HALO SMART SENSOR

HEALTH INDEX

Health Index provides a real-time indication of the potential risk for the spread of airborne infectious disease in a building.

Used to Reduce the Spread of Infection.
Short Measurement Cycles for Fast Remediation.
Number of Contaminants Sampled in HALO: 6-7.

Health Index Factors:
Carbon Dioxide (CO_2) · Particulate Matter (1 µm, 2.5 µm, 10 µm) · Humidity (RH) · Volatile Organic Compounds (VOC) · Nitrogen Dioxide (NO_2)

AIR QUALITY INDEX

Air Quality Index provides a rolling average of the quality of the air you are breathing over the course of a few hours.

The standard for EPA to Measure Air Quality.
Long Measurement Cycles for General Air Quality.
Number of Contaminants Sampled in HALO: 4-5.

Air Quality Index Factors:
Particulate Matter (2.5 µm, 10 µm) · Carbon Monoxide (CO) · Nitrogen Dioxide (NO_2)

CARBON MONOXIDE

By now, most people are aware of the deadly effects of high concentrations of this odorless, colorless gas. Exposure to lower levels sometimes given off by fuel-burning appliances can also cause adverse reactions, including confusion and memory loss.

CARBON DIOXIDE

While the effects of high levels of CO2 were long thought to be benign, research has found that concentrations as low as 1,000 ppm can affect people's cognitive function and decision-making performance.

The greatest source of indoor CO2 is people themselves, as it's a byproduct of our respiratory function. Coupled with poor ventilation, this commonly leads to high levels of CO2 in many workplaces.

NITROGEN DIOXIDE

Nitrogen dioxide (NO_2) is an ambient trace-gas result of both natural and anthropogenic processes. Long-term exposure to NO_2 may cause a wide spectrum of severe health problems such as hypertension, diabetes, heart and cardiovascular diseases and even death.

TEMPERATURE AND HUMIDITY

These levels can affect more than your comfort. High temperatures and excessive humidity promote mold and mildew growth. These can cause structural damage to your workplace and cause allergy-like symptoms in those with sensitivities. Monitoring these levels can help you prevent facility and health problems and tip you off to potential sources like structural weaknesses and leaks.

VOC (VOLATILE ORGANIC COMPOUNDS)

The acronym stands for volatile organic compounds, gases emitted from a variety of materials that can have short- and long-term health effects. Concentrations of many VOCs can be up to 10 times higher indoors than outdoors.

Sources of VOCs include many common products, including cleaning fluids, disinfectants, paints, and varnishes. Burning fuels like wood and natural gas also produce VOCs.

Short-term exposure to low levels of VOCs can cause throat irritation, nausea, fatigue, and other minor complaints. Long-term exposure to high concentrations of VOCs has been linked to more severe respiratory irritation as well as liver and kidney damage. Products can emit VOCs even when they're in storage, though to a lesser extent than when they're actively being used.

PARTICULATE MATTER

Particulate matter, or PM, is a mix of particles and droplets in the air. PM varies in shape and size, but those of 10 micrometers in diameter or smaller can adversely affect your health because they can be inhaled. PM 2.5 refers to fine particulate matter – with a diameter of two-and-one-half microns or less.

Sufficient exposure to PM can irritate the eyes, nose, throat, and lungs, leading to allergy-like symptoms and shortness of breath in otherwise healthy people. It can also exacerbate existing medical problems, such as asthma and heart disease. PM 2.5 is considered the world's single biggest environmental health risk.

Indoor PM levels can be influenced by outdoor sources like vehicle exhaust, wildfires, and power plant emissions. But many indoor activities produce PM as well: cooking, burning fireplaces, and smoking are just a few common sources.

HALO SMART SENSOR

HELP (SPOKEN KEYWORD)
Each HALO device comes preloaded with 5 spoken keyword phrases. These keywords can be used by anyone in times of stress or need. This is especially helpful in schools where bullying is a problem, teachers who are in need of assistance, nurses and hospital patients, hotel personal, etc. Whenever the keyword is said aloud, HALO will send notifications to those who have been designated to receive these alerts.

PANIC BUTTON
HALO 3C users can trigger alerts via an external 3rd party panic button or via the HALO cloud app. The location of the trigger is associated to the HALO device in closest proximity.

GUNSHOT
Identify gunshots and the location with two-factor authentication using frequency sound pattern and percussion. This sensor is 3rd party certified. Each device has a 25 ft range with 360° radius detection.

AGGRESSION
Learns the signature of abnormal noise in a room by applying Machine Learning. HALO learns what normal sound levels are and alerts when a threshold above normal is detected for a specified length of time. HALO applies aggression detection through true analytics.

MOTION
Identify and alert on movement for occupancy and trespassing.

OCCUPANCY (PEOPLE COUNTER)
Identify how many people are within the HALO location and configure to alert on abnormalities.

LIGHT LEVEL
Measured in Lux, HALO can identify the light level in a particular location. This can be helpful when detecting occupancy, improving emergency efficiency, and coupling with other sensors to identify an intrusion.

HALO 3C comes with a literal HALO of LED-colored lighting options that can be programmed to show escape routes for safety such as a red, yellow, and green pattern. Create unique colors for different alerts such as purple for Air Quality alerts or blue for Health alerts. The lights themselves are projected onto the ceiling around the HALO for extended visibility.

TAMPER
HALO uses a tamper sensor to prevent vandalism and disabling of the HALO by identifying vibrations caused by striking the HALO, throwing things at it, or even moving the ceiling tile HALO is mounted in.

MARIJUANA (THC)
THC is the chemical component found in marijuana. The HALO Smart Sensor is the only sensor that is able to trace THC oil given off by vape pens, along with the other traditional smoking methods.

VAPE
HALO uses a Dynamic Vape Detection algorithm to automatically learn the environment and alert when Vaping is detected. HALO is the only product that can alert and differentiate between Vaping, Vaping with THC, and intentionally masking Vaping behavior by using aerosols to cover up Vaping.

MASKING
This is when someone is trying to hide their vaping activity – they will typically spray cologne or other aerosols to cover up the distinguished smell of marijuana or other vaping smells.