

Power-over-Ethernet (POE) Envelope Moisture Sensor



Product Highlights

- Power-over-Ethernet (PoE) connection using a single Ethernet cable to deliver both power and communication
- Measures temperature, relative humidity, and dew point inside wall cavities for early detection of moisture intrusion
- Ruggedized capacitive polymer RH sensor, designed for long-term stability in harsh environments
- 14-bit high measurement accuracy
- Mounts to a standard single-gang electrical box for simple, discreet installation
- Remote monitoring and access via *Vu-IQ*[™] web interface for configuration, data viewing, diagnostics, and system status alarming

TYPICAL INSTALLATION LOCATIONS

- Exterior / Interior Wall Cavity

MONITORING BENEFITS

- Monitor Envelope Moisture Levels (Temperature, Humidity, and Dew point)
- Detect Early Signs of Moisture Accumulation or Leaks

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[™]



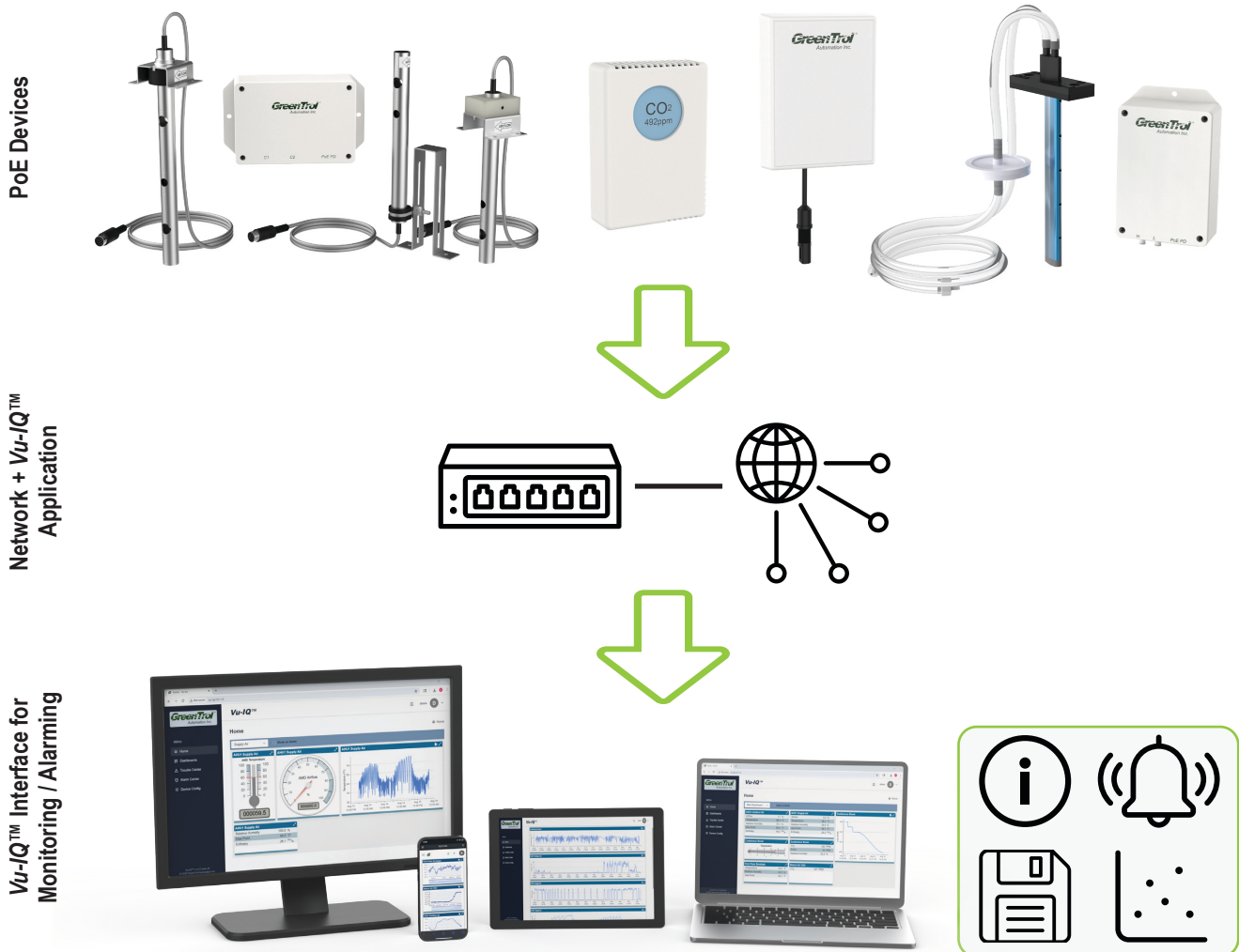
Product Overview

The EM-POE100-W is a wall-mounted Power-over-Ethernet (PoE) sensor designed to detect moisture intrusion across building envelope assemblies. By continuously measuring temperature, relative humidity, and dew point inside wall cavities, the device provides facility teams with early warning of potential leaks or moisture accumulation that can lead to mold growth or other building issues such as pressure imbalances.

The compact form factor mounts directly to a standard single-gang electrical box for discreet installation. The EM-POE100-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.

The EM-POE100-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



EM-POE100-W Technical Specifications

Functionality

Temperature Measurement: Provides temperature in °F [°C] via the Vu-IQ™ web interface

Relative Humidity (RH) Measurement: Provides RH via the Vu-IQ™ web interface

Dew Point Measurement: Provides Dew Point via the Vu-IQ™ web interface

System Status Alarms: Yes, via the Vu-IQ™ web interface
High/Low Temperature setpoints with options (reset, delay, tolerances)
High/Low RH 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

Temperature Sensor Capability

Type: Proportional to Absolute (PTA)

Accuracy: ±0.9°F [0.5°C]

Repeatability: ±0.18°F [0.1°C]

Stability: <0.05°C /year

Response Time: ≤ 116 seconds

Relative Humidity Sensor Capability

Type: Ruggedized capacitive polymer RH sensor

Operating Range: 0-99% RH, non-condensing

Accuracy @ 77 °F [25 °C]

20 to 80 %RH: ±2% RH

0 to 20 and 80 to 100 %RH: ±3.5% RH

Temperature Coefficient: 0.07%/°F [0.13%/°C]

Long Term Drift: 0.5% RH/year

Environmental Limits & Power Requirements & Dimensions

Environmental Limits

Temperature: -20 to 120°F [-28.9 to 48.9°C]

Humidity: 0 to 95% RH, non-condensing

Power Requirement

Power-over-Ethernet (PoE)

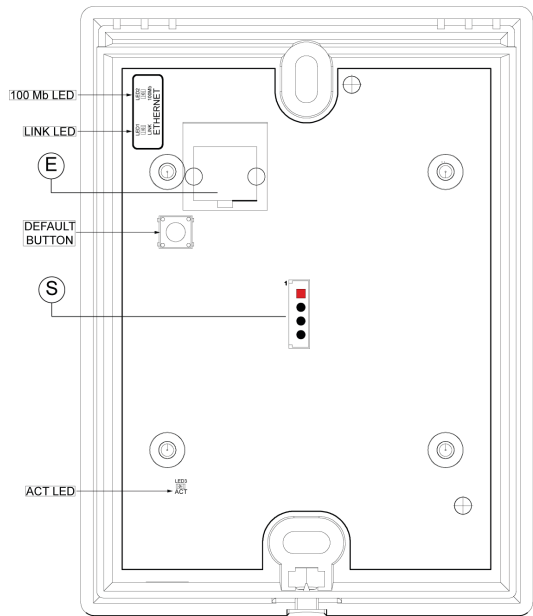
Wattage: 4W

PoE Standards Supported: IEEE 802.3af, 802.3at

Dimensions: 4.38H x 3.25W x 0.85D in. [111.3 x 82.6 x 21.6 mm]

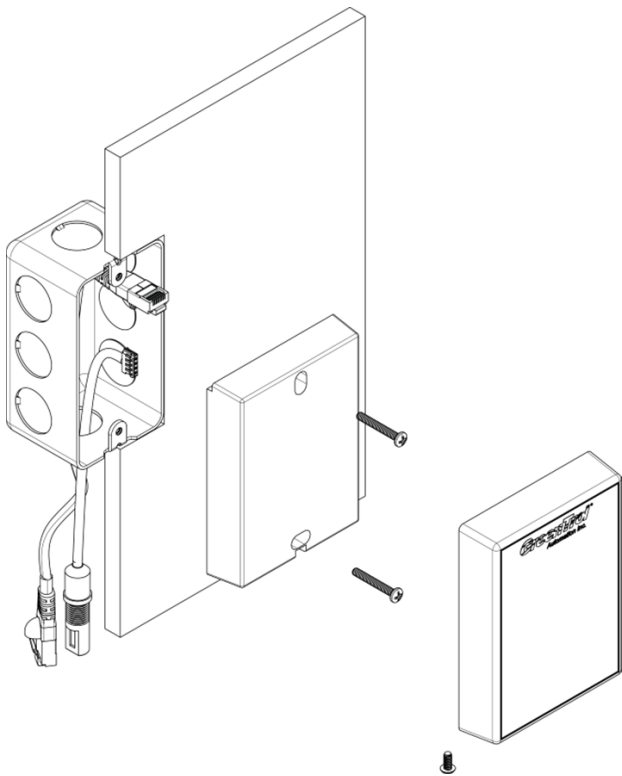
Wiring and PoE Connection

Detailed wiring and connection guidelines are provided in the EM-POE100-W installation guide.

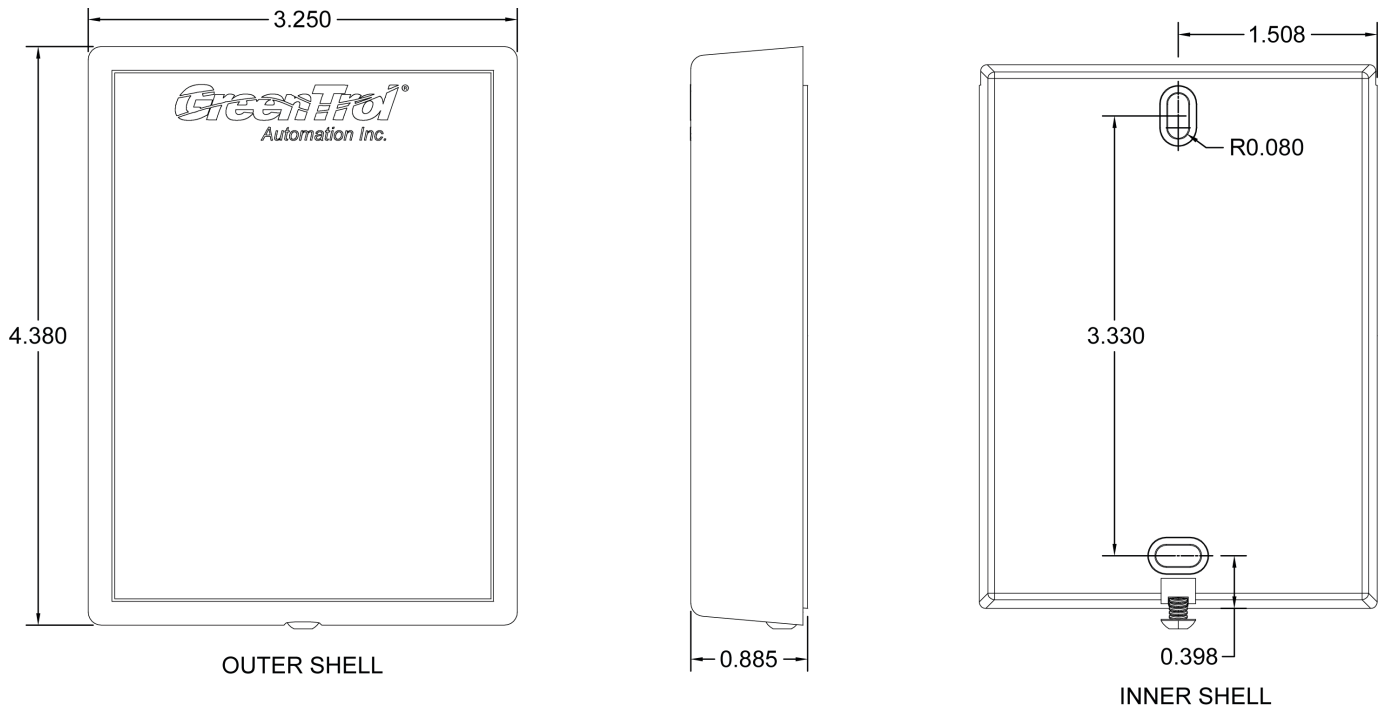


EM-POE100-W CONNECTIONS

Power Over Ethernet	Sensor
E	S
RJ-45 CAT5 or Greater	TEMP + RH Sensor



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.

EM - POE 1 0 0 - W

Envelope Measurement