



Features & Benefits

- Leading edge optical and digital sensors provide high accuracy and long life
- Drift free readings without further calibration
- Helping companies achieve WELL® and RESET® compliance
- Built in USB port for easy configuration
- Ultimate wireless connectivity through LoRaWAN
- Simple integration with BACnet and Modbus through gateway

Technical Overview

Our Indoor Air Quality Monitor is a precision instrument which accurately measures up to 9 key environmental parameters including Temperature, Relative humidity, Light level, Particle Matter (PM1, PM 2.5, PM4 & PM10), Sound Level, Volatile organic compounds, Carbon Dioxide, Barometric Pressure. Up to two additional gas sensors may be fitted; one of which must be ozone if two sensors are required. Ammonia, Ozone, Formaldehyde, Carbon Monoxide, Nitrogen Dioxide, Hydrogen Sulphide, Sulphur Dioxide and Oxygen.

Technical Specification

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| Radio output type | LoRaWAN |
| Frequency Range | 863-870MHz, 902-928MHz |
| Security | AES 128 encryption |
| Power Supply | Externally powered, 12-24VDC Or via PoE splitter |
| VOC's | IAQ Index 0 to 500 (see below) TVOC level (ppm) Variability $\pm 15\%$ (typical) Response time (33-63%) 1 s |
| Barometric Pressure | 0.12hPa (equivalent to $\pm 1m$ in altitude) Range (with full accuracy): 300 \times 1100hPa Resolution: 0.18Pa |
| Particulate matter | PM0.1, PM0.3, PM0.5, PM1, PM2.5, PM5 & PM10 Sensing method: Laser-based light scattering particle sensing Concentration range: 0-1000 $\mu g/m^3$ Accuracy: PM1, PM2.5 0 $\mu g/m^3$ to 100 $\mu g/m^3$ $\pm 5\mu g/m^3$ +5% m.v. 100 $\mu g/m^3$ to 1000 $\mu g/m^3$ $\pm 10\%$ m.v. PM4, PM10 0 $\mu g/m^3$ to 100 $\mu g/m^3$ $\pm 25\mu g/m^3$ 100 $\mu g/m^3$ to 1000 $\mu g/m^3$ $\pm 25\%$ Response Time: < 6s (t90) Sensor life expectancy: > 3 years 2 Certification to ISO 21501-4 Cleanroom Standard available |

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| CO2 | Sensing method: Optical. Non-dispersive infrared (NDIR) Accuracy: $\pm(30, +3\%)$ ppm. (typ.) Range: 0-5000ppm. Extended range 1-10,000ppm. Response time: 3min Sensor life expectancy <15years |
| Operating Humidity | 0 – 95%RH, Non-Condensing |
| Operating Temperature | 0 – 40°C |
| Output range humidity | Accuracy: $\pm 2\%$ (typical) Repeatability: $\pm 0.1\%$ Response time: 15s |
| Output range temperature | Accuracy: $\pm 0.2^\circ\text{C}$ (typical) Repeatability: $\pm 0.1^\circ\text{C}$ Conversion time: 6.35ms |
| Housing Material | ABS |
| Dimensions | 168mm Diameter x 47mm |
| Compliance | Pre-certified radio regulatory approvals: 868 & 915 MHz spectrum CE, FCC, RoHS. Particle matter MCERTS Certified. CO2IWBI WELL v2 Compliant |
| Country of origin | UK |

Related Product Codes

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| RF-LW-TIAQ | Indoor Air Quality Monitor. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 1, 2.5, 4, 10. Carbon Dioxide |
| RF-LW-TIAQ-CO2 | Indoor Air Quality Monitor with ultrafine particle sensor. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 0.1, 0.3, 0.5, 1, 2.5, 5, 10. Carbon Dioxide |
| RF-LW-TIAQ-CO2-SND | Indoor Air Quality Monitor with ultrafine particle sensor. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 0.1, 0.3, 0.5, 1, 2.5, 5, 10. Carbon Dioxide. Sound |
| RF-LW-TIAQ-SND | Indoor Air Quality Monitor. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 1, 2.5, 4, 10. Carbon Dioxide. Sound |
| RF-LW-TIAQ-VAPE | Indoor Air Quality Monitor with vape/cigarette smoke detection function and ultrafine particles. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 0.1, 0.3, 0.5, 1, 2.5, 5, 10. Carbon Dioxide. |
| RF-LW-TIAQ-VAPE-SND | Indoor Air Quality Monitor with vape/cigarette smoke detection function and ultrafine particles. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 0.1, 0.3, 0.5, 1, 2.5, 5, 10. Carbon Dioxide. Sound |