

FIFTHLIGHT MULTI-SENSOR



DAYLIGHT OCCUPANCY TEMPERATURE

Fifth Light Technology's Multi-Sensor combines daylight sensing, occupancy detection and temperature measurement into a single device. The Multi-Sensor communicates over the Digital Addressable Lighting Interface (DALI) and allows for all device settings and groups to be adjusted remotely.

KEY PRODUCT FEATURES

- Daylight sensing, occupancy detection and temperature measurement technologies combined into a single device
- Integrated DALI communication interface connects to the network with non-twisted, non-shielded and non-polarized plenum rated wires
- Sharing sensor data with third party automation systems significantly reduces total bill of materials
- Ultra low profile and small diameter create an aesthetic design
- Draws power from the DALI bus to eliminate the need for external power packs.
- All device settings (timers, sensitivity and groups) programmable online through software, no manual adjustments needed
- Robust communication interface withstands connection to power lines (up to 347V)
- 3 year standard warranty



PERFORMANCE

The Fifth Light Multi-Sensor allows for daylight harvesting, occupancy detection and temperature control through the DALI communication bus.

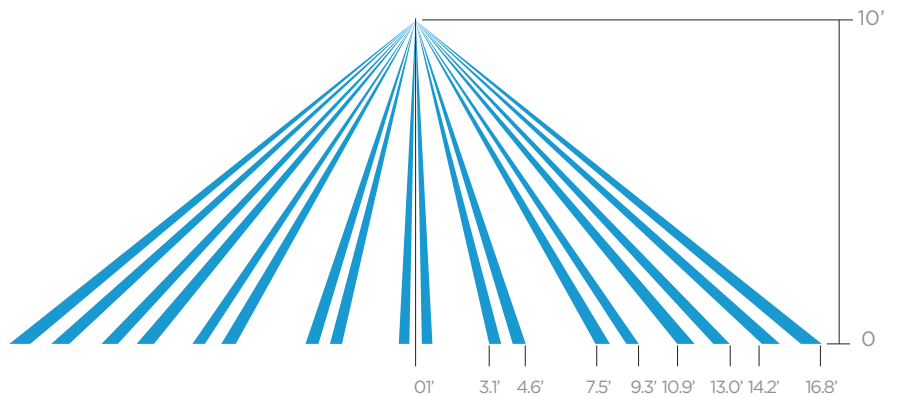
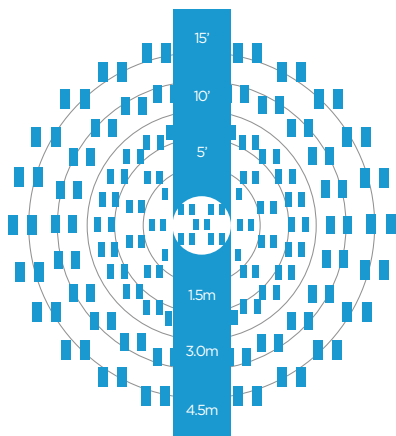
PARAMETER

Communication Interface	DALI (<30 V) communication bus
Electrical Connection	Two wire DALI communication interface
Power Supply	DALI communication bus, no power pack
Wire Type	Non-twisted, non-shielded, plenum rated pair
Input Voltage	9.5 VDC - 22. VDC as per DALI protocol
Current Draw	3.75 mA from DALI communication bus
Occupancy Detection Coverage	600 sq. ft. at 8' mounting height
Occupancy Detection Technology	Passive Infrared (PIR)
Lens Type	Multi-level Fresnel 360°
Daylight Sensing Range	0 to 400 lux
Daylight Sensing Coverage	Light input within 60° cone
Temperature Detection Range	-19.25°C to 44.5°C (-2.65°F to 112.1°F)
Mounting Option	4" octagon junction box
Status Indicator	LED

STANDARDS

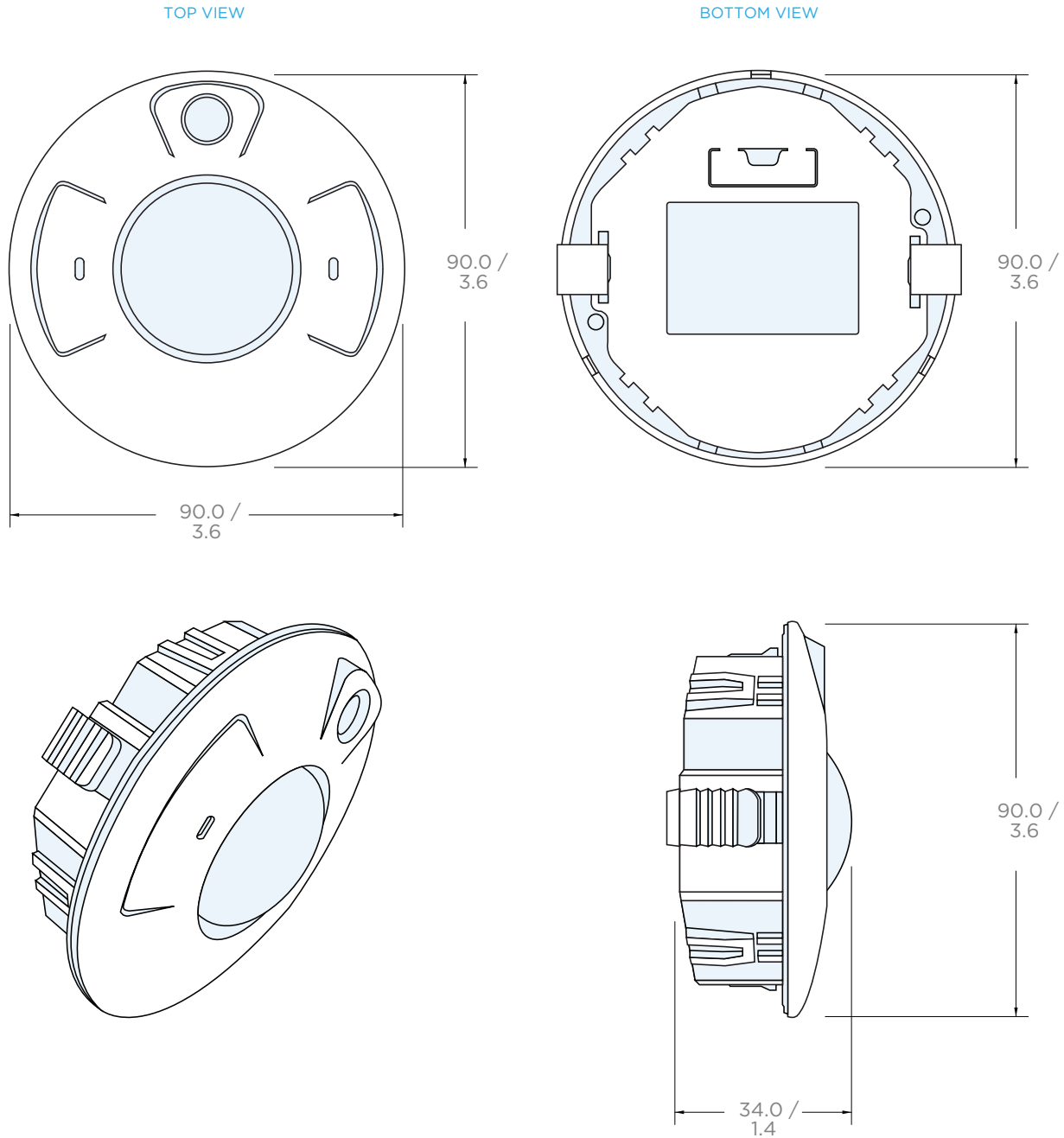
- UL
- Manufactured in an ISO 9001 certified factory

OCCUPANCY DETECTION COVERAGE PATTERN



DIMENSIONS (MM/INCHES)

The DALI Multi-Sensor is designed to be installed into ceiling tile or onto a junction box. To install into ceiling tile, use a 3" hole saw to cut a mounting hole and use the side flanges to hold the DALI Multi-Sensor into place. The mounting bracket shown on the bottom of the following page is installed above the ceiling tile with the screws provided to secure the DALI Multi-Sensor.



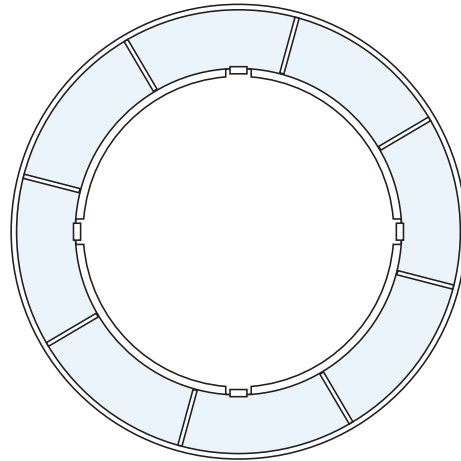
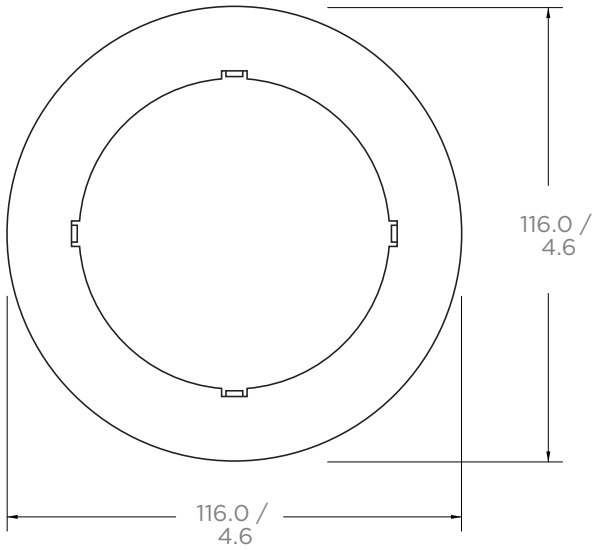
DIMENSIONS (MM/INCHES)

The DALI Multi-Sensor can be installed onto a junction box using the adaptor plate and mounting plate shown below. Secure the mounting plate onto the junction box and then snap the adaptor plate to the mounting plate. The DALI Multi-Sensor snaps into the adaptor plate (with the side flanges removed) in two possible orientations that are 180° apart.

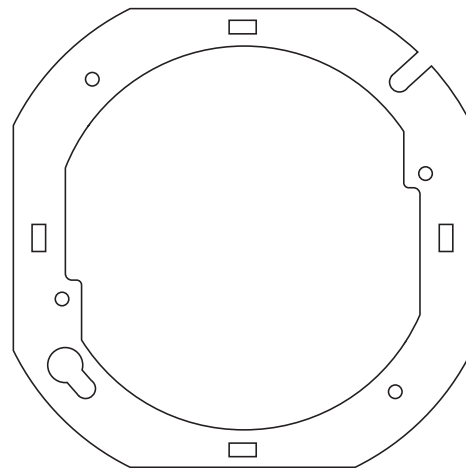
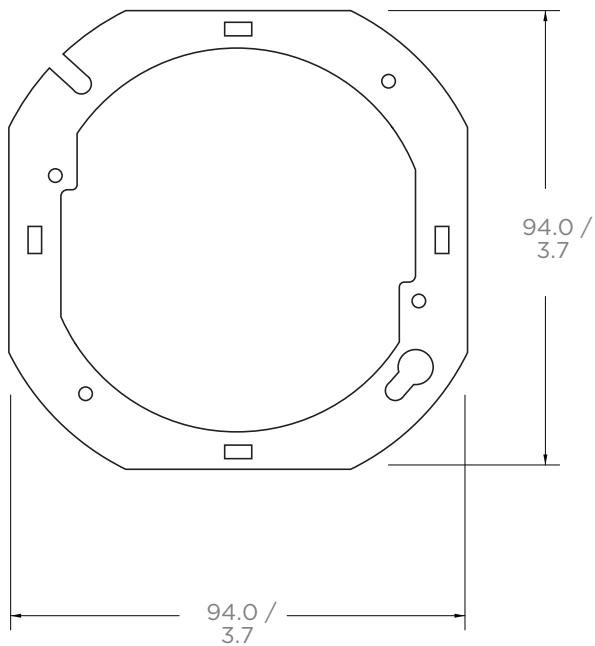
ADAPTOR PLATE

TOP VIEW

BOTTOM VIEW

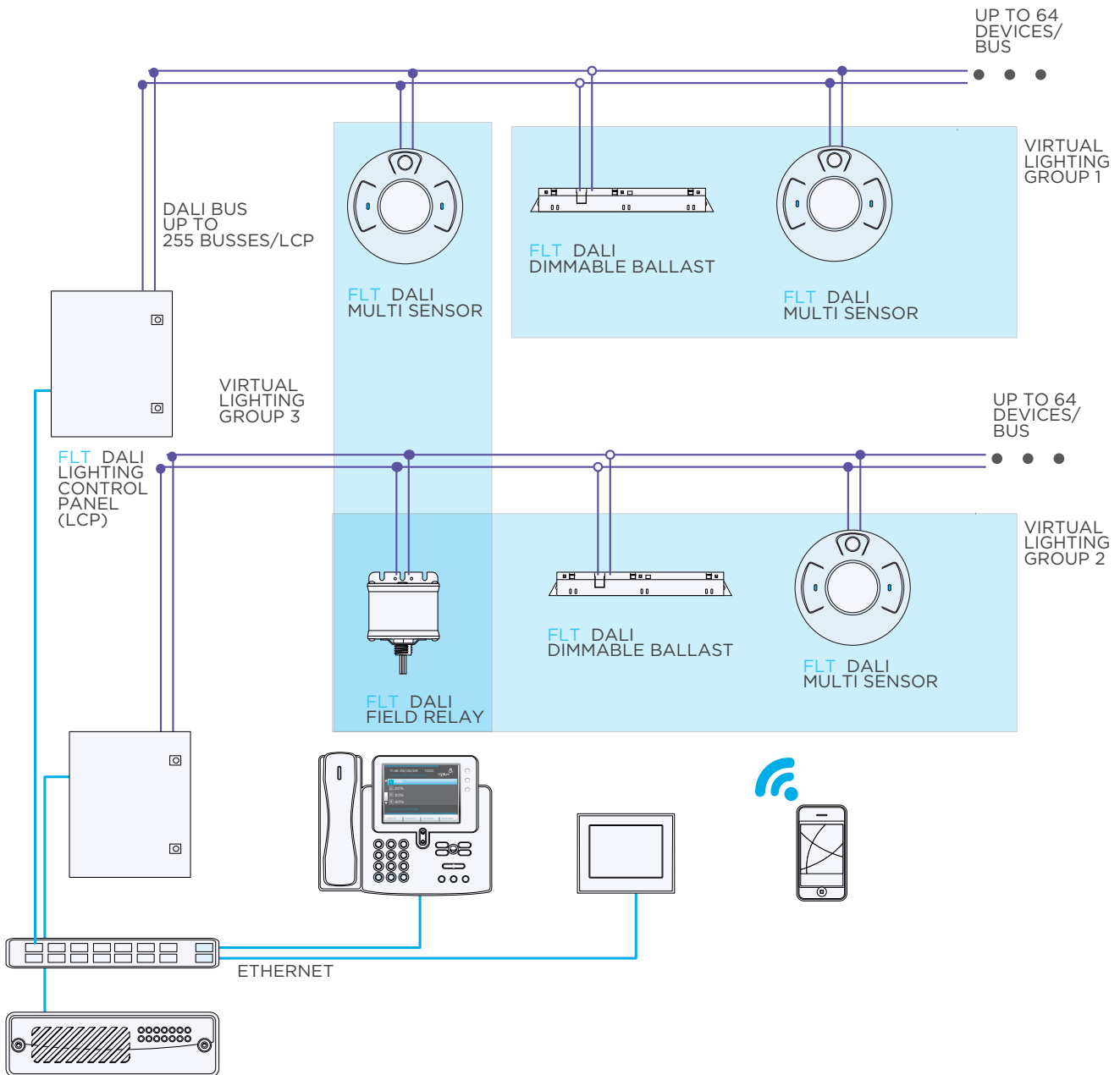


MOUNTING PLATE



ELECTRICAL CONNECTIONS

The DALI Multi-Sensor connects to the DALI communication bus using two low voltage DALI communication wires. The DALI communication wires are non-twisted, non-shielded, non-polarized and have a maximum length of 300M/984 ft. The DALI wires on the sensor are 18 AWG and rated for 600 V. The DALI Multi-Sensor does not require a connection to the line voltage since all commands to DALI ballasts, DALI relays and other DALI devices are handled through the DALI communication bus. All sensor current is drawn from the DALI communication bus, eliminating the need for power packs. The DALI Multi-Sensor can communicate to DALI devices on different busses via the Lighting Control Panel.



OPERATION

The DALI Multi-Sensor functions as a DALI end device. All settings and status information is available to a DALI controller through specific DALI query commands as tabulated below. The DALI Multi-Sensor can communicate with any DALI compliant controller. Non-DALI systems are provided with setting and status information of the DALI Multi-Sensor via the Lighting Management Software using BACNet, OPC or XML Webservice interfaces.

VALUE	DALI PARAMETER	READ/ WRITE	DESCRIPTION
Occupancy Status	Scene 15	Read	Occupancy = 1, Vacancy = 0
Light Level (0-100 Lux)	Scene 14	Read	Light Level = DALI Response/2.55
Light Level (0-400 Lux)	Scene 13	Read	Light Level = DALI Response/0.6375
Temperature Level	Scene 8	Read	Level (°C) = (DALI Response - 77)/4
Occupancy Sensor Threshold	Scene 11	Read/Write	Value = 0 to 255 (0 is the highest sensitivity)
Previous Occupancy Sensor Threshold	Scene 9	Read	Value = 0 to 255 (0 is the highest sensitivity)
Occupancy Sensor Reading	Scene 7	Read	Value = 0 to 255 (255 is highest activity)
Potentiometer Position	Scene 12	Read	Value = 0 to 255 (255 is fully clockwise)
Occupancy Status Holding Time	Scene 5	Read/Write	Holding Time = DALI Value x 5
Device Type	Device Type	Read	Value = 100
Multi-Function Register	Scene 10	Write	
Device Functional Status	Query Status	Read	Pass = 255, Fail = 1

PHYSICAL SELECTION MODE

The Physical Selection Mode is used to assign a specific DALI address to a particular DALI Multi-Sensor. The control software causes the DALI Multi-Sensor to enter physical selection mode.

EVENT

RESPONSE

Unit Arc Power Command	Five pulses of red LED (100 mS duty cycle)
Broadcast Arc Power Command	Five pulses of red LED (100 mS duty cycle)
Occupancy Detected	Blue LED on during detection of occupancy
Daylight Change	Three pulses of blue LED (100 mS duty cycle)
Device Energized and Operational	Continuous pulse of red LED (0.5 mS on, 9.5 S off)

CONTACT INFORMATION

FOR SALES & TECHNICAL SUPPORT
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