



WLRC-S49C



Atmospheric Air Pressure & Temperature Sensor

WLRC-S49C is a wireless communication device that detects ambient air pressure and temperature. WLRC-S49C detects ambient air pressure and temperature and transmits the detected data to other devices via a wireless network for display. The device adopts the SX1276 wireless communication module.

Features:

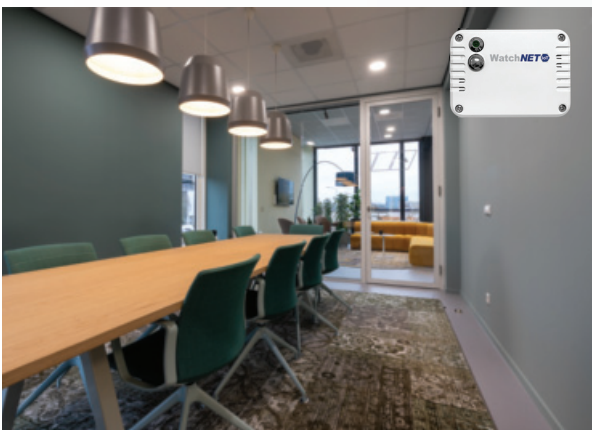
- Super Long Range Signal Penetration
- 5 years plus Battery Life*
- Easy Installation
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Over-the-air updates
- Interactive WatchNET IoT platform with dashboard, search and notification settings
- * Magnetized ABS enclosure for easy installation



Applications:

- Smart home
- Atmospheric Detection

Schematic Diagram:



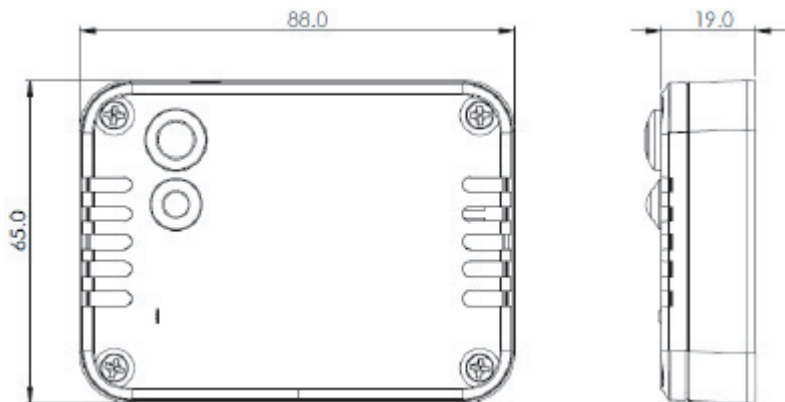
Technical Specifications

Electrical	
Power Supply	2 sections of ER14505 lithium batteries (3.6V, 2400mAh/ section) in parallel
Battery Lifetime	3 years (Conditions: ambient temperature 25°C/77°F 15 min heartbeats, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	24uA
Wake up Current	6.3mA@3.3V
Low Voltage Threshold	3.2V
RF Receiving Current	11mA @3.3V
RF Transmitting Current	120mA @3.3V
<i>*The actual electrical characteristics will vary depending on the power supply voltage.</i>	
Pressure Sensor	
Power Supply	+3.3VDC
Air Pressure Measurement Range	300-1100hPa
Air Pressure Measurement Accuracy	±1.5hPa (950~1050 hPa, 0°C~40°C/32°F~104°F)
Temperature Measurement Range	-40°C ~ 55°C / -40°F ~ 131°F
Temperature Measurement Accuracy	±1°C @25°C
Frequency	
Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	20dbm
Receive 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 Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870, US902-928, (Note: The frequency band is optional and needs to be configured before shipment)
Physical	
Dimension	Host body: 88mm x 65mm x 19mm / 3.46" x 2.56" x 0.75"
Weight	Approximately 113gr / 0.249lb
Protection class	Main Part IP65
Environment Temperature Range	-40°C ~ 55°C / -40°F ~ 131°F
Environment Humidity Range	<90%RH (No condensation)
Storage Temperature	-40°C ~ 85°C / -40°F ~ 185°F

Dimensions

* Actual signal range may vary depending on the environment.

* Battery life is determined by sensor reporting frequency and other variables.



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Rev. Dec., 2021

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