



# **UTS5000A Series Signal Analyzer**

# **Quick Guide**

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UNI-T guarantees that the Instrument product is free from any defect in material and workmanship within three years from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination, or improper handling. If you need a warranty service within the warranty period, please contact your seller directly. UNI-T will not be responsible for any special, indirect, incidental, or subsequent damage or loss caused by using this device. For the probes and accessories, the warranty period is one year. Visit instrument.uni-trend.com for full warranty information.



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# **Chapter 1 Instructions Manual**

This manual outlines the safety requirements, installment and the operation of UTS5000A Series Signal Analyzer.

# 1.1 Inspecting Packaging and List

When you receive the instrument, please check the packaging and list by the following steps.

- Check whether the packing box and padding material have been compressed or damaged by external forces and inspect the appearance of the instrument. If you have any questions about the product or need consulting services, please contact the distributor or local office.
- Carefully take out the article and check it with the packing instructions.

# 1.2 Safety Instructions

This chapter contains information and warnings that must be observed. Ensure that the instrument is operated under safe conditions. In addition to the safety precautions indicated in this chapter, you must also follow accepted safety procedures.

Safety Precautions					
Morning	Please follow these guidelines to avoid possible electric shock and risk to				
warning	personal safety.				
	Users must adhere to standard safety precautions during the operation, servicing,				
	maintenance of this device. UNI-T will not be liable for any personal safety and				
	property loss caused by the user's failure following the safety precautions. This device				
is designed for professional users and responsible organizations for measu					
	purposes.				
	Do not use this device in any manner not specified by the manufacturer. This device is				
	intended for indoor use only, unless otherwise stated in the product manual.				
Safety Sta	atements				
	"Warning" indicates the presence of a hazard. It warns users to pay				
	attention to a certain operation process, operation method or similar.				
Morning	Personal injury or death may occur if the rules in the "Warning" statement				
warning	are not properly executed or observed. Do not proceed to the next step				
	until you fully understand and meet the conditions stated in the "Warning"				
	statement.				
Contion	"Caution" indicates the presence of a hazard. It warns users to pay attention				
Caution	to a certain operation process, operation method or similar. Product damage				

	or loss of important data may occur if the rules in the "Caution" statement			
	are not properly executed or observed. Do not proceed to the next step			
	until you fully understand and meet the conditions stated in the "Caution"			
	statement.			
	"Note" indicates important information. It reminds users to pay attention to			
Note	procedures, methods, and conditions, etc. The contents of "Note" should be			
	highlighted if necessary.			

Safety Signs

A Danger		It indicates danger of electric shock, which may cause personal injury or death.		
	Warning	It indicates that there are factors you should be cautious of to prevent personal injury or product damage.		
A Caution		It indicates danger, which may cause damage to this device or other equipment if you fail to follow a certain procedure or condition. If the "Caution" sign is present, all conditions must be met before you proceed to operation.		
<u>∧</u> Note		It indicates potential problems, which may cause failure of this device if you fail to follow a certain procedure or condition. If the "Note" sign is present, all conditions must be met before this device will function properly.		
AC Alternating current of device. Please check the region's		Alternating current of device. Please check the region's voltage range.		
Direct current device. Please check the region's voltage range		Direct current device. Please check the region's voltage range.		
<u> </u>	Grounding	Frame and chassis grounding terminal		
	Grounding	Protective grounding terminal		
<u> </u> Grounding		Measurement grounding terminal		
OFF		Main power off		
ON		Main power on		
() Power		Standby power supply: When the power switch is turned off, this device is not completely disconnected from the AC power supply.		
CAT I		Secondary electrical circuit connected to wall sockets through transformers or similar equipment, such as electronic instruments and electronic equipment; electronic equipment with protective measures, and any high-voltage and low-voltage circuits, such as the copier in the office.		
CAT II		Primary electrical circuit of the electrical equipment connected to the indoor socket via the power cord, such as mobile tools, home appliances, etc. Household appliances, portable tools (e.g., electric drill), household sockets, sockets more than 10 meters away from CAT		

		III circuit or sockets more than 20 meters away from CAT IV circuit.		
	Primary circuit of large equipment directly connected to the distribution board and			
	circuit between the distribution board and the socket (three-phase distributor circuit			
CAT III	includes a single commercial lighting circuit). Fixed equipment, such as multi-phase			
	motor and multi-phase fuse box; lighting equipment and lines inside large buildings;			
	machine tools and power distribution boards at industrial sites (workshops).			
	Three-phase pu	blic power unit and outdoor power supply line equipment. Equipment		
CAT IV	designed to "initial connection," such as power distribution system of power station,			
	power instrument, front-end overload protection, and any outdoor transmission line.			
CE	<b>Certification</b> CE indicates a registered trademark of EU.			
UK CA	<b>Certification</b> UKCA indicates a registered trademark of United Kingdom.			
(I)	Certification	Conforms to UL STD 61010-1 and 61010-2-030. Certified to CSA STD		
Intertek 4007682		C22.2 No.61010-1 and 61010-2-030.		
∀	Waste	Do not place equipment and accessories in the trash. Items must be		
<u>A</u>		properly disposed of in accordance with local regulations.		
		This environment-friendly use period (EFUP) mark indicates that		
	EEUP	dangerous or toxic substances will not leak or cause damage within		
40		this indicated time period. The environmentally friendly use period of		
		this product is 40 years, during which it can be used safely. Upon		
		expiration of this period, it should enter the recycling system.		

### Safety Requirements

Warning	
	Please connect this device to AC power supply with the power cable provided.
	The AC input voltage of the line reaches the rated value of this device. See the
Preparation	product manual for specific rated value.
before use	The line voltage switch of this device matches the line voltage.
	The line voltage of the line fuse of this device is correct.
	This device is not intended for measuring the main circuit.
Check all	Please check all rated values and marking instructions on the product to avoid
terminal rated fire and the impact of excessive current. Please consult the product	
values	detailed rated values before connection.
	You can only use the special power cord for the instrument approved by the
Use the power	local and state standards. Please check whether the insulation layer of the cord
cord properly	is damaged, or the cord is exposed, and test whether the cord is conductive. If
	the cord is damaged, please replace it before using the instrument.
Instrument	To avoid electric shock, the grounding conductor must be connected to the
Grounding	ground. This product is grounded through the grounding conductor of the
crounding	power supply. Please be sure to ground this product before it is powered on.
AC power	Please use the AC power supply specified for this device. Please use the power

supply cord approved by your country and confirm that the insulation layer		
	damaged.	
	This device may be damaged by static electricity, so it should be tested in the	
Fleetweetstie	anti-static area if possible. Before the power cable is connected to this device,	
Electrostatic	the internal and external conductors should be grounded briefly to release	
prevention	static electricity. The protection grade of this device is 4 kV for contact	
	discharge and 8 kV for air discharge.	
	Measurement accessories designated as lower-grade, which are not applicable	
N	to main power supply measurement, CAT II, CAT III, or CAT IV circuit	
Measurement	measurement. Probe subassemblies and accessories within the range of IEC	
accessories	61010-031 and current sensors within the range of IEC 61010-2-032 can meet	
	its requirements.	
	Please use the input / output ports provided by this device in a proper manner.	
Use the input /	Do not load any input signal at the output port of this device. Do not load any	
output port of	signal that does not reach the rated value at the input port of this device. The	
this device probe or other connection accessories should be effectively arounded		
properly	product damage or abnormal function. Please refer to the product manual for	
	the rated value of the input / output port of this device.	
	Please use a power fuse of exact specification. If the fuse needs to be replaced,	
Power fuse	it must be replaced with another one that meets the specified specifications by	
	the maintenance personnel authorized by UNI-T.	
Disconstructure	There are no components available for operators inside. Do not remove the	
Disassembly	protective cover.	
and cleaning	Qualified personnel must conduct maintenance.	
Correitore	This device should be used indoors in a clean and dry environment with	
Service	ambient temperature from 0 °C to +40 °C.	
environment	Do not use this device in explosive, dusty, or high humidity conditions.	
Do not operate	Do not use this device in a humid any increase the suid the visit of internal shout	
in humid	Do not use this device in a numic environment to avoid the risk of internat short	
environment	Circuit of electric shock.	
Do not operate		
in flammable Do not use this device in a flammable and explosive environment to av		
and explosive product damage or personal injury.		
environment		
Caution		
	If this device may be faulty, please contact the authorized maintenance	
Abnormality	personnel of UNI-T for testing. Any maintenance, adjustment or parts	
	replacement must be done by the relevant personnel of UNI-T.	
Cooling	Do not block the ventilation holes at the side and back of this device.	

	Do not allow any external objects to enter this device via ventilation holes.	
	Please ensure adequate ventilation and leave a gap of at least 15 cm on both	
	sides, front and back of this device.	
Safe Please transport this device safely to prevent it from sliding, wh		
transportation	damage the buttons, knobs, or interfaces on the instrument panel.	
Dropor	Insufficient ventilation will cause the device temperature to rise, thus causing	
vontilation	damage to this device. Please keep proper ventilation during use, and regularly	
ventilation	check the vents and fans.	
Keep clean and	Please take actions to avoid dust or moisture in the air affecting the	
dry	performance of this device. Please keep the product surface clean and dry.	
Note		
Calibration	The recommended calibration period is one year. Calibration should only be	
Caubration	conducted by qualified personnel.	

# 1.3 Environmental Requirements

This instrument is suitable for the following environment:

- Indoor use
- Pollution degree: Class 2
- For overvoltage: This product should be powered from a mains supply that complies with Overvoltage Category II, which is a typical requirement for connecting equipment via power cords and plugs.
- Operating: Altitude below 3,000 meters; non-operating: Altitude below 15,000 meters.
- Unless otherwise specified, operating temperature is 0 to +40°C; storage temperature is -20 to +70°C.
- Operating: Humidity at temperature below to +35°C, ≤90% RH.; non-operating: Humidity at temperature from +35°C to +40°C, ≤60% RH.

There are ventilation opening on the rear panel and side panel of the instrument. So please keep the air flowing through the vents of the instrument housing. To prevent excessive dust from blocking the vents, please clean the instrument housing regularly. The housing is not waterproof, please disconnect the power supply first and then wipe the housing with a dry cloth or a slightly moistened soft cloth.

# 1.4 Connecting Power Supply

The specification of AC power supply that can input as the following table.

Voltage Range	Frequency
100-240 VAC (Fluctuations ± 10%)	50/60 Hz
100-120 VAC (Fluctuations ± 10%)	400 Hz

Please use the attached power cord to connect to the power port.

### Connecting to service cable

This instrument is a Class I safety product. The supplied power lead has good performance in terms of case ground. This signal analyzer is equipped with a three-prong power cable that meets international safety standards. It provides good case grounding performance for the specification of your country or region.

Please install AC power cable as follows.

- Ensure the power cable is in good condition.
- Leave enough space to connect the power cord.
- Plug the attached three-prong power cable into a well-grounded power socket.

# **1.5 Electrostatic Requirements**

Electrostatic discharge may cause damage to components. Components can be damaged invisibly by electrostatic discharge during transportation, storage and use.

The following measure can reduce the damage of electrostatic discharge.

- Testing in anti-static area as far as possible.
- Before connecting the power cable to the instrument, inner and outer conductors of the instrument should be briefly grounded to discharge static electricity.
- Ensure all the instruments are properly grounded to prevent the accumulation of static.

# **1.6 Preparation Work**

- 1. Connect the power supply wire, plug the power socket into the protective grounding socket; adjust the alignment jig according to your view.
- 2. Press the switch button on the front panel to boot up the instrument.

# 1.7 Usage Tip

### **Use External Reference Signal**

If user want to use an external signal source 10 MHz as reference, please connect signal source to the 10 MHz In port on the rear panel. The measuring menu on the top of the screen will indicate

### Reference Frequency: External.

### **Activate the Option**

If user want to activate the option, you need to input secret key of the option. Please contact UNI-T office to purchase it.

Refer to the following steps to activate the option you have purchased.

1. Save the secret key into USB and then insert it to signal analyzer

### 2. Press [System] key > System Information > Add token

3. Select purchased secret key and then press [ENTER] to confirm

# **1.8 Remote Control**

The UTS5000A series signal analyzers support communication with computers via USB and LAN interfaces. Through these interfaces, users can combine the corresponding programming language or NI-VISA, using the SCPI (Standard Commands for Programmable Instruments) command to remotely program and control the instrument, as well as interoperate with other programmable instruments that support the SCPI command set.

For more information about the installation, remote control and programming, please refer to *UTS5000A Series Programming Manual* on official site http:// www.uni-trend.com.

# 1.9 Help Information

The signal analyzer's built-in help system provides help information for each function button and menu control key on the front panel.

- Touch the left of the screen , help dialog box will pop out on the center of the screen. Tap support function to get more detailed help description.
- When help information displayed on the center of the screen, tap "x" or other key to close the dialog box.

# **Chapter 2 Panel and Keys**

# 2.1 Front Panel



Figure 1-1 Front Panel

- 1. Display screen: Display area, touch screen
- 2. Advanced function key: Used to activate advanced measurement functions of the signal analyzer, including:
  - Advanced measurement: Access a menu of functions for measuring transmitter power, such as adjacent channel power, occupied bandwidth, and harmonic distortion.
  - **Mode:** Select the measurement mode for the signal analyzer.
  - Auto-tune: Automatically searches for the signal and centers it on the display.
- 3. Measurement: Used to activate the main functions of the signal analyzer, including:
  - Frequency (FREQ): Press this key to enable the center frequency function and enter the frequency setup menu
  - Amplitude (AMPT): Press this key to enable the reference level function and enter amplitude setup menu.
  - Bandwidth (BW): Press this key to enable the resolution bandwidth function and enter

control bandwidth and scaling menu

- **Sweep:** Opens the sweep menu to configure the scan (sweep) time of the signal analyzer.
- Trigger: Opens the trigger menu to configure trigger setup, trigger type, and trigger parameters.
- **Trace:** Opens the trace control menu to configure detection mode and trace operation.
- Marker: Used to select marked number, type, attributes, tagging options, and list view; also controls the display of these marks.
- Peak: Places a marker at the peak amplitude of the signal and enables control over its associated functions.
- Measurement setting: Configures average/hold time, average type, display line, and limit values.
- Single: Press this key to perform single sweep; press again to return to continuous sweep mode.
- Reset (Default): Press this key to reset the signal analyzer settings to factory default parameters.
- 4. Utility (function key): Used to activate the main functions of signal analyzer, including:
  - System information (System): Access the system menu to configure system parameters.
  - **File System (File):** Opens the file manager where users can view, create, modify, or delete files. Files such as corrections, limits, measurement results, screenshots, traces, and status logs can be stored in internal or external memory and recalled when needed.
  - File storage (Save/Recall): Press this key to enter save menu, the types of files includes state, trace line + state, measurement data, limit, correction, and export data.
  - **Touch/Lock:** Toggles the touchscreen function. The key illuminates green when activated.
- **5.** Data control key: Direction key, rotary knob and numerical key are used to adjust the numerical value of the activated function, such as center frequency, start frequency, resolution bandwidth and maker position.

### Note

Esc key: If the instrument is in remote control mode, press this key to return to local mode.

**6. Radio Frequency input terminal (RF input 50 Ω)**: Used to connect the external input signal, the input impedance is 50 Ω (NMD2.92 male-head).

### Warning

It is forbidden to load the input port with a signal that does not meet the rated value,

and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function. RF IN port can only withstand an input signal power of no more than +27 dBm or a DC voltage input of 16 V.

Warning

It is forbidden to load input signals on the output port to avoid damage or abnormal function.

- 7. Headphone jack: 3.5 mm
- 8. USB 3.0 port: Used to connect external USB, keyboard, and mouse.
- **9. ON/OFF Switch:** Short press to power on the signal analyzer. When the instrument is already on, a short press will place it into standby mode, during which all functions are disabled.



# 2.2 User Interface

Figure 1-2 User Interface

- 1. Working mode: Spectral analysis, EMI, analog demodulation, vector signal analysis, IQ analyzer, phase noise analyzer, LTE FDD, LTE TDD, and NR.
- Sweep/Measuring: Single/continuous mode. Tap the screen icon to quickly toggle between the two modes.
- 3. Measurement menu: Displays the measurement information, including input impedance,

input attenuation, presetting, correction, trigger type, reference frequency, average type, and average/hold. Tap the screen icon to quickly access and switch these functions.

**4. Trace indicator:** Displays the information of trace and detector, including trace serial number, trace type, and detector type.

### Note

The first line displays the number of trace line, and the color of number matches the color of the corresponding trace on the screen for easy identification. The second line shows the trace type, including W (refresh), A (average trace), M (the maximum hold), m (the minimum hold). The third line indicates the detector type, including S (sampling detection), P (peak value), p (negative value), N (normal detection), A (average), f (trace operation). All detection type are displayed in white letters.

Tap screen icon to quickly switch different modes, different letter presents different mode.

- Letter in highlight white: Indicates the trace is currently being updated and displayed.
- Letter in grey: Indicates the trace is not being updated.
- Letter in grey with strikethrough: Indicates the trace is neither updated nor displayed.
- Letter in white with strikethrough: Indicates the trace is being updated but not displayed. This case is useful for trace mathematical operation.
- 5. **Display scale:** Displays the scale value and scale type (logarithm, linear). In linear mode, the scale value cannot be changed.
- 6. Reference Level: Displays the reference level value and reference level offset value.
- **7. Result of cursor measurement:** Displays the cursor measurement results, including frequency and amplitude. In zero span mode, the time is displayed instead of frequency.
- Panel Menu: Menu and function, including frequency, amplitude, bandwidth, trace, and marker.
- **9. Grid display area:** Displays trace display, marker, video triggering level, display line, threshold line, cursor table, and peak list.
- **10. Data display:** Displays center frequency value, sweep width, start frequency, cut-off frequency, frequency offset, RBW, VBW, sweep time, and sweep count
- 11. Function setting: Quick screenshot, file system, setup system, help system, and file storage.
  - Quick screenshot Saves a screenshot to the default file. If an external storage device is connected, the screenshot is saved there by default.
  - File system : Allows saving of corrections, limits, measurement results, screenshots, traces, status, and other data to internal or external storage. Saved files can be recalled for

later use.

- System information Displays the basic and option information.
- Help system 2: Opens user guidance and help documentation.
- File storage : Import or export state, trace + state, measurement data, limit value, and correction files.
- **12.** System log dialog box: Click the blank space on the right of file storage to enter system log to check the operation log. This dialog provides access to operation logs, alarm messages, prompt and hint information.
- 13. Connection type: Displays the connection status of mouse, USB, and screen lock.
- 14. Date and time: Displays the date and time.
- **15. Full screen switch:** Toggles full screen mode. The display is horizontally stretched. The right-side control panel is automatically hidden for maximum viewing area.

# 

# 2.3 Rear Panel

Figure 1-3 Rear Panel

- 1. USB 2.0 port: Used to connect USB, keyboard, and mouse
- 2. HDMI port: HDMI connector
- 3. LAN port: TCP/IP port for connecting remote control
- 4. USB Device port: This interface allows the signal analyzer to connect to a PC. Once

connected, the analyzer can be remotely controlled using dedicated software on the computer.

**5. Ext 1:** When using the external trigger mode, this BNC connector receives the rising or falling edge of an external trigger signal. The signal is fed into the analyzer via a BNC cable, enabling precise synchronization with external events.

### Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function.

- 10 MHz reference input: The signal analyzer supports both internal and external 10 MHz reference sources.
  - When a 10 MHz clock signal is detected at the [10 MHz IN] connector from an external source, the analyzer automatically switches to use it as the external reference. The user interface will display "Frequency reference: external". When the external reference source is lost, overrun, or disconnected, the analyzer automatically reverts to the internal reference, and the user interface will display "Frequency Reference: Internal".

### Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function.

**7. Ext 2:** When the signal analyzer operates in the external trigger mode, the [Ext 2] connector receives the rising or falling edge of an external trigger signal. This signal is input into the analyzer via a BNC cable, enabling precise synchronization with external events.

### Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function.

- 8. 10 MHz reference output: The signal analyzer can operate using either an internal or external reference source.
  - When using the internal reference, the [10 MHz OUT] connector outputs a 10 MHz clock signal generated by the analyzer's internal reference. This signal can be used to synchronize other external devices, ensuring consistent timing across instruments.

### Warning

It is forbidden to load the input signal on the output port to avoid equipment damage

### or abnormal function.

- **9. Ground connector:** Provides an electrical ground connection point for connecting an antistatic wrist strap. This helps prevent electrostatic discharge (ESD) damage when handling or connecting the Device Under Test (DUT).
- **10. Power Switch:** Used to turn on/off the AC power supply. When the switch is turned on, the signal analyzer enters the standby mode while the indicator on the front panel lights up.
- **11. Fuse holder**: Allows for fuse replacement. The instrument supports a fuse rated at 250 VAC, T6.3A, with a breaking capacity of 35 A or higher.
- 12. Power port: Connecting the AC power supply.
- 13. Burglar-proof Lock: Designed to prevent theft of the instrument.
- **14. Dustproof cover:** Protects the ports and interfaces from dust. Remove the cover before cleaning or accessing connections.
- 15. Handle: A convenient handle for carrying or repositioning the signal analyzer.

# 2.4 Touch Operation

The signal analyzer features a 15.6-inch multi-point touchscreen that supports various gesture-based operations, including:

- Tap the top-right corner of the screen to open the main menu.
- Slide up/down, left/right in waveform area to change the X-axis center frequency or Y-axis reference level.
- Pinch or spread two fingers in the waveform area to zoom in or out on the X-axis sweep width.
- Tap parameter or menu on the screen to select and edit it.
- Enable and move cursors as needed.
- Use auxiliary shortcut keys to perform common operations efficiently.

Use [Touch Lock] to turn on/off touch screen function.

# **Chapter 3 Troubleshooting**

This chapter lists the possible faults and troubleshooting methods of the signal analyzer.

Please follow the corresponding steps to handle it, if these methods is not work, please contact UNI-T and provide your machine device information (acquisition method: **[System] >System Information**).

- 1. After press the power soft switch, the signal analyzer still display a blank screen, and nothing is displayed.
  - a. Check whether the power connector is properly connected and the power switch is turned on.
  - b. Check whether the power supply meets the requirements.
  - c. Check whether the fuse of the machine is installed or blown.
- 2. Press the power switch, if the signal analyzer still display blank screen and nothing is displayed.
  - a. Check the fan. If the fan is rotating but the screen is off, the cable to the screen may be loose.
  - b. Check the fan. If the fan does not rotate and the screen is off, it represents the instrument is not enabled.
  - In case of the above faults, do not disassemble the instrument by yourself. Please contact UNI-T immediately.
- 3. Spectral line is not updated for a long time.
  - a. Check whether the current trace is in update state or multiple averaging state.
  - Check whether the current is meet the restriction conditions. Check the restriction settings and whether there are restriction signals.
  - In case of the above faults, do not disassemble the instrument by yourself. Please contact UNI-T immediately.
  - d. Check whether the current mode is in the single sweep state.
  - e. Check whether the current sweep time is too long.
  - f. Check whether the demodulation time of the demodulation listening function is too long.
  - g. Check whether the EMI measurement mode is not sweeping.
- 4. The measurement results are incorrect or not accurate enough.

Users can obtain detailed descriptions of technical index from the back of this manual to calculate system errors and check measurement results and accuracy problems. To achieve the performance listed in this manual, you need:

a. Check whether external device is properly connected and work.

- b. Have a certain understanding of the measured signal and set appropriate parameters for the instrument.
- c. Measurement should be performed under certain conditions, such as preheating for a period of time after starting up, specific working environment temperature, etc.
- d. Calibrate the instrument regularly to compensate for measurement errors caused by instrument aging.

If you need calibrate the instrument after the guarantee calibration period, please contact UNI-T company or obtain paid service from authorized measurement institutions.

# **Chapter 4 Service and Support**

# **Maintenance and Cleaning**

(1) General Maintenance

Keep the instrument away from the direct sunlight.

### Caution

Keep sprays, liquids and solvents away from the instrument or probe to avoid damaging the instrument or probe.

(2) Cleaning

Check the instrument frequently according to the operating condition. Follow these steps to clean the external surface of the instrument.

Please use a soft cloth to wipe the dust outside the instrument.

When cleaning the LCD screen, please pay attention and protect the transparent LCD screen. When cleaning the dust screen, use a screwdriver to remove the screws of the dust cover and then remove the dust screen. After cleaning, install the dust screen in sequence.

Please disconnect the power supply, then wipe the instrument with a damp but not dripping soft cloth. Do not use any abrasive chemical cleaning agent on the instrument or probes.

### Warning

Please confirm that the instrument is completely dry before use, to avoid electrical shorts or even personal injury caused by moisture.

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### PN:110401112168X

# 说明书菲林做货要求:

序号	项目				内容	
1	尺寸 夕		外	补尺寸:(148x210)±1mm.		
2	材质		封	封面封底 128G 双铜 内页 60g 书纸		
3			黑	黑色,双面印刷		
4	外观要求		ED	刷完整清晰,版面整洁.无分属	层.残损.毛边等缺陷	
5	装订	装订方式		马订装		
6	表面	表面处理		无		
7	其	其它				
版本			REV.0			
DWH 设 计				MODEL 机型:((CD))UTSE0000	Part NO. 110401112168X	
СНК				们空.((CD)0135000A		
甲核					   优利德科技(中国)股份有限公司	
APPRO 批准					UNI-TREND TECHNOLOGY (CHINA) CO.,LTD	