



## WLRC-S16L / WLRC-S17



### Wireless Temperature and Humidity Sensor for Low Temperature Environment

This commercial-grade temperature and humidity sensor can be used to monitor the temperature and humidity of low-temperature environment and notify personals by SMS, email or phone call true our hosted web platform if the values go out of the optimal range. This sensor is rugged and IP65 rated for humid and moist environment. This device has a magnetic back panel that can be mounted on any metal surfaces.

#### 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:

- Walk-IN Freezers and coolers
- Cold storages
- Outdoor temperature in extreme conditions
- Freezers and open coolers
- Factories
- Mines
- Food manufacturing units
- Data centers
- E Farming and greenhouse

#### Schematic Diagram:



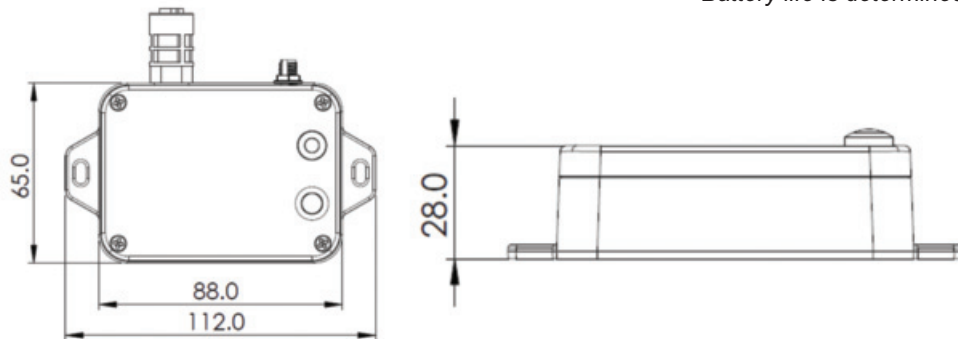
## Technical Specifications

Electrical	WLRC-S16L	WLRC-S17
Input Power	2x 3.6V ER14505 AA lithium batteries (3.6V2400mah/section)*	
Battery Life	5years (Conditions: ambient temperature 25°C/77°F, 15min heartbeats, txpower = 20dBm, LoRa spreading factor SF = 10)	
Sleeping Mode	12uA	24uA
Wake up Mode	6.3mA@3.3V	
Low Voltage Threshold	3.2V	
Transmitting current (max)	120mA@3.3V	
Receiving current (max)	11mA @3.3V	
Thermistor SHT-35		
Model	SHT-35 (Brand: Sensirion)	SHT-30 (Brand: Sensirion)
Power Supply	+3.3VDC	
Temperature Detecting Range	-40°C ~ 55°C / -40°F ~ 131°F	-20°C ~ 55°C / -4°F ~ 131°F
Temperature Accuracy	±0.3°C @25°C / 77°F	±0.5°C @25°C / 77°F
Humidity Detecting Range	0%RH~100%RH	10%RH~90%RH
Humidity Accuracy	±2%RH @25°C / 77°F	±4%RH @25°C / 77°F
Frequency		
TX Power	19dBm±1dBm	
Rx 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	
Spread Technique	LoRa/FSK	
Available Frequency	EU863-870, US902-928, Configured before shipment	
Physical		
Dimension	L:112mm x W:65mm x H:32mm / L:4.41" x W:2.56" x H:1.26"	
Weight	141g / 0.311lb	
Protection class	Main Part IP65 / External Sensor IP65	
Environment Temperature Range	-40°C ~ 55°C / -40°F ~ 131°F	-20°C ~ 55°C / -4°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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