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SHENZHEN YESSYS TECHNOLOGY CO .,LTD

Intelligent stataic monitor
DWS2A-4

User manual

- Please read this product manual before use.
- Please keep it proberly after reading and place it in a convenient place for storage

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1/Production brief introduction

In the production site of electronic products ,the human body release static electricity by wearing ESD wrist strap ,while instruments and equipment eliminate static ;EOS andEMIby grounding,However the effectiveness is bad due to the lake of effect monitoring,even there is limited frequency for routine check ,which only ensure that the effeciveness is goodat the moment of checking ,the intelligent monitor will transform the traditional static protectionwork of simple ,unknown state and easy to get out of control into safe
,on-line and controlled

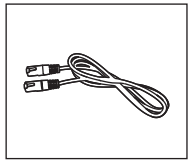
2/Product feature

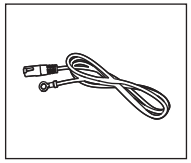
1 : Dual display: digital LED displays various information and parameters in detail, and LED indicates monitoring status。
2 : 4 channels freely monitoring objects: personnel + equipment/ voltage + bench ESD mat. Main grounding wire connection port Equipment connection port There is no need to change the monitoring module. The program automatically identifies the Antenna monitoring objects。
3 :Remote control for checking and setting parameters。
4 :Self calibration:If there is an error betweent the dsiplayed valure and actural valure ,the monitor will automatically correct the error 。
5 :Alarm funciton ::Indicated light and alarm sound。
6 :Upgrade the program dierectly with a USB flash disk .。

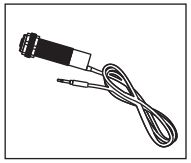
3/Monitoring object

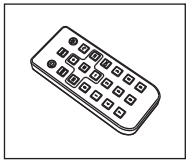
USB port for upgrade 1~4 wrist strap ,ESD mat and equipment
Wrist strap and ESD mat： 0 . 1 - 50MΩ
Equipment: 0 -25Ω

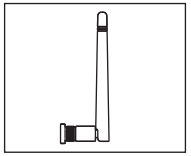
4/Confirm the packaging

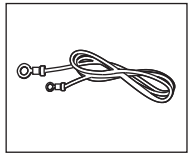

etwork cable*2

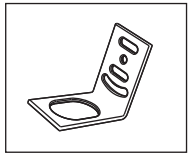

ESD mat conne--ction wire *2

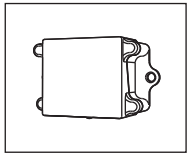

Infrared probe *2

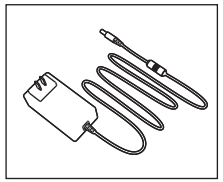

Remote control


Antenna

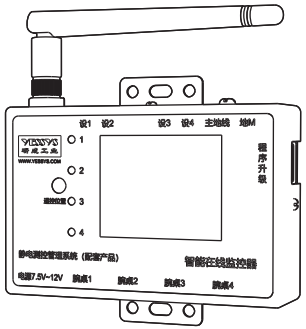

Grounding wire*2


Infrared probe holder *2

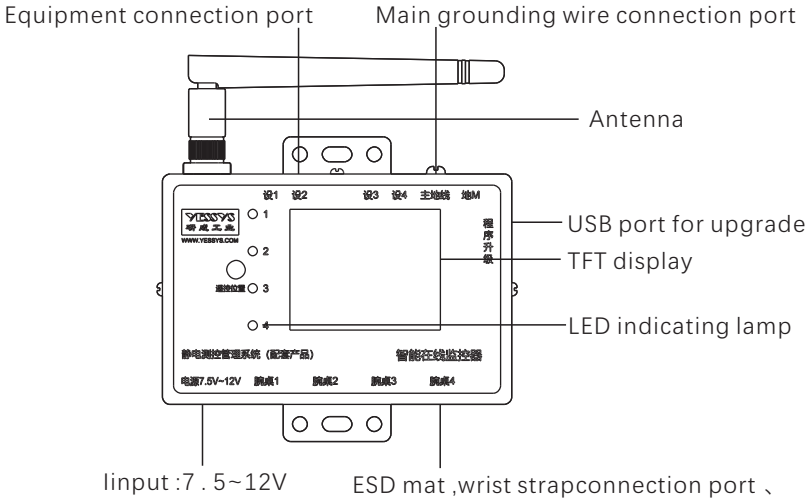

Infrared connector


power supply

User manual



5/Product introdction



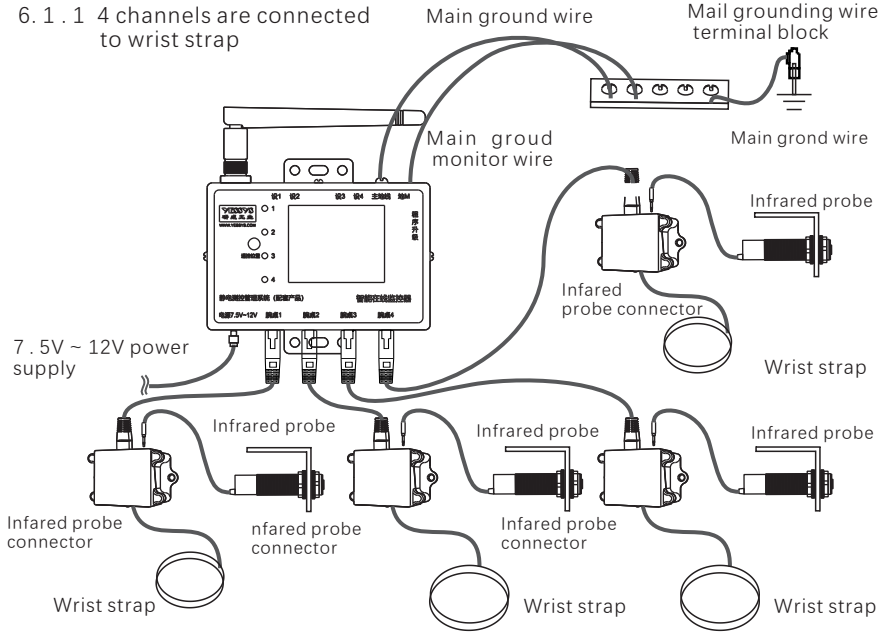
1 : LED indication status as below
Green light on :the channel status is OK
Red light on :the channel status is NG
LED light off : The channel is shut off
Connection description :there are three connection type :wrist strap ,mat,and equipment ,if the channel is connect the wrist strap or mat separately ,the channel will immediately show wrist strap or mat on the display ,and if the channel is connected to the equipment for continuous 10 seconds,, and grounding resistance less than 25Ω, the channel will show equipment ,if two of the three type are connectred at the same time ,the alarm will be trigged ,the channel displays "wrist and mat for sharing", you only can close the channel type by remote control or background

Note: By press the button of "mode"of the remote control ,the device can be returned to the main interface ,so that you can conduct the other setting by remote control ,it wil exit the main interface if no any operation within 30 seconds

6/Installation method

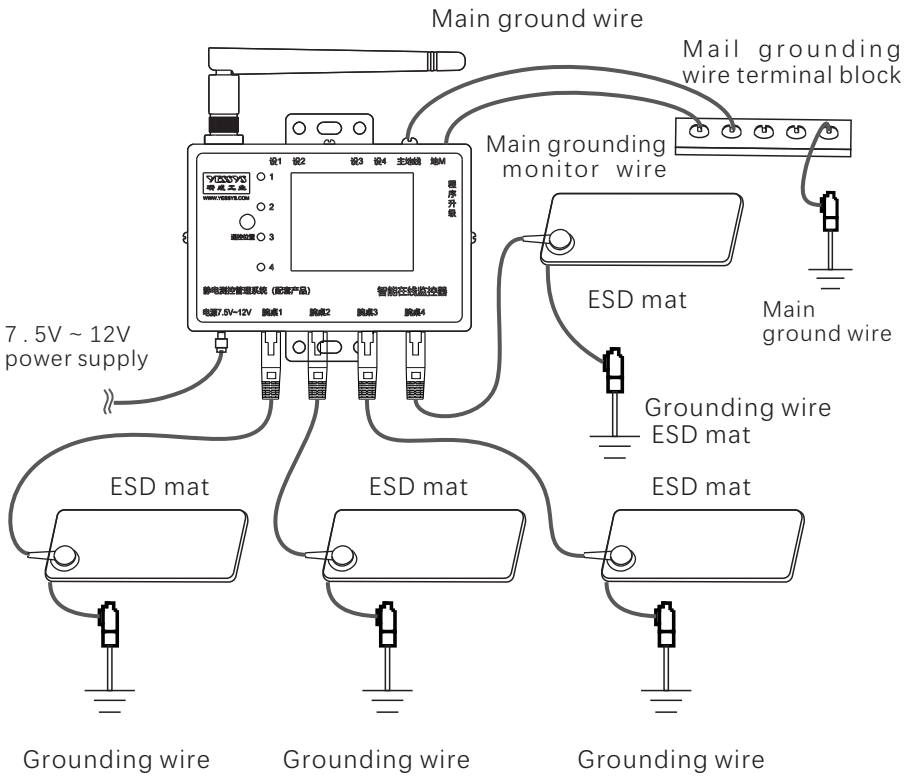
6 . 1 :installation instruction

6. 1 . 1 4 channels are connected to wrist strap

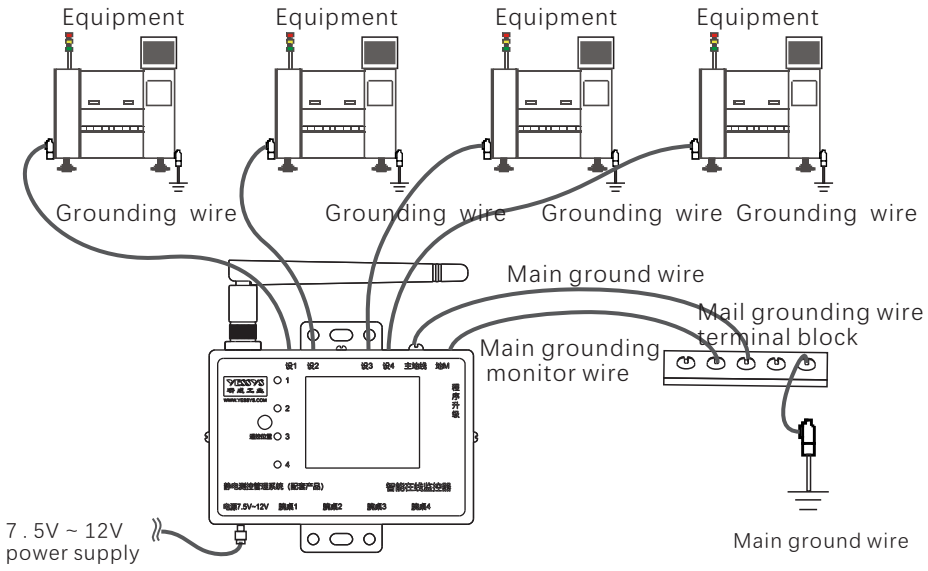


Factory default settings:
1 :Wrist strap alarm value setting :35Ω
2 :ESD mat alarm value setting : 10Ω
3 :Grounding wire alarm value setting : 4Ω
4 :Main ground wire alarm value seting : 1Ω

6 . 1 .2 :4 channels are connected to ESD mat



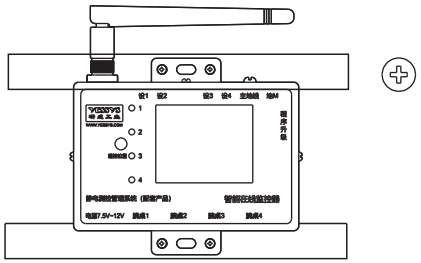
6 . 1 .3 :4 channels are connected to equipment



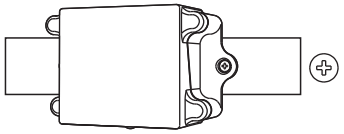
6 .2 :Installation step

6 .2 . 1 :After confirm the installation location ,take out the device in sequence according to the IDand assemble the antenna(one produciton line shall be installed in the sequence of device ID as far aspossible

6 .2 .2 :Fix device： To fix the device to the proper position in the specified area in the correctiondirection through the medod of cable ties or screws ,and the devices in the same line should be at the same height。



6 .2 .3 :Fix infared probe connector： Fix the connedtor on the proper place below the corresponding table of the station ,if it is fixed by the cable tie ,need to glue on the surface of the table where the connector is fixed



6 .2 .4 :Fix infared probe： (if need)
A :Fix the holder of infared probe in a proper position below the workbench with screws ,so that the sensor head can face the middle position of the station
B :Screw off a rubber nut of infared probe ,put the side without wire outwards (facing the operator) into the corresponding position of the holder ,and lock the nut ,then insert the other end with wire into the headhone jack of the infared probe connector

Note：
1.The induction distance of the sensor is about 50CM from the factory setting ；
2.Distance adjustable range :0.1~80CM， clock wise to the far , vice versa

6 .2 . 5 :Connecting the wire

A :Take one 1.5mm square yellow and green wire being crimped terminal ,lock one end to" the main ground wire terminal" of the devicev with the fitted bent blue teminal ,and the other end is connected to ground wire terminal

B :Take another 1.5mm square yellow and green wire being crimped terminal, lock one end to "equipment wire terminal" of the device ,and the other end is connected to the meltal part of the shell or ground pole of the equipment to be monitored

C :Take the cable of ESD mat ,insert the plug end of the network cable directly into the corresponding network port of the device ,then lock the yellow terminal of the other end on the ESD mat with self -tapping screws

D :Take a network cable of a proper lengh (2m or 3m) ,insert one end into the corresponding port of the devie ,while the other end is inserted into the port of the infared probe connector

E :Take the power supply packaged in the box ,and plug it into the power port of the device 。

F :To arrange all the cables ,then tie them with cable ties along the pipe ,and tie any of extra cableat the bottom of the worktable 。

Note:

1.The terminals of all device cables and ground cables on the device are provided with small bent blue terminals

2.The same channel can be randomly selected to monitor one of the objectes ,only connect the corresponding line ,for example ,if want to monitor the ESD mat in channel 1 ,just plug the ESD mat cable into the port of channel 1,no need to connect to the infared probe connector ,also no need to insert the wire of "equipment 1"

3.Do not move the orginal grounding wires of all the device and ESD mat to be monitored they must be well grounded ,turn on the device after confirming that all wires are proberly connected

4.The ajdio jack of infared probe connector and infared probe can be inserted and removeed more than 5000 times (under the conditional of normal use)

7/ Remote control instruction

7 .1 :Align the remote control with "IR" signal hole on the top cover

7 .2 : Press "menu" key to enther the passowrd screen

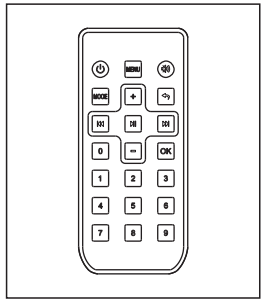
7 .3 :"OK" to enter the setting items or save the setting

7 .4 :" ⏮ " " ⏭ " to select the items ,but your must press "OK" key to confirm entering th items for seeting。

7 . 5 : "+" " -" " number key for set the adjusted value

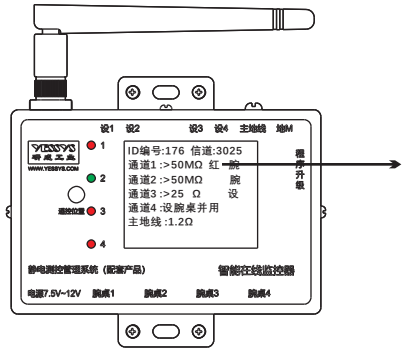
7 . 6 : "MODE" : key to clear the value bit by bit

7 .7 : " ↩ " : key to back the boot screen



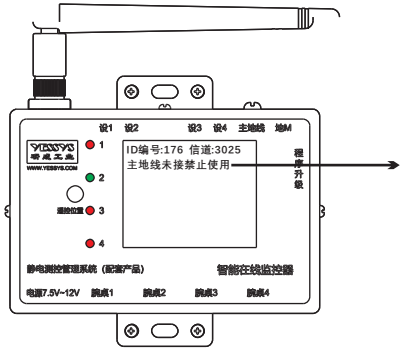
8/Operation and setting

Real-time vaue display :ID No:machine No,channel No : zigbee channel NO and related channel information 。 as shown below :



Display the channel, the test value of the channel, the connecting type (wrist, mat or device), and if the connecting type is wrist, it will show whether the infrared is on. As shown in the figure, if the infrared is on, it will show "red", if the channel is closed, it will show "off"

The ground cable is not connected as shown in the figure:



If the ground wire is not connected, related information is displayed on the screen "the machine is in no-use state because the main ground wire isn't connected" , and the channel red light is on. an alarm message will be uploaded at the same time.

The setting of the main interface of the menu as shown in the figure as below :

Press the"MENU" key on the remote control , input password"123" ,then press "ok" key, then press ⏭ or ⏮ to select the parameter for setting

1 :Wrist strap alarm value
2 :ESD mat alarm value
3 :Equipment alarm value
4 :Main ground wire alarm value
5 :Channel selection
6 :System parameter

1 :Wrist strap alarm value :Press the"MENU" key on the remote control , input password"123" ,then press "ok" key, then press ⏭ or ⏮ to select "wrist strap alarm value"as shown figure

To press "+" 、" -" key to select the maximum, minimum and infrared settings of the channel ,if select to set maximum or minimum ,press "0~9" key to set the alarm value (less than 50MΩ),then press "ok" to save ,If select the infrared setting ,press " + " 、" - " key to select to "off" or "on" ,then press "ok" key ,if display "save successfully" ,which means setting is OK .if select other channel seetings ,just press ⏭ or ⏮ to switch channels

Wrist strap minimum value of channel 1
0 .75MΩ
Wrist strap maximum value of channel 1
35 .00 MΩ
Infrared enable : Enable
On Off

2. ESD mat alarm value : Wrist strap alarm value :Press the"MENU" key on the remote control , input password"123" ,then press "ok" key, then press ⏭ or ⏮ to select "ESD mat alarm value "as shown figure"ESD mat information of channel1" press "0~9" key to set the alarm value (less than 50MΩ),then press "ok" key ,if display "save successfully" ,which means setting is OK .if select other channel seetings ,just press ⏭ or ⏮ to switch channels

ESD mat maximum value of channel 1
35 .00 MΩ

3. Equipment alarm value : Press the"MENU" key on the remote control , input password "123" ,then press "ok" key, then press ⏭ or ⏮ to select "equipment alarm value "as shown figure"press "0~9" key to set the alarm value (less than 25Ω), then press "ok" key ,if display "save successfully" ,which means setting is OK .if select other channel seetings ,just press ⏭ or ⏮ to switch channels

Equipment maximum value of channel 1
4 .0 Ω

4. Main ground wire alarm value : Press the"MENU" key on the remote control , input password "123" ,then press "ok" key, then press ⏭ or ⏮ to select " main ground wire alarm value "as shown figure"press "0~9" key to set the alarm value ,then press "ok" key ,if display "save successfully" ,which means setting is OK .if select other channel seetings ,just press ⏭ or ⏮ to switch channels

Maximum value of main ground wire
2 .0 Ω

5. Channel selection : Press the"MENU" key on the remote control , input password "123" ,then press "ok" key, then press ⏭ or ⏮ to select " channel selection "as shown figure"press "0~9" key set channel type wrist strap,ESD mat, and equipment , press ⏭ or ⏮ to switch channels ,then press "ok" key ,if display "save successfully" ,which means setting is OK .

Station 1 selection :off
Station 2 selection :off
Station 3 selection :off
Station 4 selection :off

6. System information : Press the"MENU" key on the remote control , input password "123" ,then press "ok" key, then press ⏭ or ⏮ to select " system information "as shown figure"Unuploaded alarm data and unuploaded scan data refer to the amount of data stored in the device that ahs not yet been uploaded.

Unuploaded alarm data : 5
Unuploaded scan data : 6
Channel number :3025
Date : 2018 - 12 - 24
10:43:43

calibration setting is shown on the right:
Press the remote control "MENU", input the password "888666", press "OK", and press " ⏭ " or" ⏮ " to select the parameters to be set, as shown in the picture:

1 :High resistance calibration
2 :Low resistance calibration
3 :ParameterB
4 :Zigbee infromation

1.High resistance calibration: Press the remote control "MENU", input the password "888666", press "OK", and press " ⏭ " or" ⏮ " to select "high resistance calibration" be as shown in the picture:
High resitance calibration including the calibration of wrist strap and ESD mat Firstly ,in the first step of channel calibration ,press"0~9" to enther the first calibration value (usuatlly 1M),at the same time ,the channel 1 for wrist strap & ESD mat needs to be input the corresponding resistance value ,then press "OK" to enter 2nd calibration step, input the calibration value (larger than the valure being input the first time,usually 20M),also input the same resistance to the channel of wrist strap & ESD mat,then press" OK" , if display "save successfully" ,which means setting is OK, presss ⏭ or ⏮ to switch the channel needed to be calibrated .

1st calibration step of channel 1
Calibration value:0MΩ

2.low resistance calibration : Low resistance calibration includes equipment resistance and main ground calibration ,the calibration principle is the same as that of high resistance ,the deference is that the connected calibration resistance is from the equipment interface

1st calibration step of channel 1
Calibration value:0MΩ

3. Parameter B setting :parameter B indicates the actual value of the wrist strap and ESD mat minus the tested value ,for example, if the actual value of the wrist strap and ESD mat is 10M and the test value shown on the display is 9.9M ,then set parameter B of the channel to 0.1M,manually enter the value ,press “OK” to save , and if “saved successfully “ is displayed ,the setting is successful

Parameter B of channel 1
Reference value :0 . 10M

4 : Network Zigbee information:Zigbee information includes PANID and channel (channel number) Show in the figure ,press ⏮ or ⏭ to switch for selection and setting , and enter “0~9” to set corresponding value ,but the PAN ID and channel can not be greater than 99

S hortAddr: 176
PAN - ID: 40
C hannnel: 26

5 : USB program upgrade:
Shut down the device ,inster the U disk into USB port ,then power on ,if the display shows”program upgrade Success”,means the upgrade is complete ,if not remove the U disk and repeat the preceding operation, if the Upgrade still fail ,please refer to the figure to format the U disk ,and copy the bin files to U disk ,and repeat the Preceding operations。
Requirement:the file system format of U disk is FAT32, and the upgrade file of the USB disk must Be placed in the root directory ,and there is only an upgrade file with bin suffix in the root directionly.

File system (F)
FAT32 ▼
Allocation unit isze (A)
4096 bytes ▼

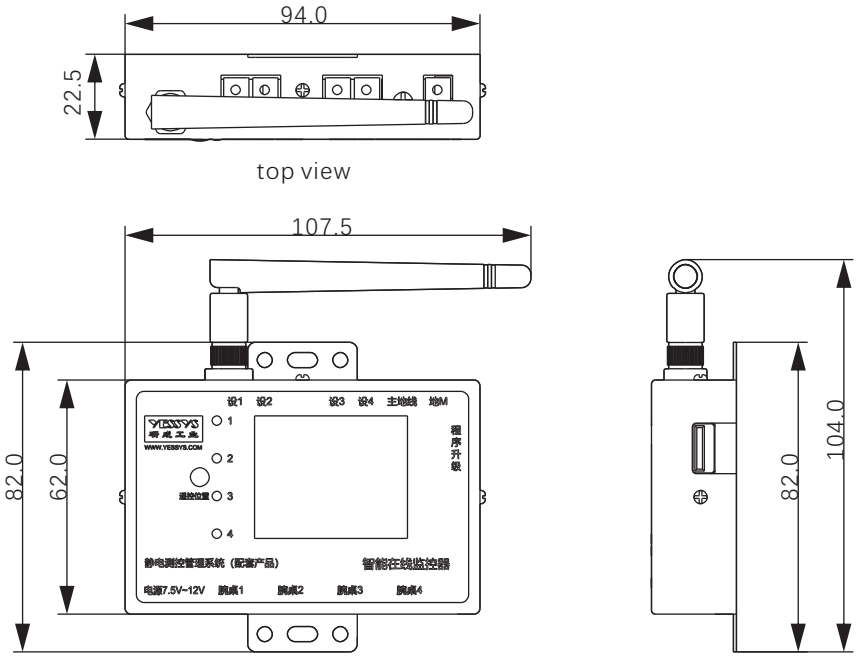
9/ Software installation instruction

The on-site status of the intelligent monitro will be wirelessly uploaded to the background in real time data ,and the normal online or alarm re--minding will be displayed in the visual interface,The transiter software including :digital factory management system ,internet of things service data collection and other software, the computer and service which will be installed the software is provided by the customer ,the server configuration is determined by the number of users,Recommen--ded server configuration : System W indow server 2012, CPU 4 core or above, memory 8G or above, storage space 500G or aboveWe will support online remote installation or telephone installation guide , any questions ,please call 0755-27447560

10/ Specification

Acccessory	Infrared connector , network cable, power supply， grounding wire etc
Product name	Intelligent static monitor
Product model	DWS2A -4
Operating environment	Anti static workshop， 0-40℃
Monitoring scope	Table mat and wrist:0-50MΩ， equipment:0-25Ω
Resistance error	±10%
Maximum power consumption	2W
input voltage	7.5-12V, 0.6A
Dimensions	L94*W62*H22.5mm
Appearance material	Tinplate， Electrostatic spraying
net weight	≈0.18KG

11/Exterior dimensional drawing



12/Safety caution

- Please read this instruction before installation and use
- Reliable grounding is necessary before operation
- Do not operate the device in an flammable and explosive environment
- Unauthorized repairs are not allowed

User Manual

13/Product warranty and service

Product warranty

YESSYS'S products are strictly inspected by the factory, in case of failure ,please contact YESSYS who will provide detail solution of the failure

1.Warranty period:
The warranty period of products sold by our company is one year, and the warranty period is one year from the date of sale due to the parts ,material or process quality problem of the product ,we will provide free repair 。
2.During the warranty period ,we have the right to refuse the warranty service and charge the repair component fee and service fee as appropriate under the following status:
A.Product failure caused by improper use or wrong operation by the user
B.Burnt-out accidents caused by lightning strikes or improper installation
C.Label damage or unauthorized disassembly for maintenance
3.Please pack and ship properly the product for repair , we will not be responsible for any damage or loss during transportation
4.We reserves the right of final interpretation ,subject to change without prior notice.

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.

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

Note: 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 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.