

INSTRUCTION MANUAL

Soil rapid measurement platform

JXBS-3001-SCY-PT

Ver1.0

I PRODUCT INTRODUCTION

1.1 Product Overview

The hand-held measuring platform developed by our company is designed with the latest digital integrated circuit technology and international testing technology.

The detector uses a large-scale full-color LCD screen, which can display the reading in real time. At the same time, it uses the detection circuit designed by the digital chip of the, which can achieve very high sensitivity and excellent repeatability. The shell adopts the high strength compound plastic which the industry special, the strength master feeling is good.

The tester is widely used in petrochemical, environmental protection, metallurgy, mining, agriculture, experiment, mapping and other industries.

1.2 Functional characteristics

- Keystrokes with multiple functions, such as single point recording, start/stop recording
- Switching with multiple units
- Rich man-machine interface, based on the latest embedded ideas designed full color interface, can query, record, display data in real time
- Data display mode, single digital instrument display, multiple measurement data collection display, matching real-time curve display.
- Optional data storage function, support 4 MB of data storage work, can export data to

the computer through Excel, and print, edit, icon display function.

1.3 Product advantages

- Large screen display, mass storage
- Diversification of keystrokes
- Small zero drift, good repeatability
- Automatic Alarm / Alarm Removing Function
- Low power consumption, long life
- High sensitivity and fast response speed
- Data one-click export, convenient and fast
- Products after a variety of tests, strong anti-interference ability
- Support for cloud data reporting

1.4 Product parameters

PARAMETERS	TECHNICAL SPECIFICATIONS
Power supply	12V DC,2500mA.h (Standard)
Display mode	2.8-inch LCD
Communication mode	USB (For more details, see DB9 interface instructions)
Data storage	4MB storage (Standard)
Working temperature	-20°C~50°C
Working humidity	0~90% (Relative humidity)、 No condensation
Communications protocol	Modbus Serial Communication Protocol
Charge time	≤4H
Access equipment	1~8 Modbus equipment
Dimensions	125*65*45mm
Weight	500g

II HARDWARE CONNECTION

2.1 Product list

Name	Number
Hand-held terminals	1
Sensors	Several (Optional)
Power adapter	1
Certificate / Warranty Card	1

2.2 Product Structure Description



2.3 Product appearance dimensions



*Product pure manual measurement, there may be 3-5 mm error

2.4 DB interface description



Parameters	Technical indicators
1	USBDM
2	Reservations
3	485A
4	5V Output
5	12V Input
6	USBDP
7	Reservations
8	485B
9	GND

2.5 Device Basic Key

Hand-held terminal operation panel has a variety of keys, different functions of the implementation of the corresponding key operation, key instructions as shown in the figure:



The area above the keyboard is "menu key" and "top, bottom, left, right key ", a total of 5 keys.

Menu button: Press will enter the device settings menu. Below are six options : " data record ", " data view ", " system settings ", " RFID swipe card ", " alarm settings "and" network settings ".



When you select any of these items in the red box, press OK to go to the next menu.

Keyboard central area for 0-9 a total of 10 numeric keys, and "return" key and "confirm" key. Some digital keys have special functions when the function state is turned on.

The bottom button of the operation panel is "backlight-function-switch" from left to right.

Backlight button: control screen backlight. After pressing the "backlight" key, the screen backlight will be turned off, and when the backlight is turned off, press any key other than the switch to turn on the backlight again.

Function button: special function of turning on or off a numeric key. When the function state is not turned on, press the "function" key, the function flag will be displayed above the screen, at this time the function below the number key is available. currently available features are "1-single point record ", "2-start record ", "3-stop record ", "4-function A", "6- function B", "7-unit switch ", "9-display ". Special features are described below:

Digital Key	Special functions
1	Single point recording, recording current sensor data once
2	Start recording, press and record sensor data at specified intervals
3	Stop recording, stop recording sensor data after pressing and save to memory
4	Function A, Press and Zero the currently displayed data
6	The function B, freely configure the modbus instruction after pressing, can read the value in register, also can write the value in register

- 7 Unit toggle, unit (unit toggleable) of parameters after pressing
- 9 Stop the alarm by pressing the buzzer
- * Return, return to the previous interface, if the inputable interface, do not save the current page user changes and return to the previous page (regular function)
- # Confirm, enter the interface, save the current page user changes and return to the previous page (regular function)

"Switch" button: long press three seconds and release can achieve boot or shutdown.

2.6 Data Records menu

Under the Data Record menu, there are four options: Automatic Record Switch, Record Interval Settings, Data Usage, and Record Data Emptying. the currently selected item will be highlighted in blue ribbon. Press "OK" to go to the detailed settings item.

Under the "Automatic Record Switch" option, you can set whether the device is turning on the function of automatically recording data, press "OK" key to switch the switch state, press "return" key to save and exit.

Under the Record Interval Settings option, you can set the time interval for the device to automatically record data in seconds, with a minimum record interval of 10 seconds and a maximum of 86,400 seconds (24 hours).

2.7 Data View menu

Under the Data View menu, you can view each piece of data in turn from the beginning

of the record, the data is recorded at the top of the time, an interface shows 4 data, press left or right to view the second half of the data, press up or down to view the next piece of data.

2.7 System Settings menu

Under the system settings menu, in turn, there are 8 options: ModBus instruction, time setting, automatic shutdown, backlight brightness, backlight hibernation, unit setting, native information, system reset. the currently selected item will be highlighted in blue ribbon. Press "OK" to go to the detailed settings item.

ModBus instruction reads the corresponding ModBus from the device register for the current device. The specific content varies according to the specific equipment. If the user carelessly modifies the corresponding ModBus instruction under unnecessary circumstances, the "system reset" under "system settings" can be selected to restore the original setting of the device, and "system reset" does not empty the data saved by the user.

Under the Time Settings option, you can modify the time displayed on the top left of the device;

In the "Automatic Shutdown" item, you can set the user without operation for many minutes after automatic shutdown, set to 0, then do not automatically shut down. After modifying the value, press OK to save, the device will automatically return to the next menu, press Return to not save and return to the next menu. note that except "ModBus instruction settings" does not need to press "confirm" key to automatically save, other options to modify the value, are "confirm" key to save and return , " return key "does not save direct return. I will

not repeat it later.

Under the "Backlight Brightness" option, you can modify the brightness of the device's current display, a total of 10 brightness adjustable.

Under the Backlight Sleep option, you can automatically turn the backlight off after the user has no operation for many minutes. Press any key except the switch after the backlight is turned off to activate the backlight again.

Under the Unit Settings option, the unit displayed can be modified if the device supports unit modifications.

Under the "native information" option, the hardware and software versions of the device correspond.

2.8 RFID credit card menu

This function is optional, this device does not have this function for the time being.

2.9 Alarm Settings menu

Under the alarm settings menu, in turn are alarm switch, alarm point 1 setting, alarm point 2 setting, alarm point 3 setting, alarm point 4 setting, alarm point 5 setting, alarm point 6 setting, alarm point 7 setting, alarm point 8 setting 9 options. the currently selected item will be highlighted in blue ribbon. Press "OK" to go to the detailed settings item.

Under the "alarm switch" option, you can set the function of alarm switch state, press "confirm" key to switch switch state, press "return" key to save and exit.

"Alarm Point 1 Settings "-" Alarm 8 Settings" option, can be set parameters corresponding to the alarm upper and lower limit, after opening the alarm sensor numerical trigger setting of the numerical speed platform will alarm, the corresponding value will turn red, buzzer will ring.

2.10 Network Settings menu

This function is optional, this device does not have this function for the time being.

2.11 Product Basic Display Interface

The first screen shows the start welcome interface after boot, and automatically jumps to the first interface after one second. The upper part of the white line of the device interface is the status bar, as shown in the following figure.

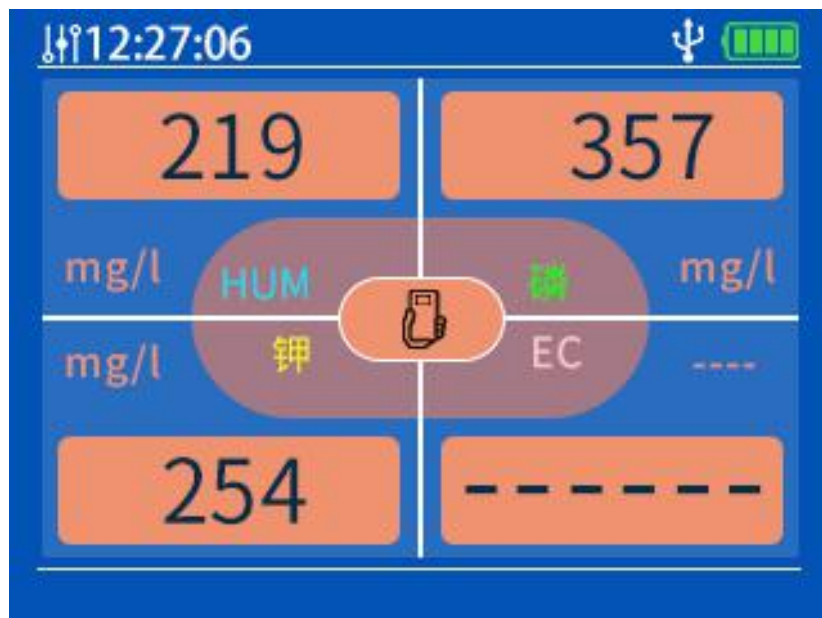


The 12:27 shown on the left side of the status bar is the current time, and the current time is

12:27 minutes.

The basic interface of the device includes the following three types: multi-in-one display interface, single display interface, menu interface.

The first interface, as shown in the following figure, is a multi-in-one interface, under which the real-time data of four devices can be displayed succinctly, and more than four devices will have one more page multi-in-one interface. normal data is shown in black font.



Short press "right key" or "bottom key" in multi-joint interface, automatically jump to single data display interface, single data display interface will only display a certain kind of data.

In the center of the screen using large font display is the current kind of data, in the single data display interface under a short click on the "right key" to display the next data, when the single data interface is turned over, will automatically return to the multi-in-one interface.

III RECORD DATA EXPORT

3.1 Driver installation

A driver may need to be installed before using a handheld terminal to connect to a computer. If the computer can not correctly identify the USB device after using the factory equipped USB to connect the computer, then open any drive detection software (such as "drive wizard ", " master lu ", etc.), install the computer missing USB corresponding driver. After the installation is complete, re-plug the USB line. USB mass storage device (U disk) can be correctly identified.

3.2 Data export

With the USB line successfully connected to the computer and device, double-click on the computer side of the USB large-capacity storage device (U disk), where the file "jxct.csv" is recorded for the user data. Copy and paste the recorded data onto the user's computer.



用EXCEL打开即可看到记录的数据

The recorded data are shown

A1	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
13	2020/6/16	14:36:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
14	2020/6/16	14:36:42	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
15	2020/6/16	14:37:02	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
16	2020/6/16	14:37:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
17	2020/6/16	14:37:42	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
18	2020/6/16	14:38:02	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
19	2020/6/16	14:38:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
20	2020/6/16	14:38:42	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
21	2020/6/16	14:39:02	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
22	2020/6/16	14:39:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
23	2020/6/16	14:39:42	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
24	2020/6/16	14:40:02	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
25	2020/6/16	14:40:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
26	2020/6/16	14:40:42	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
27	2020/6/16	14:41:02	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
28	2020/6/16	14:41:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
29	2020/6/16	14:41:42	TEM	21	℃	HOW	11.4	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
30	2020/6/16	14:42:02	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
31	2020/6/16	14:42:22	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
32	2020/6/16	14:42:42	TEM	21	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
33	2020/6/16	14:43:02	TEM	21	℃	HOW	11.6	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
34	2020/6/16	14:43:22	TEM	21	℃	HOW	11.6	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
35	2020/6/16	14:43:42	TEM	21	℃	HOW	11.6	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
36	2020/6/16	14:44:02	TEM	21	℃	HOW	11.6	%	PH	5.77	pH	EC	358	us/cm	N		18	mg/kg	P
37	2020/6/16	14:44:22	TEM	21.4	℃	HOW	11.5	%	PH	5.77	pH	EC	360	us/cm	N		18	mg/kg	P
38	2020/6/16	14:44:42	TEM	21.4	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
39	2020/6/16	14:45:02	TEM	21.4	℃	HOW	11.5	%	PH	5.77	pH	EC	359	us/cm	N		18	mg/kg	P
40	2020/6/16	14:45:22	TEM	21.4	℃	HOW	11.4	%	PH	4.77	pH	EC	356	us/cm	N		18	mg/kg	P

below: