

O3 Sensor Hub 2.0

Quick Start Guide

This guide describes how to install and set up the O3 Sensor Hub 2.0. To set up the hub, you will need an Android or iOS device with the O3 Setup app installed. You can get the app from Google Play or the App Store.

Installation

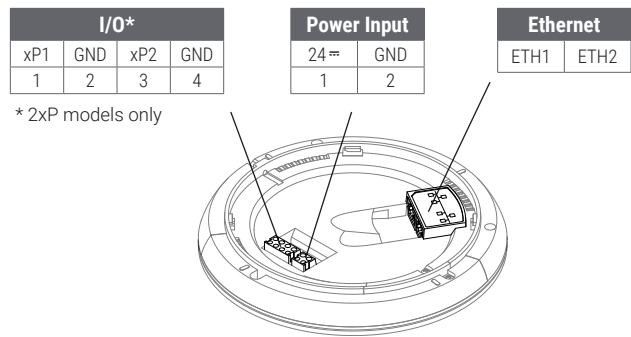
Follow all applicable electrical codes and regulations. Connect to a Class 2 power source only.

Wiring guidelines

The sensor hub requires a 24 VDC power supply.

- For power and I/O wiring, use 22–14 AWG 2-conductor copper wire.
- For network cabling, use Cat5e or Cat6 cables.

Earth ground all devices in the same circuit at the power supply. Up to 30 hubs can be daisy chained using the ETH2 port as long as the distance between hubs does not exceed 100 m (330 ft). A bypass switch allows the hubs to relay data in a power failure scenario. However, the maximum cable length is reduced by 15 m (50 ft) for each bypassed hub.



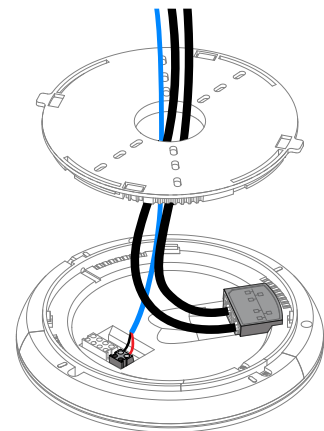
Placement guidelines

You can mount the sensor hub to a ceiling tile, finished ceiling, or junction box.

- The hub should be mounted 2.4 to 4.6 m (8 to 15 ft) off the floor.
- For best performance, place the hub in center of the room. Try to keep it at least 2.1 m (7 ft) away from windows or exterior walls.
- Choose a location where the motion sensor view is not obstructed by light fixtures, shelves, etc.
- Do not mount the hub next to hot or cold sources.
- Keep the hub at least 1.3 m (4 ft) away from ceiling diffusers and other sources of airflow.

Mounting the hub

1. If you are mounting the hub directly to the ceiling, cut a hole 32 mm (1¼ in.) in diameter and pull the wires through the hole.
2. Pull the wires through the hole in the backplate.
3. Mount the backplate to the mounting surface using M4 (#8) screws.
4. Connect the power wires, I/O wiring (if present), and Ethernet cables.
5. Attach the hub to the backplate. Line up the tabs on the hub with the notches on the backplate, hold the hub firmly against the backplate, then twist clockwise.
6. Turn on power to the hub. The light ring plays a blue swirl pattern, then displays blue-red-yellow as the hub runs a power-on self-test (POST). The POST status displays next. Green = passed, blue = Bluetooth issue, red = sensor issue, yellow = network connection issue.






Setup

To set up the hub using the O3 Setup app, you must have Bluetooth® and location services enabled on your mobile device. For best performance, your device should support Bluetooth Low Energy (BLE) version 5.0 or later.


Connecting to the hub

1. Open the O3 Setup app and select **Continue** to enter Lite Mode.
2. In the lower right corner of the screen, select **Connect**. Nearby hubs are listed by their Bluetooth MAC address.
3. Select a hub to initiate a connection. Once the connection is initiated, select **Verify** to confirm that you are connecting to the correct hub. The selected hub plays a sound and the light ring flashes blue.
4. If this is the correct hub, select **Yes, connect to this hub**. Data loads from the hub and the status changes to **Connected**. You can now view device information and sensor data from the hub in the **Diagnostics** tab. This data is transferred securely over Bluetooth from the hub to your mobile device.


Configuring the hub

1. After connecting to the hub, go to **Settings > Network**. If you want to assign a static IP address to the hub, select , select **Static**, enter the IP settings, then select **Save**. Otherwise, leave it as **DHCP**. The IP address must be unique for each hub.
2. Next to **BACnet**, select , select the protocol you want to use (BACnet/Ethernet or BACnet/IP), enter the BACnet settings, then select **Save**. The BACnet **Device ID** must be unique for each hub.
3. Next to **Security**, select , enter a 6-digit PIN to secure BLE read/write access to the hub, then select **Save**.
4. Select **Apply settings to hub**. After the settings are applied, the status shows **Configured** and a green check mark appears next to each applied setting.

Calibrating the hub


1. After connecting to the hub, go to **Settings > Calibration** and select .
2. Measure the temperature below the hub at occupant height, enter the temperature in the **Actual temperature** field, then select **Save**.
3. If you plan to use the hub for lighting control, adjust the lighting in the space to the desired brightness, record the current hub reading in the **Hub reading at desired light level** field, then select **Save**. This setpoint will be used by the control system as a baseline for control loops to compare against.
4. Select **Apply settings to hub**.

Upgrading the firmware (requires internet connection)

1. After connecting and applying settings to the hub, in the O3 Setup app, select  in the upper right corner of the screen, then select **Upgrade firmware**.
2. Under **Firmware upgrade method**, select **Select version from list**.
3. Select the firmware version you want to upgrade to, then select **Apply firmware upgrade**.
4. Click **OK** to continue. The light ring is orange while the upgrade is in progress.

Note: Do not power off or reboot the hub while the light ring is orange. If the light ring flashes red three times, there was an error during the upgrade process. Check your network connections and settings.

Rebooting the hub

To reboot the hub, in the O3 Setup app, select  in the upper right corner of the screen, then select **Reboot hub**. A confirmation appears. To continue, select **Yes, reboot hub**.

Need help? Contact o3hub@deltaccontrols.com

For regulatory and other product information, visit support.o3hub.com