

# 03™ Sensor Hub 2.0

Delta Controls' award-winning 03 Sensor Hub 2.0 uses industry-leading sensor fusion technology to deliver the most accurate view of an interior space available on the market.

Integrating temperature, humidity, motion, sound, and light sensing in a single device, the sensor hub uses machine learning to provide fast, accurate feedback on the monitored space.

The sensor hub is easy to install and can be configured out of the box with just a smartphone.



## Application

The 03 Sensor Hub 2.0 is an open platform IoT device with support for BACnet, MQTT, REST, and BLE protocols, allowing it to integrate with almost any system.

Select models also come with two universal I/O points capable of controlling or accepting inputs from nearby devices—ideal for controlling light ballasts or chilled-beam ceiling valves.

## Features

- Composite temperature, humidity, PIR motion, sound, and light sensors combined in a single device
- User feedback via speaker and full-color LED ring with customizable audio tones and colors
- IR blaster for A/V remote control
- Dual Ethernet connection for daisy-chaining in large spaces; provides pass-through communication even during power outages
- Cloud-based configuration via mobile app
- BLE API for developing custom apps

## Specifications

### Temperature Sensors

Composite temperature value  
 $\pm 0.5^{\circ}\text{C}$  ( $\pm 1.0^{\circ}\text{F}$ ) with calibration

- Digital temperature sensor  
 $\pm 0.5^{\circ}\text{C}$  ( $\pm 1.0^{\circ}\text{F}$ )
- Infrared temperature sensor  
 $\pm 1.0^{\circ}\text{C}$  ( $\pm 1.8^{\circ}\text{F}$ ) typical

### Humidity Sensor

Accuracy  $\pm 3\%$  for 20% to 80% RH  
@  $15^{\circ}\text{C}$  to  $30^{\circ}\text{C}$  ( $59^{\circ}\text{F}$  to  $86^{\circ}\text{F}$ )

### 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

$\pm (6+5\%$  reading) lx

### Audio Input

2 microphones for acoustic occupancy detection

### LED Ring

Full color ring with 12 RGB LEDs

### Universal Points (2xP models only)

Up to 2 inputs (16-bit), software configurable for the following types:

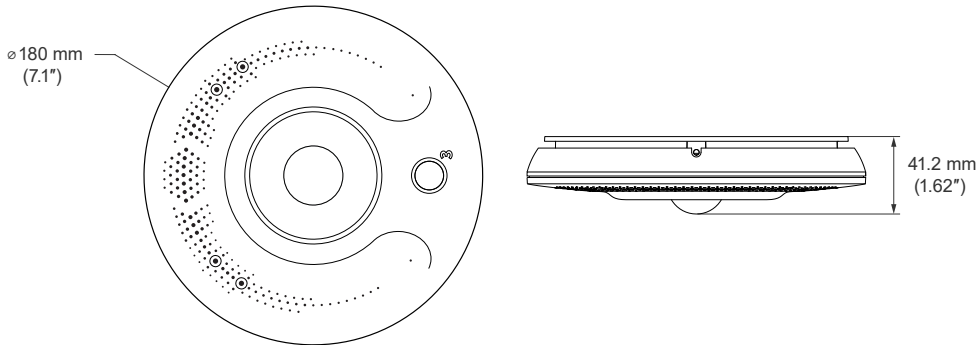
- 0–5 VDC
- 0–10 VDC
- 10K thermistor
- Dry contact (using 10K thermistor software setting)
- 4–20 mA (using external 250  $\Omega$  resistor on 0–5 V setting)

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)

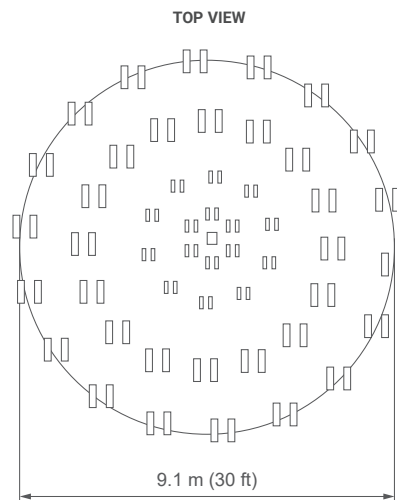
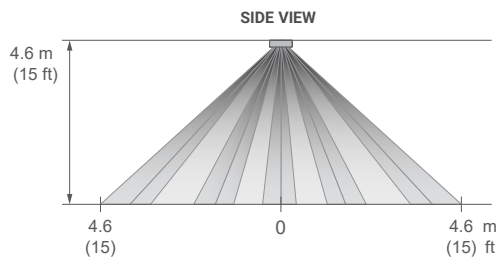
# 03 Sensor Hub 2.0

## Dimensions



## Passive Infrared Motion Coverage

Mounting Height	PIR Sensing Range
4.6 m (15 ft)	9.1 m (30 ft)
2.4 m (8 ft)	5.5 m (18 ft)



## Ordering

<b>03-HUB2</b>	Sensor hub (temperature, humidity, light, motion), Bluetooth, LED ring, microphone and speaker, with mounting plate
<b>03-HUB2-2xP</b>	Sensor hub (temperature, humidity, light, motion), Bluetooth, LED ring, microphone and speaker, 2 universal I/O, input (0–10 V, 0–5 V, 10K) or output (20 mA source, 10 mA sink), with mounting plate

## Specifications (Cont'd)

### Audio Output

1.0 W mono speaker for tones and audio output

### Connectors

Removable screw-type terminal connectors

### Wiring Class

Class 2 / SELV

### Power

24 VDC, 2 W typical, 9 W max (non-2xP) or 10 W max (2xP), Class 2

### 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 (10/100Base-T)

### Interfaces and Protocols

BACnet (BACnet/IP, BACnet/Ethernet)  
MQTT  
REST  
BLE 5.0

### Ambient Rating

0°C to 45°C (32°F to 113°F)  
10% to 95% RH (non-condensing)

### Dimensions

180 × 41.5 mm (7.1 × 1.6 in.)

### Weight

350 g (0.77 lb)

Updated 6 May 2020\_b

Subject to change without notice.