EcoWave

Remote Thermostat Package

A revolutionary wireless thermostat and control solution offering distributed management over in-room HVAC units.

Flexible Wireless Hardware Provides Ease of Installation

The EcoWave solution is comprised of two hardware components: the wireless EcoAir battery powered display unit and the EcoSource HVAC controller. The EcoSource is placed in the HVAC unit for physical control of the system. The EcoAir display can be placed in the optimum location for both temperature measurement and ease of occupant use. There are no restrictions based on where existing thermostat wire has been run or if there are enough conductors.

The EcoWave system can be configured for many different HVAC scenarios. It can control multiple HVAC systems each with an EcoSource, but all directed by a single EcoAir display unit. This type of setup reduces the complexity of running multiple HVAC units in a single large space and worrying about opposing modes competing against each other.

The EcoWave functionality adds increased usability, extra efficiency, and component cost savings to conference rooms or large room suites. Multiple EcoAir display units in different areas of a building allow each individual area the ability to make setpoint changes to control a single EcoSource.

Together, the EcoWave components form a wireless programmable controllable thermostat with over 125 configurable settings used to control the efficiency of HVAC systems. It can be easily installed on packaged terminal air conditioners, fan coils, heat pumps, split systems, and more. With software-based relay control and fan speed configuration, programming setup is simple and fast.

The ultra-wide power input along with its ability to switch alternate power sources and its proportional control outputs makes the EcoWave a fit for the most basic to the most complicated installations. Large internal data loggers measuring over 40 various runtime metrics make the EcoWave the thermostat of choice for measurement/verification and detailed analytics. With the EcoWave package you get more than just a wireless thermostat with a generous number of input options. Up to 3 Current Transformer (CT) inputs can be used to measure and log current. An external temperature input can be used to monitor remote temperature, and two dry contact pairs are available for door contacts, or integration with third party building controls.

Standards-Based Communication to Grow On

With the intelligence built-in, the EcoWave system can communicate as part of a larger EcoSmart network based on the ZigBee wireless module or fit seamlessly into existing control networks already based on ZigBee standards. Additionally, the EcoWave can inter-operate by utilizing a building's direct digital control (DDC) or building automation systems (BAS) and communicating with industry standards such as BACnet.

Overview

Onboard PIR occupancy sensor

Provides access to tools and resources that constantly monitor and control your energy savings

Two configurable soft buttons

Key Features

Highly compatible across many heating and cooling systems

Easily installed and programmed

Optional IP network

Proprietary Recovery Time Technology

Networked or stand-alone operations

Full remote control capability with any web browser via our EcoCentral platform

Communicates wirelessly with other EcoSmart products to ensure the highest energy savings

Availability

The EcoWave package is available now

Efficient HVAC Operation While Away

The EcoWave solution is designed to provide building operators with efficiency in the performance of their HVAC systems at a fraction of the normal install cost. It achieves efficiency by allowing granular control over available setpoint ranges, mode selections, setback temperature limits, and data from interconnected systems such as a hotel's property management system or time-of-day utility pricing data.

Using the built-in passive infra-red occupancy sensor, optional external sensor (EcoSense), or the optional door contact (EcoContact), the EcoWave will determine when a space is occupied or vacant and react according to its operator's programming. The system can revert to a preset temperature limit set by the operator or implement Telkonet's proprietary Recovery Time. The Recovery Time method will dynamically select the optimum setback temperature for each individual HVAC system based on its past performance and specific room characteristics such as solar load. The EcoWave is designed with networking in mind and comes integrated with the ZigBee module needed to create a larger managed building network. Large internal memory is standard on the EcoWave and data is available for download via laptop connection. When the EcoWave is connected to the EcoConnect device it becomes a ZigBee router and logs data internally and sends data of selectable intervals to a centralized database server.

By combining the EcoWave products with the full EcoSmart network solution an operator gains full remote control capability down to the individual thermostat level. A setpoint or mode can be changed room-by-room over the secure web-based EcoCentral portal. Global site changes to setpoint ranges, setbacks or even scheduled load shed events can be made easily by grouping the settings into new profiles, which can be delivered to a group of thermostats at a time.

EcoSmart Proprietary Recovery Time

EcoWave constantly calculates how far the temperature of each room can drift from the occupant's preferred setting (setpoint) to maximize energy savings and still return within the preset recovery time. Every room is constantly and independently evaluated to determine its energy efficient temperature based on environmental characteristics. Through the constant monitoring of the HVAC unit's ability to drive the temperature and real-time adjustment of setback temperature, rooms are never excessively hot or cold when an occupant returns to the room. The room will always be just minutes away from an occupant's desired comfort setting. Recovery Time technology delivers room-by-room, occupant-by-occupant savings, while maximizing occupant comfort.

Proven Savings

Telkonet's energy efficiency products have been proven in over 250,000 rooms across Hospitality, Education, Military, and Health Care markets. The power and intelligence behind the EcoWave makes it an ideal fit for a number of applications, including residential and office complex space. New opportunities for efficiency in HVAC are constantly uncovered with the wide array of support the EcoWave provides.

For more information contact a Green Energy Solutions representative today
ContactUs.ges@gmail.com or call 708-672-1900
www.GoGreenEnergySolution.com
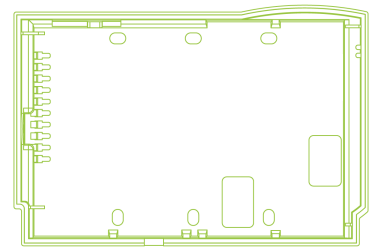
Height: 4" (10.2 cm)

Width: 6" (15.2 cm)

Depth: 1.5" (3.8 cm)

Technical Specifications

ZigBee® IEEE 802.15.42.4GHz ISM band

Temperature Range: -35-370°F (2-187.78°C)

Humidity Accuracy: +/-2% (10-90% RH)

Operational Voltage: 12-277AC 12-40V DC

Switched: 3-7(3A), 0-2(5A), 0-1(10A)

Maximum Functional Wattage: 2.5W

Options

Humidity Sensor

Real-Time Clock

Ethernet Port

External CT

External Temperature Probe

Standards

FCC Certified

telkonet®

GREEN ENERGY SOLUTIONS
A Green Way to Save