



Overview

The ECL-STAT-HP, ECB-STAT-HP, and ECW-STAT-HP series represent three thermostat families specifically designed for single stage and multi stage control of heating and cooling equipment such as heat pump units. In particular, the ECL-STAT-HP series uses the LonTalk® communication protocol and is LONMARK® certified. The ECB-STAT-HP series uses the BACnet® MS/TP communication protocol and is BTL® listed as an Application Specific Controller (B-ASC). Lastly, the ECW-STAT-HP series communicates over a wireless mesh network.

With adjustable high and low balance points, heat pump or auxiliary heating can be limited based on outside air temperature. Moreover, when a thermostat is in “economy” mode, heat pump usage is maximized before auxiliary heating turns on. All thermostats can be equipped with an optional PIR motion detector cover for advanced occupancy functionality.

All thermostat families can be configured using Distech Controls’ EC-Net^{AX}, an open multiprotocol integration solution that is powered by the Niagara^{AX} Framework®. In particular, the ECL-STAT-HP and ECB-STAT-HP families can also be configured using the EC-Configure wizard. Furthermore, the ECL-STAT-HP family can also be configured using the EC-Configure plug-in, another configuration interface that is accessible through any LNS®-based software, such as Distech Controls’ Lonwatcher 3.

Applications

- Controls heat pump units, providing single stage and multi stage temperature control
- Improves energy efficiency when used with the optional PIR motion detector cover by automatically adjusting temperature setpoints based on a zone’s occupancy mode

Features & Benefits

- 2-stage cooling and 3-stage heating control with an integrated changeover function
- Remote room and outdoor sensors with heat pump balance point settings, temperature averaging, and override
- Comfort mode and economy mode – economy mode maximizes heat pump use before auxiliary heating turns on
- Compressor/auxiliary interlock to prevent high pressure trip when the coil is downstream of the auxiliary heat source
- Remote discharge air sensor input for monitoring system efficiency
- Smart fan operation saves energy during night mode
- Compatible with an optional PIR motion detector cover, bringing advanced occupancy functionality and energy savings
- 2 software configurable digital inputs for monitoring filter status, activating a remote temporary occupancy switch, or acting as a general purpose service indicator
- Configurable auxiliary SPST output switch for lighting, exhaust fan or fresh air control
- Intuitive, menu-driven programming with 7 day scheduling and 6 hour typical clock reserve time in case of power loss¹
- Lockable keypads for tamper proofing

1. Specific models only, check table on second page for details.

Product Warranty & Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards and carry a two-year warranty. Distech Controls is an ISO 9001 registered company.

Models Available

Model	EC(α)-STAT-HP	EC(α)-STAT-HPP
2 digital inputs	■	■
1 remote room sensor input	■	■
1 remote outdoor sensor input	■	■
1 remote mixed air sensor input	■	■
1 digital auxiliary output	■	■
Compressor stage 1	■	■
Compressor stage 2	■	■
Auxiliary heat stage	■	■
Reversing valve operation	■	■
Smart fan	■	■
PIR motion detector ready	■	■
Programmable		■
Scheduling		■
Product Number	CDIVI-7600H50(β)1	CDIVI-7652H50(β)1

Recommended Applications

Model	EC(α)-STAT-HP	EC(α)-STAT-HPP
3 heating/ 2 cooling stages	■	■

α represents either L for LONWORKS, B for BACnet, or W for Wireless

β represents either E for LONWORKS, B for BACnet, or W for Wireless

Thermostat Covers – Optional

Allure PIR Motion Detector Cover



RTxxx/HPx Allure PIR Motion Allure PIR motion detector cover for all roof top and heat pump thermostat models
Detector Cover

Allure Cover



RTxxx/HPx Allure Cover

Allure cover for all roof top and heat pump thermostat models

For replacing Traditional covers on thermostats in existing installations in order to have a uniform Allure look across all wall units.

Traditional Cover

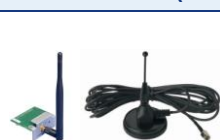


HPx Traditional Cover

Traditional cover for all heat pump thermostat models

For replacing Allure covers on thermostats that will be used as replacements or additions in existing installations where there is already a uniform Traditional look across all wall units.

Wireless Card (Required for ECW-STAT-HP Models Only)



ECW-STAT Add-On Card w/Whip Antenna Add-on card with whip antenna

ECW-STAT Add-On Card w/Remote Antenna Add-on card with remote antenna

Add-on card needs to be installed in an EC-BOS-2^{AX} or EC-BOS-6^{AX} for communication with wireless thermostat models. JAR file is available free of charge and is included in Distech Controls EC-NET-AX Support Package.

Wireless Repeater



ECW-STAT Repeater

Repeater for communication with out-of-range wireless thermostat models

Wireless Survey Tool



ECW-STAT Survey Tool

Kit for measuring signal strength of wireless transmissions. Used to establish suitable locations for installation of wireless thermostat models

Supported Platforms



EC-Net^{AX}

EC-Net^{AX} is a web-enabled multi-protocol integration solution powered by the Niagara^{AX} Framework, establishing a fully Internet-enabled, distributed architecture for real-time access, automation and control of devices. EC-Net^{AX}'s open framework creates a common development and management environment for integration of LONWORKS®, BACnet®, ZigBee™ and other protocols. Regardless of manufacturer and protocol, the EC-Net^{AX} system provides a unified modeling of diverse systems and data, providing one common platform for development, management and enterprise applications.



LNS[®]
TURBO Edition

LONWORKS Network Services (LNS)

LNS[®] is a client-server platform that allows multiple users, running different LNS-compatible applications, to access a common source for directory, installation, management, monitoring and control services for the network system being managed. Distech Controls' Lonwatcher is an example of a LNS-based network management tool that can use Plug-Ins to configure and monitor controllers and devices in the control system.

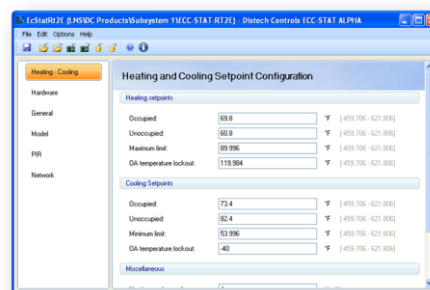
EC-Net^{AX} Wizards and LNS Plug-Ins

EC-Configure EC-Net^{AX} Wizards (ECL-STAT-HP and ECB-STAT-HP models only)

Designed for use with EC-Net^{AX} (powered by the Niagara^{AX} Framework), the EC-Configure EC-Net^{AX} Wizards can be used to easily configure a device's parameters including inputs, outputs, fan and valve settings, heating and cooling setpoints, amongst others. Moreover, these wizards can be used to enable and configure additional built-in features such as morning warm-up, load shedding, frost protection and slave operation mode.

EC-Configure LNS Plug-in (ECL-STAT-HP models only)

Similar to an EC-Configure EC-Net^{AX} Wizard, the EC-Configure LNS Plug-in is a user-friendly configuration interface, which is accessible through any LNS[®]-based software, such as Distech Controls' Lonwatcher 3.



Complementary Products

Temperature Sensors



Allure EC-SENSOR
Allure EC-SENSOR-O

Room temperature sensor with communication jack
Room temperature sensor with occupancy override button and communication jack



SS Plate Wall Sensor
Tamper Proof SS Plate Wall Sensor

Room temperature sensor with stainless steel plate cover
Room temperature sensor with stainless steel plate cover and tamper proof screws



Duct Probe Sensor

Duct temperature sensor with various enclosure types and probe lengths



Flexible Duct Averaging Sensor
Copper Duct Averaging Sensor

Duct temperature sensor with various enclosure types and cable lengths
Duct temperature sensor with various enclosure types and tube lengths



Outside Air Sensor

Outside air temperature sensor with various enclosure types

For more information on these or other Distech Controls products please refer to our web site at www.distech-controls.com or contact sales@distech-controls.com.

Dimensions



Units Legend: inches

Specifications

Power

Voltage	19-30V AC; 50/60Hz; Class 2
Maximum Consumption	2VA

Interoperability

ECL-STAT-HP series:	
Communication	LonTalk protocol
Channel	TP/FT-10; 78Kbps
LONMARK Interoperability Guidelines	Version 3.4
LONMARK Functional Profile	Space Comfort Controller #8500
ECB-STAT-HP series:	
Communication	BACnet MS/TP
BACnet Profile	B-ASC
Baud Rate	9600, 19200, 38400, or 76800 bps
Addressing	BACnet MS/TP MAC address; adjustable range from 1 – 127

ECW-STAT-HP series:	
Communication	Wireless
Addressing	Adjustable range from 0 – 254
Frequency (depends on channel parameter)	2.4GHz, 802.15.4

Hardware

Memory	EEPROM
Backup (for programmable model only)	Super capacitor, good for approx. 6 hours

Enclosure

Material	ABS Resin
Color	White
Dimensions	4.93" x 3.41" x 1.43" (124mm x 85mm x 36mm)
Shipping Weight	0.75lbs (0.34kg)

Agency Approvals

UL	UL873 (US) and CSA C22.2 No.24 (Canada)
Industry Canada	ICES-003 (Canada)
FCC	Compliant to CFR 47, Part 15, Subpart B, Class A (US)
C-Tick	AS/NZS CISPR 22 Compliant (Australia/New Zealand)
ECW-STAT-HP Series only	
FCC	Compliant to Part 15, Subpart C

Inputs

Digital Input	Relay dry contact only across C terminal to DI1 or DI2
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Outputs

Contact Output Rating	Each relay output (Y1, Y2, G, W1, and AU) has: 30V AC, 1A maximum 30V AC, 3A in-rush
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LCD Display

Type	Backlit LCD display
Display Area	2 rows of 8 characters each

Environmental

Operating Temperature	0°C to 50°C; 32°F to 122°F
Storage Temperature	-30°C to 50°C; -22°F to 122°F
Relative Humidity	0 to 95% non-condensing

Functionality

Resolution	±0.1°C (±0.2°F)
Control Accuracy	±0.5°C (±0.9°F) @ 21°C (70°F) typ. calibrated
Sensor Ranges	
- Occ and Unocc Setpoints	
Cooling	12.0-37.5°C (54-100°F)
Heating	4.5-32.0°C (40-90°F)
- Room Air Temperature	-40-50°C (-40-122°F)
- Outdoor Air Temperature	-40-50°C (-40-122°F)
Proportional Band for Room	Factory set, heating and cooling at 1.1°C
Temperature Control	(2.0°F)
Sensor Type	Local 10KΩ NTC thermistor

Electromagnetic Compatibility

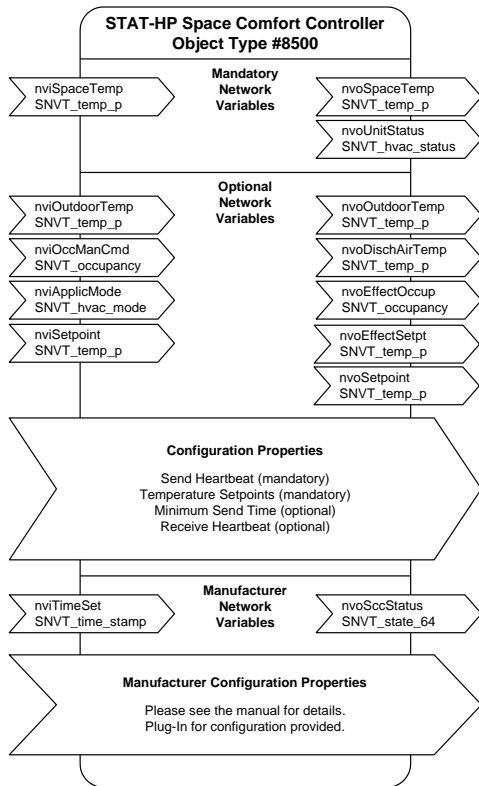
CE	EMC Directive 89/336/EEC (European Union)
FCC	Compliant with Part 15

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

Communication Protocols and Standards



LONMARK Objects and Network Variables



BACnet Objects and Services

For information on the BACnet objects and services, refer to the BACnet Protocol Implementation Conformance Statement (PICS).

Specifications subject to change without notice.

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Niagara^{AX} Framework is a registered trademark of Tridium, Inc.; ZigBee is a registered trademark of ZigBee Alliance;
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05DI-DSSTATH-10

STAT-HP Series

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