Multifunctional detector

WE-T800 User Manual



Hainan Shidian Technology Co., Ltd.

preface

- This manual serves as an instruction manual covering various product functions, wiring methods, operational procedures, and related usage details.
- Before operating, please read this manual carefully and use the product correctly to avoid unnecessary losses caused by incorrect operation.
- After reading, please keep it in a place where you can easily access it for reference during operations.

pay attention to

- If this manual is modified due to feature upgrades or other changes, please refer to the newly released document.
- We strive to ensure the accuracy of this manual. If you find any errors, please contact us.
- Please use this product in accordance with its characteristics and comply with national and regional laws and regulations.
- Reproduction and duplication of the contents of this

manual are strictly prohibited.

- The final interpretation rights of this manual shall be reserved by the Company.

edition

U-WES-T800-CN1 First Edition February 2026

Confirm packaging content

After opening the packaging box, please check the contents before starting the operation. If you find any errors in model or quantity, or physical damage to the appearance, please contact our company.

The product packaging content is specified in the standard configuration list.

Product Standard Configuration List

order number	name	quantity	remarks
1	Multifunctional detector	1	
2	instructions	1	

3	antenna	1	
4	certificate	1	

Note: Customized products may differ slightly from standard products. Please refer to your order for details.

1. Multifunctional Detector 1 1

1.1. preface II preface II

pay attention to II pay attention to II

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Confirm packaging content III Confirm packaging content III

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表1 technical parameter

import	
interface type	1 RS485 channel, 2 AI channels, 2 DI channels
RS485 Communication rate	4800-115200bps
RS485 protocol	MODBUS-RTU
AI signal type	4~20mA
DI signal type	Switching quantity, pulse counting
output	
Output power supply	DC3.6V/5V/12V, adjustable
signal transmission	
4G	Three-year data plan (100MB/month) Supports MQTT, HTTP, and WES cloud service protocols LTE FDD B1/3/5/8 LTE TDD B34/38/39/40/41 (full frequency band) Speed (Mbps) LTE FDD: 10.3 (DL) / 5.1 (UL) LTE TDD：9.1(DL)/3.1(UL)

	Antenna interface type: SMA female connector
sampling period	Settable from 10s to 18h
Reporting cycle	Settable from 10s to 18h
Electrical specifications	
Power Supply Voltage	Lithium battery with 114000mAh or 228000mAh capacity 9~30VDC, typical 24V
Battery life	Subject to specific operating conditions and reporting cycles. representative value ：
ambient condition	
work environment	temperature ： (-20~70) ℃ Relative humidity: 5%RH to 95%RH (no condensation)
Storage temperature	(-25~85) ℃
levels of	IP68

protection	

3. Product structure and dimensions

3.1. outline dimension

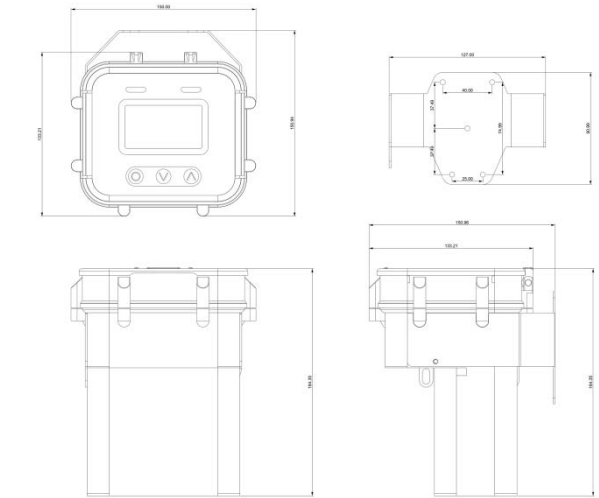


图1 Product dimensions

3.2. material quality

Shell material: ABS/PC

4. Installation and Use

4.1. Delivery inspection

Upon product delivery, users should first inspect the packaging quality. The packaging box must be intact without damage and bear clear labeling. If significant damage is observed, promptly contact the storage and transportation department to investigate the issue and determine responsibility, then notify our company. If no damage or other issues are detected, the product may be unpacked and its integrity verified through physical inspection.

4.2. Installation and Usage Notes

（1）When powering devices with external DC power, pay attention to the wiring sequence to avoid damage or malfunction caused by incorrect connections.

（2）The device antenna must be installed in a signal-optimized area; otherwise, it will increase communication power consumption and reduce battery life.

（3）When replacing the SIM card, battery, or output voltage during device use and requiring the top cover to be opened, avoid

forceful lifting. Lift gently to prevent violent disconnection of screen wiring harnesses and other electrical components.

（4）Ensure the external quick-connect plug is properly connected when in use to prevent water ingress.

（5）When connecting external devices, pay attention to wiring to avoid damage to this device and connected external devices.

（6）Installation near vibration sources or impact sources should be avoided.

（7）The thread specifications of the joints for process installation must match the product specifications.

（8）During installation and use, wear, punctures, or scratches on the conductors must be strictly avoided. If such issues are present on-site, protective measures should be implemented for the conductors.

4.3. Interface wiring diagram

As shown in the figure below, the device's external interfaces are labeled A, B, C, and the antenna interface.

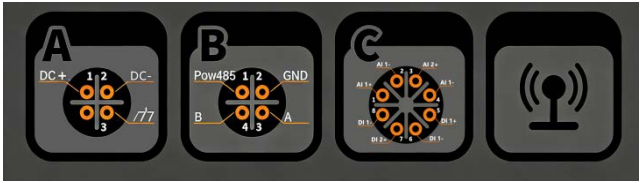


图2 Interface schematic diagram

The interface wiring is defined in the table below.

表2 Interface wiring definition

Interface	order number	definition
A	1	import DC+
	2	import DC-
	3	Input location
B	1	output POW
	2	output GND
	3	RS485A
	4	RS485B
C	1	AI 1+
	2	AI 1-
	3	AI 2+
	4	AI 2-
	5	DI 1+

	6	DI 1-
	7	DI 2+
	8	DI 2-

4.4. Installation Guide

As shown in the figure below, install the fixed bracket on the wall to be secured. Position the device according to the indicated direction on the bracket, and then secure it with screws on both sides of the device.

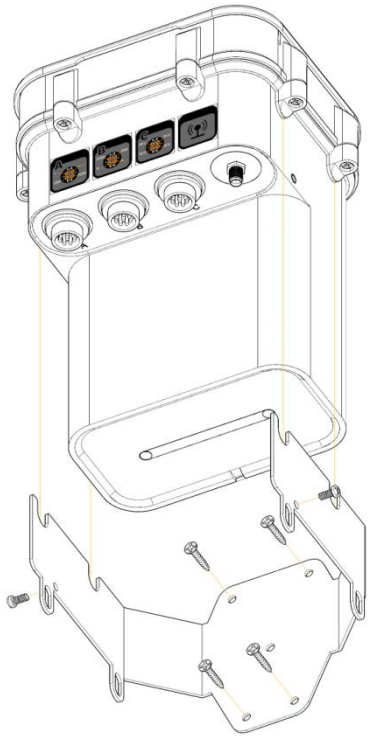


图3 Installation diagram

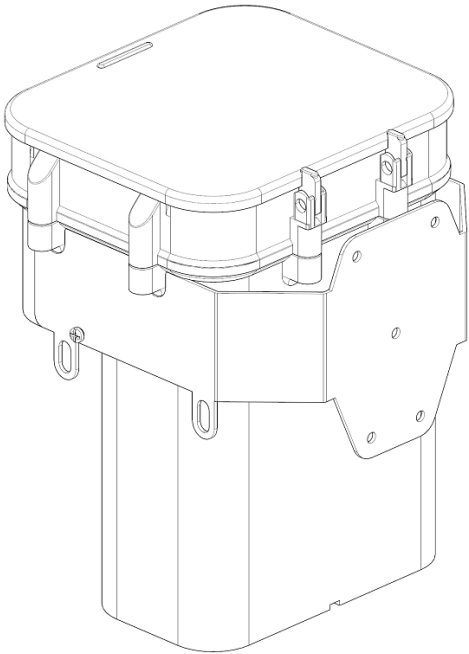


图4 Overall installation diagram

5. operate

5.1. Display and operation unit

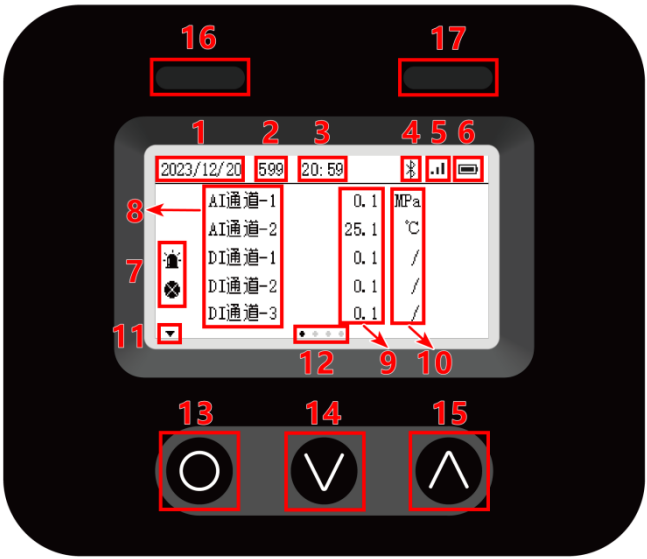


图5 Panel diagram

5.1.1. Interface Description

表3 Interface Description

order number	explain
1	date
2	Recognition countdown
3	time
4	Bluetooth connection identifier
5	Upstream network status
6	Power label and energy label
7	Device channel status: Not displayed when normal, displayed during alarms, and displayed during faults
8	Channel Identification
9	Channel acquisition value
10	Channel unit
11	Page-turning marker
12	Home page location marker

5.1.2. Key Instructions

Three operation buttons are located below the main screen.

表4 Key definition

order number	key	operate	explain
13	O (OK key)	click	1. Level switching on primary page 2. affirm 3. bit level switching 4. Light up the backlight
		Long press for 2 seconds	1. Enter selection mode 2. Exit selection mode 3. Confirm saving the settings and exit
14	v Minus key	click	1. Flip down page 2. Select the next line 3. Subtract 1 from the selected data bit value 4. Next data option
15	^ (additional key)	click	1. Flip page up 2. Select the previous row 3. Add 1 to the selected data bit value

order number	key	operate	explain
			4. Previous data option

5.1.3. Indicator light description

Two indicator lights above the main screen.

表5 Indicator light description

order number	explain
16	Device communication indicator light 1. The device displays bright green when submitting data. 2. Turn off the device when no data is reported
17	Device operation indicator light 1. The light green color indicates normal device operation with flashing. 2. When an equipment alarm occurs, the orange light flashes. 3. When a device fails, it displays bright red and flashes.

5.2. field operations

5.2.1.Page Description

表6 Home page description

home page main page	Single-page display	explain
Home (Channel Page)	RS485 channel page	1. Show the notification bar at the top of the screen 2. The screen data area displays channel status, channel identifier, channel acquisition values, and channel units.
	AI Channel Page	1. Show the notification bar at the top of the screen 2. The screen data area displays channel status, channel identifier, channel acquisition values, and channel units.
	DI Channel Page	1. Show the notification bar at the top of the screen 2. The screen data area

		displays channel status, channel identifier, channel acquisition values, and channel units.
move Status page	Web Information Page	1. Display the page title at the top of the screen Status 2. The data area displays upstream network parameters including RSSI/signal strength, SIM card, Operator, APN, and IP address.
	Final report time page	1. Display the page title at the top of the screen Status 2. The data range shows the last report time (LastUpload).
	Battery Level Page	1. Display the page title at the top of the screen Status 2. The data area displays the remaining battery power.
Configuration Page	Northbound Configuration Page	1. Display page title at the top of the screen Config 2. The data area displays

		northbound configuration parameters: Report Period, Cloud IP/Third-party Platform Address, CloudPort/Third-party Platform Port, Username/Third-party Platform Username, Password/Third-party Platform Password, Topic/Third-party Platform Reporting Topic, and Enable/Third-party Platform Reporting Enablement.
	Southbound Configuration Page	1. Display page title at the top of the screen Config 2. The data area displays the southbound configuration parameters: AI Period/AI sampling period, DI Period/DI sampling period, RS485 Period/RS485 sampling period, and RS485

		baudrate/RS485 baud rate.
QR Code Page	two-dimension code	1. Display the Bluetooth mini-program QR code on the left side of the screen 2. Display the device information QR code on the right side of the screen

表7 Secondary page description

secondary pagesubordinate page	Single-page display	explain
channel detail page	RS485 Channel Details Page	1. Display the page title RS485 Channel at the top of the screen 2. The data area displays the detailed parameters of the RS485 channel: Address, Identify, Status, and Value.
	AI Channel Details Page	1. Display the page title AI Channel at the top of the screen

		2. The data area displays the AI channel details: Type, Identify, Status, and Value.
	DI Channel Details Page	1. Display the page title DI Channel at the top of the screen 2. The data area displays the DI channel details: Type, Identify, Status, and Value.
System Page	System Information Page	1. Display the page title at the top of the screen System 2. The data area displays device Version/Version number, SN, BLE MAC, IMEI, and Language.
	Startup duration page	1. Display the page title at the top of the screen System 2. Data range display device Run Timer/Startup duration

5.2.2. operation declaration

表8 operation declaration

Operation item	operation declaration
Primary page navigation	1. Click any key to turn on the screen, then click any key again to turn on the screen backlight 2. Click the O key to scroll and switch between primary pages
page turning	1. On the first-level page, click the ∨ and ∧ keys to flip pages down and up.
View channel details page	1. Long press the O key for 2 seconds on the channel page to enter selection mode 2. Click the ∨ and ∧ keys to switch channels up or down until you reach the channel you want to view. 3. Click the O key to confirm your selection and go to the channel details page
Exit the channel details page	1. On the channel details page, long press the O key for 2 seconds to exit the channel details page.
Exit selection	1. In selection mode, press and hold the O

mode	key for 2 seconds to exit selection mode
View System page	1. Click the O key to switch to the QR code page 2. Long press the O key for 2 seconds to enter the System page
Exit System/System Page	1. On the System page, click ∧ to exit the System page.
Modify parameters	2. Press and hold the O key for 2 seconds to enter the device configuration page (Config page parameters/System page Language parameters) and select mode. 3. Click the ∨ and ∧ keys to switch options up or down until you reach the option you want to modify. 4. Click the O key to confirm the selection and edit 5. For numeric parameters, switch data bits by pressing the O key, or decrement or

	increment data bits by pressing the ∨ or ∧ keys. 6. If it is an optional parameter, click the ∨ or ∧ key to switch options 7. Long press the O key for 2 seconds to save and exit editing

5.3. Cloud migration for devices

This product can be connected to devices via the "Shidian Equipment Assistant Mini Program" or web interface, enabling remote monitoring, anomaly alerts, data reporting, and other functionalities.

5.3.1. Device cloud platform

(1) Mini Program

Search for the mini program "Shidian Equipment Assistant" on WeChat and add it.

(2) Web interface

Web address: https://www.west-iot.com/wessass

5.3.2. Add device

Step 1: Go to the Device Management interface of the Mini

Program project

Click Projects--Select a project--Click--Click Device Management.



图6 Go to the project device management interface

Step 2: Add device

Click the + icon in the upper right corner of the Device Management page, select a product, and choose an addition method: manual addition, QR code scanning, or QR code scanning.

Scan to add:

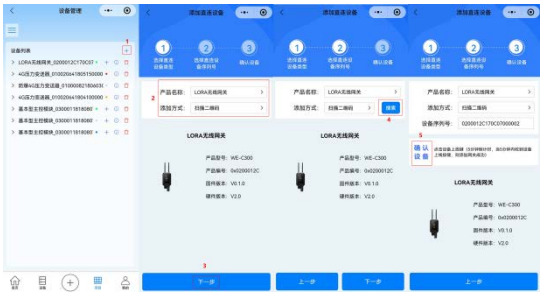


图7 Scan the device QR code to add

Add manually:



图8 Add manually

Bluetooth add:



图9 Add Bluetooth

5.3.3. Guide to Device Cloud Platform and Mini Programs

After the device is added successfully, you can view the device in the project. Detailed operation guides for the cloud platform and mini program are available in the mini program document center.

5.4. Device local Bluetooth configuration

Step 1: Open the mini program and search for devices via Bluetooth

Click-⊕-Click to search for devices. After finding the device you want to connect to, click Stop Search.

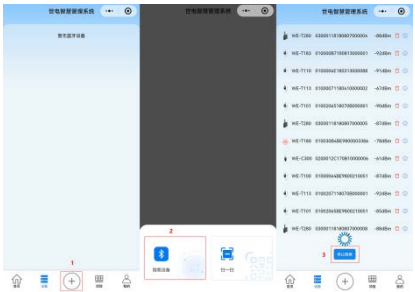


图10 Bluetooth search device

Step 2: Connect the device via Bluetooth

Click the device name to connect.



图11 Bluetooth-connected device

Step 3: Operate the device

After successfully connecting the device, you can view

device status data in Status, modify device properties in Configuration, and restart, identify, or upgrade the device in Operations.

6. Fault Analysis and Troubleshooting

The table below lists potential issues and solutions for multifunctional detectors. If your problem is not listed or the solution does not address your issue, please contact our company.

表9 Common Fault Analysis and Troubleshooting

fault phenomenon	analysis of causes	Exclusion method
Instrument display absent	Low battery level	Replace the battery
Abnormal acquisition value	Sensor connection disconnected	If the channel status is disconnected, check whether the on-site host is properly connected to the probe.
	The configuration of the RS485 channel does not match the actual sensor register	Reconfigure RS485 channel parameters

Cannot receive data	The 4G network can determine the instrument status through indicator lights. If network registration fails, the following checks will be performed: Is the SIM card properly installed and within the wireless network coverage area?	(1) Install the SIM card correctly, (2) Contact your network provider to set up the network, or check the signal strength of the local 4G network.
Card not read	Card not inserted properly / Card not used / Card bound	Replug Check data plan renewal Unlink Card
The platform has no data	The general procedure has a BUG	audit program

7. Quality Assurance and After-sales Service

Our company hereby guarantees to customers that during the warranty period, any product quality issues will be addressed through unconditional three guarantees service, including free repair, replacement, or return. All non-customized products are eligible for return or exchange within 7 days (excluding products damaged during use), while customized products shall adhere to the warranty terms specified in the contract.

disclaimer

During the warranty period, product failures caused by the following reasons are not covered by the three guarantees service:

(1) Product malfunction caused by improper use by customers.

(2) Product malfunction caused by customers' unauthorized disassembly, repair, or modification of the product.

Appendix Selection and Ordering

WE-T800 Product Selection Parameter Table	
Parameter	Selection Code and Specification
P power supply mode	P0: Powered by a 114,000mAh battery
	P1: Powered by 9~30VDC
	P2: Powered by a 228,000mAh battery
G Collection Type	G0: RS485 data acquisition
	G1: RS485 data acquisition, 2-channel AI,
Note: Customization requires customer service consultation	

instance ：

WE-T800-P0-G0

Multifunctional detector, powered by 114000mAh battery, RS485 data acquisition



WES

Scan the QR code for more information

Service hotline: 0086-21-33675566