

#### CONFIDENTIAL UNPUBLISHED WORK

# Halo HACS1 Manual



# HACS1 MANUFACTURING, INSTALLATION, OPERATION, AND LABELING MANUAL

NOTE: No changes or modifications to this device are permitted unless expressly approved by engineering.

Failure to do so could void FCC certification.

FCC ID: 2AHPO-HACS1

This device 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 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/television technician for help.

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#### Introduction

The HACS1 Ambient Sensor is designed to be installed in residential, commercial, and industrial facilities to monitor ambient temperature, humidity, lighting level, and substrate moisture content (such as sheetrock, wood, etc.). The information is used to detect a range of dangerous conditions including high relative humidity conducive to indoor mold growth, occult moisture accumulation behind walls and ceilings and plumbing leaks.

The sensor is also useful for occupancy and activity detection in bathrooms and near exterior doors, detecting rapid changes in temperature, humidity and lighting levels. For example, data from the HACS1 could be used to indicate the shower is being used (the lights are on, and the relative humidity is suddenly rising). If the leak detector on the floor goes into alarm because water from the shower curtain is leaking onto the floor, this false alarm condition can be detected and avoided.

Further, because condominiums, apartments and other MDUs typically use identical floor plans in each stack, installing an HACS1 over the toilet and near the shower also places it directly beneath the shower and toilet of the apartment above, enabling it to detect and warn of occult moisture problems in the ceiling from plumbing problems from above.

The HACS1 is designed to be used with a compatible Halo System 319.5MHz receiver. Enrollment is accomplished via the web portal, and is detailed in other documentation covering usage of the web portal.

## Installation guide

The HACS1 should be installed in locations where occult moisture may accumulate behind walls and ceilings, and in locations where occupancy detection is needed. Primarily in the bathrooms, near exterior doors, and other places where occupancy or occult moisture should be detected.

Sample FCC Label

FCC ID: 2AHP0-HACS1