Features & Benefits

- Built in USB port for configuration
- Battery or externally powered
- Multiple sensor options
- Long-range communication via LoRaWAN wireless technology
- Integration with any BMS through BACnet or Modbus through gateway

Technical Overview

A range of room sensing devices to measure all manner of parameters to ensure indoor air quality. From Temperature & RH, VOC's, Barometric Pressure, PIR, Light Level to Sound, we have it covered in these devices. They communicate via LoRaWAN, a wireless communication technology dedicated to long distance and low power consumption. Compared with other communication methods, LoRa spread spectrum modulation method greatly increases communication distance.

Technical Specification

Radio output type	LoRaWAN
Frequency Range	863-870MHz, 902-928MHz
Security	AES 128 encryption
Battery	Up to 2 x Lithium (Li-SOCl2) AA-size
Battery Life	> 3 years
Optional permenant supply	Via 2 pole Molex push button connector. Conductor size 18-26 AWG Input Voltage range: 12-24V DC. Input current 300mA max. Operating current < 100mA
Output range CO2	Sensing method: Optical. Non-dispersive infrared (NDIR) Accuracy: ±(30ppm, +3%) of reading Range: 0 – 5,000 ppm Extended range 0 – 10,000 ppm Response time: 3 minutes (t90) Sensor life expectancy: >15 years Maintenance Interval: No maintenance required
Output range Light Level (LUX)	Less than 4% error Precision optical filtering to match human eye: Rejects > 99% of IR (typical). Range: 0.01 lux to 83,000 lux Light source variation (incandescent, halogen, fluorescent): 4%

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Sound	Sensitivity: -26dB FS ±1dB SNR: 65dBA Dynamic Range: 91dBA Acoustic Overload Point: 120dB SPL Total Harmonic Distortion: 0.2% (Typical) @ 105dB SPL
Motion (PIR)	Detection distance: 5m. Detection area: 82° horizontal, 94° vertical Movement speed: 1.0m/s · Target concept: Human body with an approx. size of 700×250mm Target moving direction: Crossing the detection beam.
Operating RH	0-95%RH, Non Condensing
Operating Temperature	-10 – 60°C
Output range Barometric Pressures	Accuracy: ±0.12hPa (equivalent to ±1m in altitude) Range (with full accuracy): 300 – 1100hPa Resolution: 0.18Pa
Output range humidity	Accuracy: ±2% (typical) Repeatability: ±0.1% Response time: 15s
Output range temperature	Accuracy: ±0.2°C (typical) Repeatability: ±0.1°C Conversion time: 6.35ms
Output range VOC's	IAQ Index 0 to 500 (see below) TVOC level (ppm) Variability ±15% (typical) Response time: (tτ33-63%) 1 s
Housing Material	ABS UL 94 V0
Housing colour	White
Dimensions	120mm x 80mm x 26mm
Compliance	Pre-certified radio regulatory approvals: 868 & 915 MHz spectrum CE, FCC RoHS
Country of origin	UK

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Related Product Codes

RF-LW-THLVBCM-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, CO2, Motion (PIR)
RF-LW-THLVBCMS-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure CO2, Motion (PIR), Sound (dBA)
RF-LW-THLVBC-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, CO2
RF-LW-THLVBCS-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, CO2, Sound (dBA)
RF-LW-THLVBMS-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, Motion(PIR), Sound (dBA)
RF-LW-THLVBPM-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressures, Motion (PIR)
RF-LW-THLVBS-S	Space mounted Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, Sound (dBA)
RF-LW-THVB-S	Space mounted Temperature, Humidity, VOC's, Barometric Pressure

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