



WLRC-S51



Wireless O₃ (Ozone) Sensor

The WLRC-S51 is a wireless sensor that detects ozone (O₃) concentration in ambient air. The body and the ozone sensor are connected through the RS485 interface, and the detected data is transmitted to other devices through the wireless network. The data transmission is based on the LoRa™ communication platform.

Features:

- Super Long Range Signal Penetration
- 12V DC adapter power supply
- Easy Installation
- RS485 communication
- Improved interference immunity
- Interactive WatchNET IoT platform with dashboard, search and notification settings



Applications:

- Ozone (O₃) concentration detection in ambient air
- In water disinfection, food processing, and purification, food storage and preservation
- Medical hygiene, and household disinfection and purification
- Air quality detection, smart home
- Environmental protection
- Chemical medicine
- Real-time monitoring gas emission

Schematic Diagram:



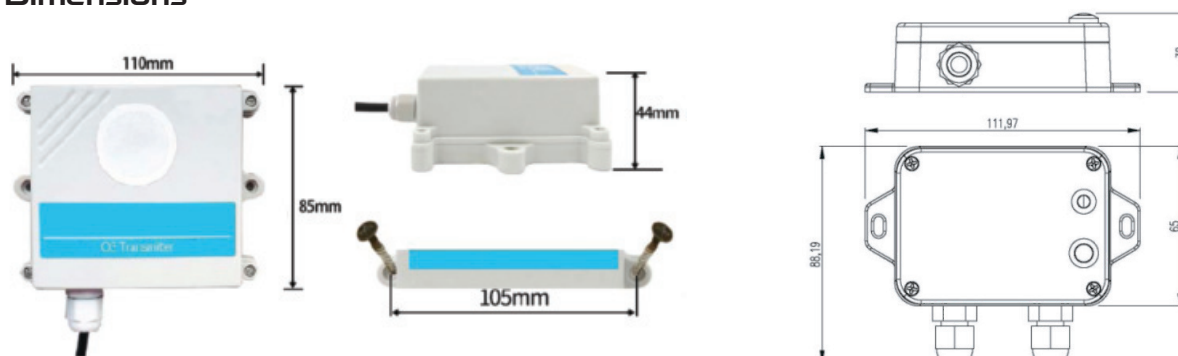
Ozone (O₃) concentration in ambient air



Technical Specifications

Electrical characteristics	
Power Supply	DC 12V adapter power supply
Working Current	55mA (external sensor)
* Specific electrical characteristics will vary depending on the power supply voltage	
Ozone (O ₃) sensor parameters	
Power supply	+ 9V ~ +24 VDC
Ozone measurement range	0 - 20ppm
Ozone measurement method	Electrochemical sensors
Ozone repeatability	± 3 % of reading (@25°C)
Detectable lower limit	< 20ppb
Response Time	Usually less than 15 seconds
Service life	In the air > 2 years
Communication port	RS485
Radio frequency characteristics	
Frequency range	863MHz-928MHz 470MHz-510MHz
Power Output	19 dBm ±1dBm
Receiving sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Range	Up to 500m/0.310miles, the actual transmission distance depends on the environment
Data Transfer Rate	0.3kbps~50kbps
Modulation system mode	LoRa/FSK (Note: choose one of them)
Available Frequency	EU863-870, US902-928, Configured before shipment
Physical characteristics	
Main unit size	Main part: L: 112 mm x W: 88.19 mm x H: 32 mm / 4.41" x 3.47" x 1.26" Sensor - L: 110 mm x W: 85 mm x H: 44mm / 4.33" x 3.35" x 1.73" Sensor Waterproof (white) - D: 19.5mm x L: 30.3mm / 0.77" x 1.19" - M12*1.5 (Screw Thread)
Ambient temperature range	-20°C ~ 55°C / -4°F ~ 131°F
Protection class	Main Part IP65
Main unit weight	160g / 0.353lb
Environment Humidity Range	<90%RH (No condensation)
Storage Temperature	-40°C ~ 85°C / -40°F ~ 185°F

Dimensions



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