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DS10LW REV.B

Product Datasheet



Version V1.00

Release Date 2026-03-10

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Verification	Review	Approval

About This Document

This document mainly introduces the specification parameters of the DS10LW REV.B.

Revision History

Date	Version	Release notes
2026.03.09	V1.00	Initial release

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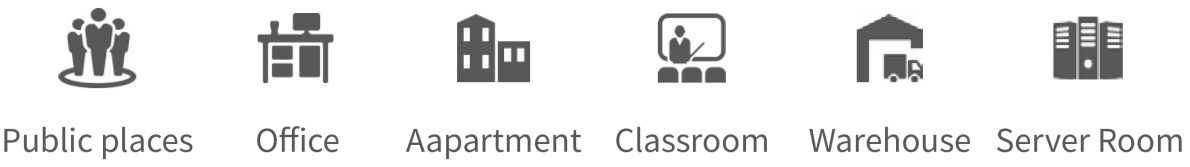
Address: 10th Floor, Building A, No. 3 Juquan Road, Guangzhou Science City, Huangpu District, Guangzhou, Guangdong, P.R. China

1. Overview

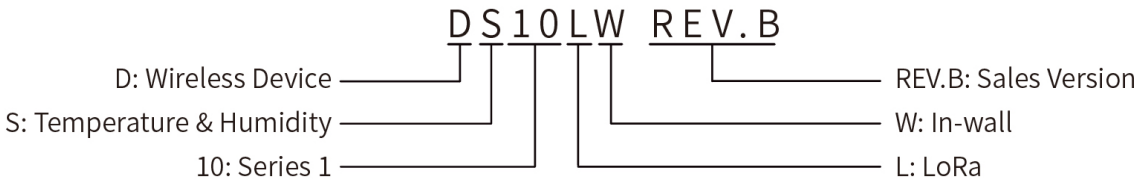
The LoRa Temperature and Humidity Sensor DS10LW is a high-performance LoRa wireless sensor designed for industrial applications. It measures ambient temperature and humidity, with the measured values displayed digitally on the LCD. When the readings exceed preset thresholds, the sensor outputs a control signal and an audible alarm. In addition, it responds to commands from the host controller and wirelessly transmits measured data to the host via LoRa RF communication in packet format.

This temperature and humidity sensor features compact size, light weight, wide measurement range, high accuracy, fast response time, and excellent long-term stability.

2. Application Scenarios



3. Product Selection



Model	Transmit power	Band	Areas
DS10LW REV.B(CN490LC22V-1H1T)	+22dBm	China	CN490
DS10LW REV.B(EU433LS22V-1H1T)	+22dBm	Europe	EU433

4. Product Features

- Standard 86mm × 86mm mounting box & wall-mounted installation
- 1-channel LCD display
- 4 buttons for parameter configuration
- Supports standard LoRaWAN protocol / LoRaPMAC protocol

- Supports standard ModBus-RTU application protocol

5. Electrical Characteristics

5.1. Power Supply

Parameter	Min	Typ	Max	Remarks
Rated Voltage	-	12V DC	-	-
Operating Voltage Range	9V DC	-	36V DC	-
Static Power Consumption	-	-	50mA	-
Maximum Current	-	-	130mA	When the maximum transmission power of LoRa is + 22 dBm

5.2. LoRa RF

Parameter	Min	Typ	Max	Remarks
Frequency Range	410MHz	-	960MHz	Multi-band Support
Transmit Power	-	-	+22dBm	-
Receive Sensitivity	-	-134dBm	-	SF10@BW125KHz

5.3. Environmental

Parameter	Min	Typ	Max	Remarks
Rated Operating Temperature	-20℃	-	60℃	-
Storage Temperature	-20℃	-	60℃	-
Humidity	0%RH	-	99.9%RH	-

5.4. Temperature and Humidity Acquisition

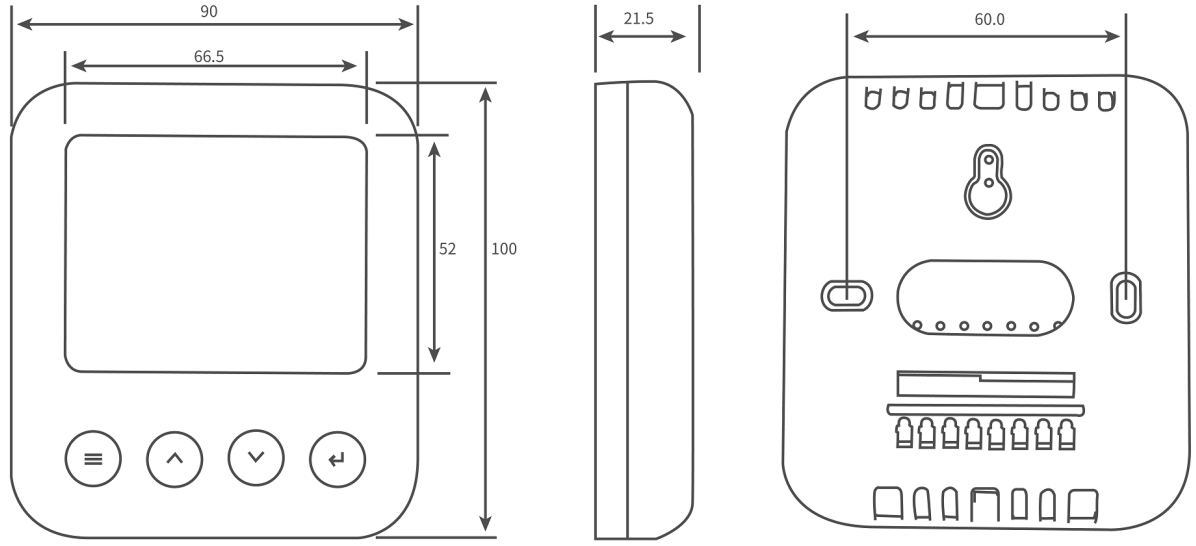
Parameter	Min	Typ	Max	Remarks
Display Resolution	-	0.1℃/ 0.1%RH	-	-
Sampling Period	-	2.5s	-	-
Temperature Accuracy	-0.3℃	-	0.3℃	At 25°C ambient
Temperature Sensitivity Drift	-	-	0.1℃	-
Humidity Accuracy	-2%RH	-	2%RH	At 25°C ambient
Humidity Sensitivity Drift	-	-	0.1%RH	-

6. Hardware Description

6.1. Hardware Dimensions

Unit：All linear dimensions are specified in millimeters (mm).

Tolerances: ±0.5 mm.



6.2. Hardware Interfaces

Please refer to the hardware identification in the six-view drawing in Section 6.1.

Terminal Interface Description

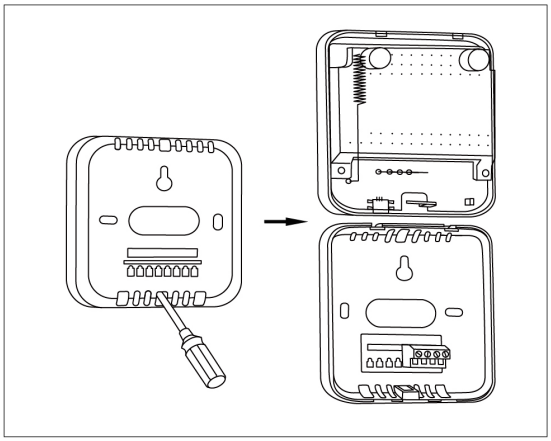
8	7	6	5	4	3	2	1
				NC	V+	GND	NC

Terminal Interface Description

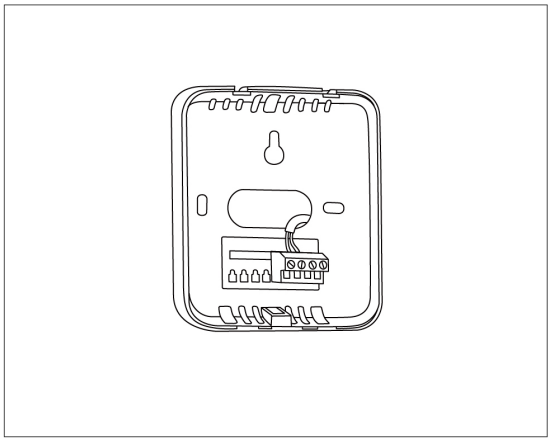
Sequence	Description	Remarks
1	NC	Reserved
2	GND	Power supply negative input
3	V+	Power supply positive input
4	NC	Reserved

7. Installation Description

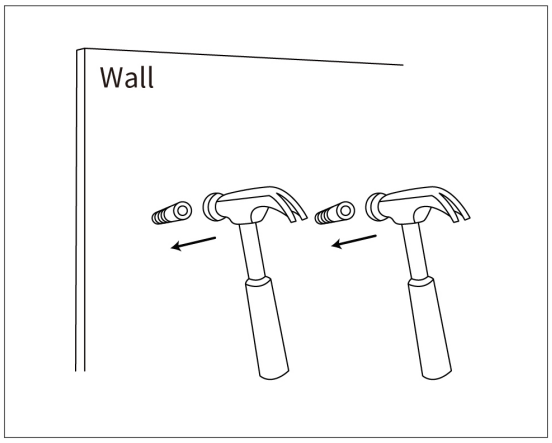
WARNING: To prevent electric shock, all wiring must be performed with the power disconnected.



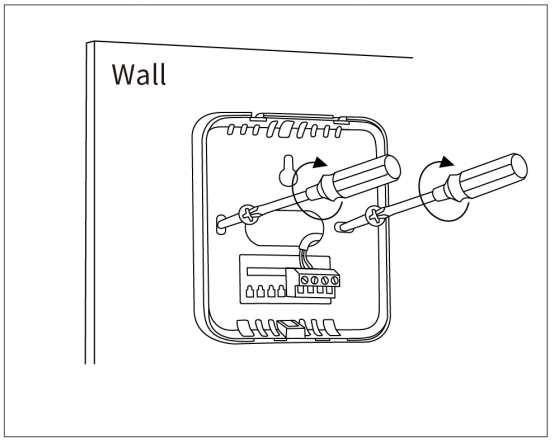
❶ Release the bottom lock with a screwdriver and remove the backplate.



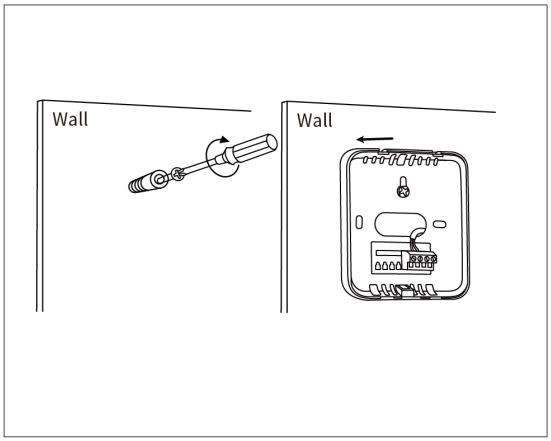
❷ Connect the power cord to the positive/negative terminals.(Terminal 2/3)



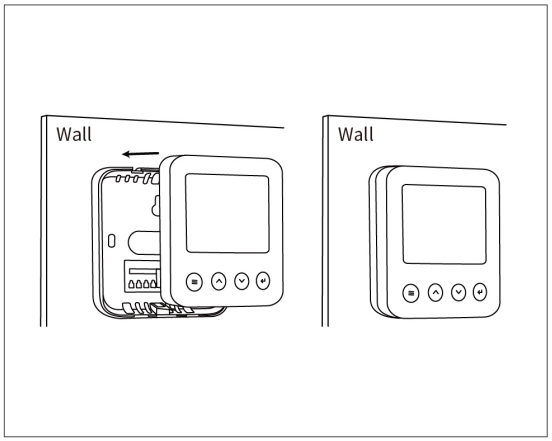
❸ Drill holes in a load-bearing wall and insert expansion bolts.



❹ Secure the backplate to the wall with screws.

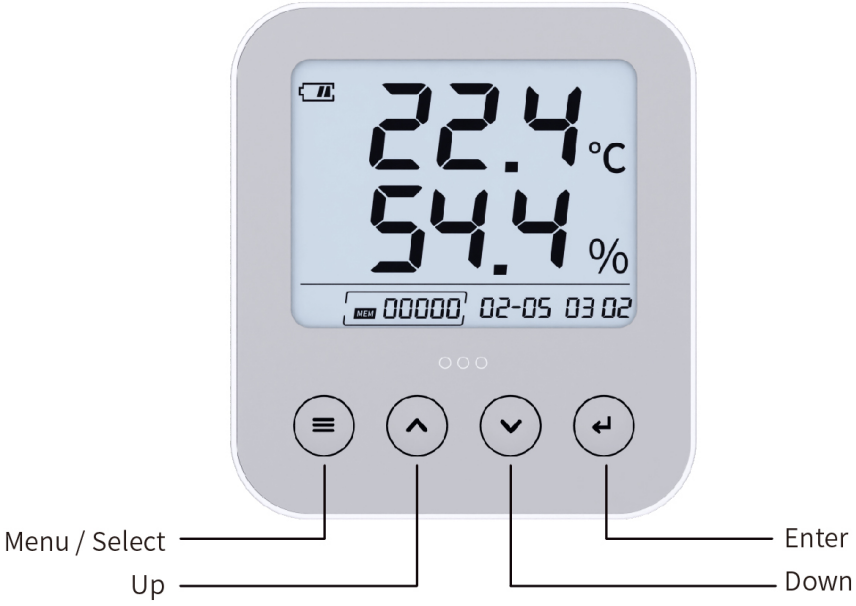


❺ Or hang the device's top mounting hole onto the wall screw.



❻ Attach the front cover. Installation complete.

8. Panel Description



9. Keypad Functions

Button	Function	Remarks
	Menu Select Key	Switches the displayed menu. Allows selection of sub-menus in a multi-level menu structure.
	Up Key	Executes parameter "increase" operation in the parameter adjustment interface.
	Down Key	Executes parameter "decrease" operation in the parameter adjustment interface.
	Confirm Key	Performs the function of returning to the main menu or exiting the menu system from within a menu.

Note: If any key is pressed during an alarm, the built-in alarm will be temporarily silenced. If no action is taken by the user, the built-in alarm will automatically reactivate after approximately 10 seconds.

10. Function Display Item Description

Display Content	Key Function	Value Range	Value Range

	ModBus Address	1~254	001(Do Not Modify)
	ModBus Baud Rate	1200\2400\4800\9600\19200	9600(Do Not Modify)
	Alarm Function	ON/OFF （Must be enabled first; triggers only when temperature or humidity exceeds set thresholds）	OFF
	Temperature High Alarm Threshold	(Temp Low Alarm+1) ~80℃	80
	Temperature Low Alarm Threshold	-40℃ ~ (Temp High Alarm-1)℃	-40
	Humidity High Alarm Threshold	(Hum Low Alarm+1) ~ 99.9%RH	99.9
	Humidity Low Alarm Threshold	1.0 ~(Hum High Alarm-1)%RH	1

11. Packing List

Sequence	Material	Number
1	LoRa Temperature and Humidity Sensor	1
2	EUI Label	1
3	Certificate of Conformity	1