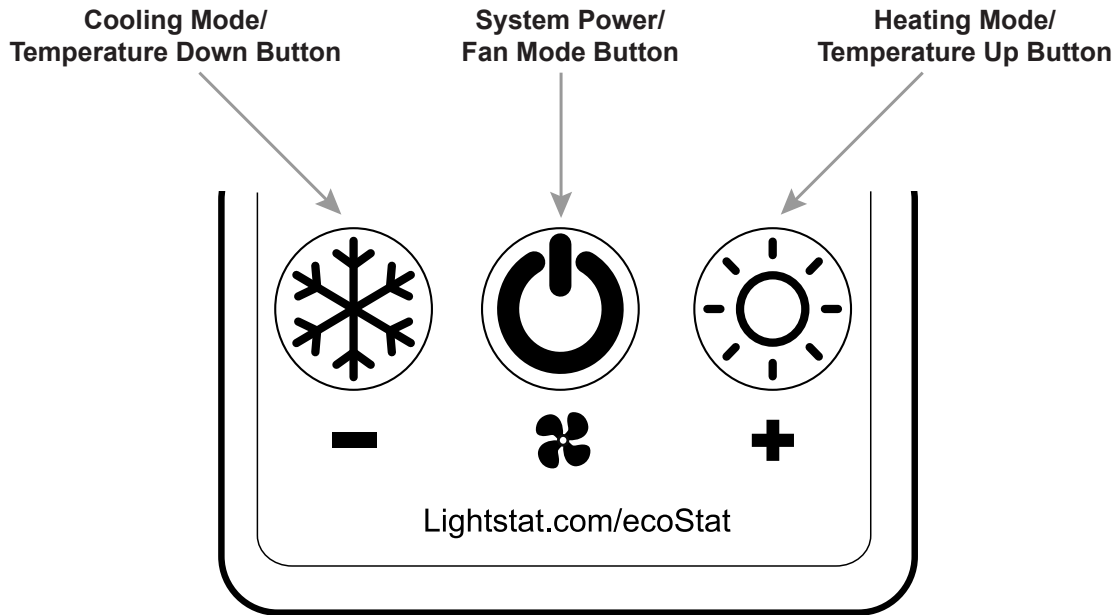










Interface

The **ecoStat** user interface has three multifunction buttons:



Each button has a **long press** function (more than 2 seconds) and a **short press** function (less than 2 seconds). The following tables show the typical function of each button:

Button			
Long Press (> 2 seconds)	Cool On Heat Off	System On/Off	Heat On Cool Off
Short Press (< 2 seconds)	Decrease Set Point	Fan Mode On/Auto	Increase Set Point

 	  
Long Press Enables Heating and Cooling with Auto Changeover	Long Press Press together to access light threshold settings

Configuration

Device parameters and settings will be factory programmed based on specifications supplied by the customer. These settings will be the default values the device stores and can only be changed through factory reprogramming.

Heating and Cooling: (Select all that apply)	<input type="checkbox"/> Heating – 1 Stage <input type="checkbox"/> Heating – 2 Stage <input type="checkbox"/> Cooling – 1 Stage <input type="checkbox"/> Cooling – 2 stage
RTU Configuration:	<input type="checkbox"/> Conventional <input type="checkbox"/> Heat Pump – Active Cooling <input type="checkbox"/> Heat Pump – Active Heating
Default Set Points:	Heating (°F): _____ Cooling (°F): _____
Maximum Set Points:	Heating (°F): _____ Cooling (°F): _____
Minimum Set Points:	Heating (°F): _____ Cooling (°F): _____
Set Point Override:	<input type="checkbox"/> Enable <input type="checkbox"/> For a Duration (Minutes): _____ <input type="checkbox"/> Disable
Fan Change:	<input type="checkbox"/> Allowed <input type="checkbox"/> Not Allowed
Default Fan Mode:	<input type="checkbox"/> On <input type="checkbox"/> Auto
Setback:	<input type="checkbox"/> Enabled <input type="checkbox"/> Disabled
Setback Set Points:	Heating (°F): _____ Cooling (°F): _____
Lock On/Off Delays:	<input type="checkbox"/> Yes, Delay (Seconds): _____ <input type="checkbox"/> No
Units:	<input type="checkbox"/> Fahrenheit <input type="checkbox"/> Celsius
Humidity:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Common Wire:	<input type="checkbox"/> Yes (24VAC) <input type="checkbox"/> No (Battery)

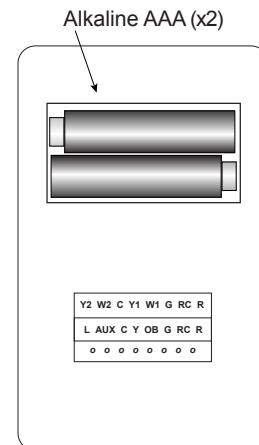
External Connections

A terminal block used for all external RTU connections will be located at the back of the thermostat accessible for wiring. The connections available on the terminal block are as follows:

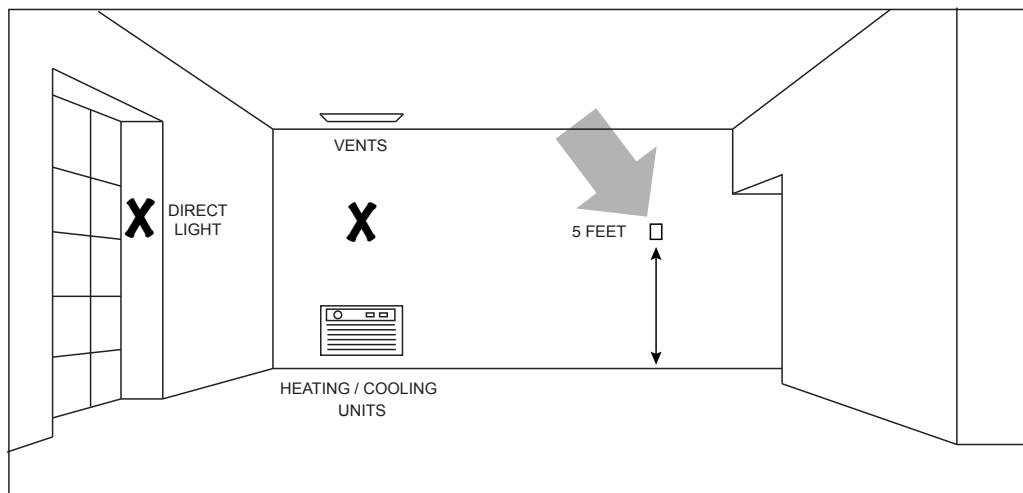
- R** (Power/Heating Power)
- RC** (Cooling Power)
- C** (Common)
- G** (Fan)
- W1** (Heat Stage 1) / **O/B** (Compressor/Damper)
- W2** (Heat Stage 2)
- Y1** (Cool Stage 1) / **Y** (Heat Pump)
- Y2** (Cool Stage 2)

For Battery Models Only

Battery models can be determined by the battery indicator on the LCD



Installation



The ecoStat's housing consists of three parts to allow for easy installation. The back plate is mounted to the wall first and all the external wiring is connected into the built-in terminal block. Once this plate is firmly mounted and wired, the cover plate and internal plastic guard attached will lock onto the back plate mating the connections between the thermostat and the terminal block.

Mounting:

Pick a mounting location AWAY from drafts, windows, doors, outside walls, and heat vents. Relocate if necessary.

The Lightstat ecoStat senses a change in LIGHT LEVEL to determine Setback if enabled. Mount it under lights that GO OFF when people LEAVE the space. Locate the Lightstat ecoStat at least 10 feet from a night light.

Setback

When setback is enabled the system will shift to using setback setpoints to conserve energy once the light level drops below the configured threshold.

Time Delays

Time delays are implemented on the system both to conserve energy as well as promote longevity of the mechanical equipment.

Time delays implemented are startup delay, output minimum on and output minimum off.

The output minimum on and output minimum off time delays are configurable based on customer request and the startup delays are randomized based on an internal algorithm.

Default lock on/lock off timers are 45 seconds.

Temperature Units

The temperature units displayed on the LCD are factory programmable and can be configured to either Fahrenheit or Celsius.

Sensors

1. Temperature and Humidity

A digital temperature and humidity sensor is used to monitor the ambient air. This sensor will maintain a relative accuracy of +/- 1°F for temperature and +/-5 %RH for humidity.

2. Light

A light sensor is used to detect the ambient light level within the local space. This is used to control setback depending upon configuration.

Heating and Cooling

Connections for 2 stages of heating and 2 stages of cooling. Configurable to allow single mode applications such as heat only or cool only.

Auto changeover option when both modes are in use.

O/B connection terminal for heat pump reversing valve control application.

Automatically controls the Y1/ W1 output for heating and cooling.

Setpoints

Setpoints for both heating and cooling to set the desired ambient temperature range.

Default setpoints are factory configurable based on customer requirements.

Setpoint Override

The user has the ability to temporarily override the default setpoints for situations where the default values are insufficient for a comfortable environment. If the setpoints are temporarily adjusted, the current active mode will determine which setpoint is changed which will have maximum/minimum restrictions for setpoint values as well as deadband size. Once adjusted away from default values a countdown timer will begin (if enabled). While in the period when this countdown timer is active the setpoint can be adjusted further up to the setpoint limits, but this will not restart the timer. Once the timer has elapsed the setpoints will revert to the configured default setpoints. The duration of this period can be configurable based on customer request. In the case where the override timer is not enabled, any adjustment (within the setpoint limits) will remain indefinitely.

Fan Control

When the system is on, the user can select whether the fan is controlled by the system based on calls for heating and cooling or to be always on regardless of system activity.

When the system is off, the user can select whether the fan is simply on or off. The fan will default to auto when the system is on and off when the system is off. Changing the fan mode while the system is off has no effect on the fan mode chosen while the system is on. This will be used to control setback depending upon configuration.