



WLRC-D17 / WLRC-D172



Wireless Hall Type Open/Close Detection Sensor

WLRC-D17/WLRC-D172 Wireless Door/Window Sensor can be easily installed to monitor windows, doors and any other openings and closings, that have to be monitored. Built-in attached contact and magnet can be mounted on door openings. The long-distance wireless range makes this device ideal to monitor underground parking lot exit doors.

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:

- Commercial doors and window monitoring
- Residential doors and window monitoring
- Freezers and coolers open/close monitoring and count
- Alarms and Alerts when the door is open/closed in undesignated time
- Data Centers / IT Server rooms
- Access Control Systems
- Underground exit doors
- Storage room monitoring
- Cargo bay door monitoring

Schematic Diagram:



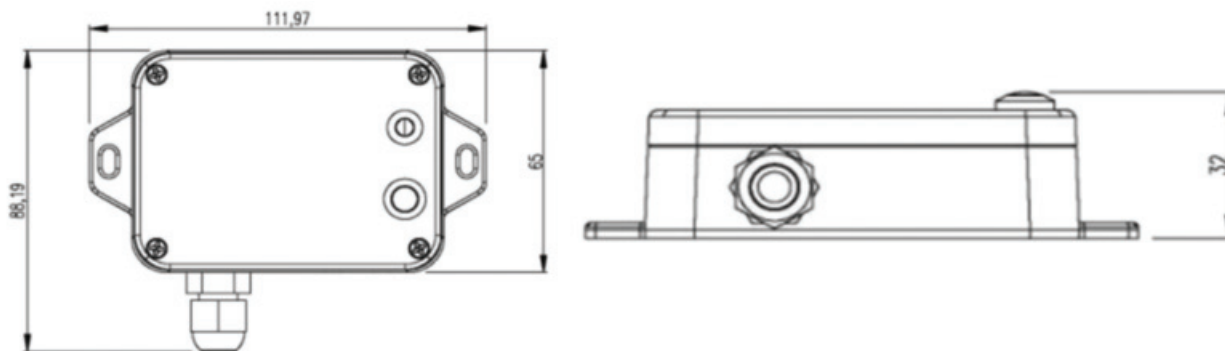
Technical Specifications

Electric	WLRC-D17	WLRC-D172
Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V2400mah/section)*	
Battery Life Time	Battery life is 5 years (condition: ambient temperature 25°C / 77°F, report once every 15 minutes, txpower = 20 dBm, LoRa spreading factor SF = 10)	
Sleeping Mode	23uA (WLRC-D17)	26uA (WLRC-D172)
Wake up Mode	0.8mA-8mA@3.3V	6.3mA@3.3V
Receiving Current (max)	11mA @3.3V	
Transmitting Current (max)	120mA/3.3V	
Battery Voltage Measurement Accuracy	±0.1V	
Low Voltage Threshold	3.2V	
* Specific electrical characteristics may vary depending on the power supply voltage		
Hall Sensor Specification		
External Hall Sensor Housing Size	42mm x 13mm x 12mm / 1.65" x 0.51" x 0.47"	
Performance Characteristics	All-pole sensing, the magnet can activate either pole	
Hall Sensor Supply Voltage Range	1.65-5.5VDC	
Hall Sensor Temperature Range	40°C to 85°C / 104°F to 185°F	
Push-pull Output	No external pull-up resistor required	
Hall Sensor Sensing Distance	Less than 3cm / 1.18"	
Frequency		
TX Power	19dBm±1dBm	
Rx Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm(FSK, Frequency deviation=5kHz, BitRate=1.2kbps)	
Antenna Type	Built-in antenna	
Communication Range	Up to 5km/3.11miles, the actual transmission distance depends on the environment*	
Data Transfer Rate	0.3kbps ~ 0kbps(LoRa)	
Spread Technique	LoRa/FSK	
Available Frequency	EU863-870, US902-928, Configured before shipment	
Physical		
Dimensions	Main Part: L: 112mm x W: 65mm x H: 32mm / 4.41" x 2.56" x 1.26"	
Weight	150g / 0.33lb	
Protection class	Main Part IP65 / External Sensor IP65	
Environment Temperature Range	-20°C ~ 55°C / -4°F ~ 131°F	
Storage Temperature	-40°C ~ 85°C / -40°F ~ 185°F	
Environment Humidity Range	<90%RH (No condensation)	

* 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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