



WLRC-I14 / WLRC-I142



Wireless Dry Contact Interface

The WLRC-I14 can be connected to external dry contact devices, such as various switches, buttons, relays and reed switch outputs. It can detect the closure or disconnection signal of the dry contacts. Based on SX1276 wireless communication module, wireless communication is secured with proprietary encryption.

Features:

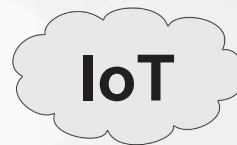
- Super Long Range Signal Penetration
 - 5 years plus Battery Life*
 - Easy Installation
 - Frequency Hopping Spread Spectrum (FHSS)
 - Improved interference immunity
 - Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
 - Over-the-air updates
 - Interactive WatchNET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



Applications:

- Tamper Switches
- Barn door access monitoring
- Freezer / cooler door access
- Door open too long (to determine if they are not closed all the way)
- Convenience store cooler doors (to determine if they are not closed all the way)
- Forklift seat switches
- Dry contact sensor
- Control relay / alarms

Schematic Diagram:



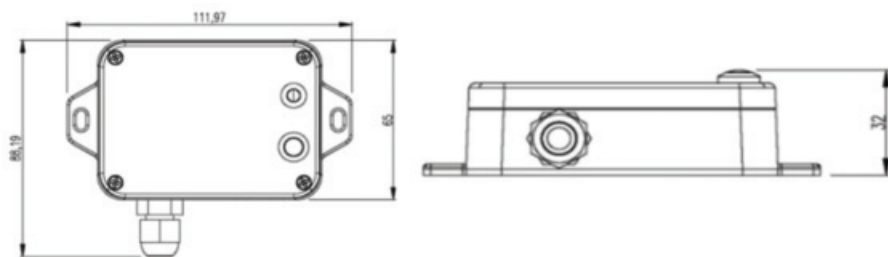
Technical Specifications

Electrical	
Input Power	2x 3.6V ER14505 AA lithium batteries (3.6V2400mah/section)*
Low Voltage Threshold	3.2V
Sleeping Mode	22uA (WLRC-I14) / 22uA (WLRC-I14)
Wake up Mode	6.3mA@3.3V
Transmitting current (max)	120mA@3.3V
Receiving current (max)	11mA @3.3V
Battery Measurement Accuracy	±0.1V
<i>*Specific electrical characteristics may vary depending on the power supply voltage.</i>	
External Wire Specification	
Wire material	UL2547 28AWG
Wire maximum temperature	80°C / 176°F
Maximum outer diameter of the wire	2mm / 0.078"
Wire length	1000mm (±5mm) / 39.37" (±0.2")
Wire flame resistance rating	VW-1
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	US915 / EU868. Configured before shipment.
Physical	
Dimension	L:112mm x W:65mm x H:32mm / L:4.41" x W:2.6" x H:1.26"
Weight	141g / 0.31lb (WLRC-I14) / 150g / 0.33lb (WLRC-I142)
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
IP Rating	Main Part IP65

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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