

# MC-W-S Series Meter Controller Datasheet

## Product Overview

The MC-W-S uses a 7-inch color LCD screen and is a meter controller that can connect multiple sensors at the same time. Users can quickly configure sensor information, connect to meter controllers, and display data and graphs in real time. MC-W-S supports wireless data output, can upload the collected data to the cloud (SPS-Server), supports HTTP protocol, MQTT protocol.



The software system is an Android application developed based on the Android environment.

## Application

- All probes or equipment of the company can be connected to display data
- It can be used as a display instrument for various sewage treatment, surface water monitoring, drinking water monitoring
- Can be connected to any sensor or device with RS485 communication
- Can be applied to scenarios where multiple sensors are connected at the same time

## Features

- Up to 4 sensors can be connected
- Support 4-20 mA output, IO output
- Strong compatibility, can be connected to all sensors of our company and sensors of other RS485 communication methods
- LCD touch screen, clear display, easy to operate
- Wireless communication, support 2G/4G, Wi-Fi



## Specifications

Specification	Detail
<b>Product Description</b>	Meter controller, connected to the sensor to display measured values and upload data
<b>Display</b>	7-inch color LCD screen with touch function
<b>Dimensions (W×H×D)</b>	230×154×68 mm
<b>Weight</b>	1.9 kg
<b>Power requirements</b>	DC 24 V
<b>Power</b>	< 15 W (No sensor connected)
<b>Protection class</b>	IP65
<b>Mounting</b>	Wall-mounted
<b>Operating temperature</b>	-20~70 °C (-4~158 °F)
<b>Storage temperature</b>	-30~80 °C (-22~176 °F)
<b>Data storage</b>	32 GB
<b>Warranty</b>	One year

## Interface

Model	Output Interface	Input interface	Wireless communication
MC-W-S-P05	1 channel RS485 output. 2 expansion ports (Each expansion port can support 2 channels of 4-20 mA or 4 channels of I/O)	4 channel RS485 input	Wi-Fi

Note:

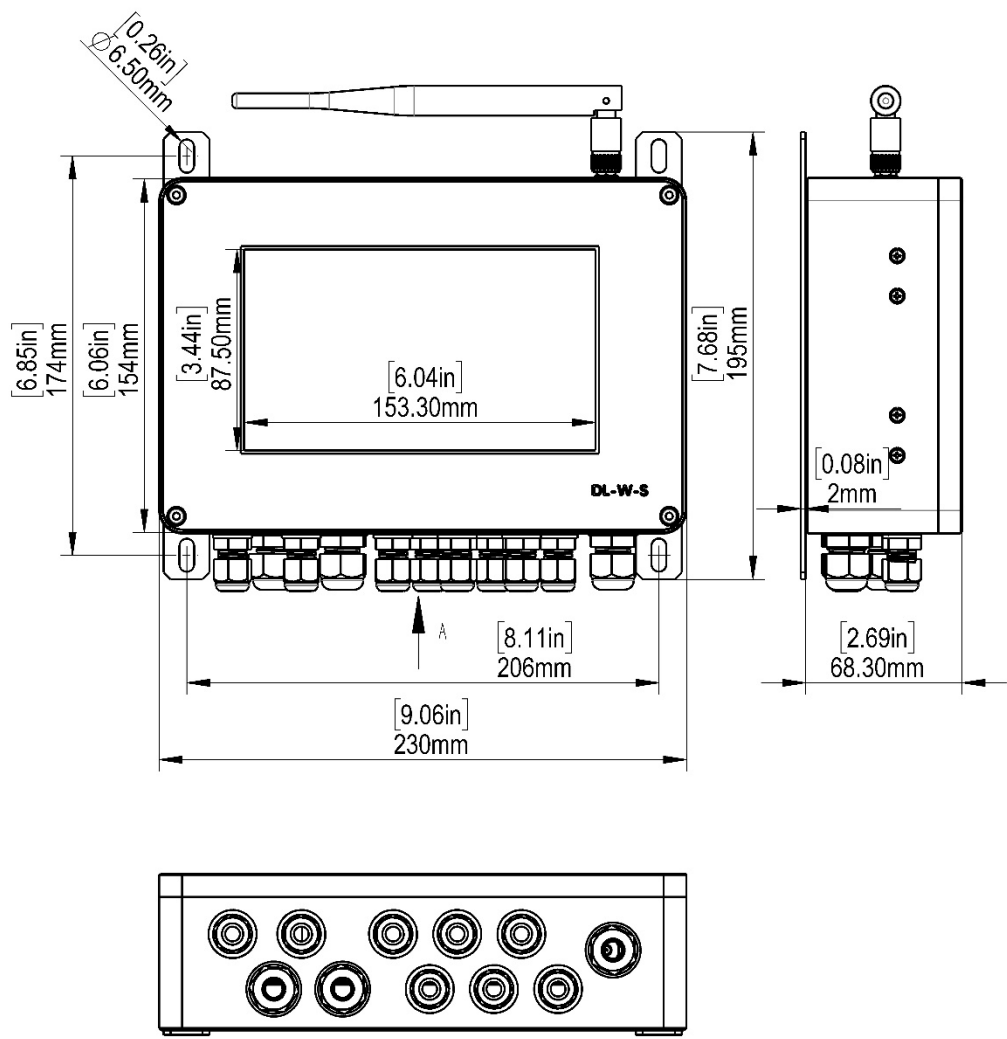
4G model requires additional purchase.

4-20 mA module and IO module need to be purchased additionally.

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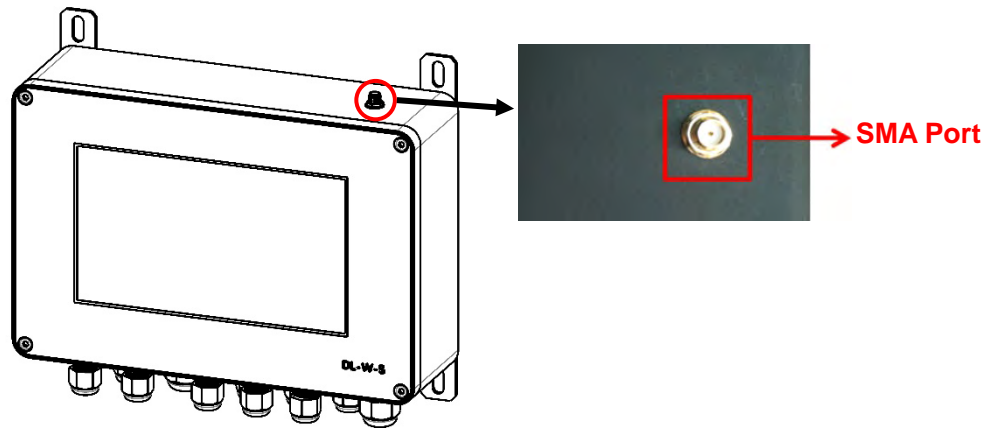


# Dimensions



## External 4G Antenna Interface

There is an SMA antenna interface on the upper right of the device. When the meter controller is placed in a confined space, an extension cable can be connected to enhance the 4G signal.

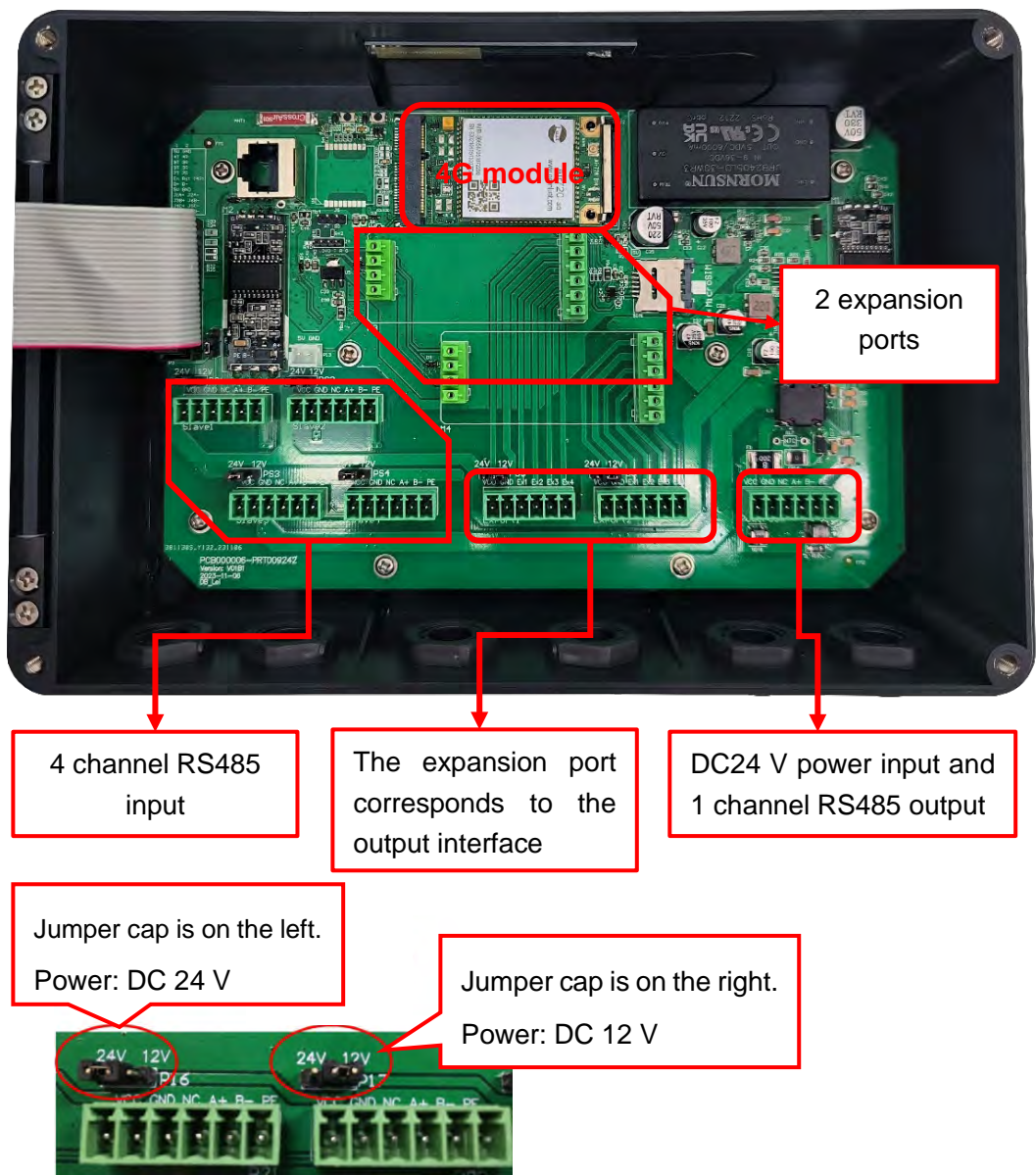


## Internal Board Interface

There are 11 ports on the internal board of the device. The pin numbers of the vertical ports (P1) are defined as 1~6 from bottom to top, and the pin numbers of the horizontal ports (P9~P13, P19~P23) are defined from left to right as 1~6. The interface definitions are described in the following table. Except for the P1 interface, the remaining 10 interfaces are used for external sensor devices. There is a jumper cap in the upper left corner of these 10 interfaces, and you can choose DC24 V or DC12 V power supply output according to the power supply specifications of the external equipment. The jumper cap is inserted on the left side for DC24 V power supply output, and the jumper cap is inserted on the right side for DC12 V power supply output.



# MC-W-S-P02 Interface



## Internal Interface Pin Definition

Port	Pin#	Name	Description	Connected equipment
Slave1	1	VCC	DC24 V+ OUT	Sensor/Slave
	2	GND	DC24 V- OUT	
	3	NC	Undefined	
	4	A+	RS485 A+	
	5	B-	RS485 B+	
	6	PE	Ground	

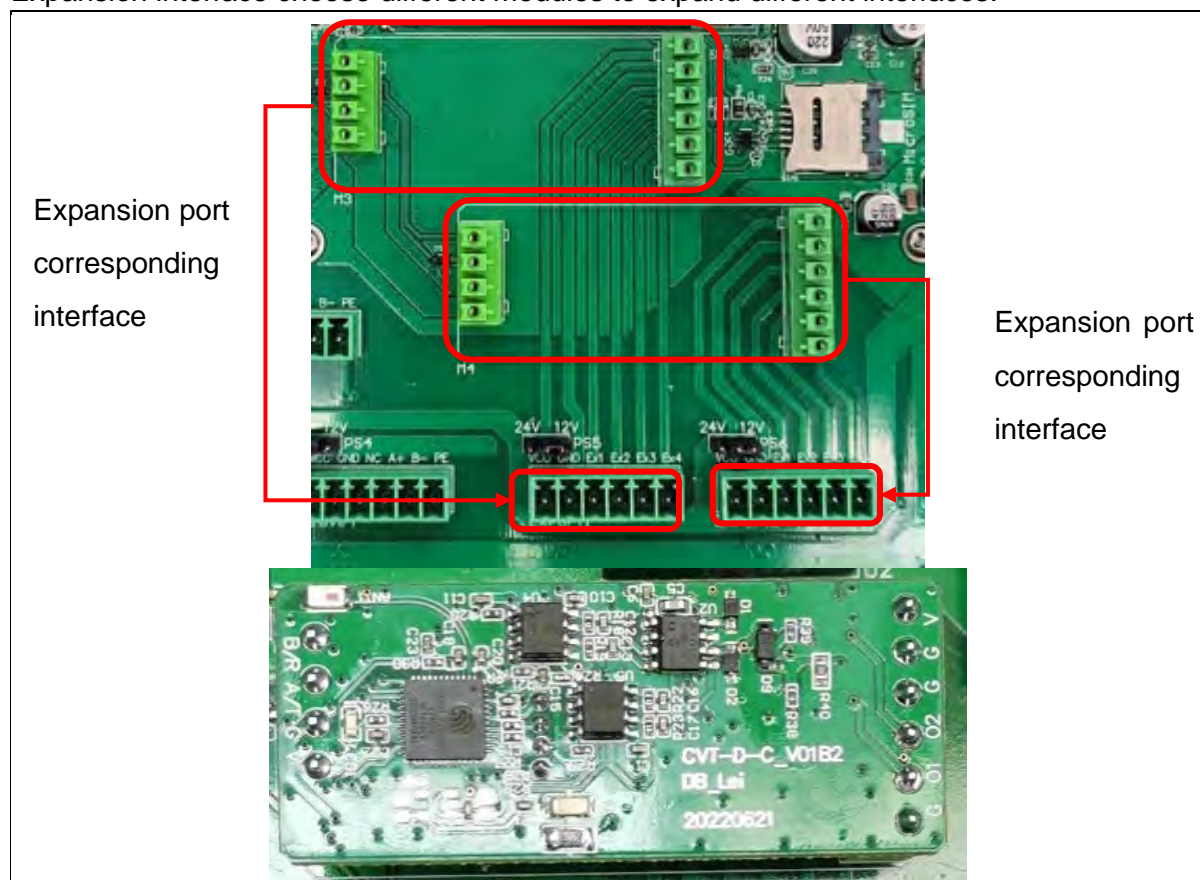


Port	Pin#	Name	Description	Connected equipment
Slave2	1	VCC	DC24 V+ OUT	Sensor/Slave
	2	GND	DC24 V- OUT	
	3	NC	Undefined	
	4	A+	RS485 A+	
	5	B-	RS485 B+	
	6	PE	Ground	
Slave3	1	VCC	DC24 V+ OUT	Sensor/Slave
	2	GND	DC24 V- OUT	
	3	NC	Undefined	
	4	A+	RS485 A+	
	5	B-	RS485 B+	
	6	PE	Ground	
Slave4	1	VCC	DC24 V+ OUT	Sensor/Slave
	2	GND	DC24 V- OUT	
	3	NC	Undefined	
	4	A+	RS485 A+	
	5	B-	RS485 B+	
	6	PE	Ground	
Power com	1	VCC	DC24 V+ IN	DC power input and host communication
	2	GND	DC24 V- IN	
	3	NC	Undefined	
	4	A+	RS485 A+	
	5	B-	RS485 B-	
	6	PE	Ground	



## 4-20 mA expansion output module

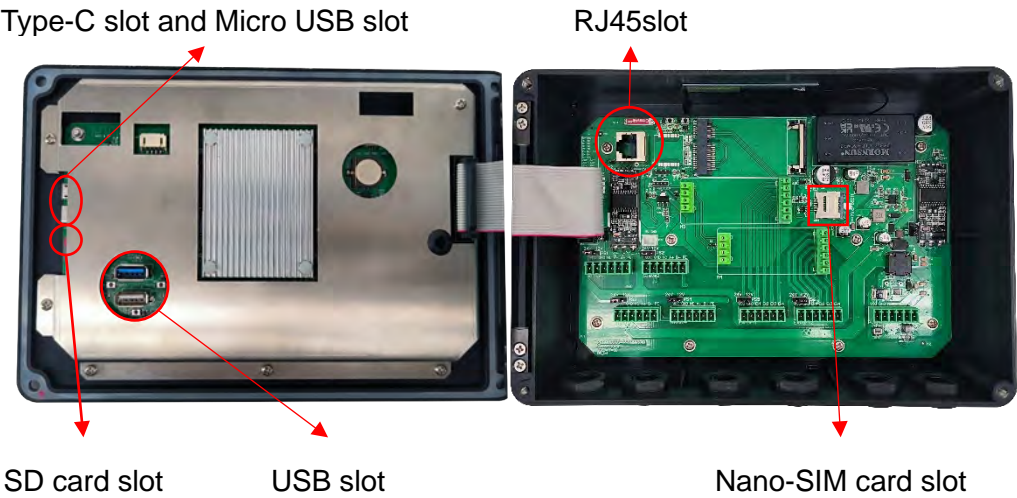
Expansion interface choose different modules to expand different interfaces.



4-20 mA expansion board	V	Extended corresponding output interface	VCC	DC24 V+ OUT	Expansion port output interface
	G		GND	DC24 V- OUT	
	G		Ex1	4-20 mA port 2 -	
	O2		Ex2	4-20 mA port 2 +	
	O1		Ex3	4-20 mA port 1 +	
	G		Ex4	4-20 mA port 1 -	
4-20 mA expansion board	V	Extended corresponding output interface	VCC	DC24 V+ OUT	Expansion port output interface
	G		GND	DC24 V- OUT	
	G		Ex1	4-20 mA port 2 -	
	O2		Ex2	4-20 mA port 2 +	
	O1		Ex3	4-20 mA port 1 +	
	G		Ex4	4-20 mA port 1 -	



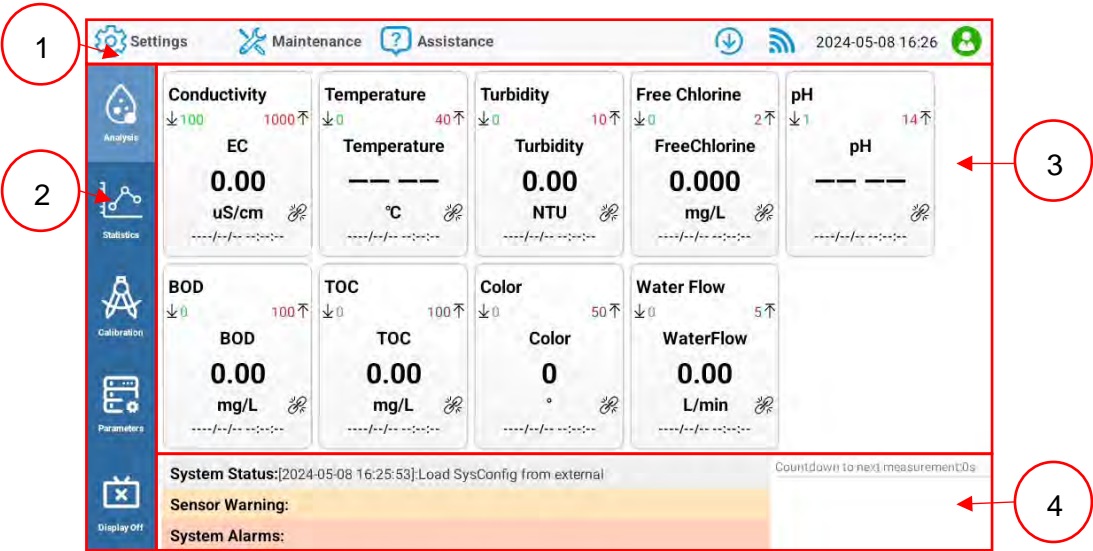
Nano-SIM card slot and SD card slot



MC-W-S is equipped with Nano-SIM card slot and SD card slot. Insert the Nana-SIM card, the MC-W-S will automatically connect to the network and upload the data to the cloud platform. By default, the company's cloud platform is uploaded. To switch other data platforms, please check the configuration information. MC-W-S comes standard with a 32 GB SD card.

Supports USB flash drive for reading and writing files, RJ45 port, Type-C and Micro USB for connecting devices.

Software interfaces



1	System bar	2	Menu bar
3	Display area	4	Status bar