



## Data Sheet

### enLink Zone

#### Wireless environmental sensor

- LoRa long range wireless
- Battery powered
- Built in sensors for:
  - Temperature (°C)
  - Carbon Dioxide (CO<sub>2</sub>)\*
  - Barometric Pressure (Pa)\*
  - Volatile Organic Compounds (VOC's)\*
  - Humidity (%RH)
  - Presence (PIR)\*
  - Light level (lux)\*



Temperature



Humidity



Light level



VOC's



CO<sub>2</sub>



Pressure



Motion

enLink Zone accurately measures multiple environmental parameters including room temperature, humidity, light level, VOC's, CO<sub>2</sub>, pressure and presence (motion)\*.

Volatile Organic Compounds (VOC's) from paints (such as formaldehyde), lacquers, paint strippers, cleaning supplies, furnishings, office equipment, glues, adhesives and alcohol can be detected and reported down to the ppm range.

Readings are transmitted to the cloud using long range LoRa wireless, where the data can be displayed and analysed.

The unit is battery powered with long life of 3+ years.

A built in USB port allows all parameters including air quality data, wireless signal strength and wireless network configuration to be viewed and set using simple menus via any USB enabled host such as a PC or Mac.

### Features

- Multiple sensor options\*
- LoRa long range wireless
- Frequency Range 863-870MHz\*
- Frequency Range 902-928MHz\*
- Up to +18dBm Tx Power
- Built in USB port for power and configuration
- Battery or mains powered
- CE compliant
- RoHS compliant
- Made in the UK

\*Model dependent, see Selection Guide section

## Specifications

Frequency range	868 / 915 MHz*
Protocol	LoRa®
Receiver sensitivity	-135dBm @ 980bps
RF Transmit power	Up to +18dBm
Antenna	Integrated
Certifications	Pre-certified radio regulatory approvals: 868 & 915 MHz spectrum CE RoHS
Voltage	3.6 Volts nominal
Batteries	Up to 2 x Lithium (Li-SOCl <sub>2</sub> ) AA-size Battery life > 3 years (sensor selection and transmission interval dependant)
Mains	Via built in Micro-USB
Processor	ARM® Cortex® M0+
Dimensions	120mm x 80mm x 20.3mm
Operating	-10 – 60°C 0-95%RH, Non Condensing
Case material	Self-extinguishing ABS UL 94 V0, white

### Sensor Characteristics:

Temperature	Accuracy: ±0.2°C (typical) Repeatability: ±0.1°C Conversion time: 6.35ms
Humidity	Accuracy: ±2% (typical) Repeatability: ±0.1% Response time: 15s
Light level	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%
VOC's	IAQ Index 0 to 500 (see below) Response time: (tT33-63%) 1 s
CO <sub>2</sub>	Sensing method: Optical. Non-dispersive infrared (NDIR) Accuracy: ±3% Range: 0 – 2,000 ppm Extended range 0 – 10,000 ppm Response time: 3 minutes (t90) Sensor life expectancy: >15 years Maintenance Interval: No maintenance required
Pressure	Accuracy: ±0.12hPa (equivalent to ±1m in altitude) Range (with full accuracy): 300 – 1100hPa Resolution: 0.18Pa
Presence (PIR)	Detection distance: 5m. Detection area: 82° horizontal, 94° vertical (see below)

## Performance Data

### VOC Sensor

Indoor air quality (IAQ) classification and colour coding <sup>1</sup>

IAQ Index	Air Quality
0 – 50	Good <sup>2</sup>
51 – 100	Average
101 – 150	Little Bad
151 – 200	Bad
201 – 300	Worse
301 - 500	Very Bad

<sup>1</sup> According to the guidelines issued by the German Federal Environmental Agency, exceeding 25 mg/m<sup>3</sup> of total VOC leads to headaches and further neurotoxic impact on health.

<sup>2</sup>Software auto-calibrates the low and high concentrations applied during testing to IAQ of 25 and 250, respectively

Compliant to the ISO16000-29 standard “Test methods for VOC detectors”.

bVOC mixture with Nitrogen as carrier gas

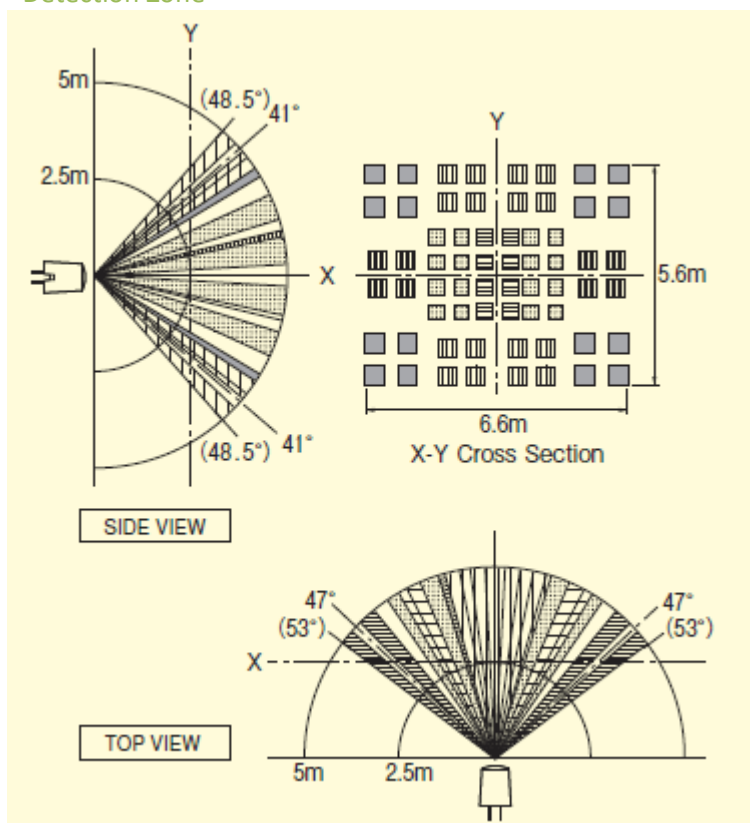
Molar fraction	Compound	Certified accuracy
5 ppm	Ethane	5 %
10 ppm	Isoprene /2-methyl-1,3 Butadiene	5 %
10 ppm	Ethanol	5 %
50 ppm	Acetone	5 %
15 ppm	Carbon Monoxide	2 %

## PIR Sensor

### Detection Characteristics

Items	Specifications
Detection distance	Max. 5m
Field of view	94° × 82°
Detection zone	64 beams
Detection condition	<ul style="list-style-type: none"> <li>The temperature difference between the target and the surroundings must be higher than 4°C</li> <li>Movement speed: 1.0m/s</li> <li>Target concept: Human body with an approx. size of 700×250mm</li> <li>Target moving direction: Crossing the detection beam.</li> </ul>

### Detection Zone



## Selection Guide / Ordering Information

Part Number	Temperature	Humidity	Light Level	VOC's	Pressure	CO <sub>2</sub>	Motion
ENL- ZN-LVCM	●	●	●	●	●	●	●
ENL- ZN-LVC	●	●	●	●	●	●	
ENL- ZN-LVM	●	●	●	●	●		●
ENL- ZN-LV	●	●	●	●	●		
ENL- ZN-L	●	●	●				
ENL- ZN	●	●					

Specifications are subject to change without notice