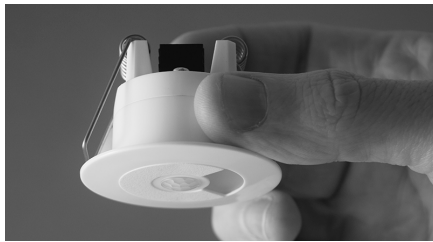# MOTION SENSOR 360 (0-10V LUX)   FARADITE
M360-0-10V-LUX

OVERVIEW

The Faradite Motion Sensor 360 (0-10V LUX) is a low profile passive infrared ceiling mounted motion sensor with an integrated 0-10V (0-1000 Lux) light sensor. It's designed for use with home/building automation systems.

TECHNICAL DATA

|	
Power supply (consumption)	12V-24V DC @ 24V (3mA)
Motion output voltage	12V-24V DC
Max, motion output current	80ma
Lux range	0 Lux (0V) - 1000 Lux (10V)
Ambient temperature	32-122 °F (Indoor Only)
IP Rating	IP20
Range (Note 1)	16' 4"
Max mounting height	9' (For optimal performance)
Motion output timeout	1 second
Mounting hole	1 1/2"
Push-fit connector	AWG 20- 24 CAT5 / CAT6 / CAT7
Standards	EN 61000-6-1 EN 61000-6-3
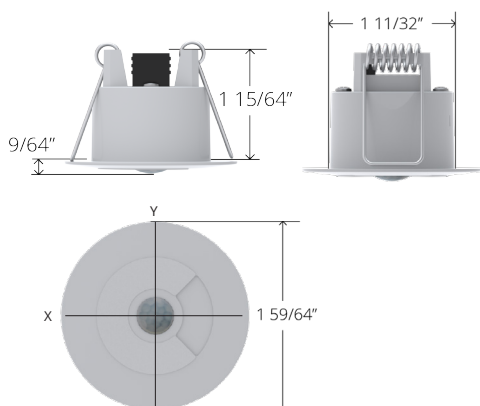
OBSERVATION AREA

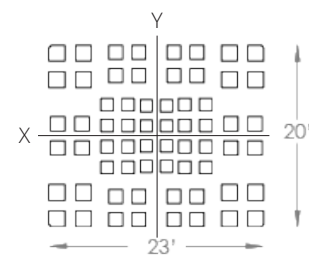**At 9'** it gives a 20' * 23' observation area.
At 10' it gives a ~26' diameter, as shown below.
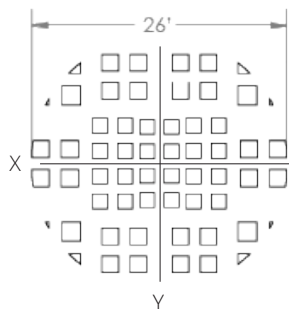
The following conditions have to be met to detect motion:

1.Movement speed: 3' /s
2.Target concept is a human body (Min object size: ~27" x 9")
3. The temperature difference between the target and the surroundings must be greater than 39°F at 16' 4" from sensor.
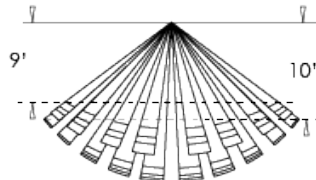


9' Height - Observation area


10' Height - Observation area

ELECTRICAL CONNECTIONS

It is recommended to use CAT cable to connect the motion sensor to the building automation system.

1: Strip the cable back 15/64"
2: Push into circular hole on the connector
3: To remove the wire insert the supplied tool or a small screwdriver in the slot behind the wire
4: The connector can be removed from the motion sensor by pulling it
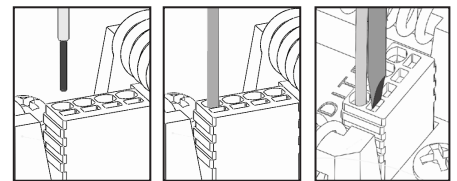
Strip back   Push in   Remove
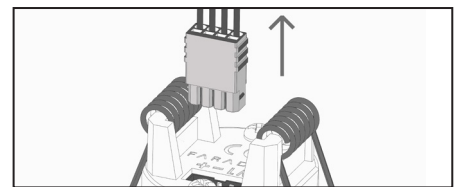
Pull to remove connector from motion sensor

EQUIVALENT CIRCUIT

M MOTION
L LUX 0V - 10V
- 0V/GND
+ 12V-24V DC

CLOSED DURING MOTION
LUX SENSOR

MOTION OUTPUT

12V- 24V DC

OUTPUT TIMEOUT 1 SECOND

0V

LUX OUTPUT

10V

0V

0 Lux   1000 Lux
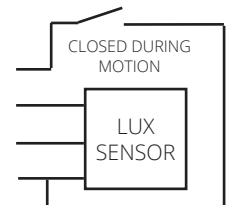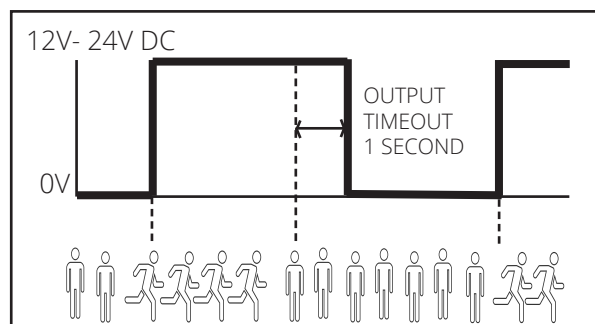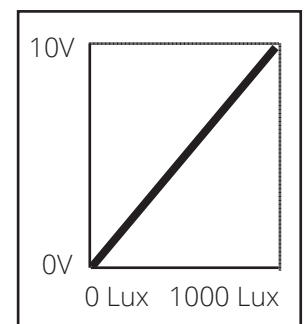
Note 1: Please note that the specified range is 16' 4" but under optimal conditions the sensor might detect movement at a much longer range

INSTALLATION

**USE A 1 1/2"
HOLE SAW FOR
INSTALLATION**

To install the Faradite Motion Sensor 360, cut a 1 1/2" hole using a suitable hole saw. Fold the spring clips upwards and push through the hole.

MOUNTING & SAFETY PRECAUTIONS

1) Do not under any circumstance use these sensors outside the range of their ratings shown in the technical data.

2) Faradite is committed to making products of the highest quality and reliability. Nevertheless, all electrical components are subject to natural deterioration, and the product durability will depend on the operating environment and conditions of use.

3) Please note that the sensor can detect heat sources other than the human body, such as:
a) Small animals
b) Direct sun light, incandescent lamps, car headlights (even if the heat source is outside the detection area)
c) Sudden temperature change inside or around the detection area i.e. hot or cold winds/drafts or vapour from the humidifier can effect the performance of the sensor.

4) Please note that the sensor will have difficulty sensing the heat source if it is behind glass, acrylic or similar materials as these materials may not allow a correct transmission of infrared rays.

SENSITIVITY ADJUSTMENT

The sensor has been designed for optimal sensitivity. It is not recommended to change the sensitivity setting unless it is found to be necessary. To adjust the sensitivity, remove the two screws and turn over the circuit board. The small potentiometer can be used to adjust the sensitivity.

CONNECTION TO LOXONE MINISERVER

Connection to Loxone is simple: connect the motion output to a digital input and the lux sensor output to an analogue input. There is no need to invert the input as the motion sensor is logic high for motion - see motion output diagram.

Simply connect directly using a CAT cable; no pull-up resistors required

FARADITE MOTION SENSOR 360	LOXONE
MOTION	DIGITAL INPUT
LUX 0V - 10V	ANALOGUE INPUT
0V / GND	GND
12V-24V	24V

LOXONE CONFIG ADJUSTMENT OF ANALOG INPUT

The analog input needs to be mapped correctly so 10V is interpreted as 1000 Lux. *To do this:* click on the correct analog input, which will bring up the properties on the left hand side of the Loxone config. Find the correction section and change the "Display Value 2" to 1000 (instead of 10).

CONNECTION TO LOXONE NANO DI TREE

If you are installing Faradite TAP-5 / TAP-1 switches as well, the recommended option is to connect the Motion Sensor 360 to the 6th Digital input of the Nano DI Tree module. *Please note that Loxone Nano DI Tree module does not have an analog input for the Lux sensor*

FARADITE MOTION SENSOR 360	NANO DI TREE
MOTION	6th INPUT (BLACK WIRE)
0V /GND	GND (WHITE WAGO)
12V-24V DC	24V (ORANGE WAGO)

CONNECTION TO CONTROL4

Connection to Control4 is simple, the motion sensor output can be connected to a contact closure on a Control4 I/O module. The 0-10V LUX sensor can be used with Control4 using a driver from Janus Technology. The driver allows for connection of the 0-10V and digital input via devices from Brainboxes Ltd. Search online for Faradite Janus Technology for more info.

FARADITE MOTION SENSOR 360	CONTROL4
MOTION	Brainboxes ED588 - Digital Input OR Control4 - Contact Closure
LUX 0V-10V	0-10V - Brainboxes ED549
0V /GND	GND
12V-24V DC	12V

RoHS ☒ C E

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For further support please visit: faradite.com