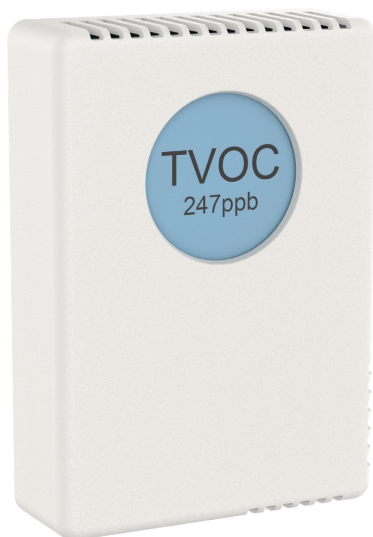


IAQ-POEy50-W Sensor

Product Data

Power-over-Ethernet (POE) Wall Mount Combination Sensor with CO₂, TVOC, Relative Humidity, Temperature, and Dew Point Capability



Product Highlights

- Power-over-Ethernet (PoE) connection using a single Ethernet cable to deliver both power and communication
- 0–2,000 ppm measurement range
- Integrated TVOC sensor for detecting a wide range of airborne contaminants
- Self-calibrating ABC logic ensures long-term stability
- Integrated MEMS-based RH sensor for psychrometric measurement data
- Built in calibration and temperature compensation ensures long-term stability
- Attractive wall-mount package
- Remote monitoring and access via *Vu-IQ*[™] web interface for configuration, data viewing, diagnostics, and system status alarming

TYPICAL INSTALLATION LOCATIONS

- Ventilation Zone Wall

MONITORING BENEFITS

- Monitor CO₂, TVOC, Temperature, Dew Point, and Humidity Levels
- Assess Indoor Air Quality for Building Occupants

ALARM ABILITIES

- Up to 10 Simultaneous Alarms Configurable per Device
- High and Low Thresholds
- Delay, Tolerance, Zero-Offset Adjustments
- % of Tolerance vs. Actual Measurement
- Manual and Automatic Reset

Vu-IQ[™] Overview

GreenTrol's *Vu-IQ*[™] ecosystem integrates a family of low-cost, easy to install, Power-over-Ethernet (PoE) sensors designed specifically for monitoring and alarming applications. Each device provides continuous, real-time measurement of airflow, temperature, humidity, CO₂, and other environmental parameters. Data is collected through a resident background application and interface (required) that can be accessed from any browser-based device—allowing users to configure setpoints, trend data, and receive alarm notifications whenever monitored values fall outside defined limits.

LEARN MORE:
VU-IQ[™]



IAQ-POEy50-W Sensor

Product Data

Product Overview

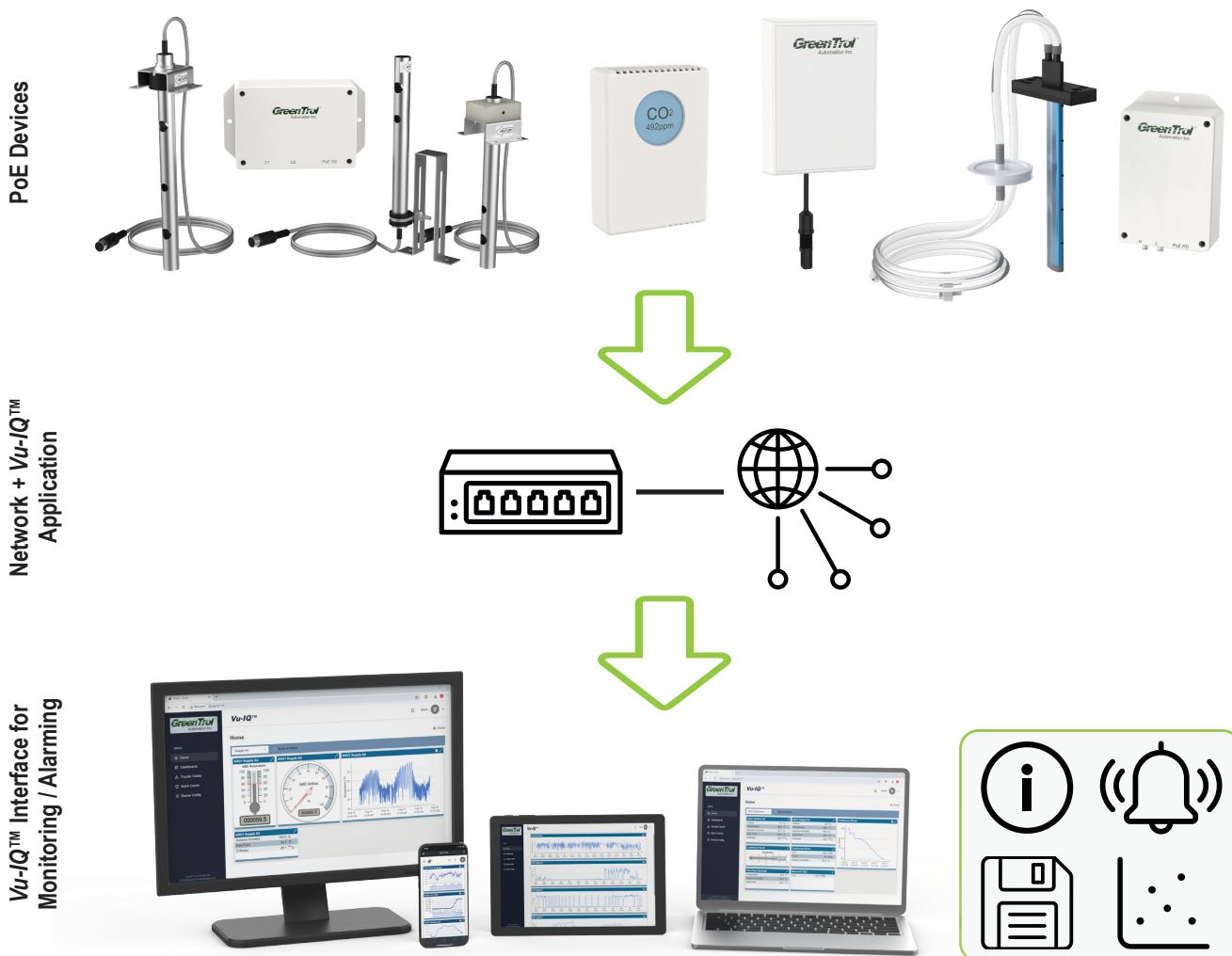
The IAQ-POEy50-W communicates over a single Ethernet cable using PoE and a resident background application and interface (required), streamlining installation and complexity by eliminating the need for separate power and data wiring.

This wall-mounted sensor combines CO₂, TVOC, temperature, and humidity measurements into a single device designed exclusively for monitoring and alarming indoor environmental conditions. The integrated TVOC sensor detects a broad spectrum of airborne contaminants, offering a more complete view of indoor air quality beyond CO₂ levels.

Long-term stability, robust components, and a streamlined PoE installation ensure reliable performance with minimal maintenance.

The IAQ-POEy50-W is optimized for high-accuracy measurement and secure remote access through GreenTrol's *Vu-IQ*™ web interface. This allows facility teams to view, log, and analyze environmental data from any network connected device.

Vu-IQ™ Ecosystem



IAQ-POEy50-W Sensor

Product Data

IAQ-POEy50-W Sensor Technical Specifications

Functionality

CO₂ Measurement: Provides the CO₂ level in ppm via the Vu-IQ™ web interface
TVOC Measurement: Provides the TVOC level in ppb via the Vu-IQ™ web interface
Relative Humidity (RH) Measurement: Provides RH via the Vu-IQ™ web interface
Temperature Measurement: Provides temperature in °F [°C] via the Vu-IQ™ web interface
Dew Point Calculation: Provides Dew Point via the Vu-IQ™ web interface
System Status Alarms: Yes, via the Vu-IQ™ web interface
 High/Low CO₂ setpoints with options (reset, delay, tolerances)
 High/Low TVOC setpoints with options (reset, delay, tolerances)
 High/Low RH setpoints with options (reset, delay, tolerances)
 High/Low Temperature setpoints with options (reset, delay, tolerances)
 High/Low Dew Point setpoints with options (reset, delay, tolerances)

Network Connection

Vu-IQ™ with auto setup using CAT5e or newer cable

User Interface

Vu-IQ™ web interface

CO₂ Sensor Capability

Technology: Non Dispersive Infrared (NDIR)
Range: 0 to 2,000 ppm
Accuracy:
 400 to 1,250 ppm ±30 ppm or 3% of reading, whichever is greater
 1,250 to 2,000 ppm ±5% of reading + 30 ppm
Temperature Dependence: 0.36% FS/°F [0.2% FS/°C]
Pressure Dependence: 0.33% of reading per 0.1 in. [2.54 mm] Hg
Stability: <2% of FS over life of sensor (15 year typical)
Calibration Interval: Not required when ABC logic is enabled
Response Time: <2 minutes for 90% step change typical
Signal Update: Every 4 seconds
Warmup Time: 2 minutes operational, 10 minutes to achieve maximum accuracy

TVOC Sensor

Range: 1 to 2,000 µg/m³
Accuracy: ±20 µg/m³ + 15%
Resolution: 1 µg/m³
Note: TVOC alone is not a complete indicator of indoor air quality

Temperature Sensor

Range: 14 to 120°F [-10 to 48.9°C]
Accuracy: ±0.54°F [0.3°C] @77°F [25°C]
Resolution: 0.045°F [0.025°C]
Long Term Drift: 0.036°F/year [0.02°C]

Relative Humidity Sensor

Type: MEMS-based RH sensor with integrated hydrophobic membrane
Operating Range: 0-100% RH
Accuracy:
 10 to 90 %RH: ±1.5% RH
Resolution: 0.01%RH
Long Term Drift: 0.10% RH/year typical

Environmental Limits & Power Requirements & Dimensions

Environmental Limits

Temperature: 14 to 120°F [-10 to 50°C]
Humidity: 0 to 90% RH, non-condensing

Power Requirement

Power-over-Ethernet (PoE)
Wattage: 4W
PoE Standards Supported: IEEE 802.3af, 802.3at

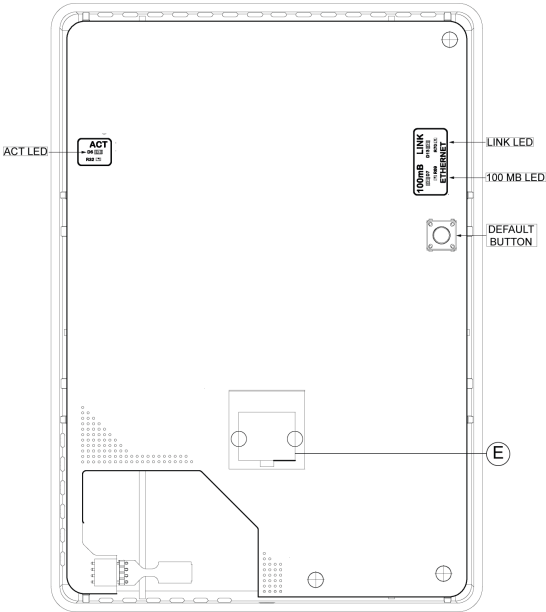
Dimensions: 4.56H x 3.25W x 1.09D in. [115.8 x 82.6 x 27.7 mm]

IAQ-POEy50-W Sensor

Product Data

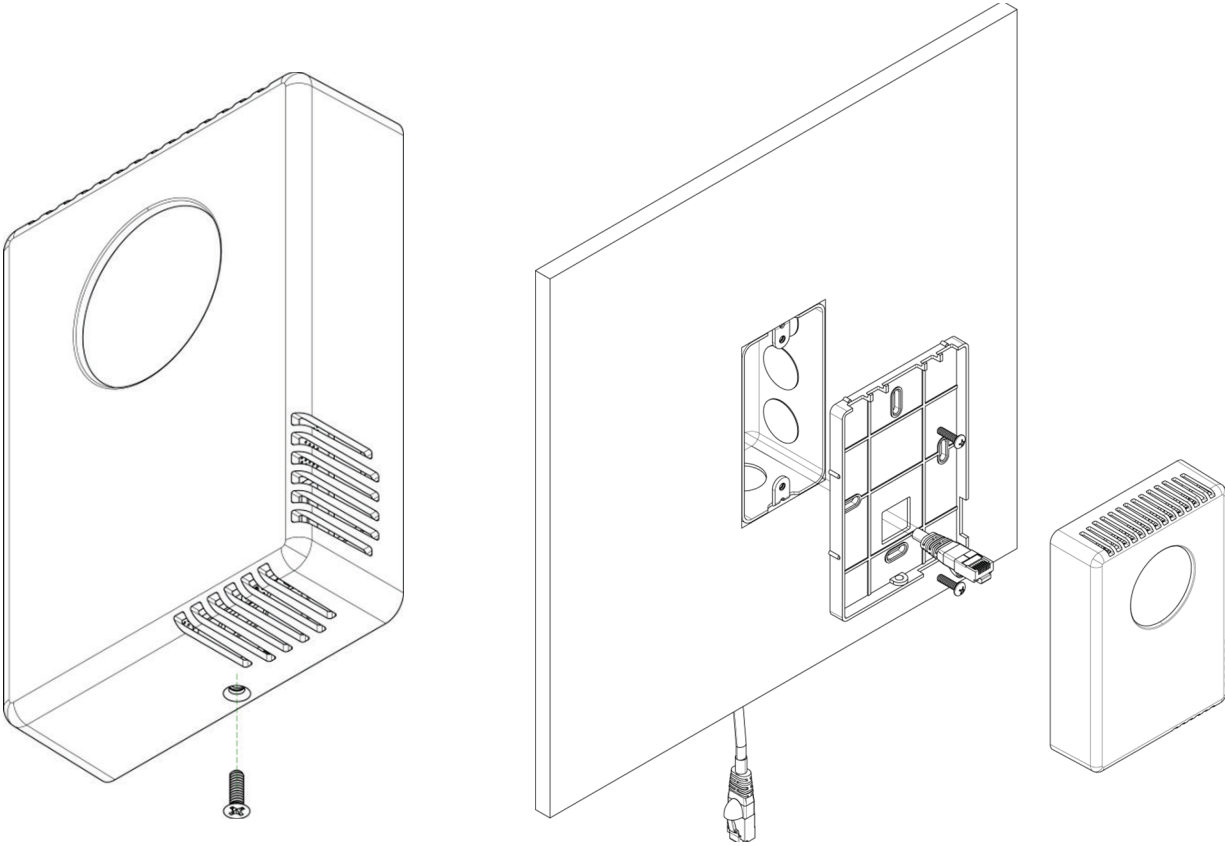
Wiring and PoE Connection

Detailed wiring and connection guidelines are provided in the IAQ-POEy50-W installation guide.



IAQ-POEy50-W CONNECTIONS

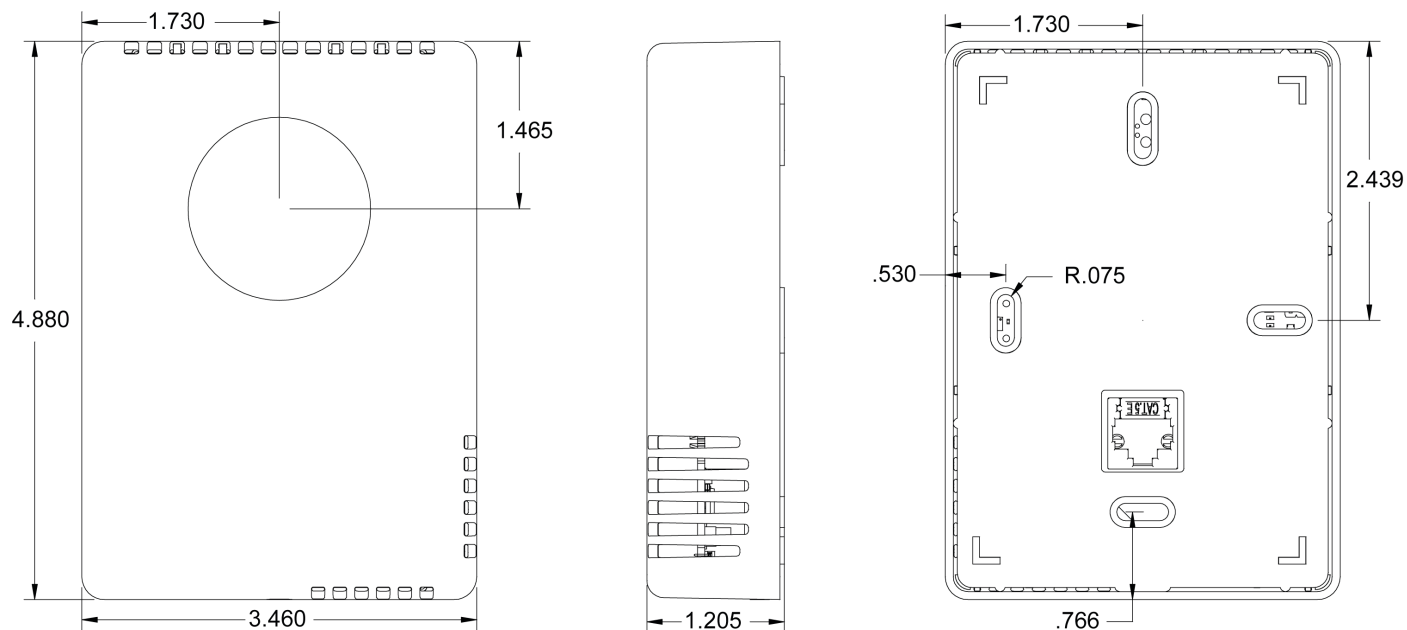
Power Over Ethernet
E
RJ-45 CAT5 or Greater



IAQ-POEy50-W Sensor

Product Data

Enclosure Dimensions



Note: All dimensions listed in inches

Quotations and Ordering

Use the model code below to request a quote or place an order. Quotations and orders are provided by your local GreenTrol representative.

IAQ - POE 5 0



Sensor Options

1 = CO₂ and TVOC, 3 = CO₂, Relative Humidity, Temperature, and TVOC

Indoor Air Quality