

# ▶ 03 Hub

## 03-HUB Sensor Hub

### Description

The ceiling-mounted 03<sup>®</sup> Hub multisensor is part of the Red5 room control system designed for the modern smart building. The sensor hub replaces multiple room sensors with a one-per-room competitive cost solution when installed together with a Red5 room controller.

The sensor hub provides occupant- and location-based control for the modern office or meeting space. Using the 03 mobile app, room occupants can select from a list of preconfigured settings or they can interact with the sensor hub directly to manage room comfort.



### Application

The 03 Hub is ideal for a wide range of room applications, such as offices, conference rooms, classrooms and apartments, incorporating location-based services and mobile app interactions into the occupant experience.

Models with I/O are ideal for controlling nearby lighting or for use in chilled beam applications.

Built-in Bluetooth<sup>®</sup> and optional EnOcean<sup>®</sup> technology allows for flexible room design with wireless devices.

### Features

- ▶ Combines humidity, composite temperature, passive infrared motion, and light sensors in a single device
- ▶ Up to 8 sensor hubs per Red5-PLUS-ROOM controller; up to 2 sensor hubs per Red5-EDGE-ROOM controller
- ▶ Supports up to 32 EnOcean wireless input devices
- ▶ Bluetooth beacon broadcasts identifiers to Bluetooth-enabled smartphones with the 03 app installed
- ▶ Full-color LED ring provides silent indications to room occupant
- ▶ Audio tones provide user feedback

### 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:

- 6.7 m (22 ft) diameter @ 3 m (10 ft) mounting height
- 5.5 m (18 ft) diameter @ 2.4 m (8 ft) mounting height

#### Light Sensor

$\pm (6 + 5\% \text{ reading})$  lx

#### Audio Input

2 microphones for acoustic occupancy detection

#### LED Ring

Full color articulated with 12 RGB LEDs

#### Universal Points (03-HUB-02 only)

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

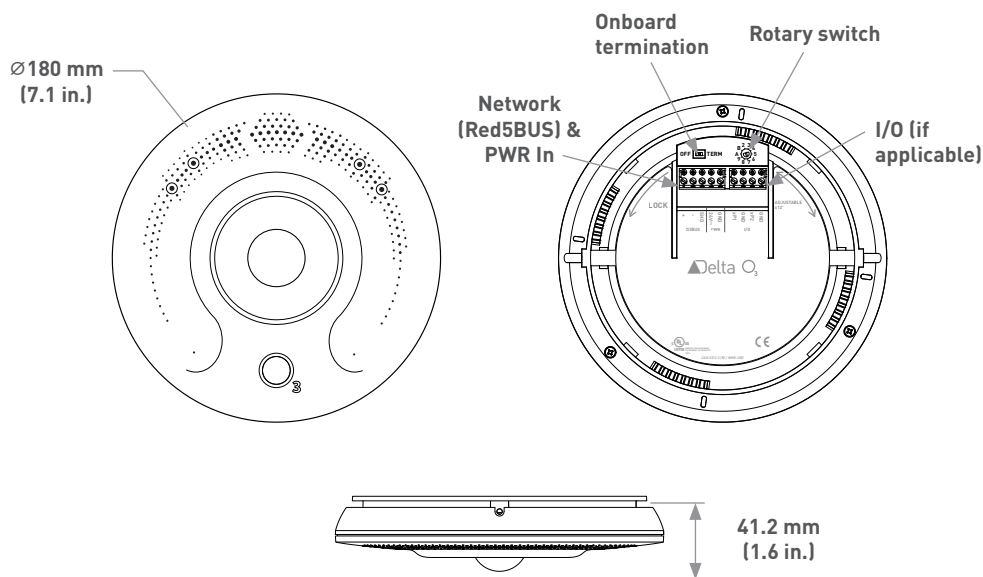
- 0–5 VDC
- 0–10 VDC
- 10 k $\Omega$  thermistor
- Dry contact (using 10 k $\Omega$  thermistor software setting)
- 4–20 mA (using external 250  $\Omega$  resistor on 0–5 V setting)

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) for hardware rev 2.7 and later

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Order a Red5 system base unit with one or more hubs or modules:

### Base Units

|                       |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| <b>Red5-PLUS-R00M</b> | 3 network ports, 2 Ethernet ports, 3 power outputs, Modbus RTU, NFC |
| <b>Red5-EDGE-R00M</b> | 2 network ports, 2 Ethernet ports, 1 power output, Modbus RTU, NFC  |

### Sensor Hubs

|                       |                                                                                                                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>03-HUB-00</b>      | Multisensor (temperature, humidity, light, motion, Bluetooth, LED ring, microphone and speaker) with mounting plate                                                                                                                      |
| <b>03-HUB-02</b>      | Multisensor (temperature, humidity, light, motion, Bluetooth, 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                                 |
| <b>03-HUB-02-E8</b>   | Multisensor (temperature, humidity, light, motion, Bluetooth, 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                |
| <b>03-HUB-02-E9</b>   | Multisensor (temperature, humidity, light, motion, Bluetooth, 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                |
| <b>03-HUB-00-B</b>    | Multisensor (temperature, humidity, light, motion, Bluetooth, LED ring, microphone and speaker) with mounting plate, black plastic                                                                                                       |
| <b>03-HUB-02-E8-B</b> | Multisensor (temperature, humidity, light, motion, Bluetooth, EnOcean 868 MHz, LED ring, microphone and speaker), black plastic, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate |
| <b>03-HUB-02-E9-B</b> | Multisensor (temperature, humidity, light, motion, Bluetooth, EnOcean 902 MHz, LED ring, microphone and speaker), black plastic, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate |
| <b>03-HUB-02-B</b>    | Multisensor (temperature, humidity, light, motion, Bluetooth, LED ring, microphone and speaker), black plastic, 2 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink), with mounting plate                  |

### Specifications (Continued)

#### Audio Output

1.0 W mono speaker for tones and audio output

#### Device Addressing

Rotary switch

#### Connectors

Removable screw-type terminal connectors

#### Wiring Class

Class 2 / SELV

#### Power

24 VDC, 1 W typical, 7 W max (non-2xP) or 8 W max (2xP), Class 2\*

\*Power can be supplied from an 03-DIN controller

#### Communications

EnOcean (868 MHz or 902 MHz)  
Bluetooth Low Energy beacon (V4.2)  
Red5BUS port (CAN-based)  
IR transmitter

#### 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  
EAC  
FCC/IC  
Bluetooth FCC ID: XPNINAB1  
Bluetooth IC ID: 8595A-NINAB1  
EnOcean 902 MHz  
FCC ID: ZV-STM300U  
IC ID: 713A-STM300U

#### Listings

cULus 916 Listed



Updated October 2023

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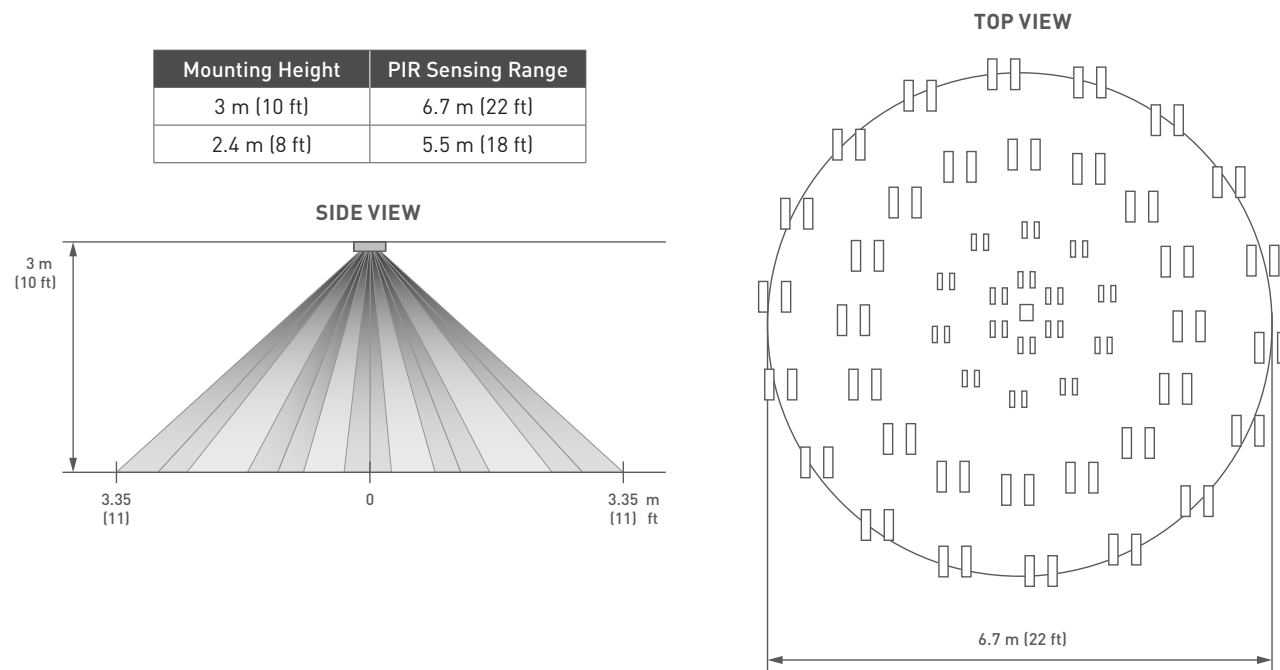
### Red5 ROOM Modules

|                          |                                                                                                |
|--------------------------|------------------------------------------------------------------------------------------------|
| <b>Red5-MODULE-4F4xP</b> | FET I/O module: 4 universal I/O, 4 FET binary outputs                                          |
| <b>Red5-MODULE-8xP</b>   | I/O module: 8 universal I/O, input (0–10 V, 0–5 V, 10 kΩ) or output (20 mA source, 10 mA sink) |
| <b>Red5-MODULE-1D00R</b> | Access module, single door support                                                             |
| <b>Red5-MODULE-DALI</b>  | DALI lighting module: DALI interface, 100 mA power output                                      |
| <b>Red5-MODULE-PoE</b>   | Power over Ethernet module                                                                     |
| <b>Red5-EXPAND-04</b>    | Power injector expansion for 03                                                                |
| <b>Red5-MODULE-SMI</b>   | SMI module for motorized blinds: SMI interface, 30 mA power output                             |

### Power Supplies

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| <b>DRC-24V30W1AZ</b>  | Chrome Line Voltage DC power supply 24 V 30 W Class A EMC  |
| <b>DRC-24V60W1AZ</b>  | Chrome Line Voltage DC power supply 24 V 60 W Class A EMC  |
| <b>DRC-24V100W1AZ</b> | Chrome Line Voltage DC power supply 24 V 100 W Class A EMC |
| <b>DRS-24V30W1NZ</b>  | Sync Line Voltage DC power supply 24 V 30 W Class B EMC    |
| <b>DRS-24V50W1NZ</b>  | Sync Line Voltage DC power supply 24 V 50 W Class B EMC    |
| <b>DRS-24V100W1NZ</b> | Sync Line Voltage DC power supply 24 V 100 W Class B EMC   |

### Passive Infrared Motion Coverage



Subject to change without notice.