User Manual

SM-WLS01

Infrared Meter Reading Head

1.Product Overview

The SM-WLS01 Meter Reading Head is an intelligent electricity meter device designed for real-time monitoring of household or commercial electricity usage, enabling energy management in conjunction with energy storage systems. Developed by our company, it connects with a dedicated mobile app to help users optimize power consumption and reduce electricity costs.

2.Product Features

Real-time Electricity Monitoring: Provides live data on electricity usage for efficient energy distribution management.

Cost Analysis: Helps users understand electricity expenses and offers energy-saving recommendations.

Remote Control: Allows users to view electricity data remotely via the app.

High Compatibility: Supports multiple types of electricity meters.

Eco-friendly & Energy-saving: Encourages reduced consumption during peak tariff periods and integrates with renewable energy systems to maximize clean energy

3. Product List

Meter reading head

LoRa antenna

P1 adapter cable

SIM ejector pin

Adapter

Data cable

Instruction manual

4.Technical specification

Category	Item	Specification
General Parameters	Dimensions (L/W/H)	(74*42*28mm)
	Weight	60g
	Power Supply	DC 5V
	Operating Current	1A
	Power Consumption	2.5W
	Operating Temperature	-20℃ ～ +65℃
	Storage Temperature	-30℃ ～ +85℃
	Installation Method	Magnetic/Plug-in
	Warranty	2 Years
Interfaces	KEY	1
	Infrared Port	1
	Communication Port	Type-C TTL, compatible with P1 port
	Antenna Port	LoRa*1
Display	LED	1
Device Management	Maximum Managed Devices	8
	Communication Method	Infrared
	Energy Interconnection	Supported
	BLE	BLE 4.2 or above, 2.4 GHz
	BLE Communication Range	50M & 10M
	LoRa Operating Frequency	433 ~ 915MHz
	LoRa Maximum Range	200M
Application Parameters	TTL Baud Rate	9600(default)bps
	Data Upload Interval	1 second
Software Support	Firmware Upgrade	OTA Supported
Communication Protocol	Data Structure	Start Bit: 1, Data Bits: 8, Parity: None
	Baud Rate	9600bps/115200bps
	Protocol	DLMS/COSEM

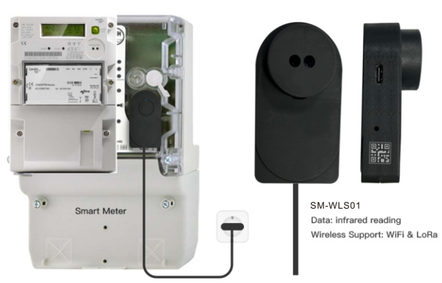
5. Installation and Configuration

First, connect the LoRa antenna to the LoRa port at the bottom of the meter reading head. Then, based on the usage scenario, connect the meter reading head to the electricity meter securely, ensuring stable connections and normal indicator lights.

5.1 Infrared Meter Installation

Applicable Scenario: Meters with infrared interfaces.

Use an adapter and data cable to connect the DC port at the bottom of the meter reading head. Attach it magnetically to the meter's magnetic port.



5.2 P1 Meter Installation

Applicable Scenario: Meters with P1 interfaces.

Use a P1 adapter cable to connect the meter's P1 port and the P1 port on the side of the meter reading head.

5.3 Pairing with Balcony Energy Storage

After installing the meter reading head, press the side KEY button with a pin to enter pairing mode. Open the ShinePhone app, locate the balcony energy storage device you wish to pair, and follow the on-screen instructions under "Associate Meter" in the settings to complete the process.

Note!!! If the meter reading head was previously paired with another device, press and hold the button for over 5 seconds with a pin to clear the pairing history.

6.Safety Instructions

This is an electronic device and should be kept out of reach of children and individuals with limited cognitive abilities. Before use, inspect the device for physical damage. If any damage is found, stop installation immediately and contact support.Avoid placing the device in high-temperature or humid environments, as this may shorten its lifespan.Store the device in a dry environment; it is not waterproof. Operating the device outside the specified temperature range (30°C–85°C) may cause malfunctions.Disassembling the device will void its warranty. Any other physical impacts may also damage the device.

7.Disposal

7.1Handling of Electronic Components

This symbol on the product, accessories, or packaging indicates that this device should not be disposed of as unsorted municipal waste. If you reside in the European Union or another European country with a separate collection system for Waste Electrical and Electronic Equipment (WEEE), please ensure this device is properly handled at a designated collection and recycling point

. By disposing of the device correctly, you help prevent potential environmental and public health impacts that could result from improper handling.

Proper treatment of waste equipment and material recycling contributes to the conservation of natural resources

7.2Packaging Waste Disposal

The packaging is made from environmentally friendly materials and can be processed at local recycling facilities

. By disposing of the packaging and packaging waste properly, you help avoid potential environmental and public health hazards.

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