WEB COMFORT™

WEB-TM Web Comfort Energy Manager

Integrated Energy Management

APPLICATIONS:

Web Comfort is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational Facilities
- Worship Facilities
- Research Facilities
- Retail Locations
- Hospitality & Restaurants

FEATURES:

- Remote monitoring and control of lighting, HVAC, fans, networked PCs and plug devices
- Metering and demand response
- Optional connectivity to Modbus and BACnet
- Easy to install and configure: simply mount, connect, power and go!
- Secure wireless 2.4GHz ZigBee communications with other network devices
- Data storage retains all system events for over one year; event data can be analyzed to optimize energy use and savings
- Scalable to manage a single building or an entire campus
- Graphical view of real-time and historical energy use provides comprehensive and actionable information to users
- Web Comfort products operate independently or as an integrated solution
- Made in the USA (ARRA Compliant)

DESCRIPTION:

The Web Comfort WEB-TM Energy Manager is a rugged, industrial control processor that is the heart of innovative integrated energy management systems powered by Web Comfort software. The Energy Manager coordinates all energy management functions utilizing Web Comfort wireless network.

The compact Web Comfort WEB-TM Energy Manager receives input from environmental sensors, local controls and metering devices throughout a facility. Based upon sensor input, schedule, local input, curtailment, and event information, adjustments to lighting, HVAC, fans, networked PCs and plug devices are implemented in real time to minimize energy waste.

Communication with other Web Comfort Meters, the Web Comfort Energy Manager running metering software and other Web Comfort devices (such as lighting and HVAC controls) is via a reliable wireless mesh network.

WEB COMFORT™

WEB-TM Web Comfort Energy Manager

Integrated Energy Management

SPECIFICATIONS:

APPLIANCE

Mounting: Wall bracket or table-top

Storage: SATA 2.5" hard drive

Endpoint Capacity: ~300, upgradable to 1000

Operating System: Secure Linux-based variant

POWER SUPPLY

Voltage: 120VAC input/ 12VDC output

Power: 20 watts max

I/O SUPPORT

LAN: 1x10/ 100/ 1000 Ethernet, TCP/ IP v4

UDP ports: 49657, 54261, 59370, 59371

Serial: 2 - 1 dedicated internal, 1 open

USB: 2 USB 2.0 host interfaces

PROTOCOLS

Serial: Modbus, RS-485, MS/ TP

Wireless: 802.15.4 with mesh networking

Ethernet: HTTP/ HTTPS

Security: Internal firewall, isolated wireless and internal processors

RADIO NETWORK

IEEE 802.15.4-2003 2.4GHz ISM (ZigBee)

Range: Approx. 1000' LOS transmit/ receive

REGULATORY APPROVALS

UL 60950

FCC (V8NZRB1000141) & IC (7737A-ZRB1000141), Certified Class B

Digital Device, FCC Part 15

ENVIRONMENTAL

Operating Temperature: 50° to 104°F

Storage Temperature: -13° to 149°F

PHYSICAL

Dimensions (HxWxD): 10.75 x 9.94 x 2.5in (27.31 x 25.25 x 6.35cm)

Color: Blue

Weight: 5.0lbs (2.68kg)

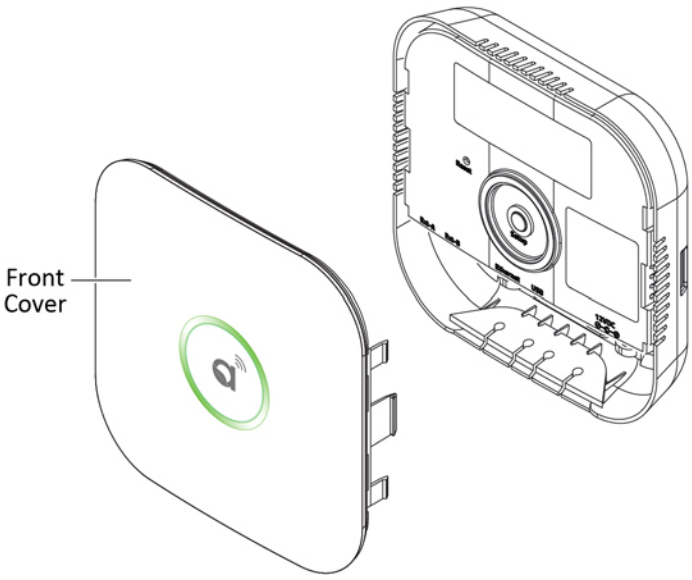
ORDERING INFORMATION:

SKU	Description
Appliances as shown include wall-mounted Web Comfort Manager with Web Comfort Software, which includes thermostat, lighting, metering, and fan software. Web Comfort Manager includes Ethernet and Web Comfort wireless interfaces.	
WEB-TM	Web Comfort Energy Manager with Web Comfort Software (For up to 100 Devices)
WEB-TM-PLUS	Web Comfort Energy Manager with Web Comfort Software (For up to 400 Devices)
Optional Accessories:	
WEB-TIS	Tridium Interface Software Supports TCP/IP connectivity via Tridium Niagara AX Platform or ModBus
WEB-PRO	Add Web Comfort PRO Advanced Automation Tools to Web Comfort Energy Manager

WEB COMFORT™

WEB-TM Web Comfort Energy Manager

Integrated Energy Management



MULTI-SITE CONNECTIVITY:

Web Comfort's Portfolio Manager is a hosted software solution for managing the temperature, lighting and energy consumption of multi-site facilities. Using a secure, web-based interface that connects two or more Web Comfort systems, Portfolio Manager directs schedules, alerts and demand response events across multiple premises.

THE WEB COMFORT FAMILY

ENERGY MANAGEMENT DONE RIGHT

The Web Comfort product line integrates lighting, climate control, fans, metering, and plug loads to provide a powerful integrated energy management solution. The lighting, thermostat, fan control and metering software share the Web Comfort Energy Manager and operate as an integrated application.

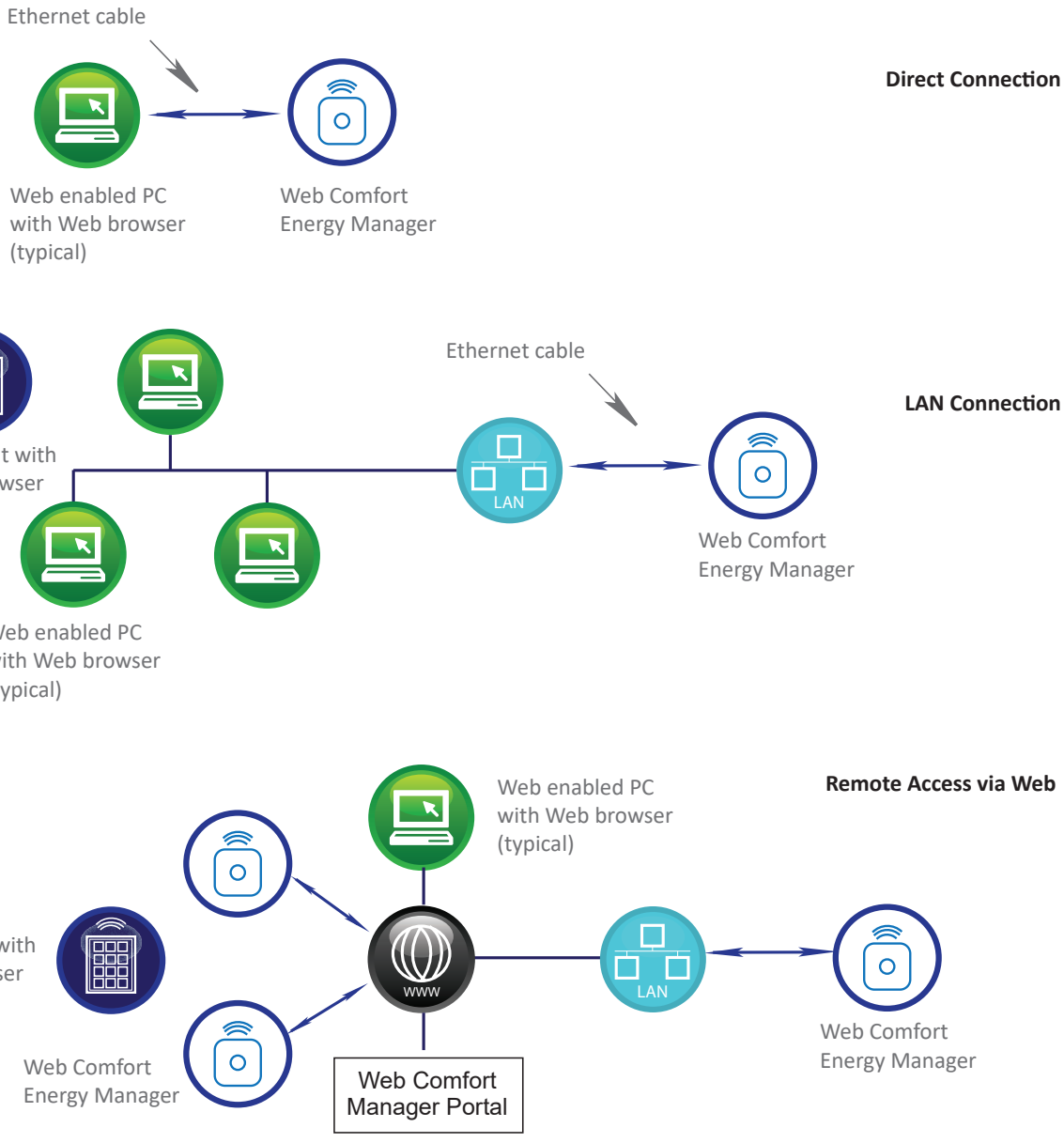
Web Comfort software communicates via the Web Comfort Energy Manager to lighting controllers, motion sensors, thermostats, fans, meters and plugs using a secure wireless 2.4GHz ZigBee communications network.

WEB COMFORT™

WEB-TM Web Comfort Energy Manager

Integrated Energy Management

WEB COMFORT WEB-TM MANAGER CONNECTIVITY:



WEB COMFORT™

WEB-T32P Web Comfort Thermostat

Wirelessly Communicating Thermostat

APPLICATIONS:

Web Comfort is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational Facilities
- Worship Facilities
- Research Facilities
- Retail Locations
- Hospitality & Restaurants

FEATURES:

- Integrated Modbus transceiver with factory wiring harness included
- Easy front panel access for transceiver diagnostics
- Universal applications
- Easy to install and configure: simply mount, connect, power and go!
- Secure wireless 2.4GHz ZigBee communications with other network devices
- Scalable to manage a single building or an entire campus
- Graphical view of real-time and historical energy use provides comprehensive and actionable information to users
- Web Comfort products operate independently or as an integrated solution
- Made in the USA (ARRA Compliant)

DESCRIPTION:

The Web Comfort WEB-T32P Thermostat is a rugged, industrial control that communications with the Web Comfort Energy Manager. This universal thermostat features an integrated Modbus transceiver that connects to the Web Comfort Energy Manager through a secure Zigbee mesh network. This design allows each thermostat to communicate with other thermostats, extending the range and ensuring a strong and reliable signal.

The integrated transceiver with factory wiring harness reduces installation time and eliminates miss-wiring. Additionally, it provides easy access for transceiver diagnostics without having to remove the thermostat sub base.

WEB COMFORT™

WEB-T32P Web Comfort Thermostat

Wirelessly Communicating Thermostat

SPECIFICATIONS:

ELECTRICAL

Input Voltage: 24VAC 50/60 Hz +/- 15%

Relay Rating: 24VAC @ 1 amp max. per relay

WIRELESS COMMUNICATION

Zigbee

PROTOCOL

Modbus

APPROVALS

FCC Part 15 C-tick

ENVIRONMENTAL

Operating Temperature: 32° to 122°F

Operating RH: 0 - 95% (non-condensing)

BACKLIGHT

Blue EL (Electro Luminescent)

PHYSICAL

Dimensions (HxWxD): 5.50 x 4.375 x 1 in

Color: White

Weight/ Shipping Weight: <10 oz/ <1lb

TERMINAL DESIGNATIONS

W2 – Second Stage Heating or Auxiliary Heat

Y2 – Second Stag e Compressor

W1-O/B – First Stage Heating or Reversing Valve

Y1 – First State Compressor

G – Fan Relay

R – 24 Volt Hot (jumpered to '24')

24 – 24 Volt Hot (jumpered to 'R')

24C – 24 Volt Common

B – Modbus Communications

A – Modbus Communications

T – Remote Sensor

ORDERING INFORMATION:

SKU	Description
WEB-T32P	Web Comfort Wireless Communicating Thermostat
Optional Accessories:	
WEB-DAS	Web Comfort Wireless Duct Air Sensor
WEB-REP	Web Comfort Wireless Range Extender with power supply

Tranceiver Front Access

DIP SWITCH FUNTIONS:

SWITCH #	OFF	ON
1 Not used	Leave OFF	—
2 Equipment	Heat/Cool	Heat Pump
3 Equipment Mode	Single Stage	Multi-Stage
4 Fan Mode or Reversing Valve	Gas "O"	Electric "B"

SWITCH #	OFF	ON
5 Short Cycle Timer	4 Minutes	Disabled
6 Thermostat Operations	Leave OFF	—
7 Minutes Run Time	Leave OFF	—
8 Setpoints	—	Leave ON

WEB COMFORT™

WEB-REP Range Extender

Web Comfort Signal Range Extender

APPLICATIONS:

Web Comfort Energy Management System is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational & Worship Facilities
- Manufacturing & Warehouse Facilities
- Retail Locations

FEATURES:

- +20dBm ZigBee transmit power
- UL Listed & Plenum Rated
- ON/OFF AC switching up to 277VAC
- Range: Approx. 1000' LOS transmit/receive

DESCRIPTION:

The Web Comfort WEB-REP Range Extender is a wirelessly connected plenum rated repeater used to extend the range of the Web Comfort Energy Manager signal within or between structures.

Up to 100 number of range extenders can be used with a Web Comfort Energy Management Systems. The WEB-REP is recognized as a device by the Web Comfort Manager.

SPECIFICATIONS:

ELECTRICAL

Input Voltage: 100-277VAC
Frequency: 47-63Hz
AC Relay Switched Current: <20A Resistive
AC Zero Cross Switching
Input Current: Module Power: <0.05A for Units power use

RADIO NETWORK

IEEE 802.15.4-2003 2.4GHz ISM (ZigBee)

Range: Approx. 1000' LOS transmit/ receive

REGULATORY APPROVALS

FCC (V8NZRB1000141) &

IC (7737A-ZRB1000141)

ENVIRONMENTAL

Operating Temperature: -4° to 122°F

Storage Temperature: -40° to 176°F

Humidity (non-condensing): 5%-95%RH

Cooling: Convection

Vibration Frequency: 5-55Hz/2g, 30 minutes

Impact Resistance: 1g/s

PHYSICAL

Dimensions (HxWxD): 4.75" x 1.75" x 1.75"

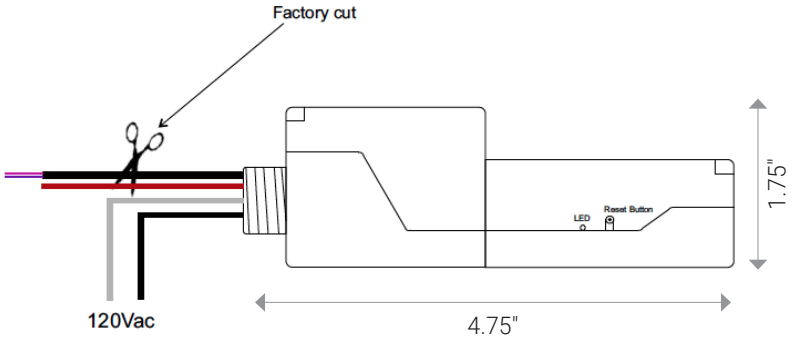
Color: Grey

Weight/ Shipping Weight: <10 oz/ <1lb

ORDERING INFORMATION:

SKU	Description
WEB-REP	Range Extender

DIMENSIONS:



WEB COMFORT™

WEB-ARC Switched Controller

Wireless Lighting and Load Controllers

APPLICATIONS:

Web Comfort wireless lighting controllers are suitable for renovation, upgrade, and new construction projects where individual fixture control and/or monitoring is desired.

- Private & Open Offices
- Corridors & Hallways
- Classrooms & Gymnasiums
- Warehouse Spaces & Manufacturing Areas
- Patient Care Rooms
- Transportation Terminals
- Retail & Grocery Stores

FEATURES:

- Multi-Voltage Compatible, 120 to 277VAC
- Dimming and daylight harvesting (which support Title 24 requirements)
- Provides two 0-10V dimming control outputs
- Plenum Rated device promotes an efficient, distributed control strategy
- Supports the Web Comfort range of wired and wireless occupancy sensors, including door and window contacts
- Local control via standard light switches and contact closures; 3-way and 4-way switching configurations are supported
- Connected sensors and switches function locally if Network Communications are lost
- Enhanced zero-crossing circuitry and control
- Configurable for momentary or maintained switch inputs
- UL Listed & Plenum Rated
- Designed & Made in the USA

DESCRIPTION:

The Web Comfort WEB-ARC Switched Lighting and Load Controllers are wirelessly managed 120/277VAC plenum-rated controllers. The WEB-ARC provides managed control of up to two independent switched circuits, supporting the second circuit via an external power pack.

Compatible with the Web Comfort WEB-ARC range of wired and wireless occupancy sensors, the WEB-ARC also provides connectivity for door and window contacts. The room controller can be operated in stand-alone mode (as a standard switched power pack) or as part of a Web Comfort Integrated Lighting Management System using the Web Comfort wireless mesh network.

As a network device, the WEB-ARC is controlled by a Web Comfort Manager running the lighting software. The software manages lighting circuits based upon time schedules, local control, occupancy, demand response curtailments, light level, computer activity and door openings or closures.

WEB COMFORT™

WEB-ARC Switched Controller

Wireless Lighting and Load Controllers

SPECIFICATIONS:

ELECTRICAL

Operating Voltage: 100 to 277VAC
Operating Current: 15mA typ./ 75mA max. @ 120VAC
DC Output (25°C): 24VDC typ., 100mA (Class 2)
Switching Capacity: 20A max. (resistive load)

INTERNAL RELAY (25°C)

Max. Switching Power: 8310VA
Max. Switching Voltage: 277VAC
Max. Switching Current: 30A

I/O PORTS

Total power budget for all I/O ports is 120mA
Power Pack
DC Output: 24VDC typ., 100mA
Contact: 24VDC typ., 100mA
Sensor: 3.0VDC for Web Comfort MINI Wired Sensor,

LOCAL CONTROL INPUTS

Wall Switch: (2) dry contact closures
Sensor: Up to (10) Web Comfrt MINI Wired Sensors

RADIO NETWORK

IEEE 802.15.4-2003 2.4GHz ISM
Range: Approx. 600' LOS transmit/ receive

REGULATORY APPROVALS

UL 916
CSA C22.2 No. 205
UL 2043 Plenum Rated
Contains FCC Module FCC ID: V8NWAT1000153;
IC: 7737A-WAT1000153

ENVIRONMENTAL

Test condition of all ratings 25°C
Operating Temperature: 0° to 60°C
Storage Temperature: -25° to 80°C

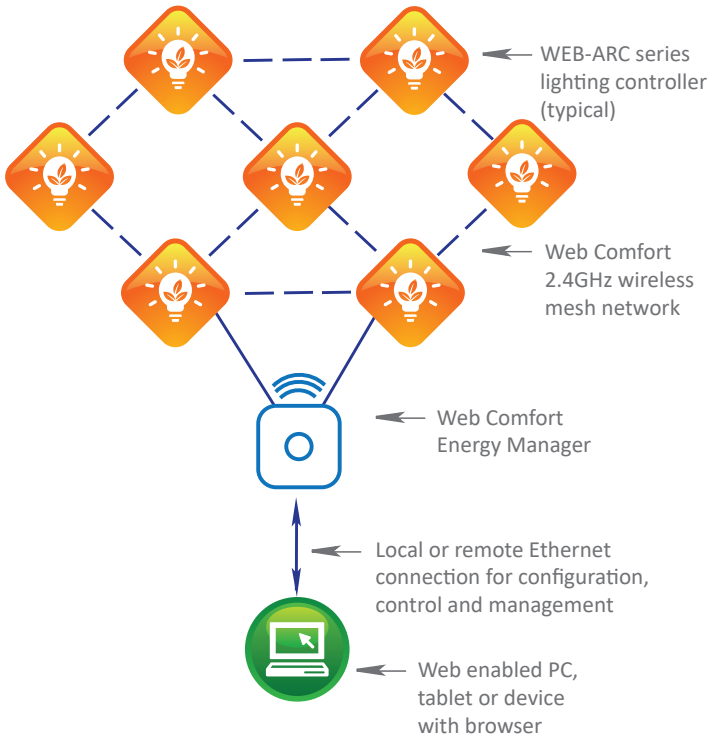
PHYSICAL

Dimensions (HxWxD): 3.75 x 3.93 x 1.19in
Color: White
Weight/ Shipping Weight: <10 oz/ <1lb

ORDERING INFORMATION:

SKU	Description
WEB-ARC-Lighting	WEB-ARC-Lighting Switched Lighting Controller, 12V, 120 to 277VAC
WEB-ARC-Load	WEB-ARC-Load Switched Load Controller, 24VDC, 120 to 277VAC

ONE-LINE DIAGRAM WEB-ARC-LIGHTING:

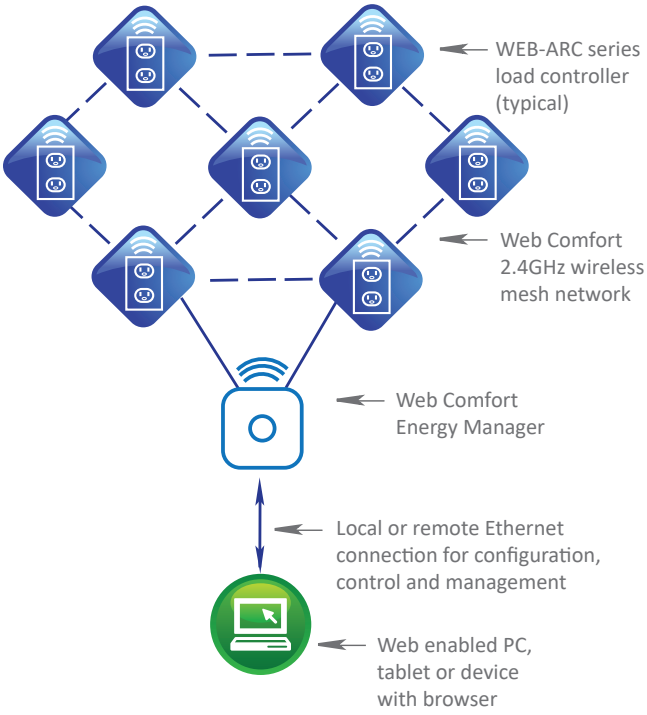


WEB COMFORT™

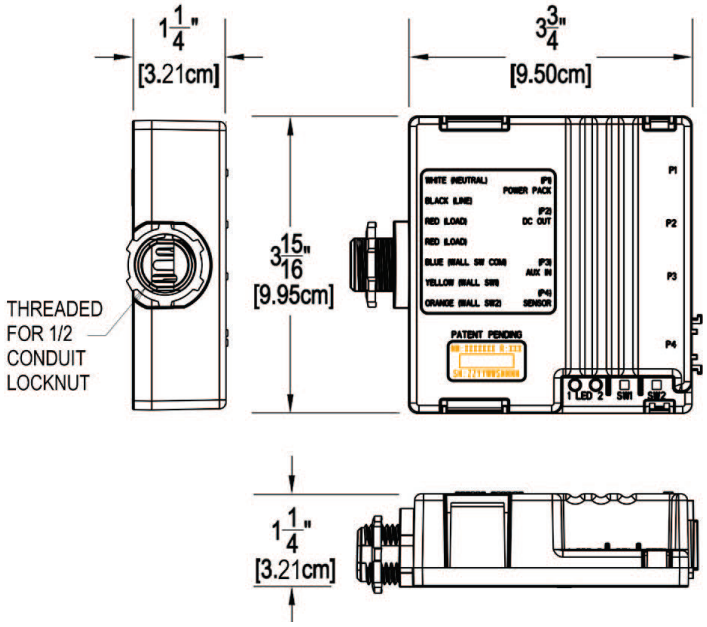
WEB-ARC Switched Controller

Wireless Lighting and Load Controllers

ONE-LINE DIAGRAM WEB-ARC-LOAD:



DIMENSIONS:



The **Web Comfort** Family

Energy Management Done Right

The Web Comfort product line integrates lighting, climate control, fans, metering, and plug loads to provide a powerful integrated energy management solution. The lighting, thermostat, fan control and metering software share the Web Comfort Manager and operate as an integrated application.

Web Comfort software communicates via the Web Comfort Manager to lighting controllers, motion sensors, thermostats, fans, meters and plugs using a secure wireless 2.4GHz ZigBee communications network.

WEB COMFORT™

WEB-DWCS Wireless Door/Window Contact Sensor

Wireless HVAC Management

APPLICATIONS:

Web Comfort door/window sensors are suitable for renovation, upgrade, and new construction project.

- Private & Open Offices
- Corridors & Hallways
- Classrooms & Gymnasiums
- Warehouse Spaces & Manufacturing Areas
- Patient Care Rooms
- Transportation Terminals
- Retail & Grocery Stores

FEATURES:

- Communicates wirelessly with otherWeb Comfort devices
- Integrated solar cell harvests indoor light to power the device and eliminates the need for wires or batteries
- Single button with LED indicator light enables simple device configuration
- Built in mounting plate for easy installation on any standard door or window frame
- Internal coin cell battery as backup for low light environments
- Can be used stand-alone or paired with an occupancy sensor to control energy use even more efficiently

DESCRIPTION:

The Web Comfort Wireless Door/Window Sensor is an easy to install, compact, high performance door and window contact sensor with an integrated wireless transceiver that uses a wireless mesh network to connect to the Web Comfort Energy Manager and other Web Comfort devices.

The Web Comfort Wireless Door/Window Sensor quickly mounts to doors and windows. As a door or window is opened, the contact sensor detects changes in proximity to the remote magnetic sensor and will automatically set back HVAC using user-defined rules. When the contact sensor detects that doors and windows are closed, HVAC will resume with the previously set schedule.

Contact detected by the Web Comfort Wireless Door/Window Sensor is used by the powerful Web Comfort family of Integrated Energy Management software applications and hardware to trigger changes in HVAC, lighting, load and plug load.

WEB COMFORT™

WEB-DWCS Wireless Door/Window Contact Sensor

Wireless HVAC Management

SPECIFICATIONS:

POWER SUPPLY
Indoor light energy harvesting

(Optional) Supplemental battery

INPUTS/OUTPUTS
Integrated solar cell for energy harvesting
Magnetic reed switch contact sensor
Radio Frequency (RF) transmitter

Button with LED for device configuration

RADIO NETWORK (ENOCEAN)
902 MHz RF transceiver

TRANSMISSION RANGE
80ft. (25m)

CHARGE TIME BEFORE LINKING
4 minutes @ 200 lux

LIGHT REQUIRED TO MAINTAIN OPERATION
50 lux for 30 transmissions/hour

100 lux for 60 transmissions/hour

CHARGE TIME FOR FULL CHARGE
20 hours @ 200 lux (after startup)

40 hours @ 200 lux (cold start)

OPERATING LIFE IN DARKNESS (AFTER FULL CHARGE)
7 days: heartbeat only
3 days @ 10 actuations/hour
10 hours @ 100 actuations/hour

RF TRANSMISSION
On door/window opening/closing events or heartbeat

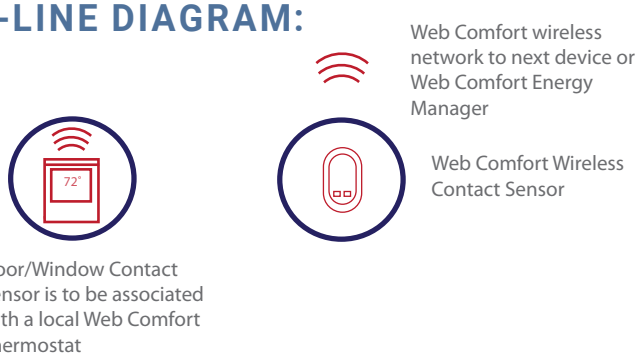
MAXIMUM SENSOR GAP
0.25in. (6.4mm)

DIMENSIONS
Sensor HxWxD: 3.15 x 0.83 0.59in (80 x 21 x 15mm)
Magnet HxWxD: 3.15 x 0.47 x 0.5in (80 x 12 x 13mm)

ORDERING INFORMATION:

SKU	Description
WEB-DWCS	Web Comfort Wireless Door/Window Contact Sensor (Includes magnetic contact)

ONE-LINE DIAGRAM:



WEB COMFORT™

WEB-FAN Airius Pear Fan

Wirelessly Managed Thermal Destratification

APPLICATIONS:

Airius Air Pear Fans are a managed system of thermal destratification fans that reduce energy consumption by increasing the efficiency of heating and cooling systems.

- Warehouse & Industrial Facilities
- Grocery & Retail Stores
- Gymnasiums & Auditoriums
- Hospitality

FEATURES:

- Destratification and Thermal Equalization can reduce energy consumption up to 30% or more
- Suitable for mounting height from 25' – 100' and up to 2500 ft2 of coverage per unit (see model numbers for specific coverage)
- A properly applied array of units is capable of achieving temperature balance within 0° to 3°F
- Control and monitoring of speed, direction, and run time via Web Comfort software
- Web Comfort secure wireless 2.4GHz ZigBee communications with network devices
- Real-time alerting for user defined and system events via email or smart phone
- Easy installation for connection to building structure; drop ceiling mounting kit available
- Meets LEED EA Credit, "Optimize Energy Performance"
- Manufactured from recyclable materials and shipped in recyclable corrugated packaging
- **Made in the USA** (ARRA Compliant)

DESCRIPTION:

The WEB-FAN Airius Air Pear fan is a wirelessly managed destratification fan. These fans form the foundation of Web Comfort Thermal Equalizer System that reduces energy consumption by increasing the efficiency of heating and cooling systems.

Stratification, or temperature layering, occurs when there is minimal air movement within an enclosed building space. Heat (naturally or artificially generated) rises to the ceiling while cold air sinks to the floor. Temperatures can increase up to 1°F per foot of building elevation.

In cold weather, destratification redirects hot air from the ceiling to the floor, recycling existing heat and reducing energy consumption. In moderate or warm weather, destratification reduces temperature differentials within the space and increases the efficiency of HVAC systems.

As a network device, the WEB-FAN Airius Air Pear is controlled by Web Comfort software. This software manages the speed, direction and run-time of destratification fans based upon schedules and demand response requests.

WEB COMFORT™

WEB-FAN Airius Pear Fan

Wirelessly Managed Thermal Destratification

SPECIFICATIONS:

MOTOR

115V or 230/277V, 0 - 79 dB(A)

Watts: 0-170 @ 115V / 0-175 @ 230/277V

RPM: 0-2850 @ 115V / 0-3050 @ 230/277V

CFM: 0-1180 @ 115V / 0-1290 @ 230/277V
(m3/hr): 0-2004 @ 115V / 0-2191 @ 230/277V

AMPS: 0-2.2 @ 115V / 0-1.4 @ 230/277V

Shutoff: 275°F (135°C); Reset: 255°F (125°C)

No lubrication required; bearings are sealed

HOUSING

Weight: 14lbs (6.4kgs)

Height to Rim: 18in (457mm)

Total Height: 24in (610mm)

Diameter: 15in (380mm)

COVERAGE

Up to 1500ft² or a 44ft coverage diameter with a mounting height up to 45ft

RADIO NETWORK (WEB COMFORT)

IEEE 802.15.4-2003 2.4GHz ISM (ZigBee)

Range: Approx. 1000' LOS transmit/ receive

REGULATORY APPROVALS

UL Standard 507 for Safety Electric Fans

ETL certified fan and components

5VA flame resistance rating

RoHS compliant

LIMITATIONS

Mounting height up to 45ft

Do not install in environments open to the elements

GENERAL

Color(s): Gray, Cool Gray

Outer shell and stator: Fire rated 5VA materials

Power cord: 3 wire 18 AWG (or 16 AWG) 300VAC rated electrical cord (UL rated as SJT)

115VAC version comes with molded 3-prong plug

230/277VAC versions do not have a plug supplied

Warranty: 3-years from shipping date

SAFETY PRECAUTIONS PROVIDED

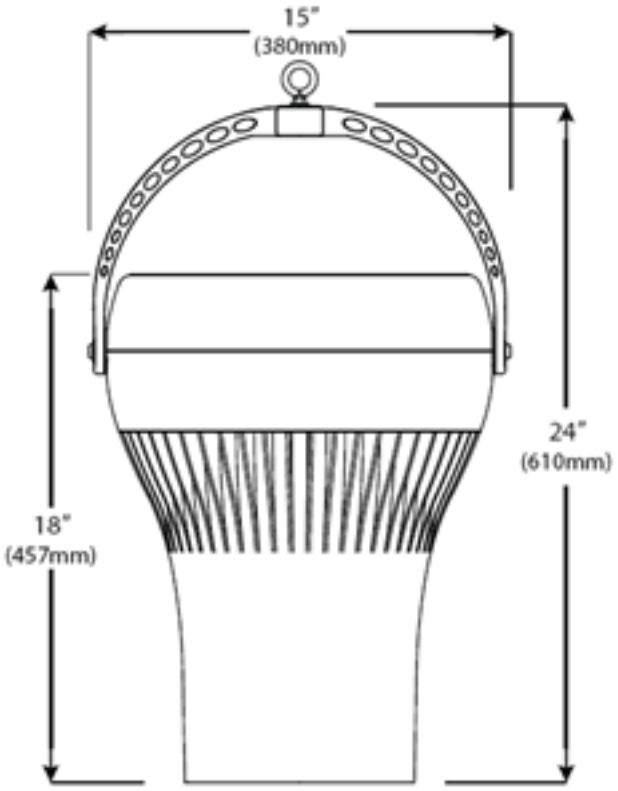
Seismic restraint point for earthquake codes

Thermal overload protection

ORDERING INFORMATION:

SKU	Description
WEB-FAN45 Wireless	Model 45 – 115V-EL-LISA with Web Comfort wireless control For ceiling height 25' – 45'; 1500ft2 area
WEB-FAN60 Wireless	Model 60 – 115V-EL-LISA with Web Comfort wireless control For ceiling height 25' – 60'; 2000ft2 area
WEB-FAN100 Wireless	Model 100 – 200/277V-EL-LISA with Web Comfort wireless control For ceiling height 25' – 100'; 2500ft2 area

Also available with wired controls and 230V.



WEB COMFORT™

WEB-OS

Wired Occupancy Sensor

APPLICATIONS:

Web Comfort Wired Motion Sensor is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational Facilities
- Worship Facilities
- Research Facilities
- Retail Locations
- Hospitality & Restaurants

FEATURES:

- Discreet, attractive, low-profile design
- High performance, compact passive infrared motion sensor compatible with the Web Comfort
- ARC series of Room Controllers
- Includes mounting hardware for walls, ceilings and standard T-Bar ceiling grids
- Standard, Slight, Spot and 10m detection patterns available
- Multiple sensors can be connected in parallel to increase coverage area or to accommodate special room shapes
- Connects to WEB-ARC series room controllers using standard RJ-11 connectors and cabling (modular telephone wiring)
- Quad type pyroelectric element provides precise detection, even of small movements
- The WEB-OS wired motion sensor is an independent system that also integrates with other members of the Web Comfort family
- **Made in the USA** (ARRA Compliant)

DESCRIPTION:

The Web Comfort WEB-OS Wired Sensor is an easy to install, compact, high performance motion sensor that connects directly to the Web Comfort WEB-ARC series of room controllers. The WEB-OS detects changes in infrared radiation that occur when there is movement by a person (or object) which is different in temperature from the surroundings.

Web Comfort WEB-OS Motion Sensors are available with Standard, Slight, Spot and 10m detection patterns. Multiple WEB-OS Sensors may be connected in parallel to a single WEB-ARC for increased coverage in larger rooms. The WEB-OS quickly mounts to a wall or ceiling using the included hardware kit and connects to the Web Comfort WEB-ARC range of room controllers using

Motion detected by the WEB-OS is used by the powerful Web Comfort family of Integrated Energy Management software applications and hardware to trigger changes in lighting, load, plug load and HVAC systems.

WEB COMFORT™

WEB-OS

Wired Occupancy Sensor

SPECIFICATIONS:

ELECTRICAL

Input Voltage Range: 2.2 to 3.0VDC

ENVIRONMENTAL

Operating Temperature: 32° to 158°F

Storage Temperature: -13° to 176°F

DETECTION RANGE

10m Detection: 110° x 93°, 10m (32.808ft) max.

Slight Detection: 91° x 91°, 2m (6.562ft) max.

Spot Detection: 38° x 22°, 5m (16.404ft) max.

5m Detection: 100° x 82°, 5m (16.404ft) max.

DETECTION CONDITIONS

Detectable temperature difference between target and background is more than 39°F.

Movement Speed/ 10m: 0.5 to 1.5 m/s

Movement Speed/ Slight: 0.5 m/s

Movement Speed/ Spot: 0.8 to 1.2 m/s

Movement Speed/ 5m: 0.8 to 1.2 m/s

CONNECTION

6' Plenum Rated cable with installed RJ-11, modular connector

PHYSICAL

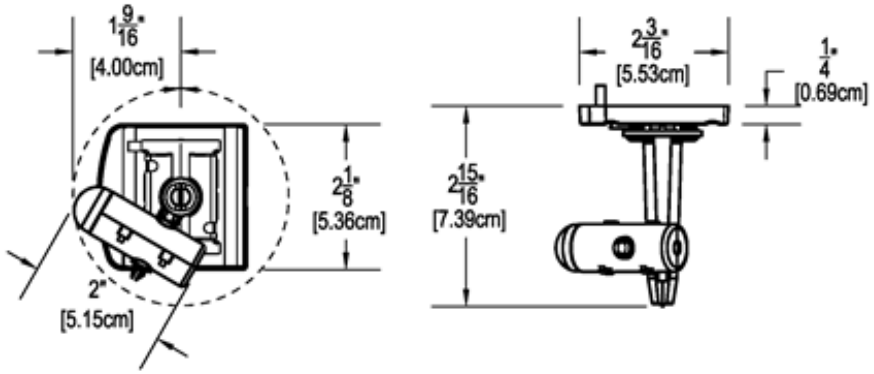
Dimensions (HxWxD): 3.12 x 2.18 x 2.11in

Color: White

Weight/ Shipping Weight: <10 oz/ <1lb

ORDERING INFORMATION:

SKU	Description
Includes 6' Plenum Rated cable with RJ-11 modular connector, Motion Sensor Pivot Arm, and clip mount for standard T-Bar grid. Sensor Mounting Bracket for non T-Bar ceilings sold separately.	
WEB-OS-WIRED	Wired Motion Sensor



WEB COMFORT™

WEB-OSB Wireless Occupancy Sensor

Wireless Battery-Powered Lighting Control

APPLICATIONS:

Web Comfort Wireless Lighting Control is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational Facilities
- Worship Facilities
- Research Facilities
- Retail Locations
- Hospitality & Restaurants

FEATURES:

- Discreet, attractive, low-profile design
- High performance, compact passive infrared motion sensor with wireless connectivity
- No control wiring required! Web Comfort secure wireless 2.4GHz ZigBee communications with the
- Web Comfort Manager and other network devices
- Standard, Slight, Spot and 10m detection patterns available
- Multiple sensors can be located in the same room to increase coverage area or to accommodate special room shapes
- Includes multi-position mounting bracket for wall or ceiling installation
- Quad type pyroelectric element provides precise detection, even of small movements
- Web Comfort is an independent system that also integrates with other members of the Web
- Comfort family
- Quick and easy to install
- **Made in the USA** (ARRA Compliant)

DESCRIPTION:

The Web Comfort WEB-OSB Wireless Motion Sensor is an easy to install, compact, high-performance motion sensor with integrated wireless transceiver that uses the Web Comfort wireless mesh network to connect to the Web Comfort Energy Manager.

The WEB-OSB detects changes in infrared radiation that occur when there is movement by a person (or object) which is different in temperature from the surroundings.

The Web Comfort WEB-OSB Wireless Motion Sensors are available with Standard, Slight, Spot and 10m detection patterns. The WEB-OSB quickly mounts to a wall or ceiling using included hardware kit.

Motion detected by the WEB-OSB Wireless Motion Sensor is used by the powerful Web Comfort family of Integrated Energy Management software applications and hardware to trigger changes in lighting, load, plug load and HVAC systems.

WEB COMFORT™

WEB-OSB Wireless Occupancy Sensor

Wireless Battery-Powered Lighting Control

SPECIFICATIONS:

ELECTRICAL

Input Voltage: 2 AA batteries

ENVIRONMENTAL

Operating Temperature: 32° to 158°F

Storage Temperature: -13° to 176°F

DETECTION RANGE

10m Detection: 110° x 93°, 10m (32.808ft) max.

Slight Detection: 91° x 91°, 2m (6.562ft) max.

Spot Detection: 38° x 22°, 5m (16.404ft) max.

5m Detection: 100° x 82°, 5m (16.404ft) max.

DETECTION CONDITIONS

Detectable temperature difference between target and background is more than 39°F.

Movement Speed/ 10m: 0.5 to 1.5 m/s

Movement Speed/ Slight: 0.5 m/s

Movement Speed/ Spot: 0.8 to 1.2 m/s

Movement Speed/ 5m: 0.8 to 1.2 m/s

RADIO NETWORK

IEEE 802.15.4-2003 2.4GHz ISM (ZigBee)

Range: Approx. 100' LOS transmit/ receive from any line powered Web Comfort device

REGULATORY APPROVALS

FCC (V8NWAT1000119)

IC (7737A-WAT1000119)

PHYSICAL

Dimensions without mounting hardware

Dimensions (HxWxD): 3.01 x 1.7 x 2.14in

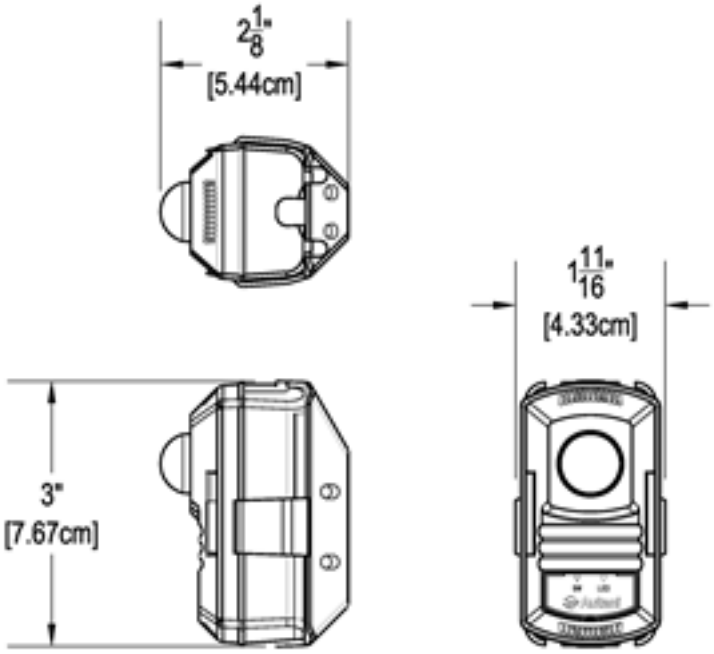
Color: White

Weight/ Shipping Weight: <10 oz/ <1lb

ORDERING INFORMATION:

SKU	Description
Wall mount sleeve is included. Requires (2) AA batteries (not included).	
WEB-OSB	Battery-Powered Wireless Motion Sensor

DIMENSIONS:



WEB COMFORT™

WEB-SMARTLET

Wireless Outlet Controller

APPLICATIONS:

The Web Comfort SmartLet Outlet Controller provides automatic receptacle control as required by ASHRAE 90.1 2010 Section 8.4.2.

- Private Offices
- Open Offices
- Computer Classrooms
- Hospitality & Retail

FEATURES:

- Easy-to-install automatic receptacle control for 15A/120VAC outlets suitable for new construction and upgrade projects
- Integrated, mechanically switched relay controls one or both receptacles by any combination of schedule, occupancy/ vacancy, demand response, and activity of plug loads
- Occupancy sensors and scheduling are shared with ARC and AFC series lighting controllers
- Local over-ride to manually switch receptacles ON or OFF with LED status indicators
- On-board energy monitoring to measure and track power consumption of plug loads in real time
- Fail safe operation maintains local control of receptacles at all times
- Web Comfort secure wireless 2.4GHz ZigBee communications with other network devices
- FCC and IC certified; UL Pending
- **Made in the USA** (ARRA Compliant)

DESCRIPTION:

The Web Comfort Smartlet integrates automatic receptacle control with dimming and switching systems. The Outlet Controller switches 120VAC receptacles ON or OFF based upon occupancy, schedules, and demand response events. The Web Comfort Smartlet is attached to 15A/120VAC duplex receptacles, which power the device.

The Web Comfort SmartLet Outlet Controller is wirelessly configured, scheduled, and controlled by a Web Comfort Energy Manager. Dynamic scheduling allows the user to define ON and OFF events for receptacles, as well as periods governed by occupancy rules. Timeouts to switch off loads in unoccupied spaces are easily set per schedule or event, and can vary throughout the day.

Connectivity between the SmartLet, Web Comfort Energy Manager, and other devices is via the secure, reliable Web Comfort wireless mesh network.

WEB COMFORT™

WEB-SMARTLET

Wireless Outlet Controller

SPECIFICATIONS:

ELECTRICAL

Load Capacity: 15A @ 120VAC
Input Voltage: 120VAC typ.
Max. Switching Power: 1800VA

RADIO NETWORK (WEB COMFORT)

IEEE 802.15.4-2003 2.4GHz ISM (ZigBee)
Range: Approx. 600' LOS transmit/receive

REGULATORY APPROVALS

UL Pending
Contains FCC Certified Module:
FCC ID: V8NWAT1000142
IC: 7737A-WAT1000142

ENVIRONMENTAL

Test condition of all ratings 77°F
Operating Temperature: 32° to 158°F
Storage Temperature: -13° to 176°F

PHYSICAL

Dimensions (HxWxD): 6.05 x 4.2 x 1.31in
Color: White
Weight: < 1lb

THE WEB COMFORT FAMILY

ENERGY MANAGEMENT DONE RIGHT

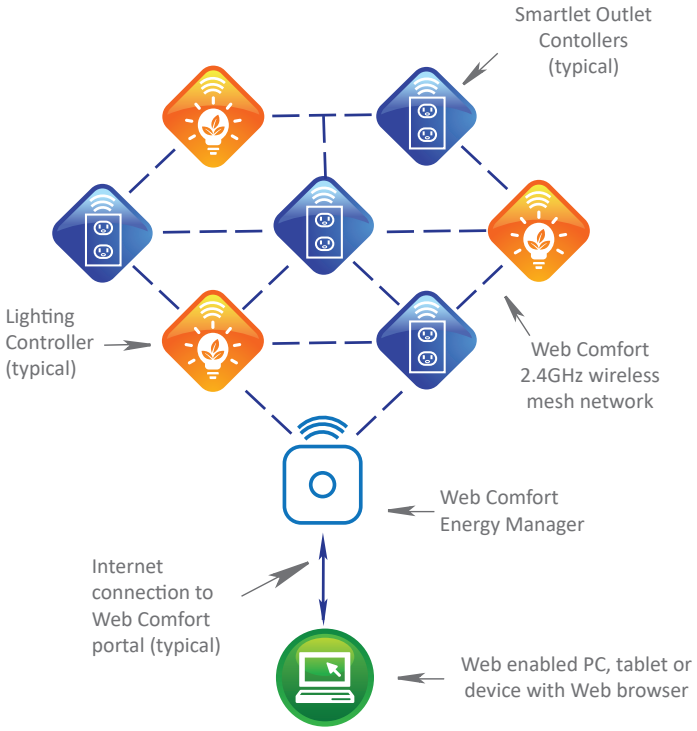
The Web Comfort product line integrates lighting, climate control, fans, metering and plug loads to provide a powerful integrated energy management solution. The lighting, thermostat, fan control and metering software share the Web Comfort Energy Manager and operate as an integrated application.

Web Comfort software communicates via the Web Comfort Energy Manager to lighting controllers, motion sensors, thermostats, fans, meters and plugs using a secure wireless 2.4GHz ZigBee communications network.

ORDERING INFORMATION:

SKU	Description
WEB-SMARTLET	SmartLet Outlet Controller with (2) receptacles managed by (1) relay

ONE LINE DIAGRAM:



WEB COMFORT™

WEB-DAS

Wireless Duct Temperature Sensor

APPLICATIONS:

Wireless Duct Temperature Sensors are suitable for renovation, upgrade, and new construction projects where individual fixture control and/or monitoring is desired.

- Private & Open Offices
- Corridors & Hallways
- Classrooms & Gymnasiums
- Warehouse Spaces & Manufacturing Areas
- Patient Care Rooms
- Transportation Terminals
- Retail & Grocery Stores

FEATURES:

- Compact temperature probe with wireless connectivity
- High accuracy and interchangeability over a wide temperature range
- No control wiring required! Web Comfort's secure wireless 2.4GHz communications with Web Comfort Manager and other network devices
- High resistance relative to Platinum RTDs creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.
- Double-encapsulated sensing element to avoid sensor failures caused by moisture infiltration
- Designed & Made in the USA

DESCRIPTION:

The Web Comfort Wireless Duct Temperature Sensor is a 24V, in-duct temperature probe featuring an integrated wireless transceiver—eliminating the need for control wiring. The sensor monitors supply and return air temperatures. It can also be used to sense temperature from ambient air.

A thermistor type sensor, the Wireless Duct Temperature Sensor provides a predictable output over a specified temperature range to meet each manufacturer's required input values.

The Wireless Duct Temperature Sensor uses the Web Comfort's wireless mesh network to communicate with other Web Comfort devices to trigger changes in HVAC.

WEB COMFORT™

WEB-DAS

Wireless Duct Temperature Sensor

SPECIFICATIONS:

SENSOR OUTPUT
Messages for Web Comfort

ENVIRONMENTAL
Operating Temperature: 0° to 60°C
Operating Humidity: 0 to 90% RH noncondensing

ACCURACY (0 TO 70°C)
+/-0.2oC (+/-0.36oF)

STABILITY
+/- 0.13oC (0.23oF)

POWER DISSIPATION CONSTANT
3 mW / oC

INTERCHANGEABILITY
+/- 0.2oC (+/-0.36oF)

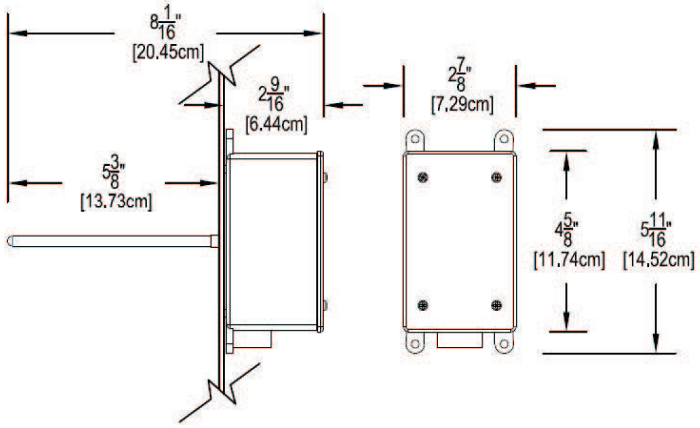
RADIO NETWORK
IEEE 802.15.4-2003 2.4GHz ISM
Range: Approx. 10o0' LOS transmit/ receive from any line powered Web Comfort device

REGULATORY APPROVALS
FCC (V8NZRB1000141)
IC (7737A-ZRB1000141)

ORDERING INFORMATION:

SKU	Description
WEB-DAS	Web Comfort Wireless Duct Temperature Sensor

DIMENSIONS:



WEB COMFORT™

WEB-RELAY

Wireless Relay

APPLICATIONS:

Web Comfort is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational Facilities
- Worship Facilities
- Research Facilities
- Retail Locations
- Hospitality & Restaurants

FEATURES:

- Discreet, attractive, low-profile design
- High performance, compact normally open relay with wireless connectivity
- No control wiring required! Web Comfort secure wireless 2.4GHz ZigBee communications with Web Comfort Manager and other network devices
- Multiple sensors can be located in the same room to optimize HVAC, lighting, load and plug load control
- Low voltage, line powered device requires no batteries
- Quick and easy to install
- Web Comfort products operate independently or as an integrated solution
- FCC Certified
- **Made in the USA** (ARRA Compliant)

DESCRIPTION:

The Web Comfort Relay is an easy to install, compact, high performance switching relay with an integrated wireless transceiver that uses the Web Comfort wireless mesh network to connect to a Web Comfort Energy Manager and other Web Comfort devices.

The low voltage Relay provides a method to switch a 24VAC load on or off.

WEB COMFORT™

WEB-RELAY

Wireless Relay

SPECIFICATIONS:

ELECTRICAL

Input Voltage: 12 to 24VDC, 24VAC
Relay Switching Current: 1 amp
Relay Switching Voltage: 24VAC

I/O PORTS

Normally open relay

RADIO NETWORK (WEB COMFORT)

IEEE 802.15.4-2003 2.4GHz ISM (ZigBee)
Range: Approx. 1000' LOS transmit/ receive

REGULATORY APPROVALS

FCC (V8NZRB1000141)
IC (7737A-ZRB1000141)

ENVIRONMENTAL

Test condition of all ratings 77°F
Operating Temperature: 32° to 158°F
Storage Temperature: -13° to 176°F

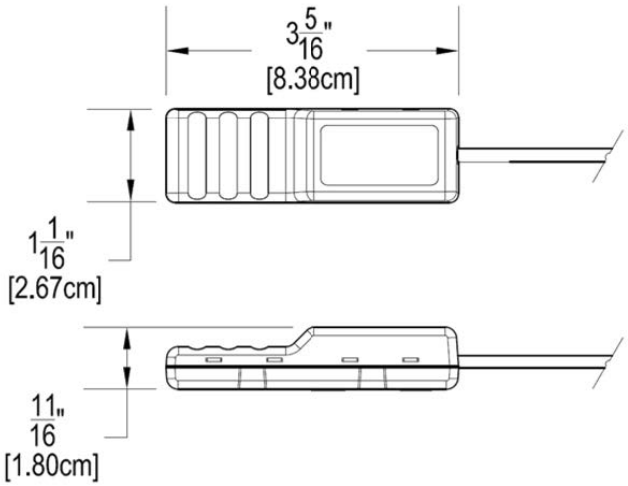
PHYSICAL

Dimensions (HxWxD): 3.35 x 1.07 x 0.71in
Color: White
Weight/ Shipping Weight: <10 oz/ <1lb

ORDERING INFORMATION:

SKU	Description
WEB-Relay	Web Comfort Relay

DIMENSIONS:



WIRING:

Black – 24VAC common
Red – 24VAC hot
Blue – Load normally open
Black – Load common

WEB COMFORT™

WEB-WS

Wireless Wall Temperature Sensor

APPLICATIONS:

Web Comfort's Wireless Temperature Sensors are suitable for renovation, upgrade, and new construction projects.

- Private & Open Offices
- Corridors & Hallways
- Classrooms & Gymnasiums
- Warehouse Spaces & Manufacturing Areas
- Patient Care Rooms
- Transportation Terminals
- Retail & Grocery Stores

FEATURES:

- Compact temperature sensor with wireless connectivity
- High accuracy over a wide temperature range
- No control wiring required! Web Comfort secure wireless 2.4GHz communications with Web Comfort Manager and other network devices
- Designed and Made in the USA

DESCRIPTION:

Web Comfort Wireless Temperature Sensors feature an integrated wireless transceiver—eliminating the need for control wiring.

A part of Web Comfort's family of devices, the Wireless Temperature Sensors use the Web Comfort wireless mesh network to communicate with other Web Comfort devices to trigger changes in HVAC, generate alerts of monitored conditions, or simply record values for required documentation.

WEB COMFORT™

WEB-WS

Wireless Wall Temperature Sensor

SPECIFICATIONS:

SENSOR OUTPUT
Web Comfort messages for Web Comfort Energy Manager

ENVIRONMENTAL (TRANSCEIVER)
Operating Temperature: 0° to 50°C
Operating Humidity: 0 to 90% RH noncondensing

ACCURACY (0 TO 70°C)
+/-0.2°C (+/-0.36°F)

STABILITY
+/- 0.13°C (0.23°F)

MEASUREMENT RANGE
-40° to 150°C / -40° to 302°F

INTERCHANGEABILITY
+/- 0.2°C (+/-0.36°F)

RADIO NETWORK
IEEE 802.15.4-2003 2.4GHz ISM
Range: Approx. 1000' LOS transmit/ receive from any line powered Web Comfort device

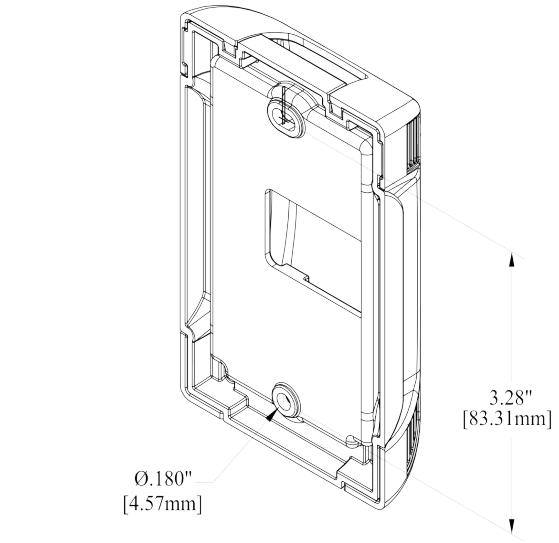
REGULATORY APPROVALS
FCC (V8NZRB1000141)
IC (7737A-ZRB1000141)

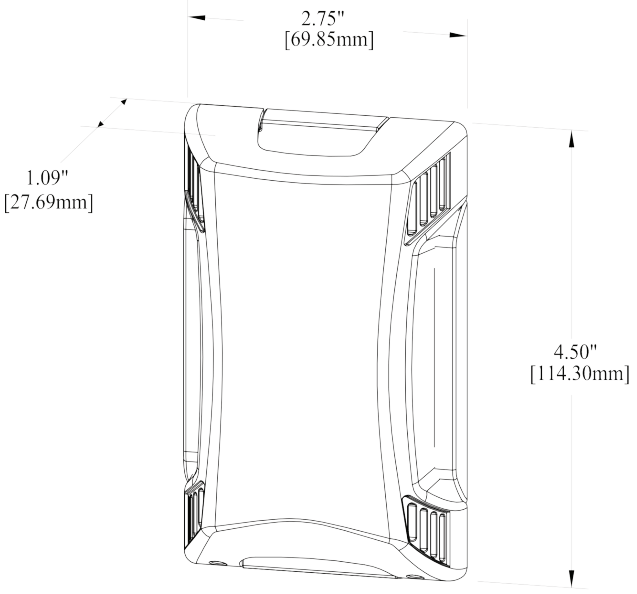
WIRING:
Black- 24VAC common
Red- 24VAC hot

ORDERING INFORMATION:

SKU	Description
WEB-WS	Web Comfort Wireless Wall Temperature Sensor

DIMENSIONS:





WEB COMFORT™

WEB-Z2000T

Wirelessly Communicating Modulating Zoning Thermostat

APPLICATIONS:

Web Comfort is suitable for renovation, upgrade and new construction projects.

- Commercial Offices
- Educational Facilities
- Worship Facilities
- Research Facilities
- Retail Locations
- Hospitality & Restaurants

FEATURES:

- Integrated Modbus transceiver with factory wiring harness included
- Easy front panel access for transceiver diagnostics
- Universal applications
- Easy to install and configure: simply mount, connect, power and go!
- Secure wireless 2.4GHz ZigBee communications with other network devices
- Scalable to manage a single building or an entire campus
- Graphical view of real-time and historical energy use provides comprehensive and actionable information to users
- Web Comfort products operate independently or as an integrated solution
- **Made in the USA** (ARRA Compliant)

DESCRIPTION:

The Web Comfort WEB-Z-2000T Zoning Thermostat is a rugged, commercial control that communicates with the Web Comfort Energy Manager and our Z-2000 Modulating Zoning System. This zoning thermostat features an integrated Modbus transceiver that connects to the Web Comfort Energy Manager through a secure Zigbee mesh network. This design allows each thermostat to communicate with other thermostats, extending the range and ensuring a strong and reliable signal.

The integrated factory-wired transceiver reduces installation time and eliminates miss-wiring. It provides easy access for transceiver diagnostics without having to remove the thermostat sub base.

The WEB-Z2000T uses our Z-2000 Modulating Zoning System to integrate zoning into the Web Comfort Energy Management System.

WEB COMFORT™

WEB-Z2000T

Wirelessly Communicating Modulating Zoning Thermostat

SPECIFICATIONS:

ELECTRICAL
Input Voltage: 24VAC 50/60 Hz +/- 15%
Relay Rating: 24VAC @ 1 amp max. per relay

WIRELESS COMMUNICATION
Zigbee

PROTOCOL
Modbus

APPROVALS
FCC Part 15 C-tick

ENVIRONMENTAL
Operating Temperature: 32° to 122°F
Operating RH: 0 - 95% (non-condensing)

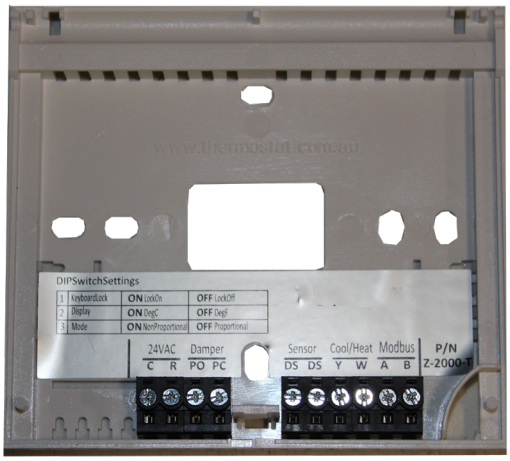
BACKLIGHT
Blue EL (Electro Luminescent)

PHYSICAL
Dimensions (HxWxD): 5.50 x 4.375 x 1 in
Color: White
Weight/ Shipping Weight: <10 oz/ <1lb

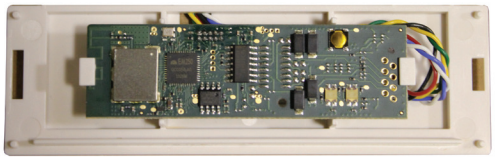
TERMINAL DESIGNATIONS
C – 24VAC (Common)
R – 24VAC (Hot)
PO – Power Open
PC – Power Close
DS – Duct Sensor
DS - Duct Sensor
Y – Cooling Relay
A – Modbus Communications (factory-wired)
B – Modbus Communications (factory-wired)

ORDERING INFORMATION:

SKU	Description
WEB-Z2000T	Web Comfort Wirelessly Communicating Modulating Zoning Thermostat
Optional Accessories:	
WEB-DAS	Web Comfort Wireless Duct Air Sensor
WEB-REP	Web Comfort Wireless Range Extender with power supply



Wiring Terminals



Transceiver Front Access