

03 Edge

03-EDGE-02 Edge Controller

Description

Delta Controls' award-winning 03® Edge standalone multisensor 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, light and occupant sensing in a single device, the fully programmable 03 uses machine learning to provide fast, accurate feedback on the monitored space.

The 03 is easy to install and can be configured out of the box with just a smartphone.



Application

With support for BACnet, MQTT, EnOcean* and BLE protocols, the 03 Edge is an open platform IoT device that can integrate with almost any system.

It also comes 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

- ▶ Fully programmable using GCL+ or Node-RED flows
- ▶ Composite temperature, humidity, PIR motion, sound, light and occupant sensors combined in a single device
- ▶ User feedback via speaker and full-color LED ring with customizable audio tones and colors
- ▶ Supports up to 32 EnOcean wireless devices*
- ▶ Dual Ethernet connection for daisy-chaining in large spaces; provides pass-through communication even during power outages
- ▶ Configuration via mobile app
- ▶ BLE API for developing custom apps

Specifications

Temperature Sensors

Composite temperature value
 $\pm 0.5^{\circ}\text{C}$ ($\pm 1.0^{\circ}\text{F}$) typical 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°C to 30°C (59°F to 86°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

Occupant Sensor

PIROE (passive infrared occupancy estimation) motion sensor

Audio Input

2 microphones for acoustic occupancy detection

Audio Output

1.0 W mono speaker for tones and audio output

LED Ring

Full color ring with 12 RGB LEDs

Universal Points

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

0–5 VDC

0–10 VDC

10 k Ω thermistor

Dry contact (using 10 k Ω thermistor software setting)

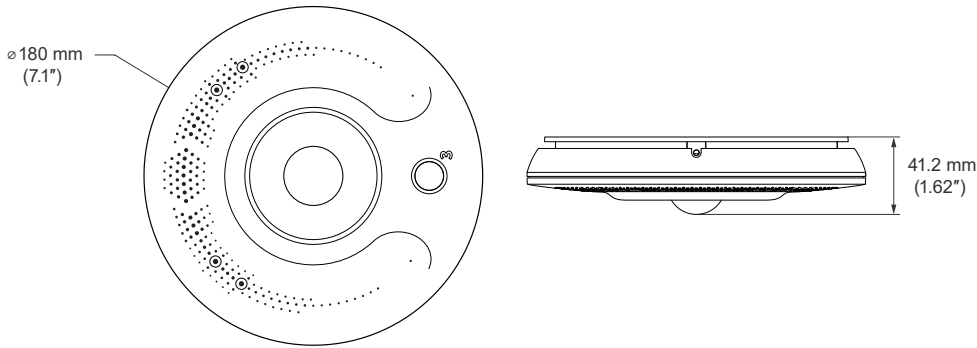
4–20 mA (using external 250 Ω resistor on 0–5 V setting)

* 03-EDGE-02-E8 and 03-EDGE-02-E9 models only

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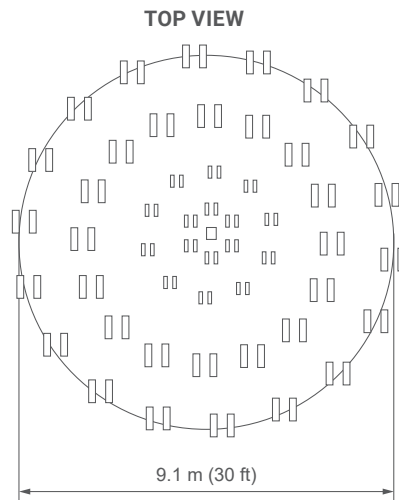
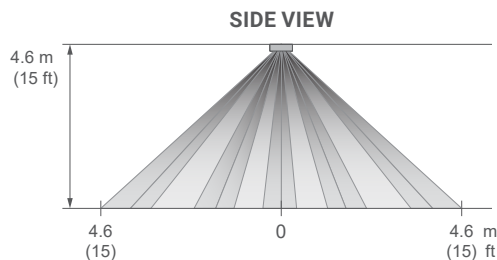
03-EDGE-02 Edge Controller

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)



Specifications (Continued)

Universal Points (Continued)

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), 2 W typical, 10 W max, 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, BACnet/SC)
EnOcean (868 MHz or 902 MHz)
MQTT
BLE 5.0

Ambient Rating

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

Dimensions

180 × 41.2 mm [7.1 × 1.6 in.]

Weight

350 g (0.77 lb)

Compliance

CE
FCC/IC
NCC (in progress)
EnOcean Level 2 Certification

Listings

cULus 916 Listed

Subject to change without notice.

Ordering

Order the O3 Edge using the following product numbers:

331741	O3-EDGE-02	Multisensor (temperature, humidity, light, motion, occupancy), BLE, LED ring, microphone and speaker, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331739	O3-EDGE-02-E8	Multisensor (temperature, humidity, light, motion, occupancy), BLE, EnOcean 868 MHz, LED ring, microphone and speaker, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331740	O3-EDGE-02-E9	Multisensor (temperature, humidity, light, motion, occupancy), BLE, EnOcean 902 MHz, LED ring, microphone and speaker, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331746	O3-EDGE-02-S	Multisensor (temperature, humidity, light, motion, occupancy), Ethernet Single Port, BLE, LED ring, microphone and speaker, 2 universal I/O, input (0–12 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331759	O3-EDGE-02-E8-B	Multisensor (temperature, humidity, light, motion, occupancy), black plastic, BLE, EnOcean 868 MHz, LED ring, microphone and speaker, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331760	O3-EDGE-02-E9-B	Multisensor (temperature, humidity, light, motion, occupancy), black plastic, BLE, EnOcean 902 MHz, LED ring, microphone and speaker, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331761	O3-EDGE-02-B	Multisensor (temperature, humidity, light, motion, occupancy), black plastic, BLE, LED ring, microphone and speaker, 2 universal I/O, input (0–12 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate
331766	O3-EDGE-02-S-B	Multisensor (temperature, humidity, light, motion, occupancy), black plastic, Ethernet Single Port, BLE, LED ring, microphone and speaker, 2 universal I/O, input (0–12 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate

Updated April 2024

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