ECLYPSE™ Connected Thermostat

Overview

The ECLYPSE Connected Thermostat (ECY-STAT) is geared towards new or existing rooftop unit, heatpump unit, fancoil unit and other zone control applications. It features a touchscreen interface, multiple connectivity options (both wired IP and Wi-Fi) for system communication, and *Bluetooth*® low energy (BLE) for mobile connectivity.

Features & Benefits

- Elegant and compact design, provides a modern appearance when installed in any environment
- A unique user experience with an intuitive interface to adjust temperature, fan speed, HVAC mode, and lighting/sunblinds via BACnet all from a single device
- Wired IP or Wi-Fi network connectivity provides options for both new and retrofit projects
- Using the *my* PERSONIFY mobile app simply pair your mobile device to the ECY-STAT through Bluetooth
- Comes with pre-loaded applications or customize the control sequence and interface for a specific application using EC-*gfx*Program
- 7-day scheduler supports single or dual setpoint or multi-state schedule for standalone applications
- Benefit from a built-in web server and ENVYSION viewer for managing smaller installations

Model Selection

Examples: ECY-STAT-***R-W-WB***

Model		Color	Connectivity
ECY-STAT	**-R:** Rooftop (RTU) or Heat Pump (HPU) Unit 4UI, 5DO, 3DUO **-F:** Fan Coil Unit (FCU), 4UI, 5DO, 3DUO **-Z:** Zone Control, 4UI, 3DO, 2DUO	**-B:** Black **-W:** White	**-WB:** Wired IP, Wi-Fi and Bluetooth connection

Product Specifications

Power Supply Input

Voltage Range	24VAC/DC; ±15%; Class 2
Typical Power Consumption	6VA; all external loads excluded
Maximum Power Consumption	8VA; external 24VAC loads excluded
Frequency Range	50 to 60Hz
Overcurrent Protection	External fuse required
Fuse Type	Up to 4A depending on output current consumption[1]

1. Device power (Rc and Rh) and all other loads on the ECY-STAT should not exceed 4A total consumption.

Wired Communications

Ethernet Connection Speed	10/100 Mbps
Addressing	IPv4 or Hostname
BACnet Profile	BACnet Building Controller (B-BC), AMEV AS-A and AS-B
BACnet Listing	BTL, WSP B-BC (pending)
BACnet Interconnectivity	BBMD forwarding capabilities
BACnet Transport Layer	IP
Web Server Protocol	HTML5
Web Server Application Interface	REST API

Wireless Communications

Bluetooth Version	4.2
Bluetooth Frequency	2402 – 2480 MHz
Wi-Fi Communication Protocol	IEEE 802.11b/g/n
Wi-Fi Connection Types	Hotspot (default) and Client

Temperature Sensor

Range	0°C to 50°C (32°F to 122°F)
Accuracy	Sensing component; ±0.20°C (±0.36°F)
Resolution	0.10°C (0.18°F)

Humidity Sensor

Accuracy	<±3%: RH 0% to 70%
Resolution	1%

Hardware

Processor	Sitara ARM processor with 3D acceleration
CPU Speed	600MHz
Memory	4GB Non-volatile Flash (applications & storage) 512MB RAM
Real Time Clock (RTC)	Real Time Clock with rechargeable battery Supports SNTP network time synchronization
RTC Battery	20 hours charge time, 20 days discharge time
	Up to 500 charge / discharge cycles
Cryptographic Module	FIPS 140-2 Level 1 Compliant
Ethernet	1 × RJ-45 Ethernet port

Display Characteristics

Display Type	Full color, IPS, backlit, capacitive LCD touchscreen
Display Resolution	High definition (320 × 480)
Effective Viewing Area (W x H)	48.96 x 73.44 mm (1.93 × 2.89”)
Languages	English, French, Spanish, Italian, German, Danish, Dutch, Polish, and Portuguese

Mechanical

Dimensions (H × W × D)	131.4 × 86.0× 28.0 mm (5.17 × 3.39 × 1.10”)
Shipping Weight	0.55lbs (0.26 kg)
Enclosure Material[1]	ABS
Enclosure Rating	Plastic housing, UL94-V0
Installation	Wall mounting through included mounting holes

1. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive

Environmental

Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 50°C (-4°F to 122°F)
Relative Humidity	0 to 90% Non-condensing
Ingress Protection Rating	IP20 (IEC 60549)

Standards and Regulations (pending)

CE Emission	EN61000-6-3: 2007+A1:2011
CE Immunity	EN61000-6-1: 2007
CE Radio	EN 300 328 V2.1.1 November 2016
FCC	Compliance with FCC rules part 15, subpart B, class B
UL Listed (CDN & US)	UL916 Energy management equipment

Universal Inputs (UI)

General

Input Type	Universal; software configurable
Input Resolution	12-Bit analog / digital converter

Contact

Type	Dry contact

Counter

Type	Dry contact
Maximum Frequency	1Hz maximum
Minimum Duty Cycle	500ms On / 500ms Off

0 to 10VDC

Range	0 to 10VDC (40kΩ input impedance)

0 to 20mA

Range	0 to 20mA 165Ω external resistor wired in parallel

Resistance/Thermistor

Range	0 to 350 KΩ
Thermistor	10KΩ Type 2, 3 (10KΩ @ 77ºF; 25ºC)

Digital Output (DO)

General

Output Type	24VAC/DC; software configurable
Maximum Total Current for all Outputs	4A max

Output Power Source

DO2, DO3	Supplied by Rc
DO4, DO5	Supplied by Rh
DO8	Unpowered. Must be protected by an appropriately sized fuse of up to 1A and supplied by an external power supply < 24VAC/DC +/15%; Class 2

Digital

Voltage Output	0 or 24VAC/VDC
Current	1A
Max in-rush Current	3A

ON/OFF

PWM:

Time Period	Adjustable from 2 to 65 seconds
Thermal Actuator Management	Adjustable warm up and cool down time

Floating:

Minimum Pulse On/Off Time	500 milliseconds
Drive Time Period	Adjustable

Digital-Universal Output (DUO)

General

Output Type	Universal or digital; Software configurable
Analog Output Resolution Converter	10-bit digital to analog Converter
Output Protection	Built-in snubbing diode to protect against back-EMF.

Output Power Source

DUO1, DUO6, DUO7	Supplied by Rc

Digital

Voltage Output	0 or 24VAC/VDC
Current DUO1, DUO6, DUO7	1A
Max in-rush Current DUO1, DUO6, DUO7	3A

ON/OFF

PWM:

Time Period	Adjustable from 2 to 65 seconds
Voltage Output	0 or 24VAC/VDC with same current as digital configuration and 0 or 12VDC with max source current of 5mA.
Thermal Actuator Management	Adjustable warm up and cool down time

Floating:

Minimum Pulse On/Off Time	500 milliseconds
Drive Time Period	Adjustable

Analog 0 to 10VDC

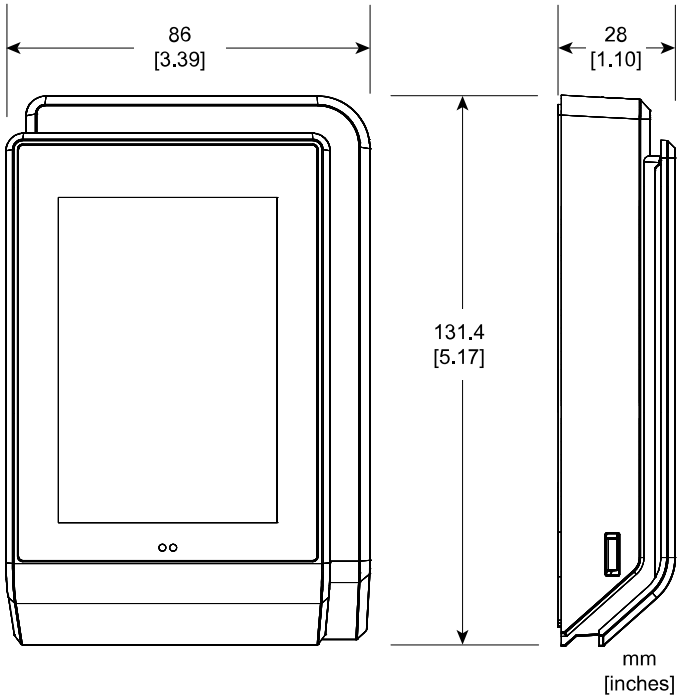
Source:

Voltage Range	0 to 10VDC linear
Source Current	Maximum 5 mA at 10VDC (minimum resistance 2kΩ)

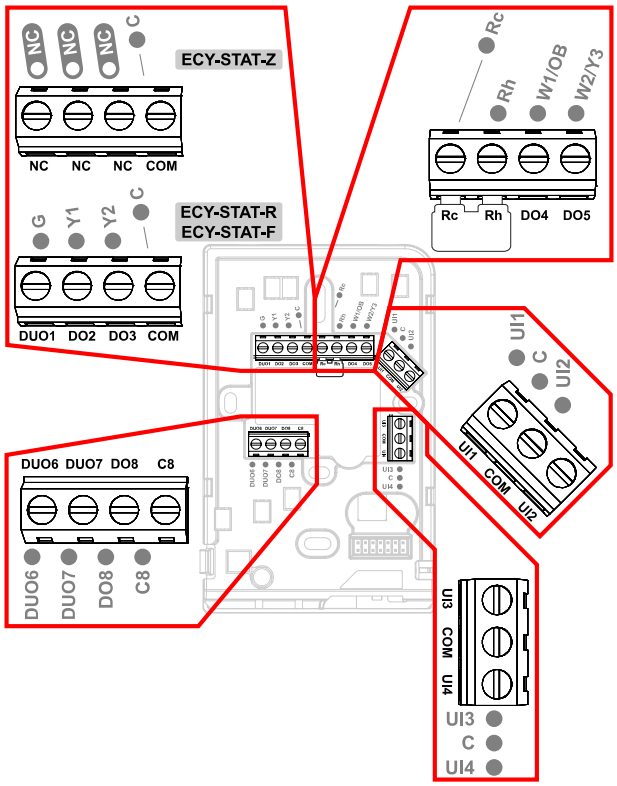
Sink:

Voltage Range	0 to 10VDC linear
Sink Current	Maximum 2.5 mA at 1VDC (minimum resistance 4kΩ)
Output protection	Output is internally protected against short circuits

Dimensions



I/O Identification



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