



WLRC-D15



Wireless Water Leak Sensor

WLRC-D15 is a wireless water/flood detection device with long range communication capabilities. Two stainless steel electrodes quickly detect water presence on contact. Combined with water shutter valve WLRI-V11 can stop serious water damage to the property. Built-in smart linkage function on gateway enables automated shut off in online or offline mode.

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:

- Any location where water presence or leak to be detected
- Industrial or Commercial use
- Residential water leak detection
- Automatic operation shut off valve to prevent damage
- Instant notification

Schematic Diagram:



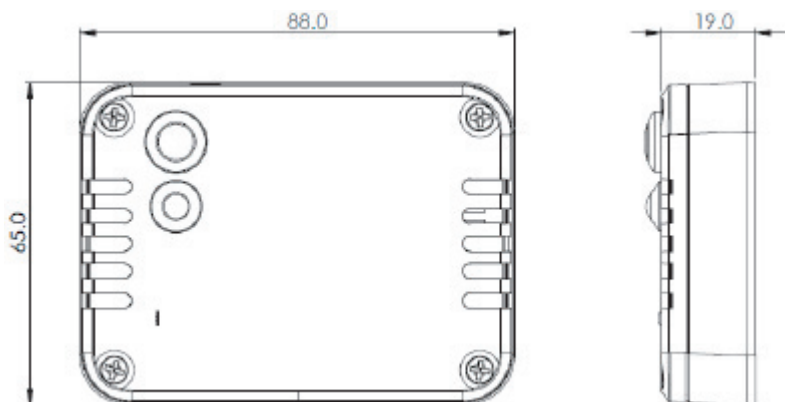
Technical Specifications

Electrical	
Power Supply	2 sections of ER14505 lithium batteries (3.6V, 2400mAh/ section) in parallel
Battery Lifetime	5 years (Conditions: ambient temperature 25°C/77°F 15 min heartbeats, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	24uA
Wake up Current	7.12mA (typical value) Wake up current range 0.8mA - 20mA * When no transmitting/receiving LoRa data)
Low Voltage Threshold	3.2V
RF Receiving Current	11mA @3.3V
RF Transmitting Current	120mA/3.3V
*The actual electrical characteristics will vary depending on the power supply voltage.	
Electrode Rod	
Material	Nickel-plated phosphor bronze
Length	Total length: 201.5±1.5mm / 7.93"±0.06" 10 sections of the electrode rod have been rolled grooves for easy cutting. The length of each section is about 10mm as the figure shown.
Frequency	
Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	19dBm±1dBm
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(LoRa) / 1.2kbps~300kbps(FSK)
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 127gr / 0.28lb
Protection class	Main Part IP65
Environment Temperature Range	-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

* Actual signal range may vary depending on the environment.

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

Dimensions



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