ISAAC O3 Multi-Sensor

With seven different sensors on board, the O3 utilizes Sensor Fusion for enhanced occupancy detection, temperature reading, and more.

5 Unique Sensor Types

The ISAAC O3 Multi-Sensor contains 5 unique sensor types that you can use to monitor rooms.

Temperature
Detect ceiling, surface, and human height temperature.

Humidity
Detect ceiling and human height humidity.
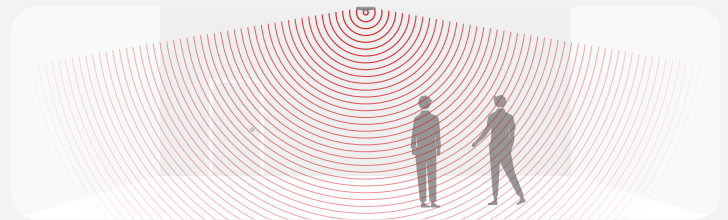
Motion
Detect if there is motion in the room.
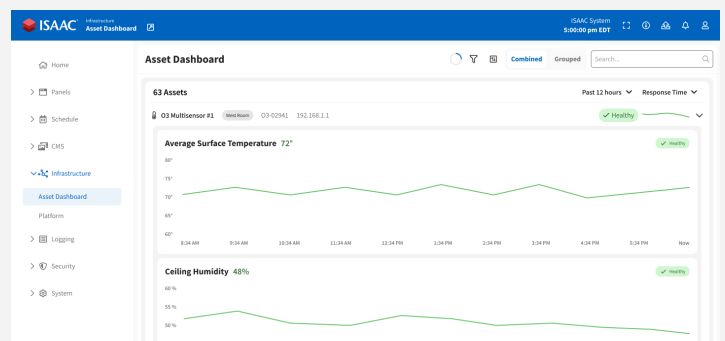
Light
Detect light level intensity.

Sound
Detect occupancy using sound from two on-board microphones.

Ø 180 mm
7.1"

41.2 mm
1.62"

ø180 mm
(7.1")

41.2 mm
(1.62")
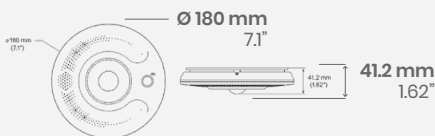
Order Reference
O3-EM1

Occupancy Count
Occupant estimation uses onboard sensors and machine learning to estimate the number of people in a space.
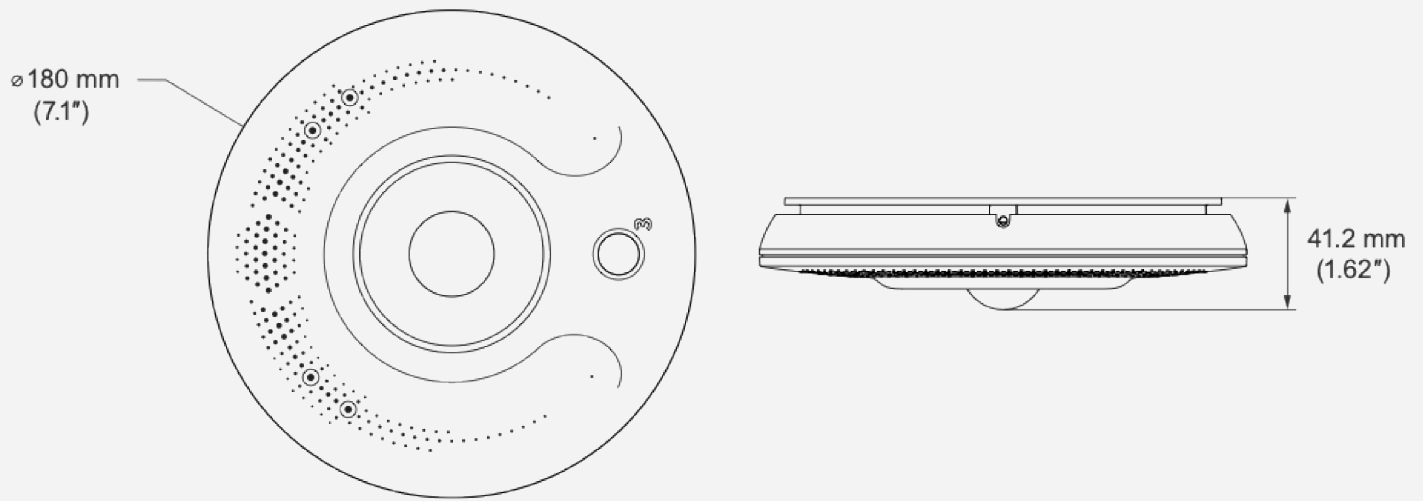
Monitoring Sensors
Give your O3 sensor a name and enter its IP Address to start monitoring in the Asset Dashboard. This allows you to view up to the last 30 days of data from the sensor

isaacplatform.com

info@isaacplatform.com

ISAAC®

⌀180 mm (7.1")

41.2 mm (1.62")

Temperature Sensors
Composite temperature value ± 0.5ºC (± 1.0ºF) typical with calibration.
- Digital temperature sensor ± 0.5ºC (± 1.0ºF)
- Infrared temperature sensor ± 1ºC (± 1.8ºF)

Humidity Sensors
Accuracy ± 3% for 20% to 80% RH @ 15ºC to 30ºC (59ºF to 86ºF)

Motion Sensor
Passive infrared (PIR) motion sensor motion sensing range:
- 9.1 m (30 ft) diameter @ 4.6 m (15 ft) mounting height.
- 5.5 m (18 ft) diameter @ 2.4 m (8 ft) mounting height.

Light Sensor
± (6+5% reading) lx

Audio Input
2 microphones for acoustic occupancy detection.

LED Ring
Full color ring with 12 RGB LEDs

Audio Output
1.0 W mono speaker for tones and audio output.

Universal Points
Up to 2 inputs (16-bit), software configurable for the following types:
- 0-5 VDC
- 0-10 VDC
- 10 kΩ thermistor
- Dry contact (using 10 kΩ thermistor software setting)
- 4-20 mA (using external 250 Ω resistor on 0-5 V setting

Up to 2 outputs (12-bit), software configurable for the following types:
- 0-10 V @ 20 mA max (sourcing)
- 1-10 V @ 10 mA max (sinking)

Connectors
Removable screw-type terminal connectors.

Wiring Class
Class 2 / SELV

Power
24 VDC (20-28 VDC) (Not included), 2 W typical, 9 W max, Class 2

Interfaces and Protocols
- BACnet (BACnet/IP, BACnet/Ethernet,BACnet/SC)
- MQTT
- BLE 5.0

Technology
- Arm® Cortex®-A7 MPU + Cortex-M4 MCU
- 256 DDR3L RAM
- 4 GB eMMC flash memory
- Real-time clock (RTC)
- Supercapacitor power backup for RTC

Communication Ports
Dual Ethernet (10/100 Base-T)

Ambient Rating
- 0ºC to 45ºC (32ºF to 113ºF)
- 10% to 95% RH (non-condensing)

Dimensions
180 x 41.5 mm (7.1 x 1.6 in.)

Weight
350 g (0.77 lb)

Compliance & Listings
- CE
- FCC/IC
- NCC (in progress)
- C-UL Listed
- UL 916 Listed

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