

LoRaWAN®

2 YEARS WARRANTY



**WLRC-S35**

## Wireless Outdoor CO<sub>2</sub>/Temperature Humidity Sensor with Solar Panel

The WLRC-S35 is equipped with a temperature and humidity sensor that detects and transmits ambient temperature and humidity data. It is a wireless communication method that uses the SX1276 wireless communication module. The WLRC-S35 has a CO<sub>2</sub> sensor that detects the concentration of CO<sub>2</sub> in the air

### KEY FEATURES

- Temperature and humidity detection
- CO<sub>2</sub> concentration detection
- With solar panel charging function
- Built-in lithium battery pack power supply
- Compatible with LoRaWAN® Class A
- Frequency hopping spread spectrum technology
- Low power consumption and long battery life

### NOTE:

- Battery life is determined by the sensor reporting frequency and other variables, please refer

### APPLICATION

- Mining
- Smart Home
- Smart Farm
- All outdoor environment



Device



Gateway



WatchNET Cloud



Mobile Application

ELECTRIC	
Power Supply	3 pcs rechargeable lithium batteries in series (single rechargeable lithium battery 3.7V)
Operating Voltage Range	9.8VDC ~ 12.6VDC
Low Voltage Threshold	10.5V
Operating Current 1	15mA (Standby mode)
Operating Current 2	55mA (When the sensor is working.)

BATTERY ELECTRICAL CHARACTERISTIC	
Solar Panel Specifications	5W / 18VDC
Lithium Battery Pack Specifications	3 pcs rechargeable lithium batteries in series (single rechargeable lithium battery 3.7V)
Lithium Battery Pack Charging Current	About 300mA (guaranteeing sufficient sunshine intensity)
Lithium Battery Pack Charging Time Is Full For	About 4 days (guaranteeing sufficient sunshine intensity, calculated with a rechargeable battery capacity of 3500mah)
Lithium Battery Pack Battery Is Fully Charged And Used For	About 300 hours (report data once every 30 minutes, calculated with a rechargeable battery capacity of 3500mah)

TEMPERATURE AND HUMIDITY SENSOR	
Temperature Measurement Range	-20 C ~ 55 C
Temperature Measurement Accuracy ±	±1 C @25 C
Humidity Measurement Range	0%RH ~ 100%RH
Humidity Measurement Range	±4%RH @25 C

CO2 Sensor	
Operating Current	< 85mA
Accuracy	± 100ppm+6% reading
Range	400~5000ppm
Warm-up Time	3min
Response Time	T<90s
Output	UART

FREQUENCY	
Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm, AS923 16dbm, AU915 20dbm, CN470 19.15dbm, EU868 16dbm, KR920 14dbm, IN865 20dbm
Receive Sensitivity	-121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps) -136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps)
Antenna Type	Built-in antenna
Communication Range	Up to 500m/0.310miles, the actual transmission distance depends on the environment*
Data Transfer Rate	LoRa: 0.3kbps ~ 50kbps FSK: 1.2kbps ~ 300kbps
Modulation Method	LoRa / FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment.)

PHYSICAL	
Dimension	Mask part: D220mm*H280mm, Solar panel: 290mm*150mm*25mm Host body: 117mm * 89mm * 41mm
Weight	Mask part and Host body: about 1900g Solar panel (solar panel, solar panel bracket, anti-bird needle): about 1355g
Mask Service Life	The material is ABS. It can be used outdoors for 3 years.
Ambient Temperature Range	-20°C ~ 55°C
Ambient Humidity Range	<90%RH (No condensation)
Storage Temperature Range	-40°C ~ 85°C

\* Tested under laboratory conditions and for guideline purposes only.

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CANADA:  
351 Ferrier Street, Unit 5  
Markham, ON L3R 5Z2  
Toll Free: 1-866-843-6865  
Tel: 416-410-6865

USA:  
171 Cooper Ave. Suite 110  
Tonawanda, NY 14150 USA  
Toll Free: 1-866-843-6865  
Local: 1-716-877-7277

UAE:  
PO Box No 126312 Office Suite 703,  
Oxford Towers Business Bay, Dubai, UAE  
Tel: + 971 4 2767117



www.watchnetiot.com  
info@watchnetiot.com

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