LoRaWAN® Solenoid Valve Controller

UC51x Series

Milesight

UC51x series LoRaWAN® Solenoid Valve Controller is a device used to remotely control DC latching solenoids of the valve. It contains 2 solenoid interfaces and 2 GPIO interfaces, which can be easily controlled locally or remotely.

Besides ultra-low-power LoRaWAN® technology, UC51x series also provides built-in solar pannel and high-capacity battery power supply for long-term operation. For outdoor applications, it equips with IP67-rated enclosure and M12 connectors to protect from water and dust under harsh environments.

◆ Features

- Compatible with standard DC latching solenoids
- OPEN/CLOSE control by mobile App locally or commands remotely
- Two GPIO interfaces for flow monitoring or valve status monitoring
- Transmission distance up to 15 km with line of sight
- Waterproof design including IP67 case and M12 connectors
- Solar powered and built-in chargeable battery
- Quick wireless configuration via NFC
- Time and flow control via Milesight IoT Cloud

◆ Specifications

Wireless Transmission	
Technology	LoRaWAN®
Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm (868 MHz)/20dBm (915 MHz)/19dBm (470 MHz)
Sensitivity	-137dBm @300bps
Working Mode	UC511: OTAA/ABP Class A, Class B, Class C, Class C to B
	UC512: OTAA/ABP Class A, Class B
Data Interfaces	
Interface Type	M12 A-Coded Male
Solenoid Interface	
Ports	2 × Solenoid Interfaces, 5/9/12 VDC Switchable
Solenoid Support	2 Wires Latching Solenoids
GPIO Interface	
Ports	2 × GPIO Interfaces, Dry Contact
Work Mode	Digital Input, Pulse Counter
Operation	
Power On & Off	Mobile App (via NFC), PC Software (via USB Type-C),
	Power Button (Internal), Cable Connection
Configuration	Mobile App(via NFC) or PC software (via USB Type-C)
Physical Characteristics	
Power Supply	UC511: Solar Powered (5V, 1.6W) + 2 × 2550 mAh Chargeable Batteries
	UC512: 3 × 9000 mAh Replaceable Li-SOCl$_2$ Batteries
Operating Temperature	-20°C to +60°C
Ingress Protection	IP67
Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)
Installation	Wall or Pole Mounting
Approvals	
Regulatory	CE, FCC, RoHS