

IAQ-POE100-D Sensor

Product Data

Power-over-Ethernet (POE) In-Duct CO₂ Sensor



Product Highlights

- Power-over-Ethernet (PoE) connection using a single Ethernet cable to deliver both power and communication
- Monitors carbon dioxide (CO₂) levels directly within ducted airstreams
- 0–2,000 ppm measurement range
- Includes 6" anodized sampling tube and 3' hose for simple in-duct installation
- Remote monitoring and access via *Vu-IQ*[™] web interface for configuration, data viewing, diagnostics, and system status alarming

TYPICAL INSTALLATION LOCATIONS

- Duct CO₂ Measurement

MONITORING BENEFITS

- Monitor CO₂ Levels
- Assess Indoor Air Quality in Ducted Airstreams 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[™]



Product Overview

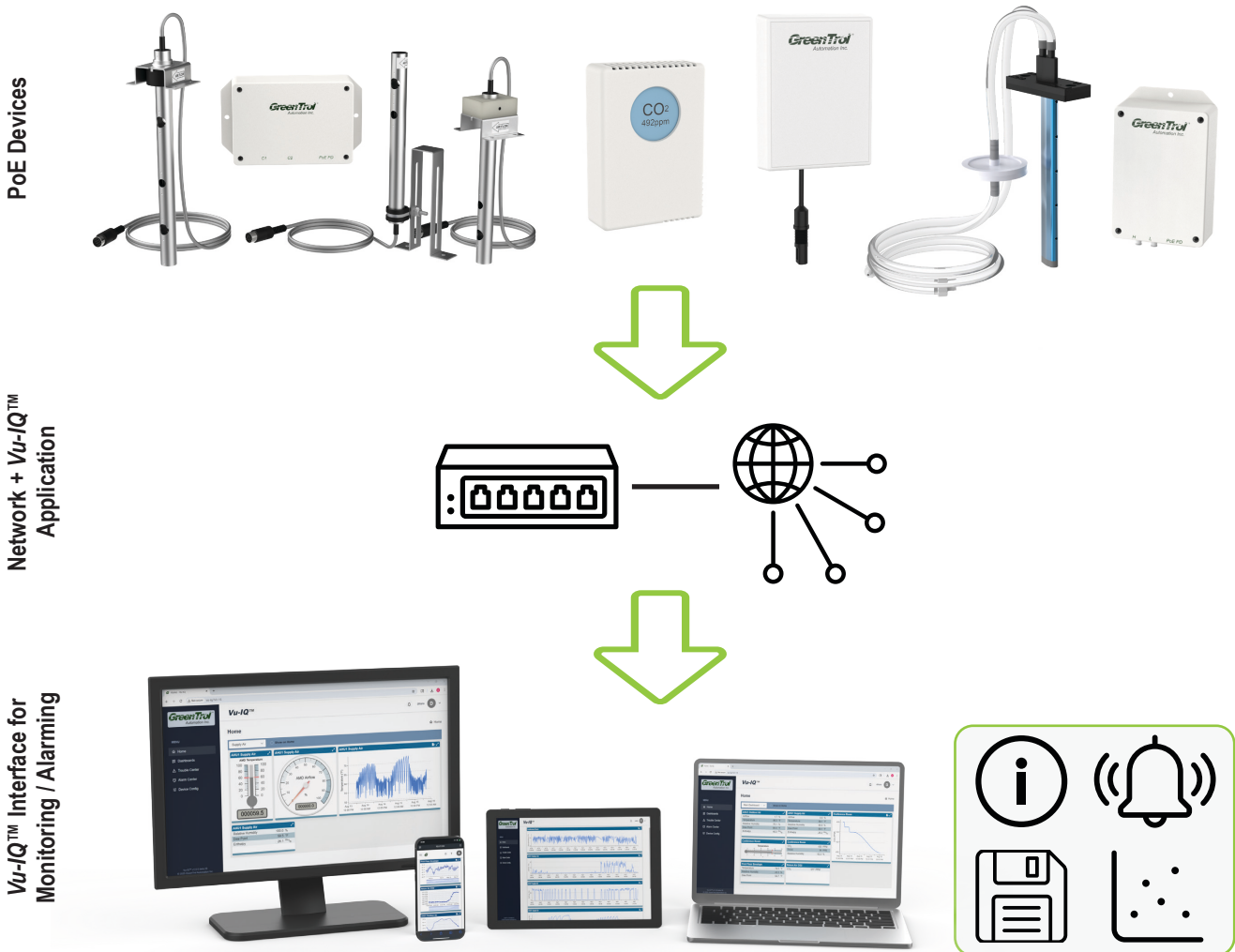
The IAQ-POE100-D is a duct-mounted Power-over-Ethernet (PoE) sensor designed for accurate carbon dioxide (CO₂) monitoring directly in the airstream. Unlike space-mounted sensors that can be influenced by localized conditions, in-duct measurement provides a more reliable indication of ventilation effectiveness and outdoor air delivery.

Equipped with non-dispersive infrared (NDIR) sensing technology and automatic background calibration, the IAQ-POE100-D delivers long-term stability with minimal maintenance. Its 0–2,000 ppm measurement range and fast response time make it ideal for continuous monitoring of ventilation performance.

The device installs easily with an included anodized sampling tube and hose (3ft length) and 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.

The IAQ-POE100-D 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-POE100-D Technical Specifications

Functionality

CO₂ Measurement: Provides the CO₂ level in ppm via the Vu-IQ™ web interface

System Status Alarm: Yes, via the Vu-IQ™ web interface
High/Low CO₂ 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: 0.13% of reading per 0.039 in. [1.00 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

Warm-up Time: 2 minutes operational, 10 minutes to achieve maximum accuracy

Environmental Limits & Power Requirements & Dimensions

Environmental Limits

Temperature: 32 to 120°F [0 to 48.9°C]

Humidity: 0 to 95% RH, non-condensing

Power Requirement

Power-over-Ethernet (PoE)

Wattage: 4W

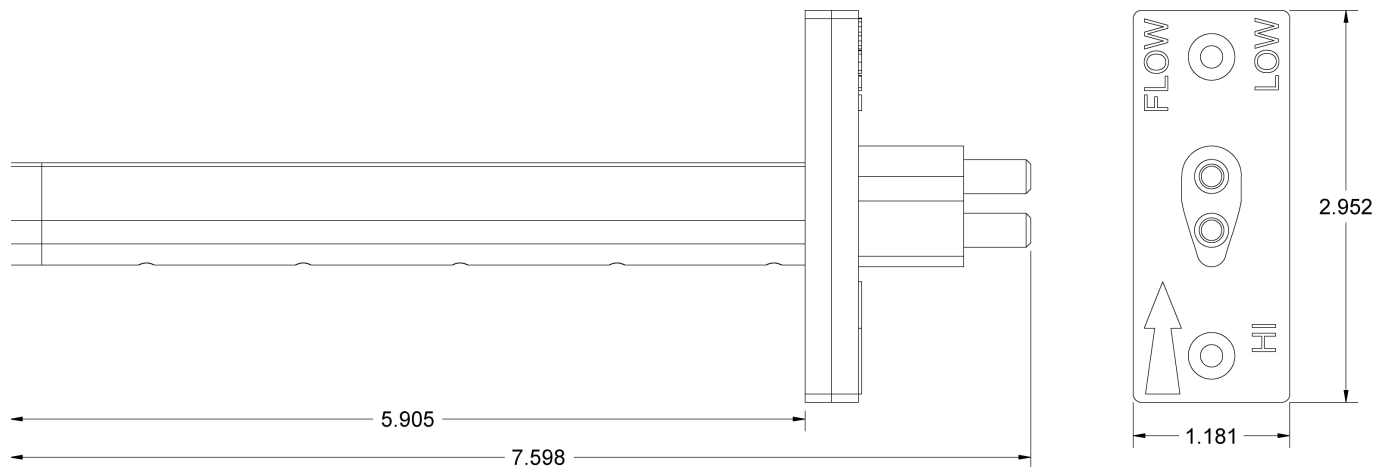
PoE Standards Supported: IEEE 802.3af, 802.3at

Dimensions

Transmitter: 6.01H x 3.57W x 1.50D in. [152.7 x 90.7 x 38.1 mm]

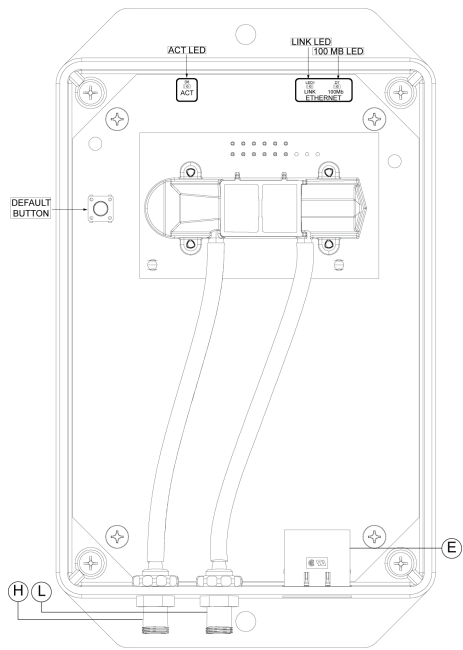
Sensor: 7.68H x 2.95W x 1.18D in. [195.1 x 74.9 x 30.0 mm]

Sampling Tube Dimensions



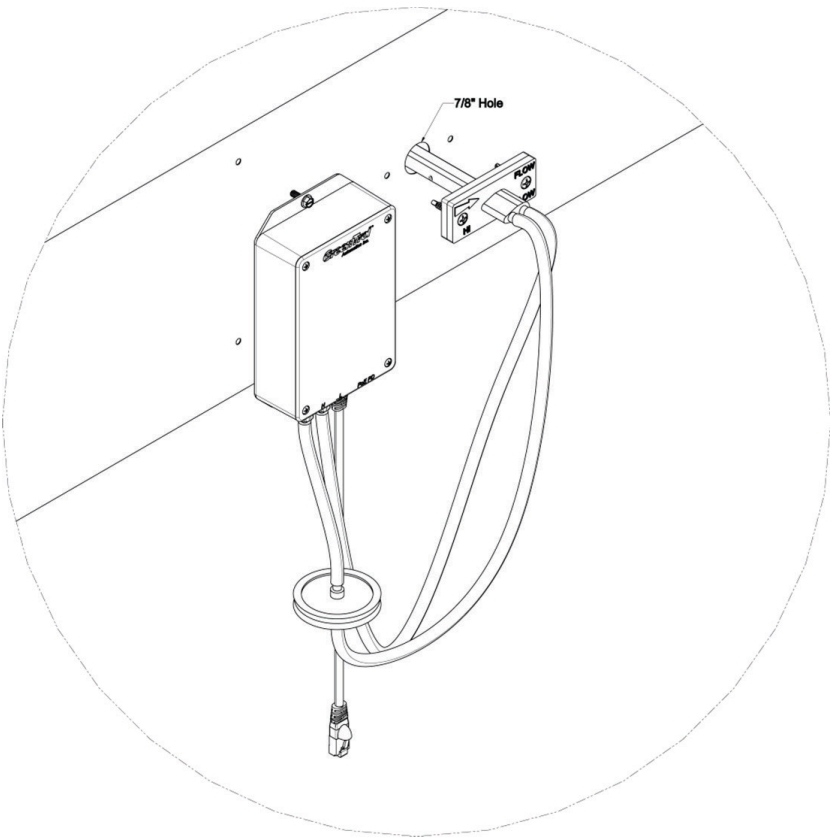
Wiring and PoE Connection

Detailed wiring and connection guidelines are provided in the IAQ-POE100-D installation guide.



IAQ-POE100-D CONNECTIONS

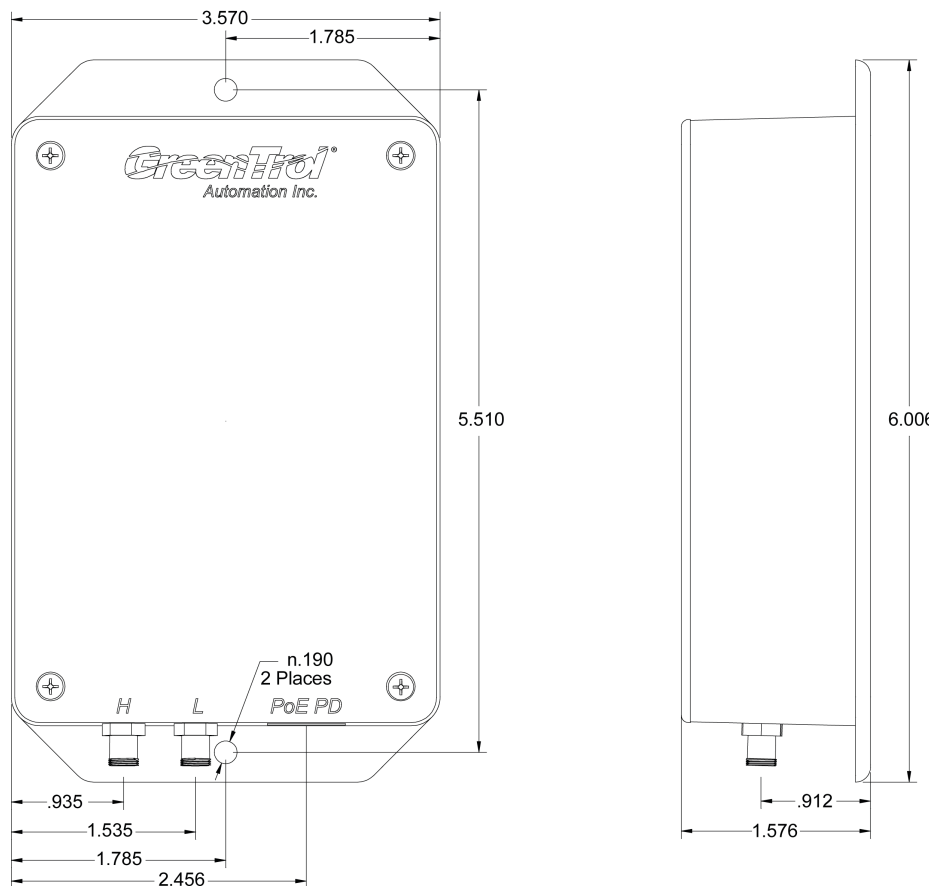
Power Over Ethernet	CO ₂ Sampling Tube	
	H	L
RJ-45 CAT5 or Greater	HI side tube	LOW side tube



IAQ-POE100-D Sensor

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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 1 0 0 - D

_____ Indoor Air Quality