC) or normally open (NO).

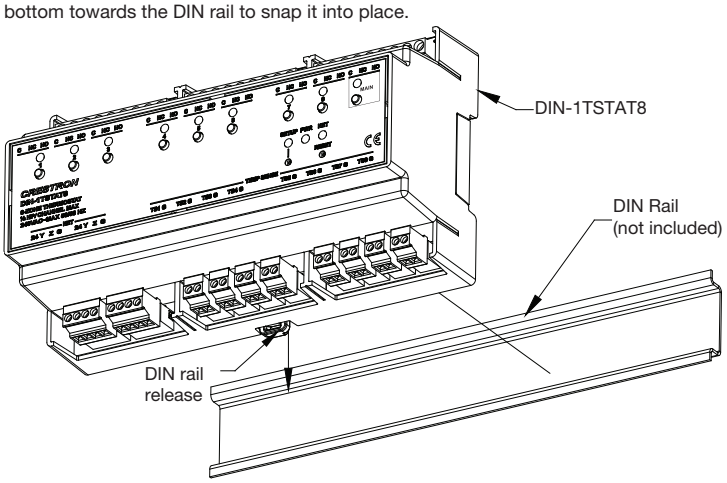
Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

Installation

Use the DIN-1TSTAT8 in a well-ventilated area. The venting holes should not be obstructed under any circumstances. The DIN-1TSTAT8 mounts to a DIN rail (not included). Refer to the following diagram when installing.

To install the DIN-1TSTAT8, hang the DIN-1TSTAT8 on the top of the DIN rail and press the bottom towards the DIN rail to snap it into place.



To remove the DIN-1TSTAT8 from the DIN rail, use a small, flat object (such as a flat-head screwdriver) to pull the DIN rail release tab down, and then tilt the bottom of the DIN-1TSTAT8 away from the DIN rail.

NOTE: Certain third-party DIN cabinets provide space for an informational label between each DIN rail row. Crestron's Engraver software (version 4.0 or later) can generate appropriate labels for all Crestron DIN rail products.

Wiring

Wire the system according to the diagram below.

NOTE: When wiring the temperature sensors, observe the following points.

- Up to eight temperature sensors may be connected to the DIN-1TSTAT8, one per heat zone.
- Use a separate run of wire for each sensor.
- Sensor lines should not be run parallel to any other wiring. Lines should cross other cables at right angles.
- Crestron strongly recommends low-capacitance twisted pair wire such as CAT3 (up to 76 meters (250 feet)) or CAT5 (up to 152 meters (500 feet)) network cable when using remote sensors. Other cables besides what is listed above may be used, provided that the total capacitance is less than 7,000 pF. Maximum distance from sensor to thermostat is 152 meters (500 feet). Use only one pair per remote sensor.
- In situations where ordinary two-conductor thermostat wire (18 to 20 gauge) has been installed, it may be used for runs up to 30 meters (100 feet). This is not a preferred method of installation.
- If multi-conductor cables are used, the unused conductors must NOT be used for other purposes and must be left unconnected at both ends.

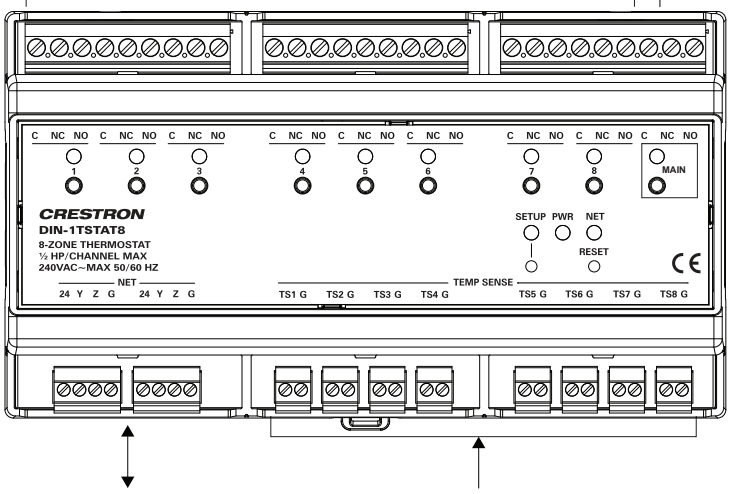
NOTE: When wiring the zone valves, observe the following points.

- Up to eight zone valves may be connected to the DIN-1TSTAT8, one valve per zone.
- When making connections to the zone valves, ensure proper wiring for normally closed (NC) or normally open (NO) valves. Refer to the valve manufacturer for specifications and wiring.
- The MAIN relay is to be used for the main valve only.

Wiring the DIN-1TSTAT8

1-8:
C (common), NC (normally closed), and NO (normally open) to relays 1-8.

MAIN:
C (common), NC (normally closed), and NO (normally open) to the main valve.



24 Y Z G:
Cresnet control from a control system and to daisy-chained Cresnet device.

TS1 - TS8, G:
Temperature sensor input from remote temperature sensors

Operation

Bootup

When the DIN-1TSTAT8 boots up, all zones are turned off before starting up.

Main Valve Delay

When a heat call is made, a delay from 0 to 5 minutes can be set; refer to the valve specifications for the correct value. The default delay is 5 minutes.

1-8 Buttons and LEDs

Press the 1-8 button to toggle the corresponding heat zone on and off.

The 1-8 LEDs operate as follows:

- The LED flashes during a heat call.
- The LED lights when the heat is enabled, but there is no call for heat.
- The LED is off when heat is disabled.

MAIN Button and LED

Press and hold the MAIN button for 10 seconds to toggle the main valve on and off.

The MAIN LED operates as follows:

- The LED flashes during a heat call for one or more zone valves.
- The LED lights when heat is on for one or more zone valves.
- The LED is off when all zone valves are off.

Temperature Sensors

The temperature sensors operate as follows:

- If a temperature sensor is not connected, the corresponding zone turns off and stays off until a temperature sensor is connected.
- If a temperature sensor does not send a valid value, or is not functioning for 10 minutes, the corresponding zone turns off and stays off.
- The temperature sensor reads the temperature of the room every second.

Failsafe Mode

The DIN-1TSTAT8 enters Failsafe mode to ensure safe operation if the stored setpoint becomes corrupt, or if no control system is connected.

When in Failsafe mode, the DIN-1TSTAT8 sets all zones to heat and changes the temperature to the failsafe setpoint. The failsafe setpoint is user defined in the program and can be set from 0° - 20 °C (32° - 68 °F). The default failsafe temperature setpoint is 20 °C (68 °F). In temperate zones the failsafe temperature setpoint may be lower, and in cold climates the value may be higher to minimize situations such as frozen pipes, etc.

Normal operation is resumed when the DIN-1TSTAT8 regains communication with the control system or if the stored setpoint is corrected. The DIN-1TSTAT8 will resume operating according to the last known state.

Test Mode

The wiring and the operation of the zone valves can be verified using Test mode to ensure that the system is properly configured.

NOTE: To exit Test mode, press and hold the desired zone button for 10 seconds.

To test the operation of a zone valve.

1. Press and hold the desired zone button for 10 seconds.

   NOTE: If the DIN-1TSTAT8 is programmed per the zone-valve manufacturers specified time delay, the delay will be added to the test time (5 minutes).

   NOTE: The default delay is 5 minutes.

2. The DIN-1TSTAT8 performs a 5-minute heat call on that zone. If the valve is programmed to have a time delay, the delay is initiated and added to the test call for heat. The zone LED flashes for the duration of Test mode.

   NOTE: The time that Test mode takes to run is determined by the time of the delay plus the 5-minute heat call. Test mode can take up to 10 minutes to complete.

3. The zone valve, main valve, and DIN-1TSTAT8 return to their previous states when Test mode has been completed.

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The thermostat is not receiving a signal.	There is an improper connection between the sensor and the thermostat.	Check the connection between the sensor and thermostat.
	An incomplete (open) circuit exists in wiring.	Check the connection between the sensor and thermostat.

As of the date of manufacture, the product has been tested and found to comply with specifications for CE marking.

CE

Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada (IC) Compliance Statement

CAN ICES-3 (B)/NMB-3(B)

This document was written by the Technical Publications department at Crestron.

Crestron Electronics, Inc.
15 Volvo Drive, Rockleigh, NJ 07647
Tel: 888.CRESTRON
Fax: 201.767.7576
www.crestron.com

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