



## 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

<b>Radio output type</b>	LoRaWAN
<b>Frequency Range</b>	863-870MHz, 902-928MHz
<b>Security</b>	AES 128 encryption
<b>Battery</b>	Up to 2 x Lithium (Li-SOCl2) AA-size
<b>Battery Life</b>	> 3 years
<b>Optional permanent supply</b>	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
<b>Output range CO2</b>	Sensing method: Optical. Non-dispersive infrared (NDIR) Accuracy: $\pm(30\text{ppm}, +3\%)$ 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
<b>Output range Light Level (LUX)</b>	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%

<b>Sound</b>	Sensitivity: -26dB FS $\pm$ 1dB SNR: 65dBA Dynamic Range: 91dBA Acoustic Overload Point: 120dB SPL Total Harmonic Distortion: 0.2% (Typical) @ 105dB SPL
<b>Operating RH</b>	0-95%RH, Non Condensing
<b>Operating Temperature</b>	-10 – 60°C
<b>Output range Barometric Pressures</b>	Accuracy: $\pm$ 0.12hPa (equivalent to $\pm$ 1m in altitude) Range (with full accuracy): 300 – 1100hPa Resolution: 0.18Pa
<b>Output range humidity</b>	Accuracy: $\pm$ 2% (typical) Repeatability: $\pm$ 0.1% Response time: 15s
<b>Output range temperature</b>	Accuracy: $\pm$ 0.2°C (typical) Repeatability: $\pm$ 0.1°C Conversion time: 6.35ms
<b>Output range VOC's</b>	IAQ Index 0 to 500 (see below) TVOC level (ppm) Variability $\pm$ 15% (typical) Response time: ( $\tau$ 33-63%) 1 s
<b>Housing Material</b>	ABS UL 94 V0
<b>Housing colour</b>	White
<b>Dimensions</b>	120mm x 80mm x 26mm
<b>Compliance</b>	Pre-certified radio regulatory approvals: 868 & 915 MHz spectrum CE, FCC RoHS
<b>Country of origin</b>	UK

## Related Product Codes

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