IPVIDEO
a Motorola Solutions Company

Halo Smart Sensor Installation and Placement Guide



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About this Document

This manual is intended for administrators and users of the Pelco Halo Smart Sensor, and is applicable to hardware versions 3C, 3C-PC, 3C-NRD, 3C-PC-NRD, Halo firmware version 2.18.0.8. It includes instructions for using and managing the product on your network. Previous experience of networking will be of use when using this product. Some knowledge of electrical circuitry and alarm panel connection may be useful in certain types of installations. Later versions of this document will be posted at https://halodetect.com/resources/manuals-guides/.



NOTE

HALO-3C-NRD & HALO-3C-PC-NRD does not have wireless communication. The following features are unavailable:

- Wifi Network Adapter
- Amplify Sensor Suite
- iPANIC Button



NOTE

Halo v2.0 and HALO-2C have been discontinued, however these devices should be updated to firmware version 2.17.0.3 to include cybersecurity updates. For more information see https://halodetect.com/.

Firmware version **2.14.3.0** is the last supported firmware update, however **2.17.0.3** includes required cybersecurity updates.

To leverage the latest features, including cybersecurity-related improvements, download the latest version of the firmware from https://halodetect.com/firmware-tools/

Introduction

Halo Smart Sensors are Internet of Things (IoT) devices which can detect environmental changes occurring in many locations including privacy concern areas where surveillance cameras can't be installed. Halo Smart Sensors are capable of detecting many things such as vaping, smoke, vaping with THC, specific keywords, occupancy, air quality, and aggression. Additional sensors give Halo the ability to monitor air quality index (AQI), temperature, humidity, many hazardous chemicals and more. When the sensor values exceed threshold levels, Halo Smart Sensor can send alerts to responders.

To leverage the latest features, including cybersecurity related improvements, download the latest version of the firmware from https://halodetect.com/firmware-tools/

Hardware Overview

NOTE

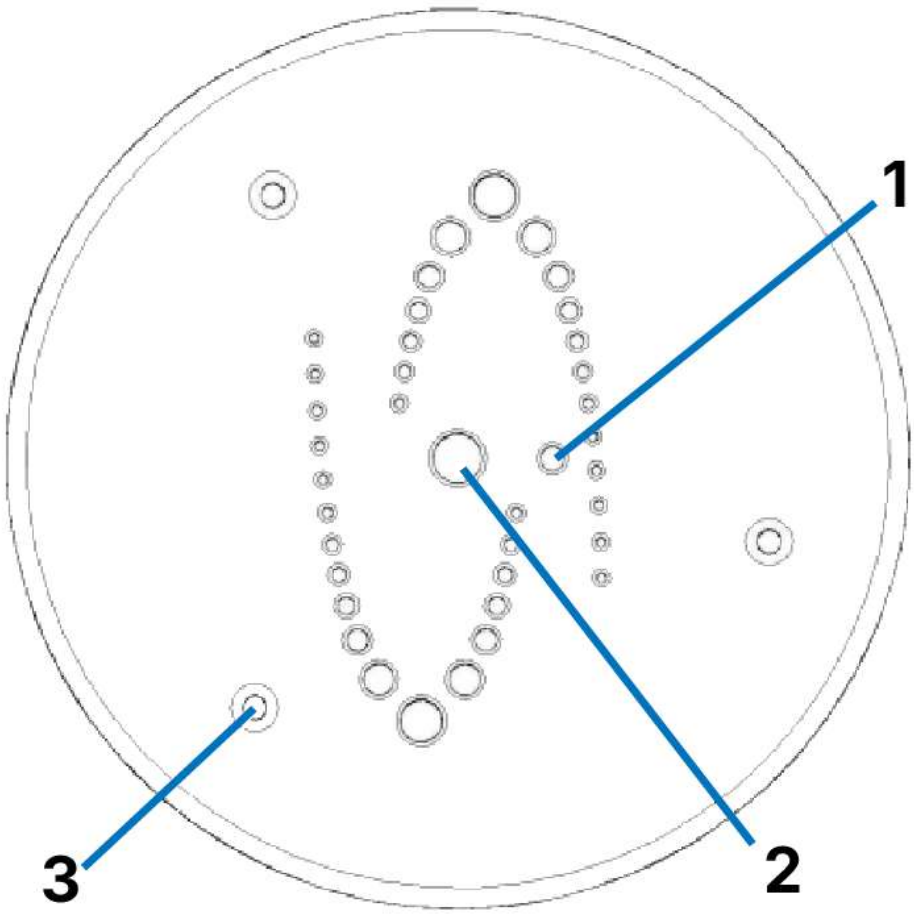
The product shall be connected using a shielded network cable (STP). All cables connecting the product to the network shall be intended for their specific use. Make sure that the network devices are installed in accordance with the manufacturer's instructions. For information about regulatory requirements, see*Electromagnetic Compatibility* on page 42.

REMARQUE

Le produit doit être connecté à l'aide d'un câble réseau blindé (STP). Tous les câbles reliant le produit au réseau doivent être destinés à leur utilisation spécifique. Assurez-vous que les périphériques réseau sont installés conformément aux instructions du fabricant. Pour plus d'informations sur les exigences réglementaires, voir *Electromagnetic Compatibility* on page 42.

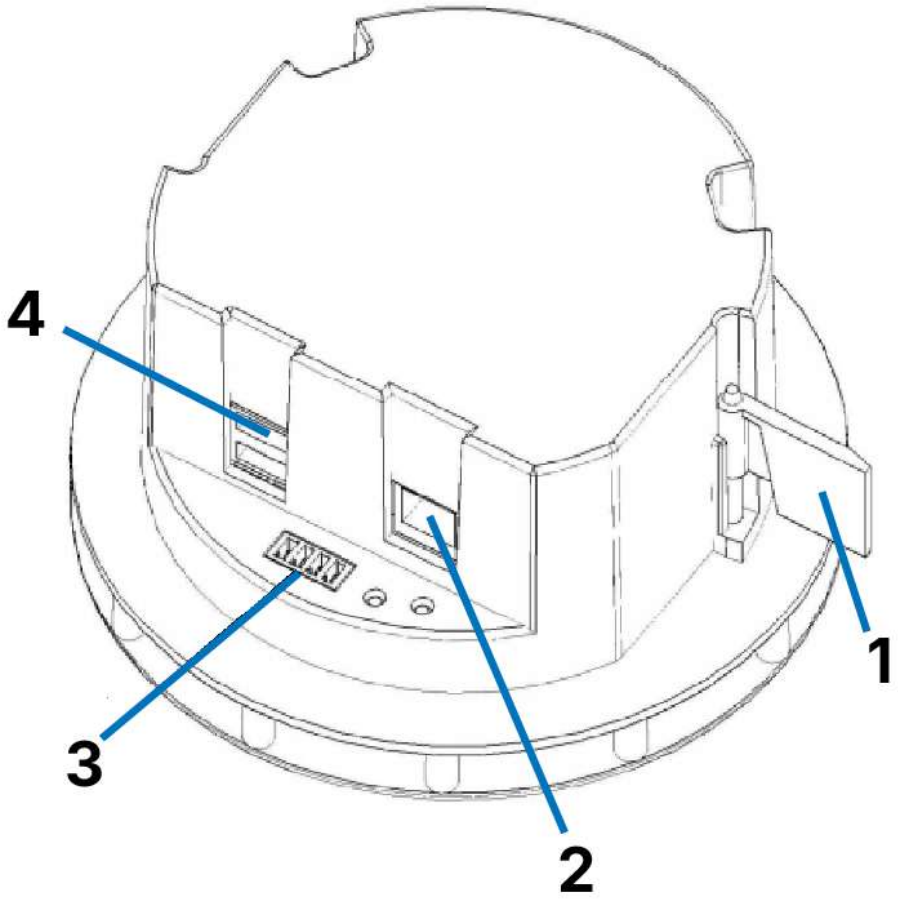
Halo 2.0 Overview

Front View



1. Light sensor
2. Multi-color LED indicator
3. Cover-securing screws (3) - T10 Torx driver required

Back View

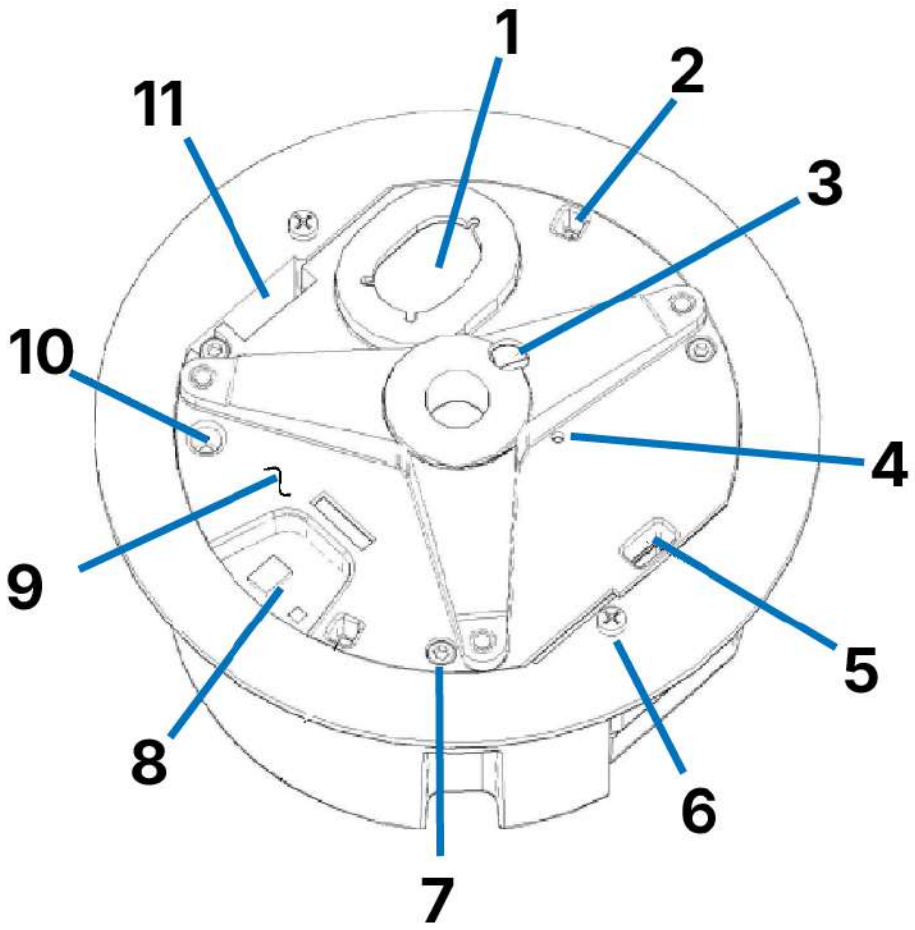


1. Locking wing
2. Network connection (RJ-45) - requires 802.3af PoE
3. Relay connection (plug supplied)
4. USB ports - currently unused

Inside View

NOTE

The outer cover must be removed (by removing the three T10 TORX screws [5] with the provided wrench) during installation and to perform a manual factory reset. The figure below shows details exposed when the Outer Cover is removed.

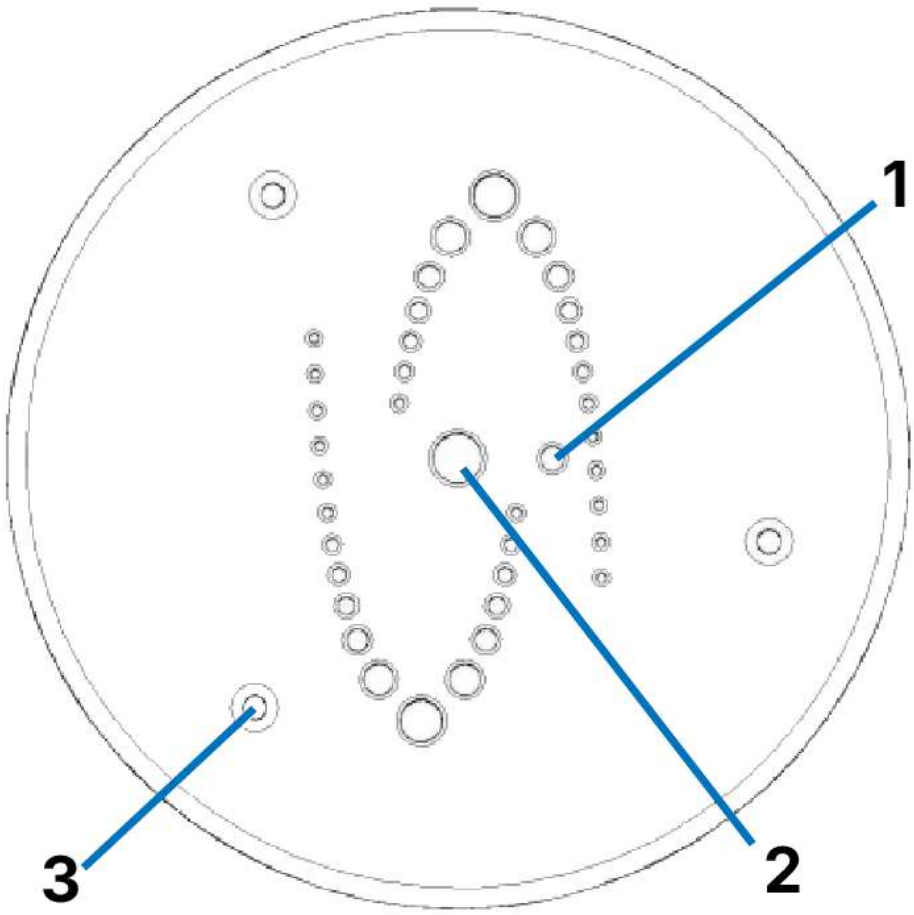


1. Loudspeaker
2. Microphones (2)
3. Light sensor on PC board
4. Reset button on PC board
5. Particle air intake port
6. Clamping screws (2)
7. Inner cover mounting screws (3)

8. Gas sensors
9. Inner cover
10. Temperature and humidity sensor
11. Particle air exhaust port

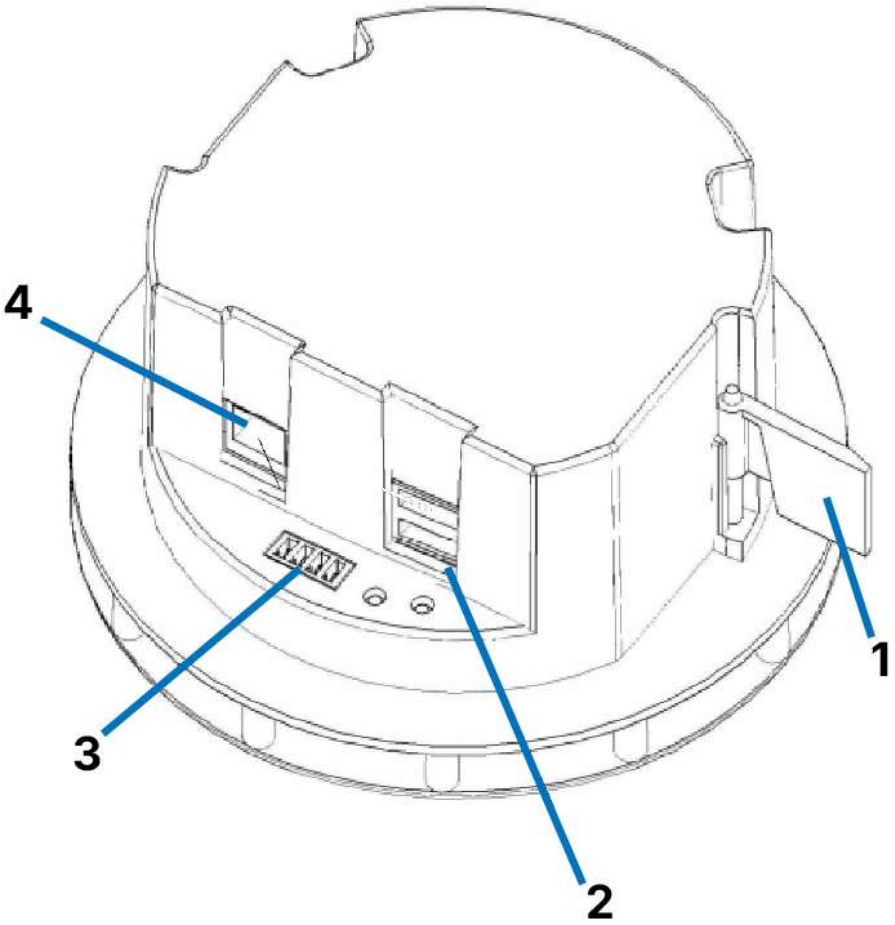
Halo 2C Overview

Front View



1. Light sensor
2. Multi-color LED indicator
3. Cover-securing screws (3) - T10 Torx driver required

Back View

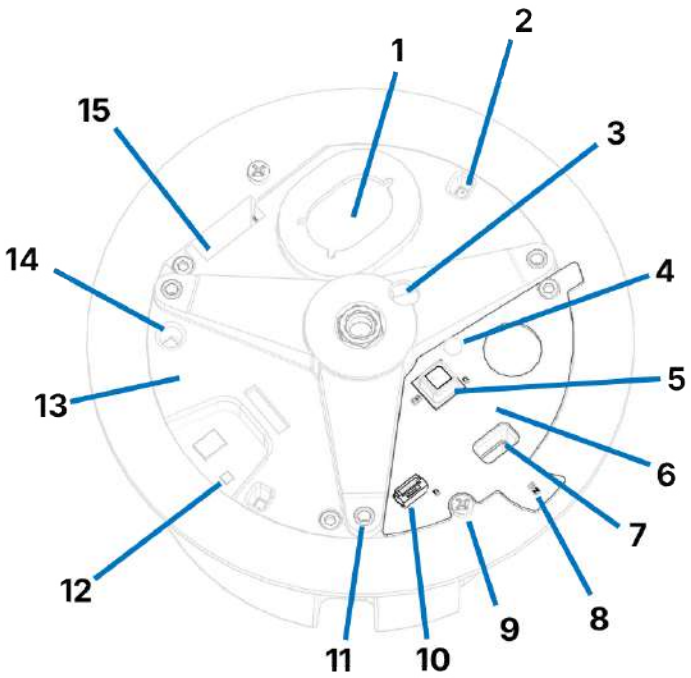


1. Locking wing
2. USB ports - currently unused
3. Relay connection (plug supplied)
4. Network connection (RJ-45) - requires 802.3af PoE

Inside View

NOTE

The outer cover must be removed (by removing the three T10 TORX screws [5] with the provided wrench) during installation and to perform a manual factory reset. The figure below shows details exposed when the Outer Cover is removed.

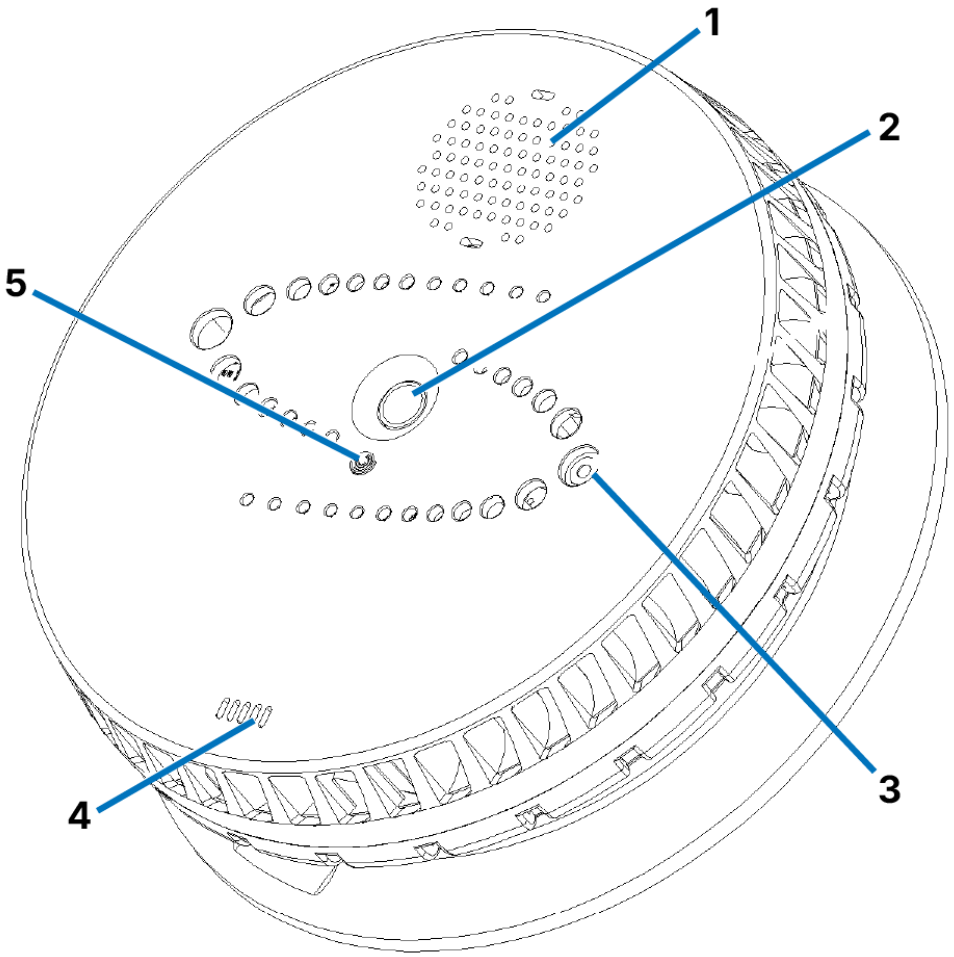


1. Loudspeaker
2. Microphones (2)
3. Light sensor on PC board
4. Reset button hole on PC board
5. Gas sensor
6. Halo 2C expansion board
7. Particle air intake port
8. Temperature/Humidity sensor
9. Clamping screws (2)
10. Plug connector
11. Inner cover mounting screws (3)
12. Gas sensor

13. Inner cover
14. Temperature and humidity sensor
15. Particle air exhaust port

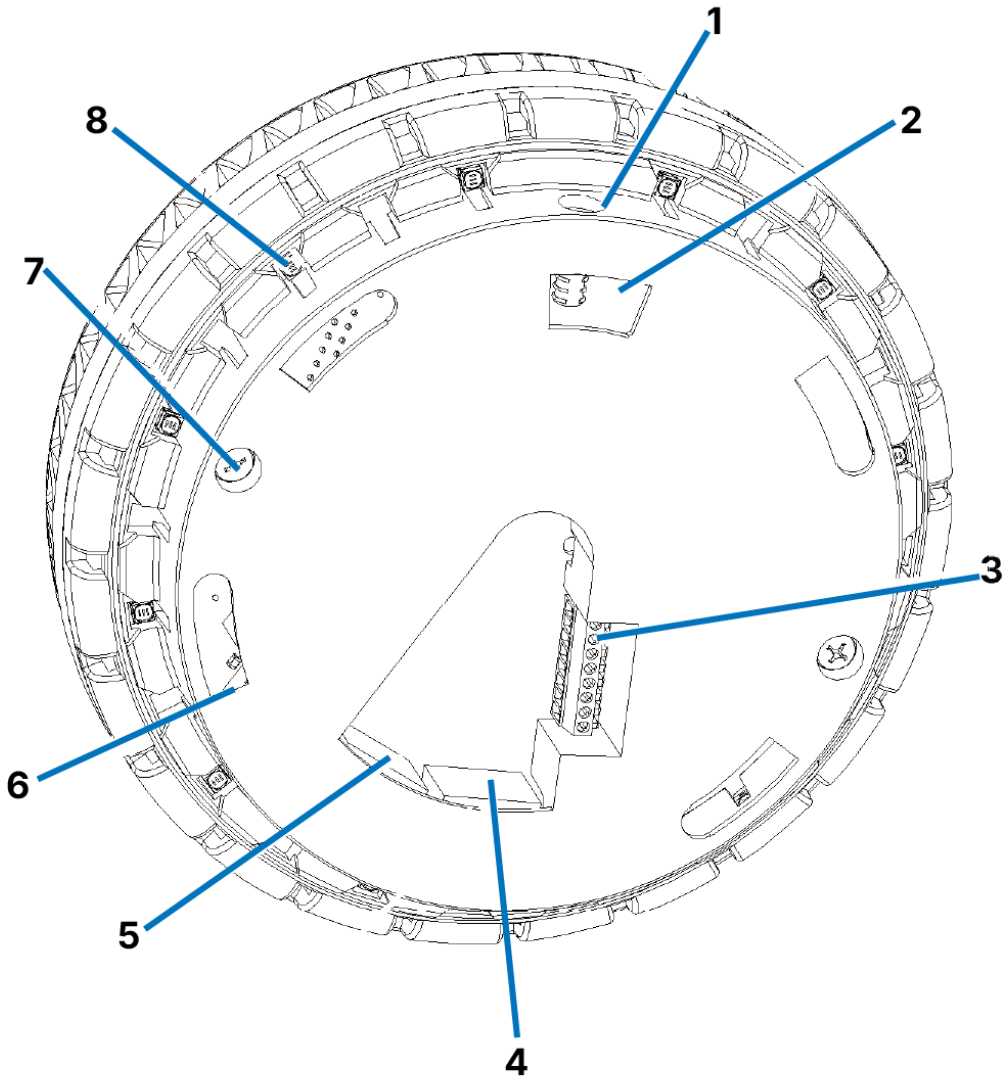
Halo 3C / 3C-PC Overview

Front View



1. Speaker grill
2. PIR sensor
3. Occupancy sensor
4. Particle sensor port
5. Lux sensor

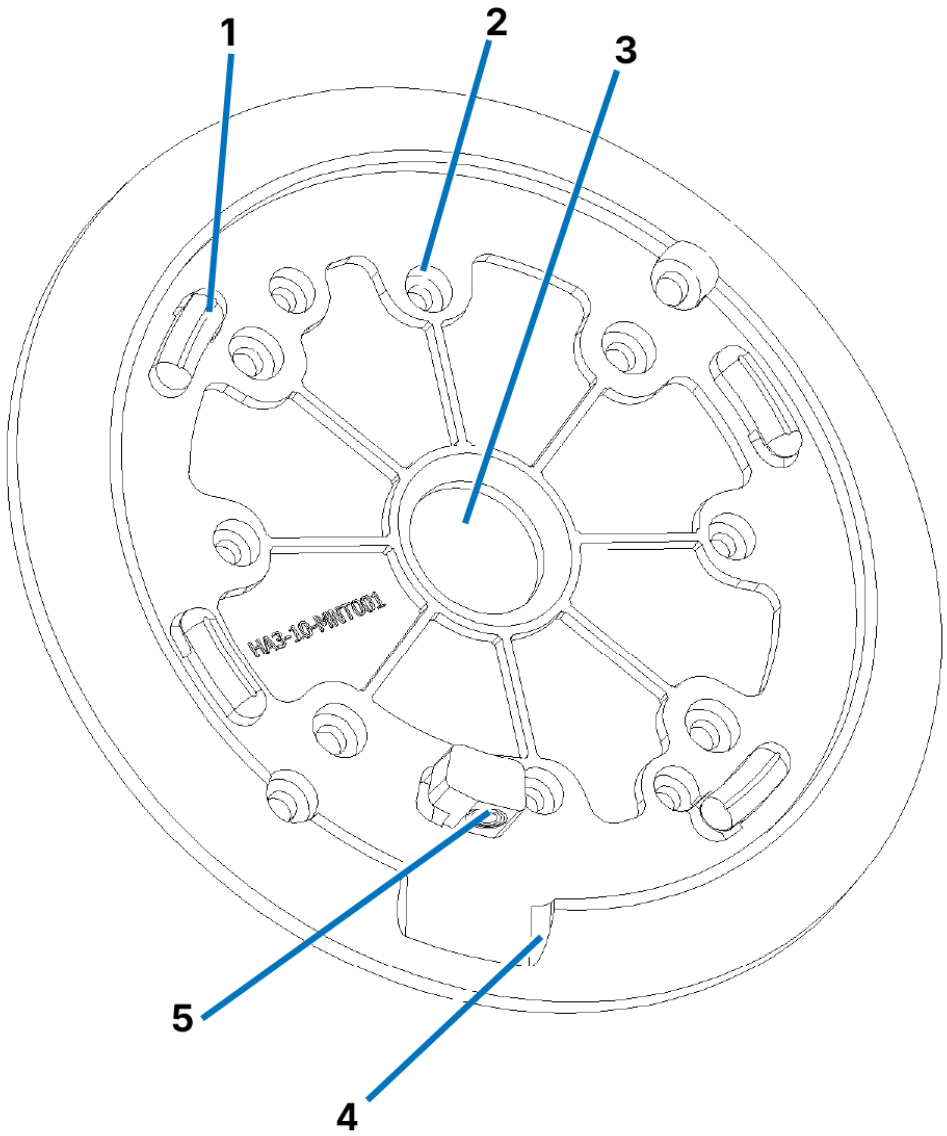
Back View



1. Security screw slot for locking mechanism
2. Slot for mounting plate locking mechanism
3. External connector terminal block
4. Downstream network connection - supplies 802.3af PoE
5. Input network connection (RJ-45) - requires 802.3at or 802.3af PoE
6. Slot for mounting plate (4)
7. Screw for unit assembly (2)
8. Multi-color LED light (12)

Inside View

To perform a manual factory reset, the device must be separated into two halves by undoing the security screw from the locking mechanism, then twisting the device apart. The figure below shows details exposed when the Mounting Plate is removed.



1. Mounting plate lock (4)
2. Mounting screw hole (12)
3. Opening for Ethernet external connection wires
4. Clearing for security screw
5. Security screw locking mechanism

Preparing for Installation

Required Tools and Materials *20*

Package Contents *20*

Required Tools and Materials

NOTE

Halo sensors require a wired Ethernet connection, not to exceed 100m (300') in length, which must provide a standard PoE (IEEE 802.3af).

Halo 2 and 2C

The following tools are required to complete the installation but are not included in the package:

- #2 Phillips screwdriver
- 120 mm (5') hole saw, or hand saw for creating mounting hole

Halo 3

The following tools are required to complete the installation but are not included in the package:

- #2 Phillips screwdriver
- Sheetrock anchors and accompanying screws
- 19 mm (3/4") drill with spade bit, hole saw, or hand saw for creating cable hole

Package Contents

Ensure the package contains the following:

- Halo Smart Sensor
- Mounting template sticker
- Mounting plate
- T10 Torx wrench

Selecting an Installation Location

When selecting a location for your sensor, look for areas that are:

- away from any HVAC units, fans, vents or return ducts
- away from the door between two rooms
- without significant background noise or vibration

NOTE

When deployed for Air Quality and Environmental Monitoring (AQI), do not install the sensor directly above or beside fuel-burning appliances, as these may emit a small amount of carbon monoxide upon start-up. The sensor should be at least 547 cm (15') away from heating or cooking appliances, or humid areas such as bathrooms with showers. Consult with your Authorized iPVideo Dealer for AQI placement guidance.

There are additional considerations, depending on whether you want to install the sensor:

- on the ceiling
- on a wall

NOTE

Wall installation is only applicable for the Halo 3C when used for AQI.

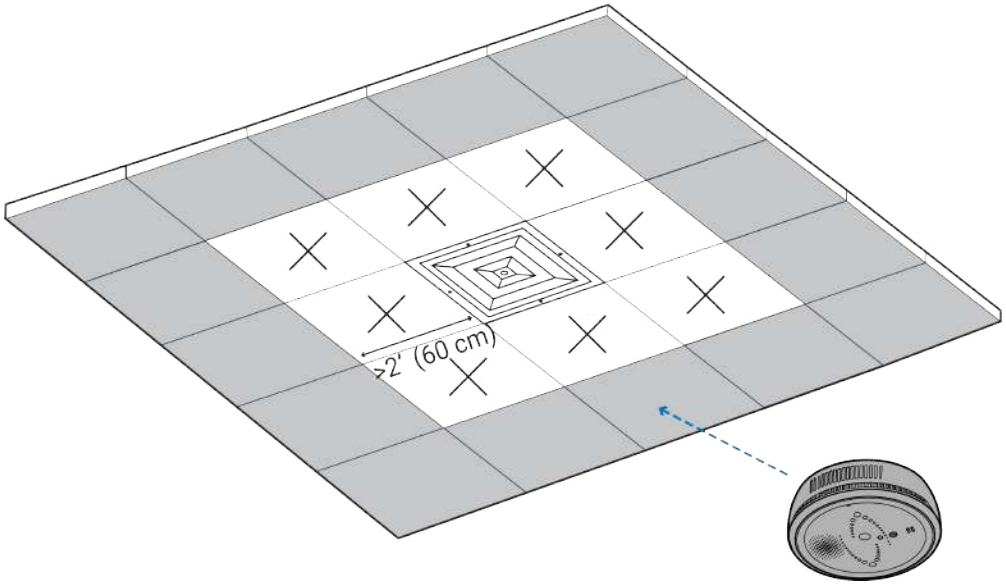
Ceiling Installation

When the sensor is installed on the ceiling, it should be installed at a height of 240 cm (8').

NOTE

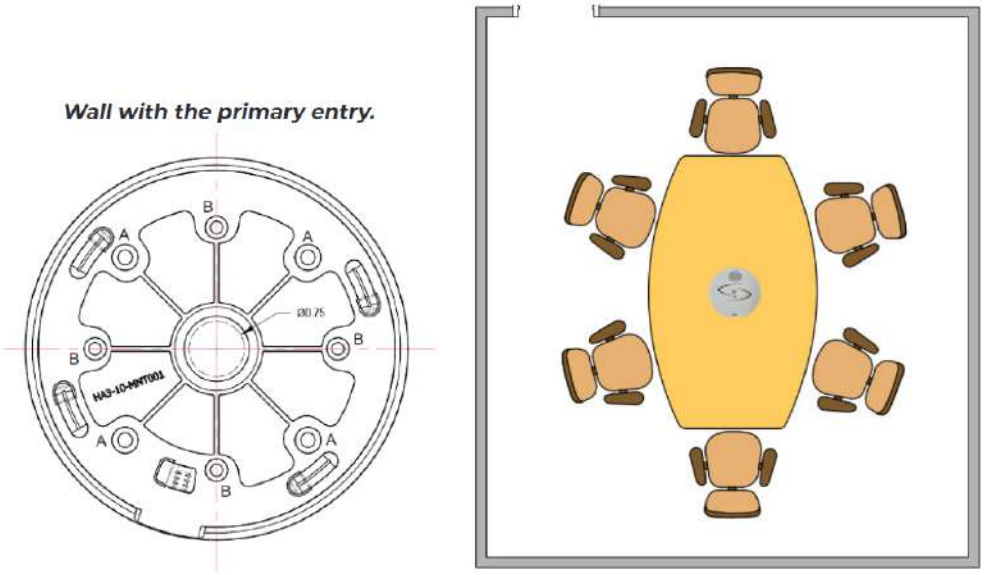
The area of coverage is affected by ventilation in the room and ceiling height. A pendant mount is available to keep the sensor at the recommended height.
For example, when mounted at the recommended height, the area of coverage for Vape Detection is a 366 cm (12') radius.

The sensor must be installed at least one 60 cm x 60 cm (2’ x 2’) ceiling tile away from any air vent or HVAC unit.



Occupancy Sensor Placement

When installing your sensor to detect occupancy, ensure that the speaker on the sensor faces the side of the room with the primary entry.



Wall Installation

NOTE

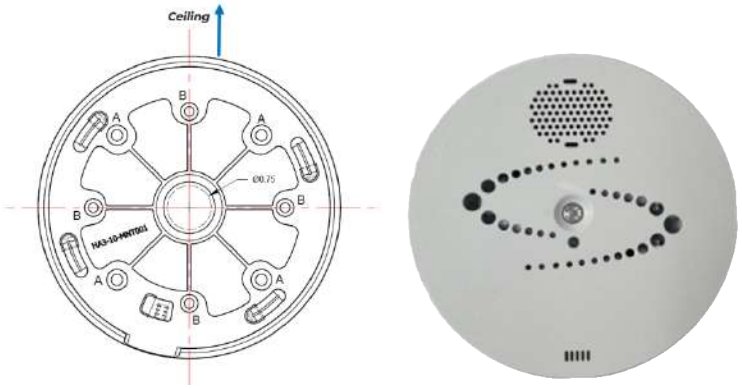
Wall installation is only intended for the Halo 3C model when used for AQI. For all other models and applications, a ceiling installation is required.

For most applications, the sensor should be installed 8' to 9' (240 - 274 cm) from the floor.

Ensure the particle sensor is at least 2' (60 cm) away from any inside corners.

Ensure the sensor is properly aligned, the:

1. on-board microphone is at the bottom
2. speaker is at the top



Installing the Halo Sensor

Installing a Halo 2 or 2C Sensor *24*

Installing a Halo 3 Sensor *26*

Installing a Halo 2 or 2C Sensor

NOTE

Before installing your sensor, ensure the ceiling material is 3-19 mm (0.06”- 0.75”) thick.

1. Use the template (included in package) and a hole saw, make a 120 mm (5.0”) hole at the location in which you want to install your sensor.

   NOTE

   Clean up and make sure dust or material from cutting the hole doesn't come into contact with your sensor.

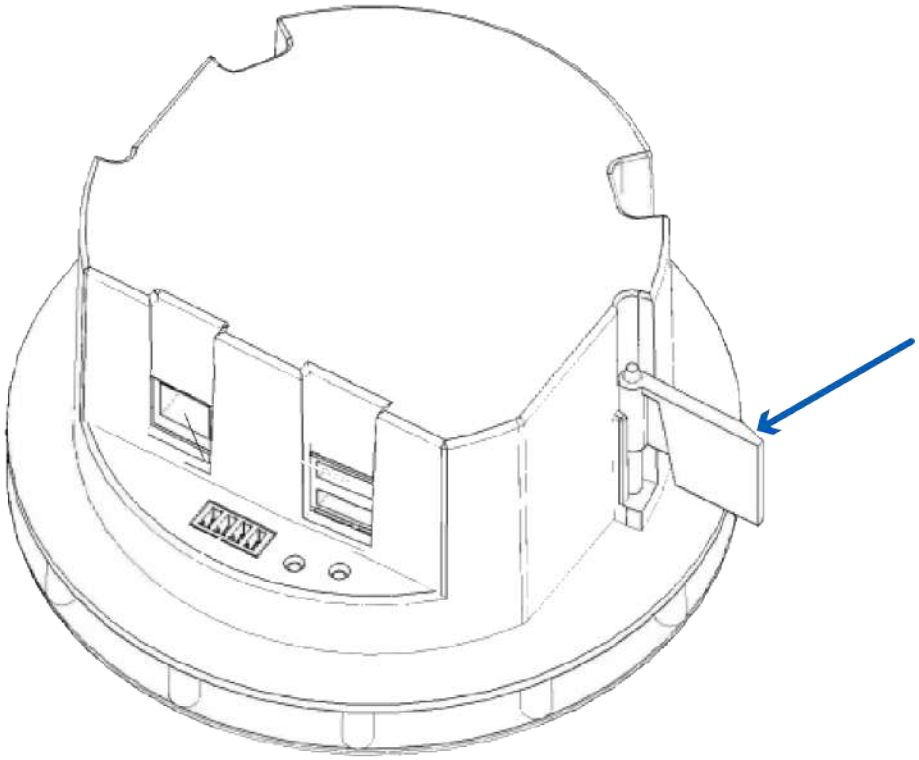
2. Pull the Ethernet cable through the hole.
3. Use the Torx wrench (included in the package) to remove the 3 securing screws holding the outer cover on.
4. Plug the network cable into the RJ-45 jack on the side of the sensor. After 10-15 seconds the green LED in the lower left corner starts blinking, indicating a good network connection and power supply.
5. Insert the sensor into the hole.

   NOTE

   Be careful not to damage the network cable during this process.

6. Use a #2 Phillips screwdriver to tighten the two clamping screws, located on either side of the sensor.
    - in the **2.0** *Inside View* on page 11, this is **6**
    - in the **2C** *Inside View* on page 15, this is **9**

    Tightening the clamping screws, rotates the locking wings to an extended position and pulls them down to secure the sensor against the ceiling.



> **NOTE**
>
> Do not over-tighten the clamping screws.

7. Put the sensor outer cover back on, aligning the cover's screw holes with the mounts on the sensor, and use the Torx wrench to tighten the 3 securing screws.

Installing a Halo 3 Sensor

NOTE

Before installing your sensor, ensure the ceiling material is 3-19 mm (0.06”- 0.75”) thick.

1. Drill a 19 mm (¾”) hole at the location in which you want to install your sensor.

   NOTE

   Clean up and make sure dust or material from cutting the hole doesn't come into contact with your sensor.

2. Position the mounting plate, so the previously drilled hole lines up with the center hole in the mounting plate and mark 4 holes in either the A or B pattern on the template.

   NOTE

   If you are using your sensor for occupancy detection, or installing it on a wall, ensure the mounting plate is correctly oriented for your application.

3. Drill holes at the marked locations.
4. Install anchors into the holes.
5. Position the mounting plate again, and insert screws through the mounting plate into the anchors.
6. Pull the Ethernet cable through the hole.
7. Plug the network cable into the RJ-45 jack (labeled IN) on the back of the sensor. After 10-15 seconds the green LED in the lower left corner starts blinking, indicating a good network connection and power supply.
8. Place the sensor on the mounting plate and rotate counterclockwise to lock into place.
9. Use the Torx wrench (included in the package) to tighten the security locking screw on the side of the sensor.

Connecting the Halo Sensor to the Network

Finding the Sensor's IP Address *27*

Choosing a Tool to Access Sensor Settings *28*

Creating the Initial User *28*

Finding the Sensor's IP Address

After you have added the sensor to the network, you must find the sensor’s IP address. You need the sensor’s IP address to access and configure the sensor’s settings. The network assigns an IP address automatically, as soon as you connect the sensor.

Connecting to the Same Subnet

To ensure connectivity, your sensor and the computer you are using must be on the same subnet:

- **If DHCP is enabled**, set the client machine to obtain a DHCP assignment so the sensor is automatically added to the same subnet.
- **If DHCP is not enabled**, set the client machine for zero-configuration networking (zero-conf). The sensor uses zeroconf to obtain an IP address in the 169.254.x.x range. Zero-conf is the default behavior for Windows OS when DHCP is not available.

Autodiscover the Sensor

After you have added the sensor to the network, you must find the sensor’s IP address.

Autodiscover the sensor using the **Halo Device Manager (HDM)** (version 2.9.8 and later). Download the latest version from https://halodetect.com/firmware-tools/.

Alternative Methods to Find the IP Address

If you don't have access to one of those applications, consider one of these options:

- **ARP/Ping:** For factory-default sensors without administrator credentials, you can use the arp Windows command to add an entry to the ARP table. Then, by powering on the sensor and simultaneously pinging it with the desired new IP address, the sensor adopts that address.
- **DHCP Assignment:** Your network administrator can check the DHCP server for assigned IP addresses on the network.

Choosing a Tool to Access Sensor Settings

There are two different tools you can use to configure your sensors:

- The **Halo Web UI** - use the sensor web interface to initialize and configure sensors individually from a web browser. Enter the sensor's IP address in a web browser to access the web interface. See the **Halo Web UI User Guide** for more information.
- The **Halo Device Manager** (HDM) - use the HDM (version 2.9.8 or later) to discover, initialize and configure sensors. The HDM can discover and connect to many sensors at once. You can also use HDM to configure and bulk apply common settings to sensors. See the **Halo HDM User Guide** for more information.
  Download the latest version of the HDM from https://halodetect.com/firmware-tools/

Creating the Initial User

New sensors come without a default username or password. You must create an initial user with administrator privileges and log in to the sensor before the sensor becomes operational.

You need the sensor's IP address to create the initial user. See "Finding the Sensor's IP Address" on page 1 for information on how to obtain the sensor's IP address.

Use one of the following tools to create the initial user:

- **Halo Web User Interface** — enter the sensor's IP address in a web browser to access the web interface. When you log into the Web UI for the sensor for the first time, the system redirects you to the Add a new user page to create the first user.
- **Halo Device Manager (HDM)** - scan for devices. Any sensors discovered in the factory default state are identified in blue text. Click **First-Time Setup** and create the first user.
  Version **2.9.8** and later is required. Download the latest version of the HDM from https://halodetect.com/firmware-tools.

External Connections

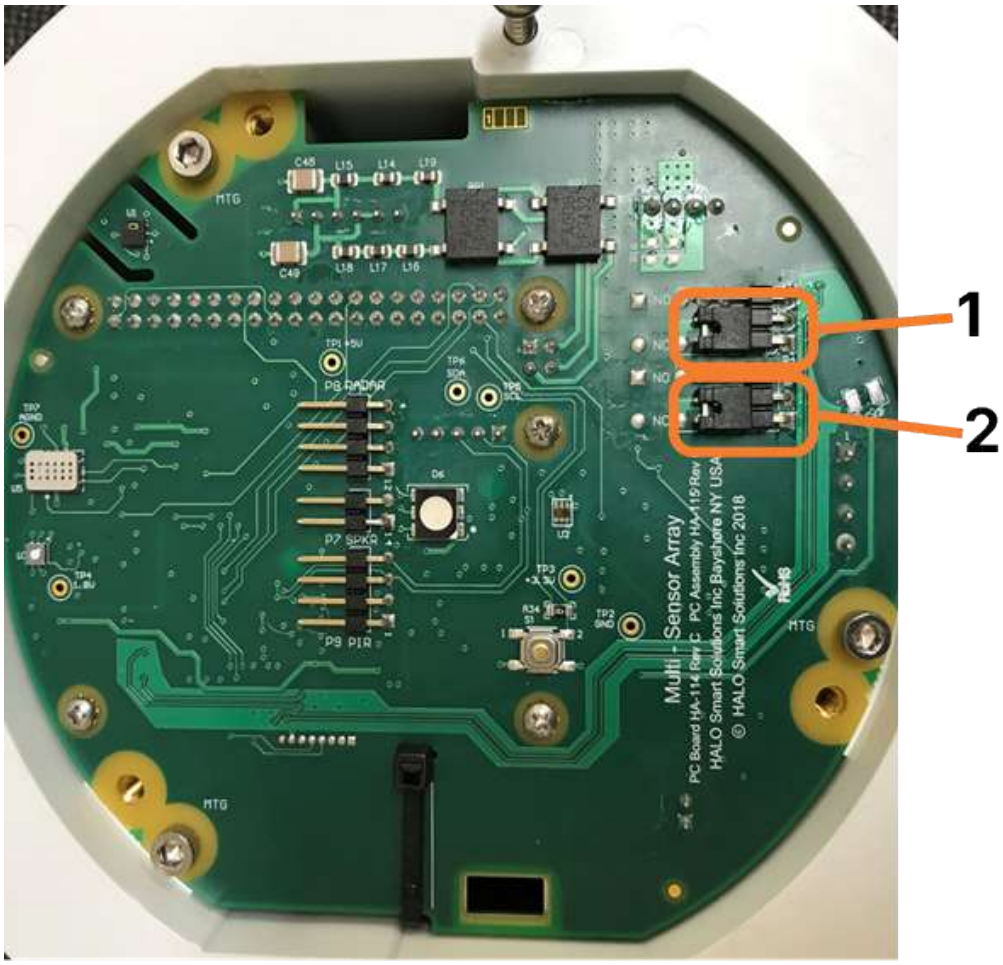
Your Halo sensor supports connecting other devices. This section describes how those connections can be made.

Halo 2.0 and 2C Relays *29*

Halo 3C Relays *30*

Halo 2.0 and 2C Relays

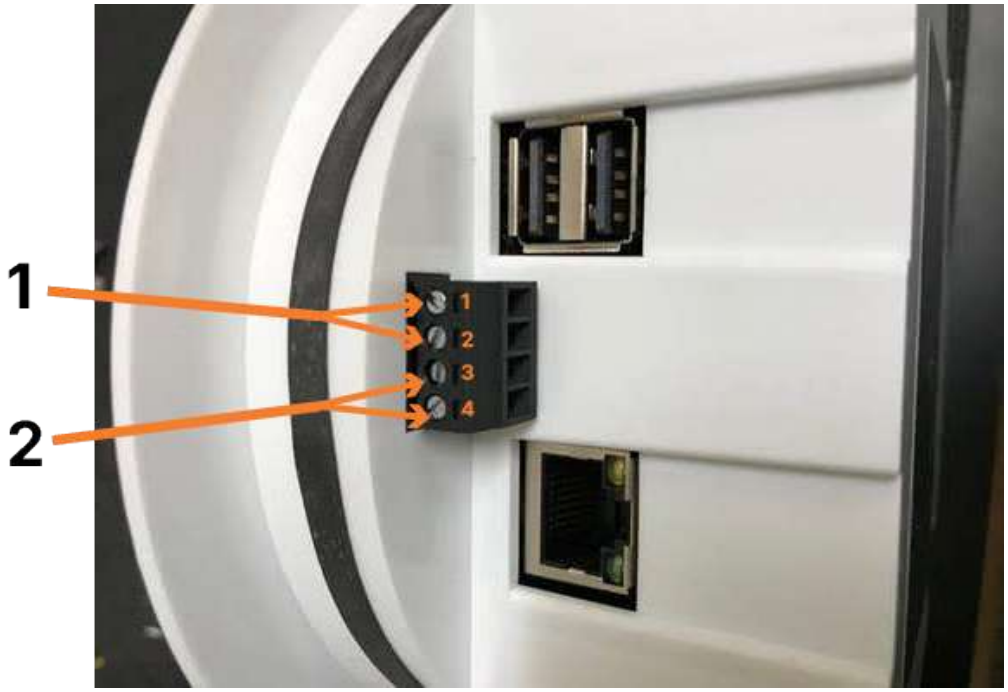
The sensor features two relay controllers that can trigger an external system upon an Event.



1. Relay 1
2. Relay 2

The relay controls are set to Normally Closed (NC) by default. The ports can be switched to Normally Open (NO) by switching jumper pins. The Jumper Pins are located on the board. The top two covers of the Halo Smart Sensor need to be removed to expose the Relay Jumper Pins.

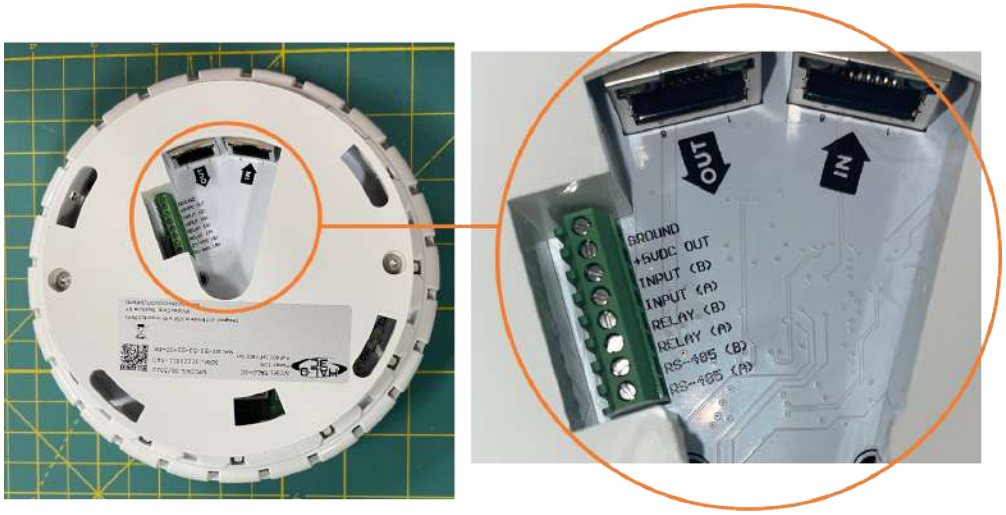
Once exposed, the default state of each relay can be adjusted independently by moving the jumpers from NC to NO.



1. Pins 1 and 2 are Relay 1
2. Pins 3 and 4 are Relay 2

Halo 3C Relays

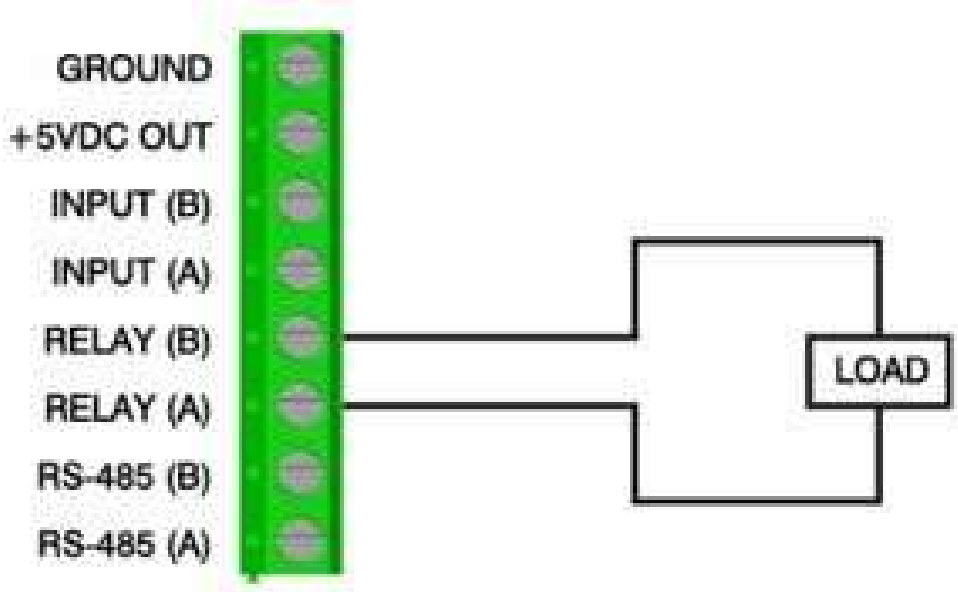
The Halo 3C contains a single solid state relay which uses Relay (A) & Relay (B) to open and close the circuit loop. By default, the relay is in a closed state meaning the loop is closed. Once an event triggers the relay, it opens the circuit. This means that, by default, current flow is through the load due to the closed state.



Connections:

- Ground
- +5VDC OUT
- INPUT (B)
- INPUT (A)
- RELAY (B)
- RELAY (A)
- RS-485 (B)
- RS-485 (A)

Once the Halo event triggers with the relay set, the relay opens the circuit.



NOTE

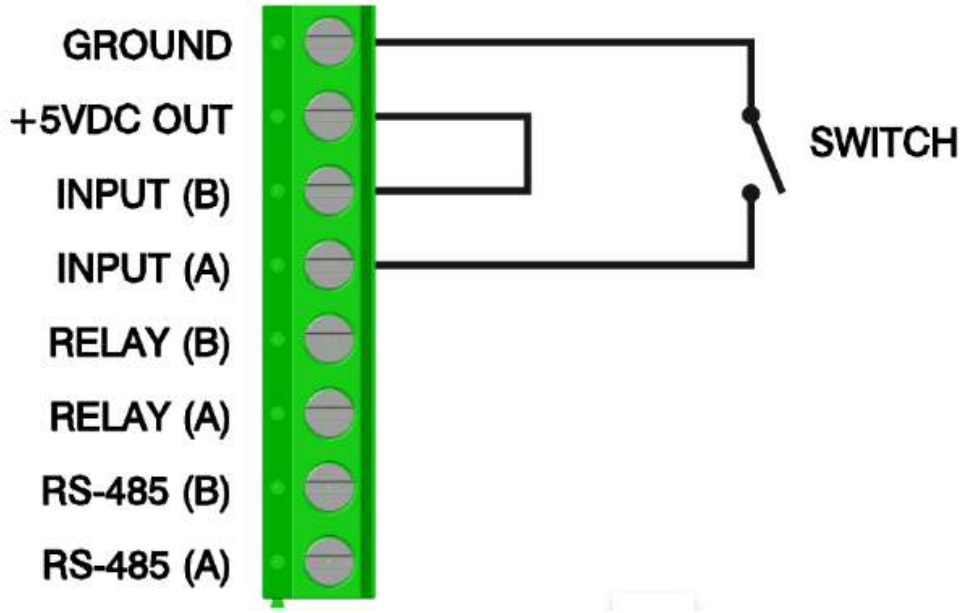
The maximum amount of current the output side of the relay can handle is 500mA

External Input

Halo-3C has the ability to read HIGH/LOW voltage signals from outside devices to trigger events on the device. Voltage potential is limited to 24V between the two connections. Once a voltage is seen across the two connections, the event triggers on the Halo GUI.

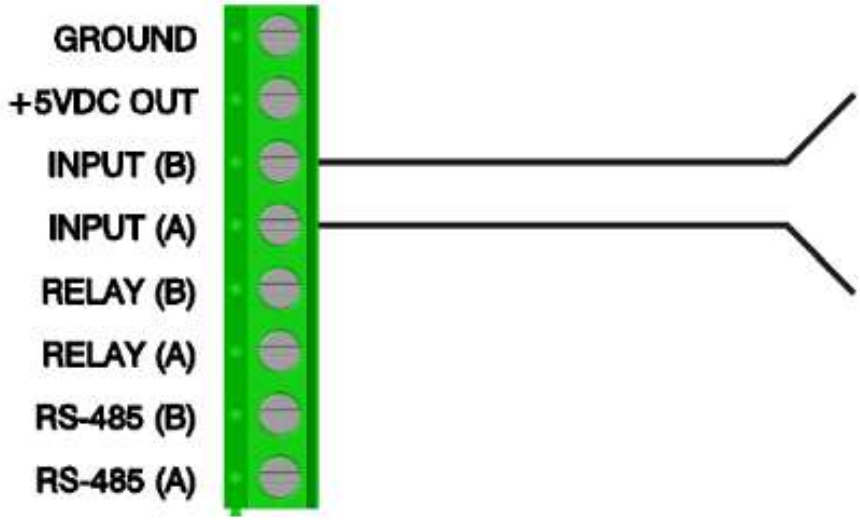
Example 1

- Connect Pin 8 (GROUND) to Pin 5 (INPUT A) with a switch. The switch acts as a method to trigger the event.
- Connect Pin 7 (+5VDC OUT) to Pin 6 (INPUT B)



Example 2

- Apply voltage to Pin 5 (INPUT A) with COM/GND to Pin 6 (INPUT B).
- 5V - 25V DC non polarized required to trigger an event.



The input circuit draws 6mA@24VDC and 1mA@5VDC.

Device Maintenance

Factory Reset

Halo 2.0 and 2.5

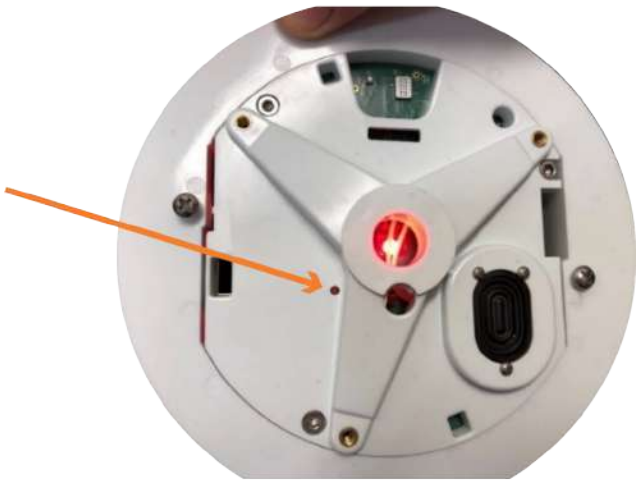
Your sensor includes a hard-reset button that can revert the settings to the Factory Defaults.

> **NOTE**
>
> The outer cover of the sensor must be removed to expose the reset button.

To reset your sensor:

1. Ensure the device has been on for more than 30 seconds.
2. Using a straightened paperclip or similar device:
    a. Press and hold the button until the LED turns violet to remove all users and reboot.
    b. Press and hold the button until the LED turns green to remove all users, switch to DHCP and reboot.
    c. Press and hold the button until the LED turns red to remove all users, switch to DHCP, clear all configuration files and reboot.

Halo v2.0 Variable Reset Button Location



Halo 2C Variable Reset Button Location



Halo 3C

To factory reset Halo-3C contact support at support.ipvideo@motorolasolutions.com or 1-866-797-1300

Have your warranty information prepared to confirm ownership.

Maintenance

Halo is an environmental sensor and as such, proper maintenance keeps your sensor operating at peak levels. These are our recommended best practices for your sensor maintenance.

Notify appropriate staff of alarms that will be activated during cleaning or disable alerts via the HALO GUI interface or HDM.

NOTE

Levels of some of the sensors may read high levels for apx 3 – 5 minutes.

Halo-V2.00 / 2C

Remove only the first front cover using T10 torx wrench. Do not remove the next cover.

Wipe the cover that was removed on both sides with a 75% Saturated Alcohol Wipe.

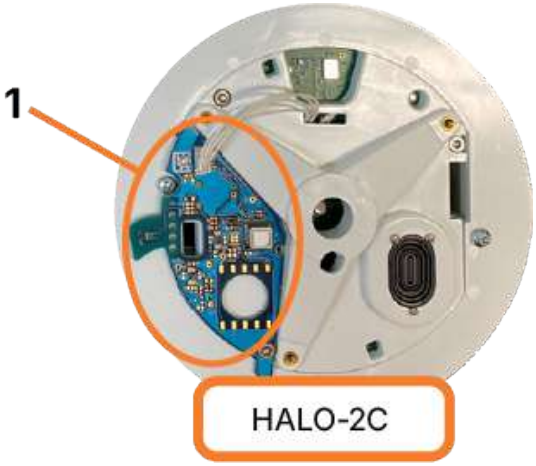
Halo-V2.00

Wipe the inside surface with a 75% Saturation Alcohol Wipe.



Halo-2C

Wipe the sensor with a 75 % Saturation Alcohol Wipe avoiding the blue exposed sensor board (**1**).



Screw back in the front cover.

Halo-3C

- We recommend using an ESD Safe vacuum to pull dust from within.
- Wipe the outside with a slightly damp cloth.

CAUTION

DO NOT:

- forcibly push the wipe into any of the holes on the sensor where it would come in direct contact with a sensor or circuit board
- open Halo-3C for maintenance
- use detergents,alcohol, or other cleaners

Cleaning Frequency

Frequency for cleaning is based on the environment and amount of sediment collecting on the Halo housing.

We recommend cleaning the sensor at least every 90 days.

Maintaining Your Thresholds

Environments change over time. Periodic review of your environmental conditions ensures that your thresholds are set appropriately, and you can receive notifications of events.

Review active events signatures in your Halo.

Use the Cloud Analytics or Halo log to establish average levels of the events and signatures you are using.

Adjust the thresholds of your active signatures and events to appropriate levels.

Testing



NOTE

The following LED responses are defined in the “Presets” of firmware 2.3 or newer.

Vape Detection Test

Testing Product: Cirrus Wind Indicator

Process: Activate cartridge and pump for 10 seconds from directly below Halo Smart Sensor at 5’ height.

Results: Vape Alarm, Green LED Indicator

Keyword Test

Process: Clearly speak the active keyword from directly below Halo at slightly elevated speaking volume. Word options include:

- Help Emergency
- Help Nine One One
- Help One One One
- Help Triple Nine
- Help Triple Zero

> **NOTE**
> Typically only 1 of the keywords is active on a given device.

Default Actions: Help Alarm, Violet LED Indicator

Additional keywords available on Halo-3C and 3C-PC

- Halo Privacy
- Halo Clear
- HALO Check In
- socorro auxilio [Spanish]
- aidez moi au secours [French]
- aiuto soccorso [Italian]
- ajuda emergência [Portugese]
- hoy brilla la luna [Spanish]
- ayuda, ayuda, ayuda [Spanish]

Tamper Detection Test

Process: Knock on the Halo Smart Sensor 3-5 times.

Results: Red LED Indicator

Particulate, CO2, & TVOC Test

Testing Product: CRC Smoke Test, canned

Process: Sprayed directly at Halo from 2’ away for 2-3 seconds as directed.

Results: PM2.5 Rise 200+ µg/m³, PM 10 Rise 500+ µg/m³, CO2eq (or CO2cal) Rise 8,000+ppm, TVOC Rise 4,000+ppb. (Observed in “Sensors” view, confirmed in event logs)

Alerts: Masking event (Detected using revised Halo v2.3 Masking Advanced conditions), Yellow LED Indicator

Temperature Test

Testing Product: FLUKE-62 MAX Infrared Thermometer

Process: Aim thermometer directly at Halo. Compare to Halo displayed values. Calibration: Under the “Device” tab under “Heat Sensor” input temperature offset to calibrate. The values are in Celsius and (+) and (-) values are accepted.

Safety and Legal

Safety Information

The following convention is used within this manual. French translations of the critical levels are included.

Hazard Levels



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



IMPORTANT

Indicates a situation which, if not avoided, could result in damage to property.



AVERTISSEMENT

Indique une situation dangereuse qui, si elle n'est pas évitée, pourrait entraîner la mort ou des blessures graves.

PRUDENCE

Indique une situation dangereuse qui, si elle n'est pas évitée, pourrait entraîner des blessures mineures ou modérées.



IMPORTANT

Indique une situation qui, si elle n'est pas évitée, pourrait entraîner des dommages matériels.

Other Message Levels

NOTE

Indicates significant information which is essential for the product to function correctly.

TIP

Indicates useful information which helps in getting the most out of the product

Trademark

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Vista and WWW are registered trademarks of the respective holders. Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates. SD, SDHC and SDXC are trademarks or registered trademarks of SD-3C, LLC in the United States, other countries or both. Also, miniSD, microSD, miniSDHC, microSDHC, microSDXC are all trademarks or registered trademarks of SD-3C, LLC in the United States, other countries or both.

Legal Considerations

WARNING

Halo Smart Sensors are NOT a LIFE SAFETY Device. They do NOT replace such LIFE SAFETY Devices as CO (Carbon Monoxide) monitors or Smoke Detectors.

AVERTISSEMENT

Halo Smart Sensors n'est pas un appareil LIFE SAFETY. Il ne remplace PAS les dispositifs LIFE SAFETY tels que les moniteurs de CO (monoxyde de carbone) ou les détecteurs de fumée.

Environmental and behavioral monitoring can be regulated by laws that vary from country to country. Halo has been designed to prohibit any direct monitoring or recording of video or audio, please check your local laws to ensure compliance.

Liability

Every care has been taken in the preparation of this document. Please inform your local IPVideo Corporation office of any inaccuracies or omissions. IPVideo Corporation cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and manuals without prior notice. IPVideo Corporation makes no warranty of any kind with regard to the material contained within this document including, but not limited to, warranties of merchantability and fitness for a particular purpose. IPVideo Corporation shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance, or use of this material. This product is only to be used for its intended purpose.

Intellectual Property Rights

IPVideo Corporation has intellectual property rights relating to technology embodied in the product described in this document. In particular, and without limitation, these intellectual property rights may include on one or more patents or pending patent applications in the US and other countries. A list of relevant patents may be found at https://halodetect.com/patents/.

This product contains open source and licensed 3rd party software components. The complete list of open source and licensed 3rd party software components can be found through the Dashboard web page of Halo by navigating to: *About > Legal > View Licenses*.

Equipment Modification

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components. Unauthorized equipment changes will invalidate all applicable regulatory certifications and approvals.

Regulatory Information

Electromagnetic Compatibility

This equipment has been designed and tested to fulfill applicable standards for:

- Radio frequency emission when installed according to the instructions and used in its intended environment.
- Immunity to electrical and electromagnetic phenomena when installed according to the instructions and used in its intended environment.
- This equipment is not entitled to protection against harmful interference and cannot cause interference in duly authorized systems.

Antenna Specifications

HALO-v2.0, 2C, 3C, 3C-PC

Type	Value	Unit
Radio Frequency	2402-2480	MHz
Max Power	21.9	mW
Antenna Gain	3.5	dBi
Antenna Type	Internal	

For All Countries:

The use of EMC compliant support and auxiliary equipment with this device is required in order to fully comply with the EMC regulatory standards.

The Reg Models for HALO3 are: IA1AFAN (HALO3 with BT and WiFI) and IA1A1AN (Non-wireless HALO3).

RF Exposure (Wireless) Requirement:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

A separation distance of at least 20 centimeters should normally be maintained between the device and nearby persons.

Une distance de séparation d'au moins 20 centimètres doit normalement être maintenue entre l'appareil et les personnes à proximité.

EU WEEE



This symbol means that according to local laws and regulations your product should be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Some collection points accept products for free. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment WEEE.

Mexico HALO-3C, 3C-PC



IMDA HALO-3C, 3C-PC



Korean requirement:

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며,
모든 지역에서 사용할 수 있습니다.

FCC

The **HALO 2.0 / 2C** complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WARNING

Operation of this equipment in a residential environment could cause radio interference.

The HALO-3C & HALO-3C-PC has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been tested using a shielded network cable.

VCCI - HALO 2C

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

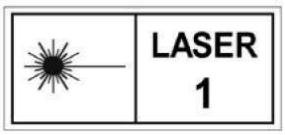
Translation

This is Class A equipment. Operation of this equipment in a residential environment could cause radio interference. In such a case, the user may be required to take corrective actions.

VCCI-A

Laser Safety Notice

HALO 2.0 / HALO 2C / HALO 3C



Halo Smart Sensors contain a **CLASS 1 LASER PRODUCT** in accordance with standard **IEC60825-1:2014. This product complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019**

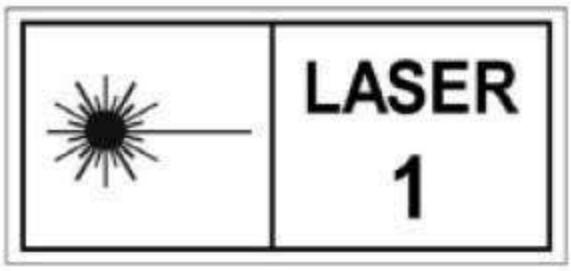
CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

No regular maintenance is required to keep this product in compliance.

Avis de sécurité laser

Halo Smart Sensors contient un PRODUIT LASER DE CLASSE 1 conforme à la norme IEC60825-1: 2014. Ce produit est conforme aux normes 21 CFR 1040.10 et 1040.11, à l'exception de la conformité à la norme IEC 60825-1 Ed. 3., tel que décrit dans l'Avis laser n ° 56 du 8 mai 2019



Halo Smart Sensors contient un PRODUIT LASER DE CLASSE 1 conforme à la norme IEC60825-1: 2014. Ce produit est conforme aux normes 21 CFR 1040.10 et 1040.11, à l'exception de la conformité à la norme IEC 60825-1 Ed. 3., tel que décrit dans l'Avis laser n ° 56 du 8 mai 2019

PRUDENCE
L'utilisation de commandes ou de réglages ou la réalisation de procédures autres que celles spécifiées dans le présent document peut entraîner une exposition à des radiations dangereuses.

Aucun entretien régulier n'est requis pour maintenir ce produit en conformité.

Considérations de maintenance de niveau 1

Les procédures de maintenance de niveau 1 pour le capteur intelligent Halo ne requièrent pas le retrait de composants susceptibles d'exposer l'assemblage laser de classe 1.

Level 1 Maintenance Considerations

Level 1 Maintenance procedures for the Halo Smart Sensor do not require removal of any components that would expose the Class 1 Laser Assembly.

Electrical Safety

HALO 2.0 / HALO 2C / HALO 3C

This product complies with IEC/EN/UL 60950-1, Safety of Information Technology Equipment. The product shall be grounded either through a shielded network cable (STP) or other appropriate method. The power supply used with this product shall fulfill the requirements for Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN/UL 62368-1 or IEC/EN/UL 60950-1.

HALO 3C

The HALO 3C family of sensors adhere to the KS X 3126 (electrostatic discharges) minimum performance criteria. In certain cases of exposure to a high level of ESD exposure the HALO 3C would require a power cycle to restore power to the downstream ethernet port.

Battery

These products use a lithium battery as the power supply for its internal real-time clock (RTC). Under normal conditions this battery will last for a minimum of five years. Low battery power affects the operation of the RTC, causing it to reset at every power-up. The battery should not be replaced unless required, but if the battery does need replacing, contact IPVideo Corporation support for assistance.

Lithium coin cell 3.0 V batteries contain 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME), CAS no. 110-71-4.

WARNING

- Risk of explosion if the battery is incorrectly replaced.
- Replace only with an identical battery or a battery which is recommended by IPVideo Corporation
- Dispose of used batteries according to local regulations or the battery manufacturer's instructions.

AVERTISSEMENT

- Risque d'explosion si la batterie est remplacée de manière incorrecte.
- Remplacez uniquement avec une batterie identique ou une batterie recommandée par IPVideo Corporation.
- Éliminez les piles usagées conformément aux réglementations locales ou aux instructions du fabricant.

Disposal and Recycling

When these products have reached the end of their useful life, dispose of it according to local laws and regulations. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. In accordance with local legislation, penalties may be applicable for incorrect disposal of this waste.

Support

Should you require any technical assistance, please contact your IPVideo Corporation Authorized Reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response. If you are connected to the Internet, you can download user documentation and software updates.

Technical Support via Telephone: 1-866-797-1300

Live technical support is available Monday through Friday (excluding holidays) between the hours of 8 AM and 7 PM Eastern Standard Time.

Technical Support via Email: support.ipvideo@motorolasolutions.com

Knowledge Base: https://halodetect.com/knowledge-base

IPVideo Terms of Service

https://ipvideocorp.com/license-agreements/