

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 and Compliance

- BACnet International:** BTL Listed
- FCC:** This device complies with Part 15 of the FCC rules
- RoHS:** This device is RoHS2 compliant

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% of 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]