

ZKS[®] 洲斯物联[®]

S20 Operation Manual



ZKS Mobile IoT Tech. Co., Ltd.

www.zksiot.com

Please read this manual before using this product and keep it for future reference. The final interpretation of this manual belongs to ZKS Mobile IoT Tech Co., Ltd. This manual does not refer to a specific model of ZKS products. Some of the parts, appearances or functions mentioned in the manual may differ slightly from the purchased models.

The contents of this manual are subject to change without prior notice. If you have any doubts, please call the hotline in the manual for consultation.

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Remarks:

- * In order to enhance better operation, please read this manual carefully and keep it for future reference.
 - *The function descriptions in this manual may vary slightly depending on the model.
 - * This device is designed for overseas users.
 - * Please use genuine software, includes but not limited to operating system, database and controls.
-

Dear Users:

Thank you for choosing and using ZKS products.

For your convenience in installation and use, please read the instructions carefully and follow the steps in the instructions.

From beginning to end, ZKS's international star service will accompany you. If you have any problems during use, please contact us by phone or address on the warranty certificate, we will be at your service. Thank you again for using ZKS products.

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Section 1 Product Description

1.1 Product Description

1.1.1 Remote Temperature Recording

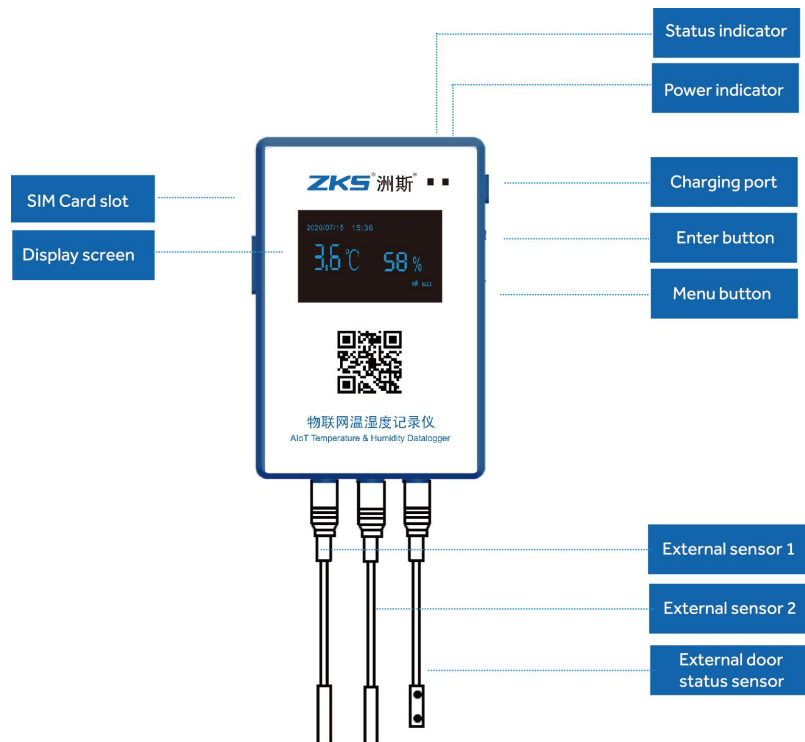
The S20 is an IoT temperature and humidity recorder that integrates temperature and humidity collection with data upload functions. The S20 can be equipped with an external temperature and humidity sensor. The collected temperature and humidity data are uploaded to the cloud platform via 4G or Wi-Fi (for corresponding models), enabling remote platform monitoring.

1.1.2 Application Scenarios



It can be used for real-time monitoring of warehousing and distribution of food, medicine, vaccine, blood, reagents, biological products, biological sample tissue and other items. The application scenarios include refrigerated trucks, incubators, cold rooms, cold packs, refrigerated cabinets, refrigerators, freezers and so on.


Section 2 Product Instructions

2.1 Product Sketch



2.2 Product Charging

This device uses rechargeable lithium polymer battery and power indicator is in 3 grids . When the battery indicator is empty , the power is less than 20%, the red light flashes every 5 seconds, and the platform sends message of low battery alarm, indicating that it needs charging.



Before use: Check the power status of the device. When the battery indicator is empty , you need to charge it. The charging procedure is as follows:


- 1) Remove the USB plug on the top of the product;
- 2) Connect the charger to the product for charging. When charging, the power indicator (tricolored light) shows red and blue at the same time;
- 3) After the battery is fully charged, the red light will be off and the blue light is always on;

Note: Please use the charger supplied with the device to charge.

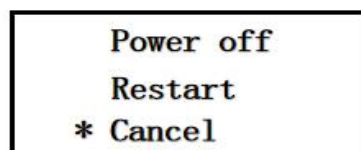
2.3 Power On/Off

2.3.1 Power On




- 1) Press button  for 4 seconds, the status indicator flashes green for one time; the screen displays, namely, it is powered on;
- 2) Press button  for 4 seconds, the status indicator flashes red for one time, and there is no display on the screen, indicating that the battery has low power. It is not allowed to start, please charge it.

Remark: When the device is restarted, press the button  to enter the engineering mode and refer to clause 2.9 for processing.

2.3.2 Power Off



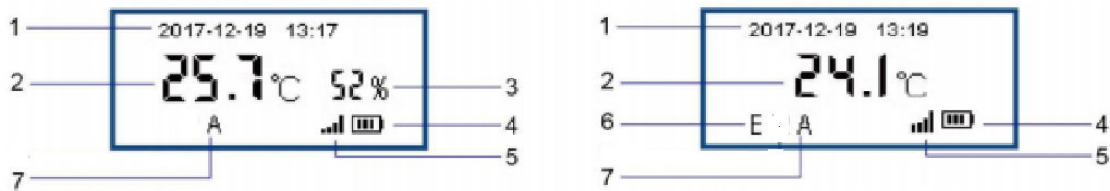
The power-off steps are as follows:





- 1) Short press any button, after activating the screen, press power button  for 4 seconds, the screen displays “Power off”, “Restart” and “Cancel”. The sign “*” points to the “Cancel” by default;
- 2) Short press menu button  to switch the selection until the sign “*” points to the “shutdown”;
- 3) Short press power button  to confirm;
- 4) Power-off does not affect the stored data.

2.4 Screen Activation


The standby time of the device is 15 seconds. After 15 seconds, the screen will automatically turn off. Screen activation can be realized by the menu button or the power button, and then the menu can be operated.

2.5 Screen Definition



- 1) Time display area;
- 2) Temperature display area;
- 3) Humidity display area;
- 4) Power display area ;
- 5) Mobile signal connection display ;
- 6) Probe: external probe display , built-in probe does not display;
- 7) Alarm function: The device has sound and light alarms;  indicates that the alarm has been triggered and needs to be processed in time;

2.6 Device Information Query

After the screen is activated, short press menu button  to query the device's local configuration information.

DEID: 71008888 CUID: 0000 CCID: 8987654321 7787656666	CPLD: 60S UPLD: 120S RMIT: 0 RCIT: 0
FW: 0.0.01	TA03: 2~8 PA03: 3~7


- 1) DEID: device MAC number;
- 2) CUID: customer code;
- 3) CCID: SIM card information;
- 4) CLPD: acquisition interval;
- 5) ULPD: upload interval;
- 6) RMIT: stored data, namely, data received by the device and not yet transmitted;
- 7) RCIT: recorded data, namely, all data generated after the recording function is turned on;
- 8) FW: software version;
- 9) TA00: the upper and lower temperature alarm interval of channel0;
PA00: early warning temperature range;
- TA03: the upper and lower temperature alarm intervals of channel 3;
PA03: early warning temperature range.




2.7 Alarms

2.7.1 Alarms

If the device has set high and low temperature alarm values and exceeds the temperature range, it will send sound and light alarms.

2.7.2 Alarm Query


- 1) Switch the menu to the “Alarm Query” by long pressing the menu button .

2) Press the power button  to confirm the menu selection “Alarm Query”, the screen will display the historical alarm records; short press the menu button  to scroll through the last 10 history records; short press the power button  to exit the query.

2.8 USB Port

This product is designed with a standard micro USB interface in the battery compartment for charging, upgrading firmware, and exporting PDF files.

2.9 Engineering Mode

When the device is restarting, press the button  to enter the engineering mode; After entering the engineering mode, press the button according to the instructions until the engineering mode ends and enter “Power-off” state; Power it on and it can work normally.

Section 3 Technical Specification

3.1 Method

WiFi	WLAN standard	IEEE 802.11 b/g/n
	Working channel	1-11
	Frequency range	2.4G
4G	Communication band	B2/B4/B5/B12/B13/B66

3.2 Measuring range

External temperature and humidity sensor: temperature: $-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$;
Humidity: 0%RH~99%RH

3.3 Measuring accuracy

Temp.: 0°C to $+65^{\circ}\text{C}$ $\pm 0.5^{\circ}\text{C}$, Other $\pm 1^{\circ}\text{C}$

Humidity: $\pm 5\%RH$

3.4 Storage capacity:60,000 sets of data, support resume transmission

3.5 Protection level: IP66

3.6 Storage and Transportation Conditions

1) Equipment packaging is suitable for transportation like roads, railways, waterways, aviation, etc. Avoid severe vibration and shock during handling. It is required to be protected from rain during transportation and strictly prohibited to mix with other harmful gases or corrosive substances.

2) The equipment should be placed in a dry, clean warehouse with good air circulation, no rain or snow intrusion, no sulfides, no silicide and other harmful substances.

Section 4 Packing List

◎ Please confirm that the following items are included in the product package. If anything is missing, please contact your dealer.

◎ The color and shape of the item may vary by model.

Bare machine	1
Certificate	1
Instruction manual	1
Charger	1
Charging Cable	1
Fixed casing	1

Section 5 Attentions

5.1 Do not soak the temperature and humidity sensors in the water;

5.2 Do not place it in an environment exceeding the operating temperature range;

5.3 Do not dismantle the device privately;

5.4 Do not place the device in the blind area of the mobile signal;

5.5 Charge the device once every three months to ensure battery life;

5.6 Deliver damaged rechargeable and wasted batteries to the designated battery collection point.

5.7 Return the device to ZKS when the device is scrapped. We will ensure that the product be disposed in an environmental manner.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

***RF warning for Mobile device:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.