

CHV-TSTATEX

infiNET EX™ Thermostat

The CHV-TSTATEX is a wireless thermostat featuring infiNET EX™ technology. The CHV-TSTATEX installs just like a conventional thermostat because no extra wires are needed to connect to the control system. Although functional as a standalone thermostat, the CHV-TSTATEX delivers enhanced functionality as part of a complete Crestron® automation system. Integrating HVAC with a Crestron system can help lower energy bills and increase user friendliness.

The CHV-TSTATEX is designed for one- or two-stage heating and one- or two-stage cooling control of baseboard, forced air, heat pump¹, and dual-fuel heat pump¹ HVAC systems. The large backlit LCD display provides a clear view of temperature, set point, system mode, fan mode, system status, and setup functions. Climate control features include separate heating and cooling set points, and adjustable anticipators to prevent overshooting the desired temperature. Continuous fan operation can be selected when needed for increased circulation.

infiNET EX™ Communications

Built on steadfast infiNET™ technology, infiNET EX is the new standard in 2-way wireless connectivity that can handle installations in even the most urban settings. The redundant nature of its mesh networking technology means that a command will never be missed, resulting in faultless operation - something that is of the utmost importance when it comes to HVAC control and home automation. The CHV-TSTATEX harnesses this cutting edge wireless connectivity which affords it a level of robustness and dependability above other solutions.

Automation System Integration

The wireless connection to the control system allows the functions of the CHV-TSTATEX to be controlled from touchpanels, keypads, wireless remotes, computers, or even a mobile device. It supports unlimited flexibility for remote control, scheduling, and integration with other devices and systems. However, in the event that communication with the control system is disrupted for any reason, the CHV-TSTATEX will remain operable to control the HVAC system.

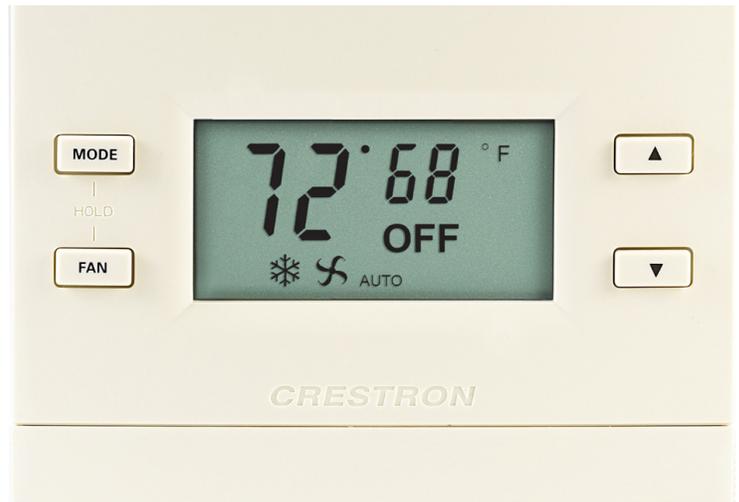
Easy Installation

System design and installation using infiNET EX thermostats could not be easier. Because no control wires are required, the CHV-TSTATEX can be installed just like any conventional thermostat.

To simplify installation, physical switches are provided for the most critical configuration options, including heat/cool type, heat pump behavior, power settings, number of heating/cooling stages, and fan options. These settings allow HVAC contractors to install and test the thermostats prior to the appearance of a Crestron system integrator.

An infiNET EX gateway such as the CEN-RFGW-EX is needed for communications. Setting up a complete network of infiNET EX devices is simple, utilizing dynamic discovery (self-install) to locate and acquire each RF device automatically. Setting the ID of each device employs the same convention as Crestron's familiar TSID method, and each device is programmable using Crestron SIMPL Windows, SystemBuilder™ or D3Pro™ software just like any wired Cresnet device. Even firmware updates are performed over the wireless network.

No further action is required to configure the infiNET EX network. Each device assigned to a common gateway automatically behaves as a wireless expander² for any other devices within range (approximately 150 feet indoors), and additional expanders may be added if



necessary. The infiNET EX gateway monitors each device on the network at all times, ignoring any other 2.4 GHz signals. It reconfigures the entire network automatically in response to new sources of interference and other changes in RF conditions.

Remote Sensors

Optional remote temperature sensors can be connected to the CHV-TSTATEX for enhanced flexibility and optimized performance. Climate can be regulated according to an average of multiple sensors, or the built-in sensors can be disabled entirely to allow the CHV-TSTATEX to be installed out of view. For heat pump-type systems, outdoor temperature can be monitored to optimize system performance. Compatible sensors include the CHV-RTS and the CHV-RSS.

> *Wall mount heat/cool thermostat for baseboard, forced air, and heat pump¹ HVAC systems*

> *Crestron system integration via infiNET EX wireless network*

> *Saves on energy costs with advanced programming abilities*

> *Supports two remote temperature sensors*

> *Fail-safe mode allows operation in event of control system failure*

> *Backlit LCD display*

> *Available in white, black, or almond*

SPECIFICATIONS

Wireless

RF Transceiver: 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.6 MHz), IEEE 802.15.4 compliant

Range (typical): 150 feet indoor, 250 feet outdoor; Subject to site-specific conditions; range is increased by adding additional devices or CLW-RFEXP-EX wireless expander

Gateway: Requires a CEN-RFGW-EX RF gateway

CHV-TSTATEX infiNET EX™ Thermostat

Connectors

HVAC:

7 terminal blocks comprising the following (top row, listed left to right):

RS2: Remote sensor 2 (outdoor)

RS1: Remote sensor 1 (indoor)

RSR: Remote sensor return

RSR: Remote sensor return (duplicated for easier wiring)

W2: Heat, second stage

W1: Heat, first stage

RH: Heat return

7 terminal blocks comprising the following (bottom row, listed left to right)

B: Auto changeover (inverted); switched to RC during heat calls

O: Auto changeover; switched to RC during cool calls

G: Fan

Y2: Cool, second stage

Y1: Cool, first stage

RC: Cool return

Buttons

MODE: Cycles through available System Modes: OFF, HEAT, AUX HEAT ONLY (for heatpump or dual-fuel systems only), and COOL

FAN: Toggles fan setting between FAN AUTO and FAN ON

RAISE: Raises the set point

LOWER: Lowers the set point

HOLD (combination): Pressing MODE and FAN buttons simultaneously enters/exits HOLD mode

SETUP (combination): Holding the FAN button, then pressing the RAISE and LOWER buttons simultaneously for 5 seconds enters SETUP mode; pressing mode button advances to next setup parameter/function; pressing RAISE or LOWER adjusts value of current setup parameter or executes current setup function; pressing FAN button exits SETUP mode

Display

Type: Backlit LCD with (2) large 7-segment digits, (2) small 7-segment digits, (14) dedicated symbols;

Displays ambient temperature, set point, system mode, fan setting, call activity, low battery, RF or control system communication errors, firmware download progress, setup parameter/function and value

Measurement Range

Ambient Temperature: -10° to 110°F (-23° to 43°C)

Display Limits: -9° to 99°F (-9° to 43°C)

Temperature Tolerance

Over Full Range: ±1°F (±0.5°C)

At Room Temperatures: ±1°F (+0.4/-0.2°C)

Setpoint Range

Heat Set Point: 38° to 89°F (3° to 32°C)

Cool Set Point: 59° to 99°F (15° to 37°C), or 38° to 99°F (3° to 37°C) extended cool mode enabled

Relay Rating

1 Amp @ 40 Volts DC or 24 Volts AC (nominal)

Environmental

Temperature: -10° to 110°F (-23° to 43°C)

Humidity: 10% to 90% RH (non-condensing)

Power Requirements

24V: 0.24 Watts (10 mA) @ 24 Volts AC, supplied by heating or cooling system

Battery: (2) AA batteries required, estimated 1 year normal operation

Housing

Injection-molded plastic, surface-mountable to the front of a horizontally oriented 1-gang electrical box

Dimensions

Height: 4.50 in (11.43 cm)

Width: 5.53 in (14.05 cm)

Depth: 1.03 in (2.60 cm)

Weight

6.7 oz (190 g)

Available Models

CHV-TSTATEX-A-T: infiNET EX™ Thermostat, Matte Almond [Release Date: TBA]

CHV-TSTATEX-B-T: infiNET EX™ Thermostat, Matte Black [Release Date: TBA]

CHV-TSTATEX-W-T: infiNET EX™ Thermostat, Matte White [Release Date: TBA]

CHV-TSTATEX-FCU-A-T: infiNET EX™ Thermostat, Fan Coil Unit, Matte Almond [Available July, 2011]

CHV-TSTATEX-FCU-B-T: infiNET EX™ Thermostat, Fan Coil Unit, Matte Black [Available July, 2011]

CHV-TSTATEX-FCU-W-T: infiNET EX™ Thermostat, Fan Coil Unit, Matte White [Available July, 2011]

Notes:

1. Heat pump systems require an outdoor temperature sensor; contact Crestron for additional design assistance.

2. CHV-TSTATEX must be powered by a 24 volt source to enable repeater functionality.

CHV-TSTATEX infiNET EX™ Thermostat

