ETC Unison Echo Dual Tech Occupancy and Vacancy Sensors

Echo Responsive Control Series

Type(s)

Project

Date

Notes

GENERAL INFORMATION

Buildings waste electricity as a result of lights being left on in an unoccupied room. Occupancy and Vacancy Sensors are a convenient and simple solution for any facility to eliminate wasted energy by automatically turning off lighting loads when a room is empty. The low-profile, sleek sensors can be installed anywhere to provide uninterrupted, 24/7/365 operation, without affecting the look and beauty of their surroundings.

APPLICATIONS

- Houses of worship
- Education
- Hospitality
- Healthcare facilities
- Office buildings
- Conference rooms
- Meeting rooms
- Retail

FEATURES

- Manual-on/auto-off (Vacancy Sensor) and auto-on/off (Occupancy Sensor) versions
- Multi Space Preset functionality
- Passive infrared (PIR) and Acoustic sensing technology
- Two mounting options available:
  - Ceiling-Mount
  - Wall-Mount
- Multiple Lensing options available
- Walk-thru mode for coverage verification
- Field-installed coverage masks (Ceiling only)
- EchoConnect: two-wire, topology-free bus for power and communication
- Ceiling Sensor available in black and white
- Wall Sensor version available in cream, black and white

REGULATORY AND COMPLIANCE

- cULus Listed
- CE compliant

ORDERING INFORMATION

Ceiling Mount Occupancy and Vacancy Sensors

MODEL	DESCRIPTION
E-DOC-C-SR-_	Dual Tech Occupancy Sensor - Small Room
E-DOC-C-LR-_	Dual Tech Occupancy Sensor - Large Room
E-DOC-C-HC-_	Dual Tech Occupancy Sensor - High Ceiling
E-DVAC-C-SR-_	Dual Tech Vacancy Sensor - Small Room
E-DVAC-C-LR-_	Dual Tech Vacancy Sensor - Large Room

Enter sensor color code in __ space provided:

4 = Black (RAL 9004), 5 = Pure White (RAL 9010)

Wall Mount Occupancy and Vacancy Sensors

MODEL	DESCRIPTION
E-DOC-W-NR-_	Dual Tech Occupancy Sensor - Narrow Wall
E-DOC-W-WD-_	Dual Tech Occupancy Sensor - Wide Wall
E-DVAC-W-NR-_	Dual Tech Vacancy Sensor - Narrow Wall
E-DVAC-W-WD-_	Dual Tech Vacancy Sensor - Wide Wall

Enter sensor color code in __ space provided:

1 = Cream (RAL 9001), 4 = Black (RAL 9004), 5 = Signal White (RAL 9003)

Echo Power Requirements

EchoConnect:	1 Unit of Control Power
Auxiliary Power:	Not Required

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SPECIFICATIONS

FUNCTIONAL

- Occupancy sensors support configurable auto-on/auto-off functionality (occupancy sensing) functions
- Vacancy sensors support configurable manual-on/auto-off (vacancy sensing) functions
- Ceiling Sensor:
  - 360-degree coverage pattern
  - Includes configurable coverage masks
  - Small room: 450 sq. ft. at 8' ceiling, 800 sq. ft. at 12' ceiling
  - Large room: 1800 sq. ft. at 8' ceiling, 3000 sq. ft. at 12' ceiling
  - High ceiling: 300 sq. ft. at 10' ceiling, 7000 sq. ft. at 40' ceiling
- Wall Sensors
  - Wide: 60' coverage at 7–10' mounting height. 140 degree field of detection
  - Narrow: 16' x 75' coverage pattern at mounting height of 7–10'. 40 degree field of detection
- Supports walk-thru mode for verifying coverage area
  - Sensor lens illuminates for walk-thru and test mode
  - Red illumination for PIR detection
  - Green illumination for Acoustic detection
- Sensor coverage tested to NEMA WD 7-2000

MECHANICAL

- Constructed of injection-molded, ABS plastic in Pure White (RAL9010) or Black (RAL 9004) or Cream (RAL 9003 - Wall only)
- Electronics assembly and mounting accessories included
- Accessible configuration buttons
- No visible means of attachment
- Ceiling Mount:
  - Surface- or box-mountable
  - Supports drywall, plaster, wood and concrete mounting
  - Mounts to standard electrical box (supplied by others)
  - Mounts to compressed fiber ceilings with included wire mounting option
- Wall Mount:
  - Flush-mount to industry standard backbox, RACO 690 or equivalent

ELECTRICAL

- Connect via EchoConnect two-wire control network utilizing low-voltage Class 2 wiring
  - Topology-free and polarity-independent wiring over Belden 8471 or equivalent and one #14 ESD drain wire
  - Wiring may be bus, loop, home run or any combination of these
- Up to 500 m (1,640 ft) of control wiring per system
- Supports optional Cat5/5e wiring using Belden 1583A or equivalent
  - Requires optional Cat5 termination accessories

ENVIRONMENTAL

- Ambient room temperature: 0°–40° C (32°–104° F)
- Ambient humidity: Maximum 90% non-condensing

FUNCTIONALITY

BASIC MODE FUNCTIONALITY

- Occupancy Sensors
  - Occupancy Event: Play selected default preset
  - Vacancy Event: Space off
- Vacancy Sensor:
  - Occupancy Event: N/A
  - Vacancy Event: Space off

CUSTOM MODE FUNCTIONALITY

(Requires Programing With EchoAccess® Mobile App and additional connection hardware)

- Occupancy Events Supported
  - Preset Activate*
  - Zone Set to Level
  - Space Set to Level
- Vacancy Events Supported
  - Preset Activate*
  - Zone Set to Level
  - Space Set to Level
  - Space Off*

*Multi Space capable - allowing for presets to be recalled in multiple spaces from a single control

ECHO FAMILY OF PRODUCTS

EchoConnect Power Supplies

MODEL	DESCRIPTION
E-SPS	6 U Room Station Power Supply, Knockout Mount
E-SPS-DIN	16 U DIN rail Station Power Supply with 24 V Aux
E-SPM-A	16 U DRd Station Power Module with 24 V Aux
E-APS2	24 V Aux Power Supply, Knockout Mount

EchoTouch

MODEL	DESCRIPTION
ETS	EchoTouch Controller Mk2

Echo Stations

MODEL	DESCRIPTION
E1001	Inspire One Button Station
E1002	Inspire Two Button Station
E1004	Inspire Four Button Station
E1006	Inspire Six Button Station
E1008	Inspire Eight Button Station
E1104	Inspire Four Button with Fader Station
EPS05	Echo Preset Station - 5 Button
EPS10	Echo Preset Station - 10 Button
EPSKS	Echo Keyswitch Station
E-ATC	Echo TimeClock

Echo Responsive Controls

MODEL	DESCRIPTION
ELS	Light Sensor
EOCC	Ceiling-Mount PIR Occupancy Sensor
EVAC	Ceiling-Mount PIR Vacancy Sensor
E-DOC-C	Ceiling-Mount Dual Tech Occupancy Sensor
E-DVAC-C	Ceiling-Mount Dual Tech Vacancy Sensor
E-DOC-W	Wall-Mount Dual Tech Occupancy Sensor
E-DVAC-W	Wall-Mount Dual Tech Vacancy Sensor
E-DOC-SM1	Switch-Mount Dual Tech Sensor - One Button
E-DOC-SM2	Switch-Mount Dual Tech Sensor - Two Button

Echo Interfaces

MODEL	DESCRIPTION
EACC	EchoAccess Interface
EEB	Echo Expansion Bridge
EDMXC	Echo DMX Scene Controller
EEI	Echo-Echoflex Interface
ECII	Echo Contact Input Interface
ECOI	Echo Contact Output Interface
EDRI	Echo Demand Response Interface
EBI	Echo BACnet Interface
EII	Echo Integration Interface

Zone Controllers

MODEL	DESCRIPTION
ERC-G2	One Zone Relay Controller
EDRC-G2	Two Zone Relay Controller
ELD-G2	One Zone 0–10 V Controller
EDLD-G2	Two Zone 0–10 V Controller
ESSC-G2	One Zone SmartSpace Controller
EDSSC-G2	Two Zone SmartSpace Controller
ELVD-G2	600-Watt Phase Adaptive Dimmer (120 V)
ELVD-277-G2	600-Watt Phase Adaptive Dimmer (277 V)
ELVD-G2-MLV	600-Watt Forward Phase Dimmer (120 V)
ELVD-277-G2-MLV	600-Watt Forward Phase Dimmer (277 V)

Room Controllers

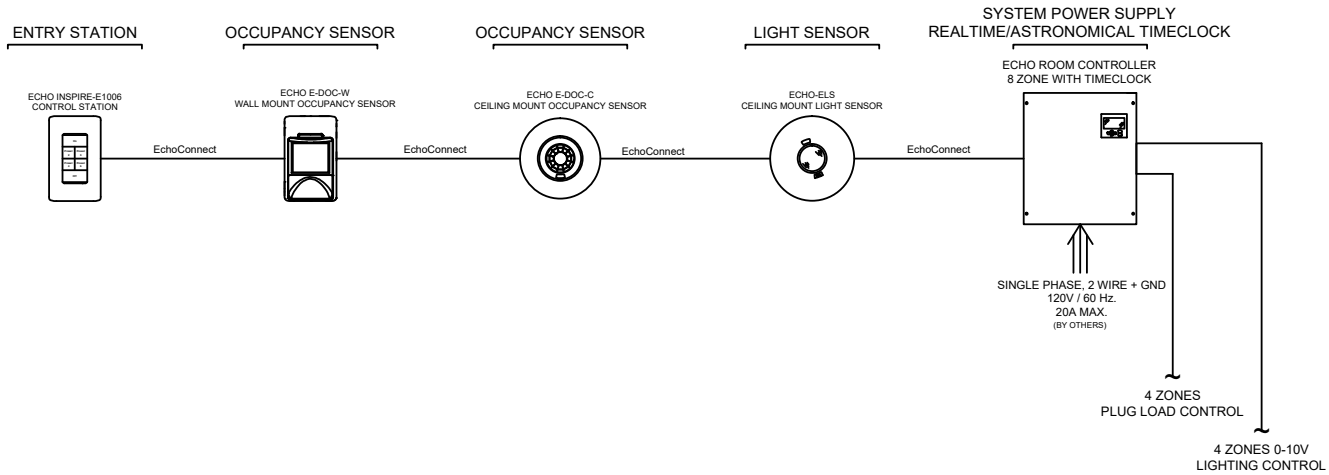
MODEL	DESCRIPTION
ERMC4-G2	Four Zone Room Controller
ERMCT4-G2	Four Zone Room Controller with TimeClock
ERMC8-G2	Eight Zone Room Controller
ERMCT8-G2	Eight Zone Room Controller with TimeClock

Panel Products

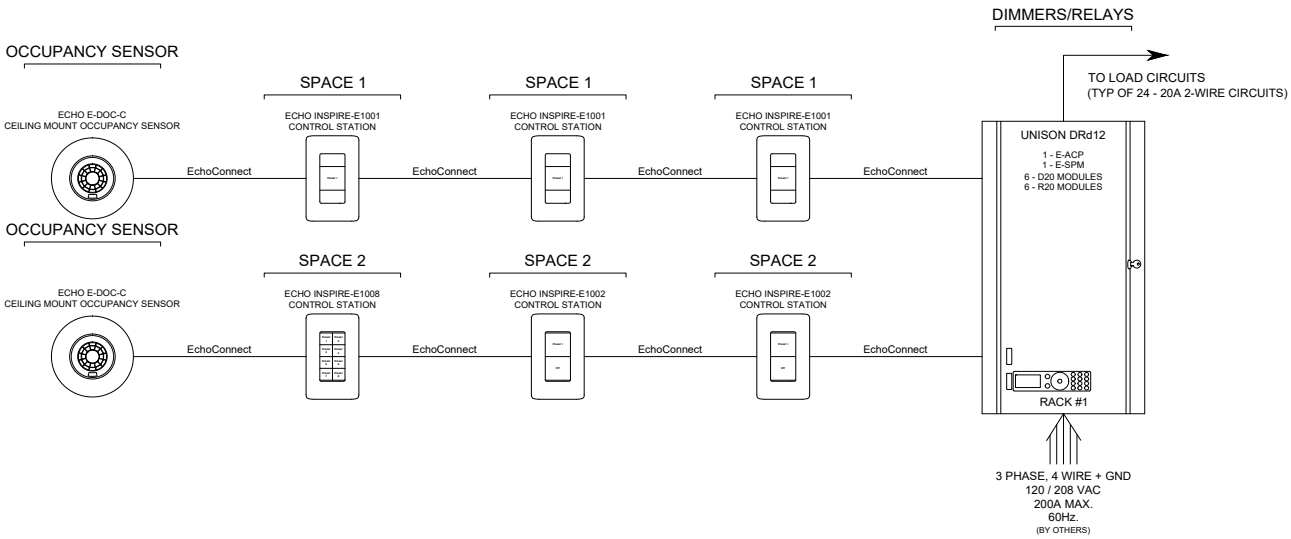
MODEL	DESCRIPTION
ERP	Echo Relay Panel Mains Feed
ERPA	Echo Relay Panel Mains Feed 277 V
ERP-FT	Echo Relay Panel Feedthrough
IQ	Sensor IQ Intelligent Breaker System
SR3	Sensor3 Power Control System
DRd	Unison DRd with Echo Control

SAMPLE ECHO SYSTEMS

SAMPLE SENSOR RISER

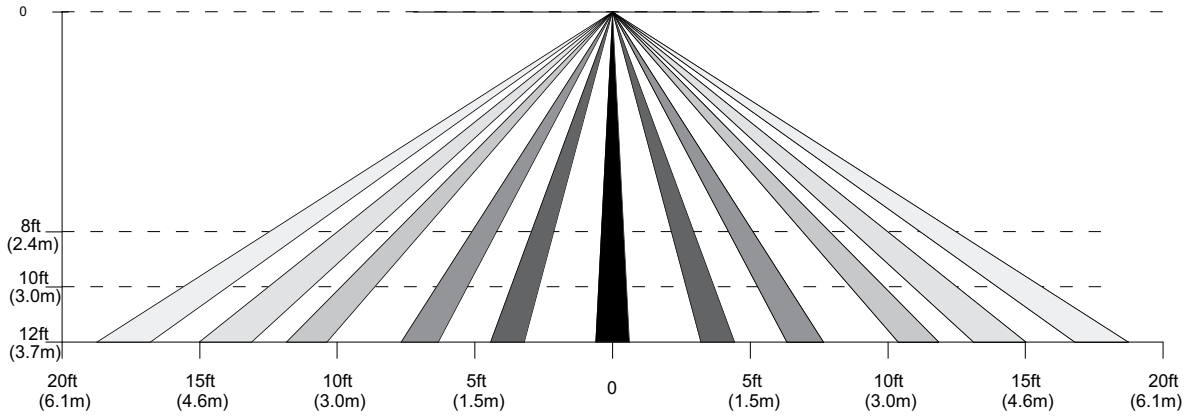


SAMPLE PANEL BASED SYSTEM RISER

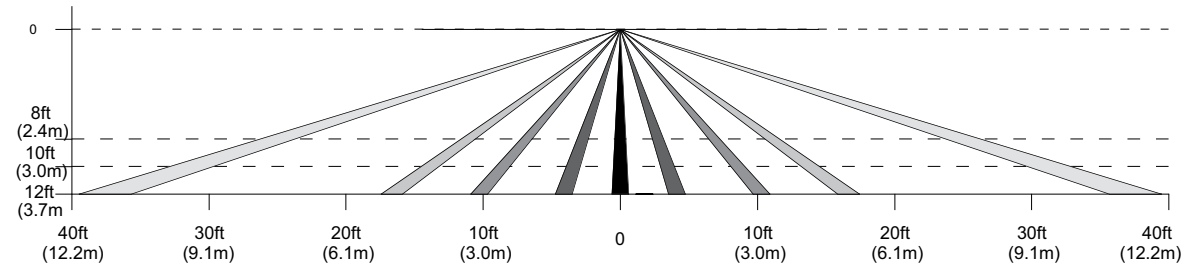


CEILING MOUNT COVERAGE PATTERNS

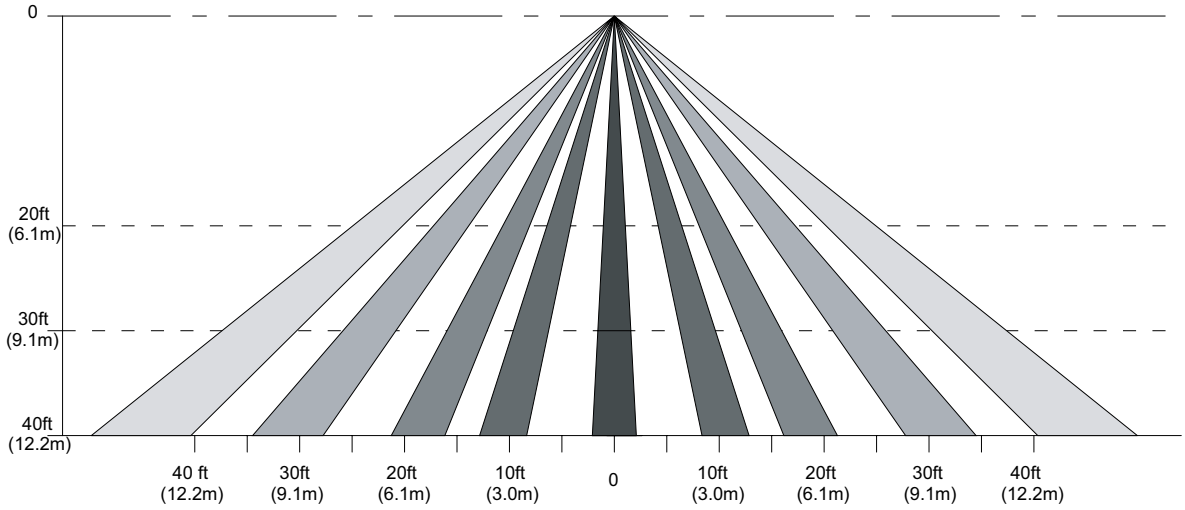
Small Room, side view



Large Room, side view



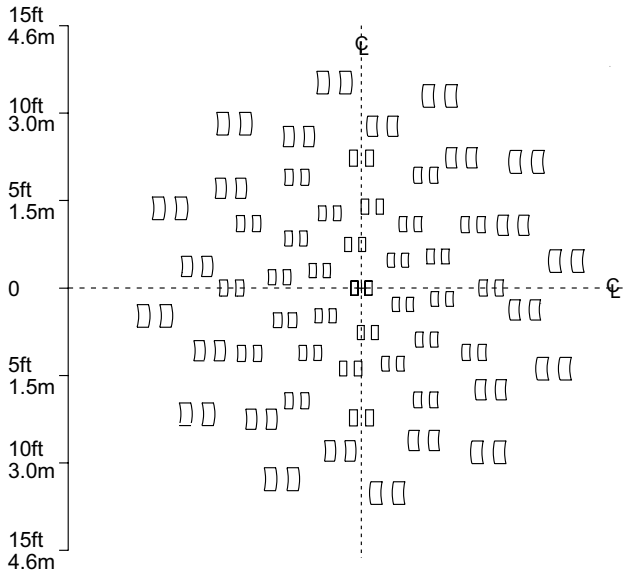
High Ceiling, side view



FLOOR COVERAGE PATTERNS

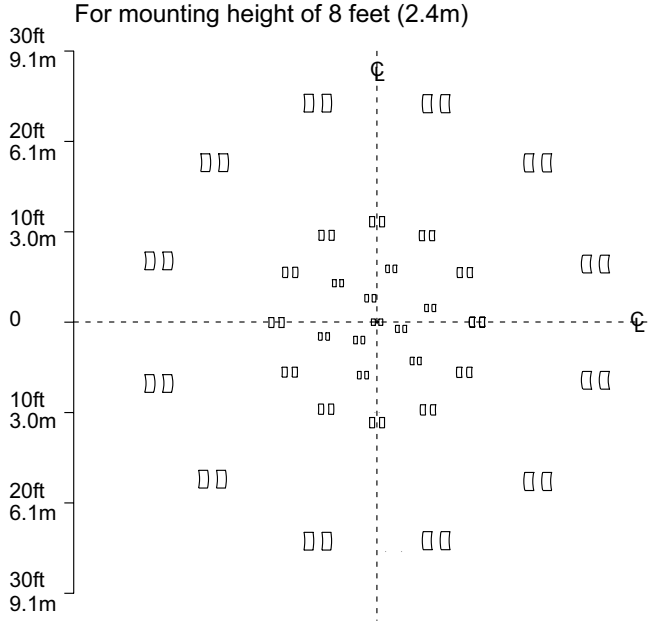
Small Room Floor Coverage

For mounting height of 8 feet (2.4m)



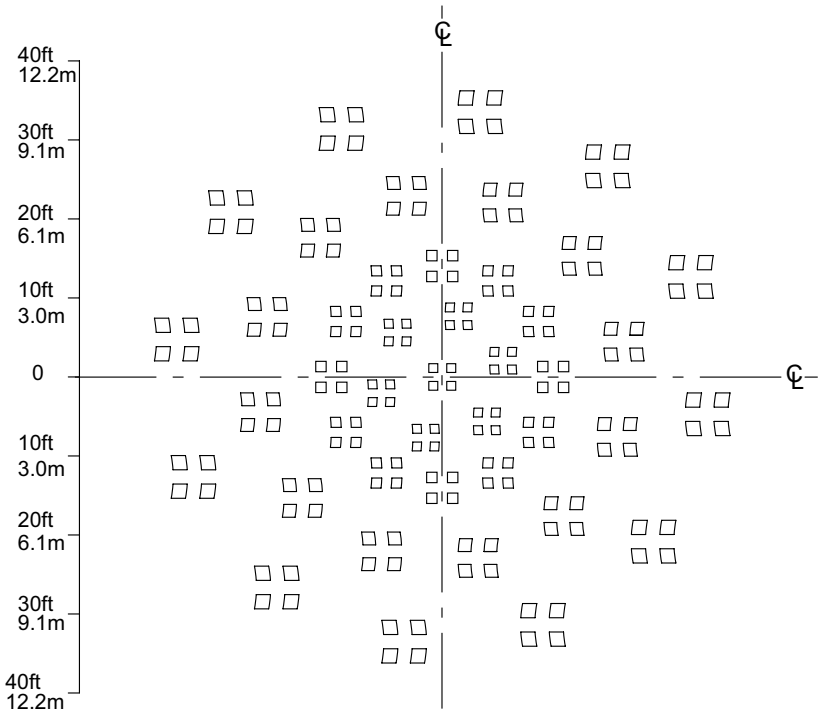
Large Room Floor Coverage

For mounting height of 8 feet (2.4m)



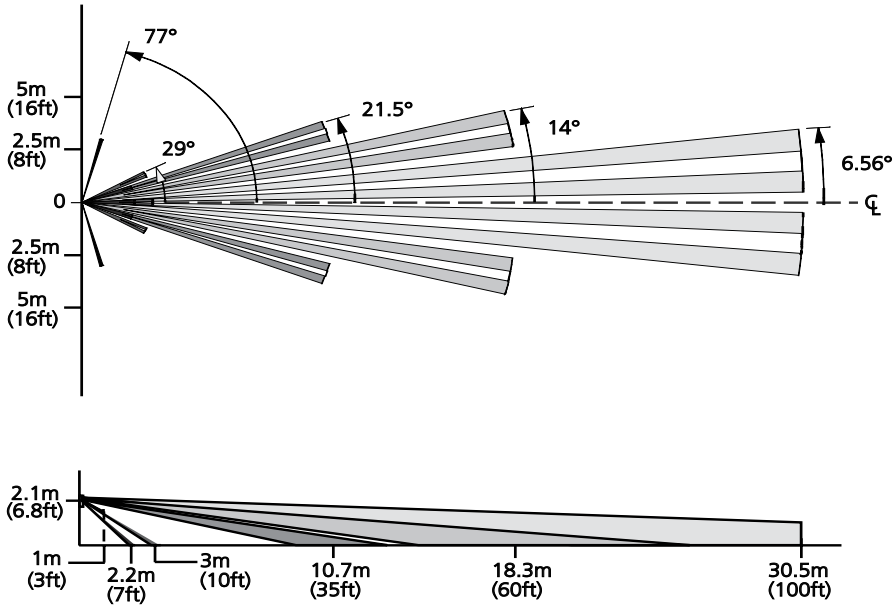
High Ceiling Floor Coverage

For mounting height of 30 feet (12.2m)

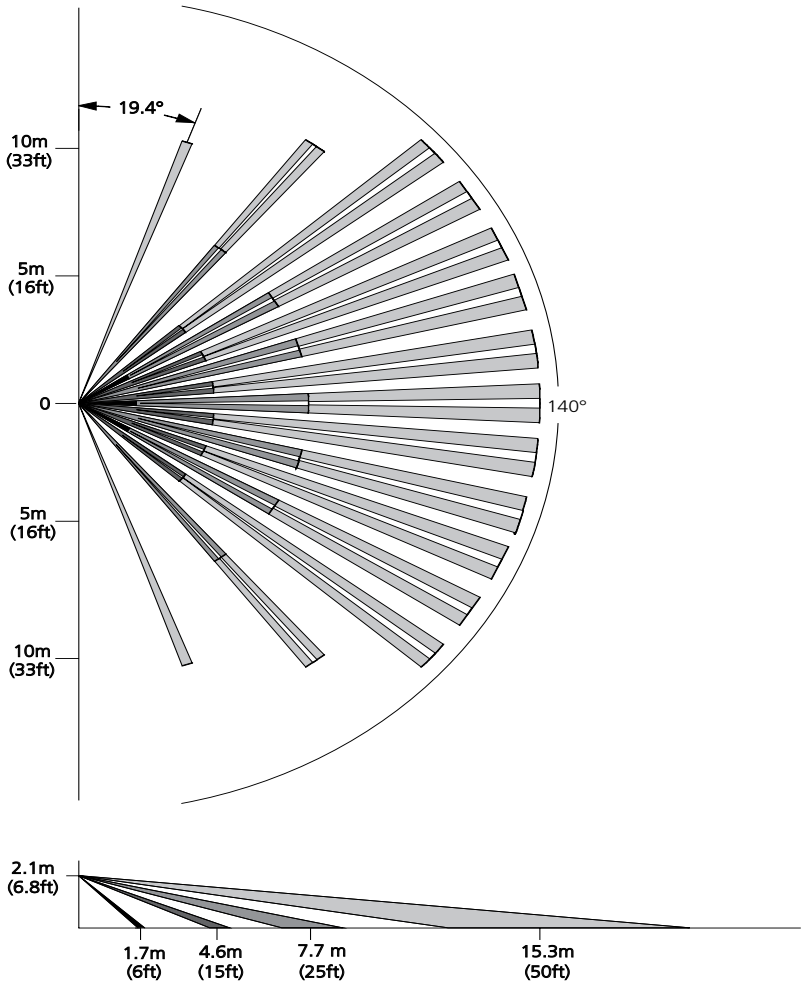


WALL MOUNT COVERAGE PATTERNS

WALL MOUNT NARROW LENS



WALL MOUNT WIDE LENS



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PHYSICAL

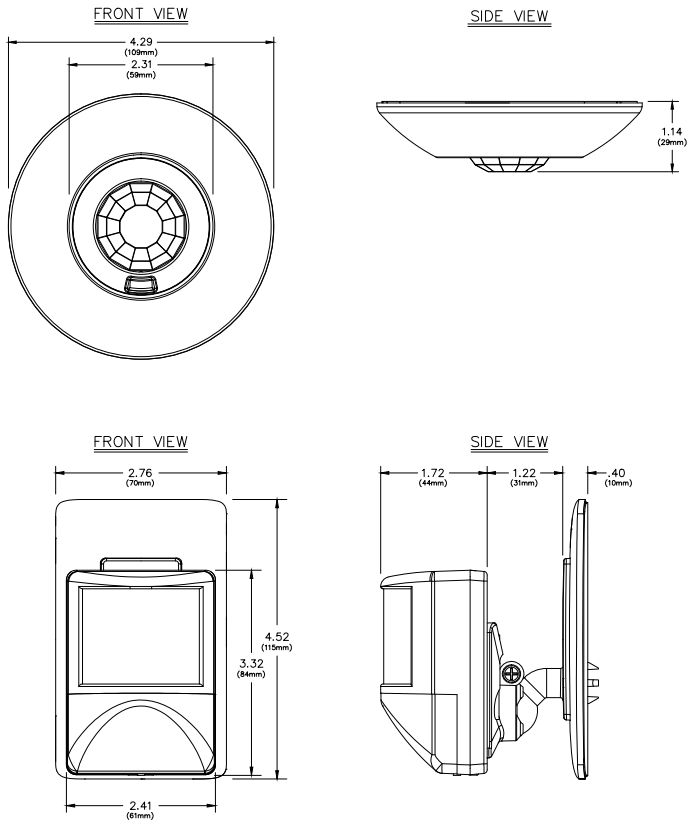
Sensor Dimensions*

MODEL	HEIGHT		WIDTH		DEPTH	
	in	mm	in	mm	in	mm
E-DOC-C / E-DVAC-C	4.29	109	4.29	109	1.14	29
E-DOC-W / E-DVAC-W	3.32	84	2.76	70	3.34	85

Sensor Weights*

MODEL	WEIGHT		SHIPPING WEIGHT	
	oz	g	oz	g
E-DOC-C / E-DVAC-C	3.84	109	6.24	177
E-DOC-W / E-DVAC-W	4.40	125	6.64	188

*Weights and dimensions typical



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