

Wall-mounted RS-485 Combination Sensor with CO₂,
Temperature and Relative Humidity Capability

OVERVIEW



- Up to 3 Sensors in One Package
- Telaire NDIR CO₂ Sensor
- Planar Capacitive Polymer RH Sensor
- Integral Bandgap PTAT Temp. Sensor
- Accurate Measurement
- Reliable Design
- RS-485 BACnet/Modbus Connection
- BTL Listed
- Attractive Wall-mount Enclosure
- 1-year Warranty

The IAQSENS family of wall mounted devices simplifies wiring and installation by providing up to three sensors over a single RS-485 connection. The device is available as a stand-alone CO₂ sensor, dual output RH/Temperature sensor or a combination of all three.

Typical Applications

- ◆ Room CO₂, Relative Humidity and Temperature Monitoring
- ◆ CO₂ Demand Control Ventilation (DCV)
- ◆ CO₂/Airflow* Population Estimation DCV

* When an Airflow Monitoring Device is Provided

Benefits

- ◆ Reset Outdoor Airflow Rates
- ◆ Save Energy
- ◆ Satisfy LEED Requirements
- ◆ Combine with an Airflow Measuring Device for ASHRAE 62.1 and 90.1 Compliant DCV

Product Highlights

- ◆ Self-calibrating ABC Logic Circuitry for CO₂ Measurement
- ◆ Microprocessor-based
- ◆ Watchdog Circuit Protection
- ◆ Time-tested Network Firmware
- ◆ Simple DIP Switch Network Configuration



SPECIFICATIONS: **IAQ-Ny00-W**

General

Sensor Configurations

CO₂ only - IAQ-N100-W

RH and Temperature only - IAQ-N200-W

CO₂, RH and Temperature - IAQ-N300-W

Listings

BACnet International: BTL Listed

Environmental Limits (Recommended)

Temperature: 32 to 122 °F [0 to 50 °C]

Humidity: 5 to 95%

Sensors

CO₂ Sensor

Technology: Telaire 6613 Non Dispersive Infrared (NDIR)

Range: 0 to 2,000 ppm

Accuracy:

400 to 1,250 ppm ±30 ppm or 3% or reading, whichever is greater

1,250 to 2,000 ppm ±30 ppm

Temperature Dependence: 0.36% FS/°F [0.2% FS/°C]

Stability: <2% of FS over life of sensor (15 year typical)

Calibration Interval: Not required

Response Time: <2 minutes for 90% step change typical

Temperature Sensor

Technology: Integral Bandgap PTAT

Range: 32 to 122 °F [0 to 50 °C]

Accuracy: ±1.08 °F [0.6 °C] @77 °F [25 °C]

Resolution: 0.36 °F [0.2 °C]

Relative Humidity Sensor

Technology: Planar Capacitive Polymer

Range: 0 to 100% RH

Accuracy:

±3% <20% RH

±2% 20% to 80% RH

±3% >80% RH

Resolution: 0.4% RH

Integral Transmitter

Power Requirement: 24 VAC (22.8 to 26.4 under load) @1.5V-A

Printed Circuit Boards: Electroless nickel immersion gold (ENIG) plated

User Interface: DIP switch

B.A.S. Connectivity Options

IAQ-N100, IAQ-N200, IAQ-N300 Transmitters: One field selectable (BACnet MS/TP or Modbus RTU) and isolated RS-485 network connection

Supported Baud Rates: 9.6, 19.2, 38.4 and 76.8 kbaud

System Status Alarm

Type: Sensor diagnostic system trouble indication

Visual Indication: Yes, LED indication

Network Indication: Yes

Enclosure

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