



## WLRC-103



### Wireless Automation Controller

WLRC-103 is a Wireless Multifunctional Controller that can be used as an Input/Output device or AC/DC Motor controller. WatchNET IoT platform can link IoT events from other devices to activate relays on this controller. Three inputs and three independent relay outputs can perform simple automation or scheduled tasks with monitoring and control.

#### Features & Benefits:

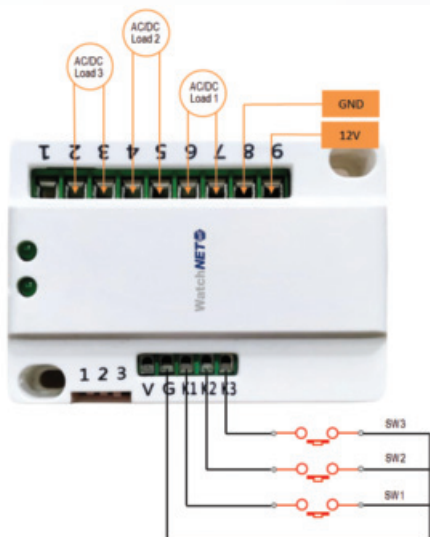
- Super Long Range Signal Penetration
- Easy Installation
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Over-the-air updates
- Interactive WatchNET IoT platform with dashboard,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



#### Applications:

- Monitor doors or other dry contact inputs
- Independent input/output control (Light switch on/off, alarm trigger, etc.)
- For greenhouse/farm automation
- Remote on/off control

#### Schematic Diagram:



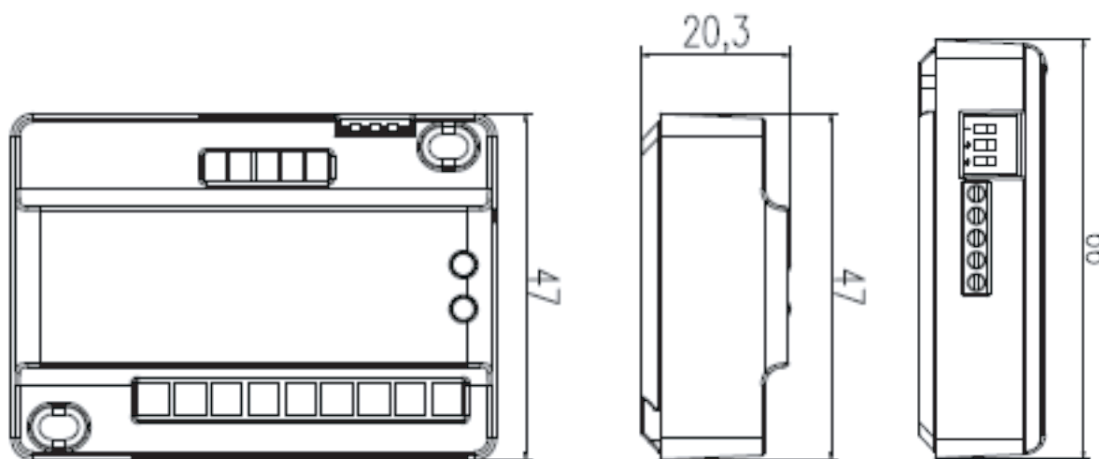
AC Source: L N  
DC Source: VCC GND



## Technical Specifications

Electrical	
Work electric voltage	DC 12V / 1A
Work Current	20mA(12V) (Relay does not operate and no data transfer)
Relay Load Characteristics	AC250V/5A, DC30V/5A (contact load)
Relay Power Consumption	300mW
Relay Type	Magnetic Latching Relay
Relay Model	HFE60/5-1HSTGL2R
Battery Voltage Measurement Accuracy	±0.1V
RF frequency parameter	
Power Output	US: 915 20dbm, CN: 470 19.15dbm
Receiving 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 System Mode	LoRa/FSK (Note: You can choose one of them)
Frequency range	863MHz-928MHz 470MHz-510MHz
Physical	
Working Temperature Range	-20°C ~ 55°C / -4°F ~ 131°F
Storage Temperature Range	-40°C ~ 85°C / -40°F ~ 267°F
Ambient Humidity Range	<90%RH (No condensation)
Dimensions	166mm x 47mm x 20.3 mm / 6.53" x 1.85" x 0.80"

\* Actual signal range may vary depending on the environment.



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Rev. Dec. 2021

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