深达威® 涂层测厚仪

COATING THICKNESS METER

SW-6310B **用户手册**

User Manual

SNDWAY

CE

产品执行标准：DB44/T 1207-2013　GB/T 4956-2003
GB/T 4957-2003

用户须知

初次使用仪器前，请先仔细阅读用户须知

一、不要用任何方式自行打开或修理仪器，严禁非法改装仪器。请妥善保管仪器，不要放在儿童可以接触到的地方，避免无关人员的使用。

二、仪器电磁辐射可能对其它设备和装置造成干扰，请不要在飞机或医疗设备附近使用本仪器，不要在易燃、易爆的环境中使用仪器。

三、报废的仪器不可与生活垃圾一同处理，请按国家或者当地的相关法律规定处理报废仪器。

四、超过保修期的本公司产品出现故障，可以交由本公司维修产品，按公司规定收取维修费用。

五、凡因用户自行拆装本公司产品、因运输、保管不当或未按产品说明书正确操作造成产品损坏，以及私自涂改保修卡，无购货凭证，本公司均不能予以保修。

六、仪器出现任何的质量问题，或对使用仪器有任何疑问时请及时联系当地经销商或深达威仪器厂家，我们将第一时间为您解决。

专业铸造品质　品质成就品牌

概述

本仪器通过金属底材磁性和涡流特性，能够准确分辨出底材的属性。本仪器采用高精密探头，能精准地测量出磁性底材表面的非磁性覆盖层厚度（如油漆，橡胶，珐琅等），以及非磁性金属底材表面的非导电覆盖层(如油漆，橡胶等)的厚度。

本仪器通过不断的测试和改善，以各大工业复杂环境为标准，研发出来的涂层测厚仪，能准确，快速，无损伤地测量出覆盖层的厚度，适用于各大工业车间，实验室和户外环境。

特点

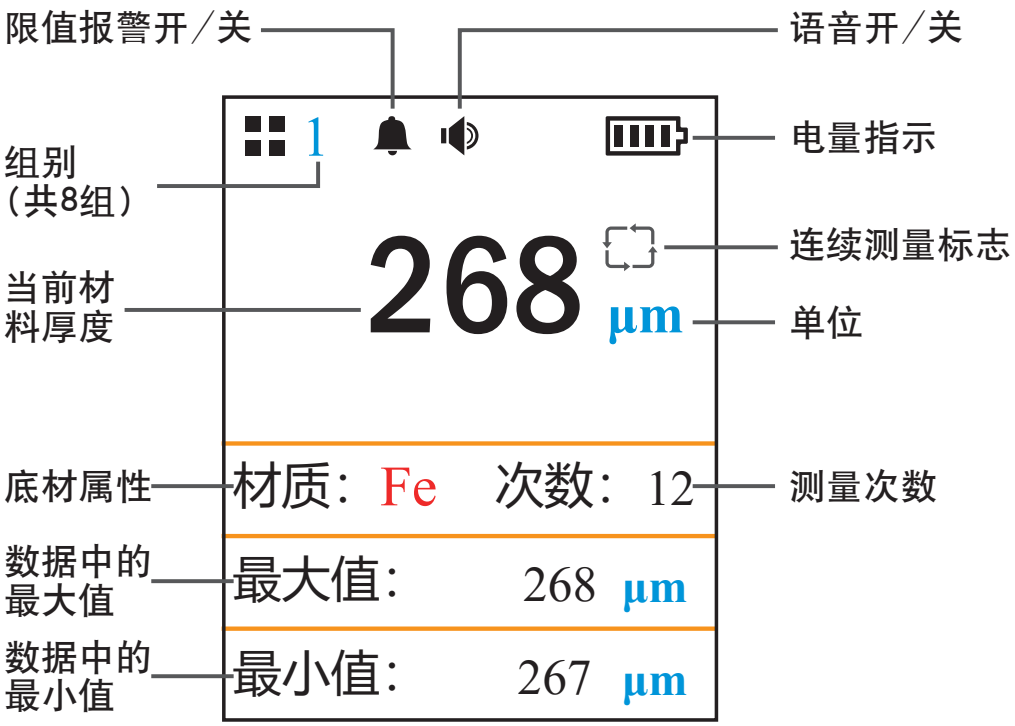
● 主要功能和特点：

1、2寸彩屏
2、4向转屏
3、内置850mAh锂电池
4、USB连接电脑导出数据
5、语音播报（限中文版）
6、数据分组，可存8组各32笔
7、校准数据分组，分别校准8组底材
8、测量直接显示覆层厚度和底材材质

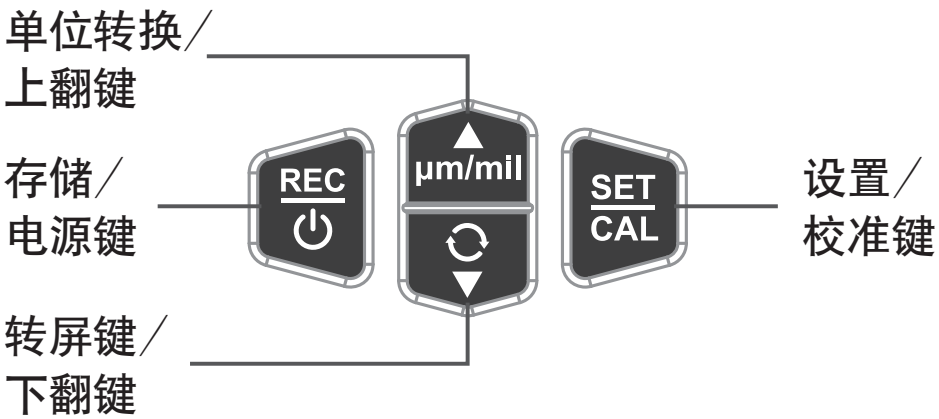
● 其它功能和特点：

9、柱状图显示
10、上下限报警测量功能
11、自动关机时间可设置
12、可恢复出厂设置和校准值
13、统计数据：平均值(Avg)，最大值(Max)，最小值(Min)，标准差(SDev)

功能说明与按键



其中Fe为磁性材质，NFe为非磁性材质



主界面

主界面时，左上角显示组别“ ■ * ”	
SET CAL	短按进入菜单 长按进入当前组校准模式
μm/mil	短按切换组别 长按转换单位μm或mil
	短按数据条形图显示 长按转屏（数据为0时是转屏，如果不是0，则是零点校准功能）
REC	短按存储当前测量的数据 长按关机

注：切换组别后，可能因为校准数据不同，测出厚度值有所差别。

菜单

在主界面下，短按 SET CAL 键进入菜单	
SET CAL	短按选择当前菜单项
μm/mil	短按向前移动或数值加1
	短按向后移动或数值减1
REC	短按返回上一级

校准模式

在主界面下，长按 SET CAL 键进入校准模式，可校准当前组的数据	
SET CAL	短按切换校准点，1（0μm）、2（50μm）、 3（100μm）、4（250μm）、5（500μm）、 6（1000μm）共6个点循环切换
μm/mil	短按厚度值加1
	短按厚度值减1
REC	短按退出校准模式

*任何情况下：长按 REC 键15秒以上强制关机或重启。

锂电池充电

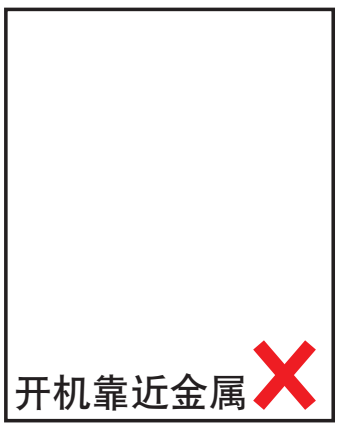
- 产品内置3.7V 850mAh 锂电池供电，不可拆卸。
- 当产品不能开机或者开机后显示电量空，请及时充电。
- 请使用DC5V，大于1A的充电适配器对产品充电，充电接口为Type-C。（建议使用手机充电器）
- 充电时，电池符号滚动显示。充满电后，电池符号变为绿色满格“ ”。

电池保养

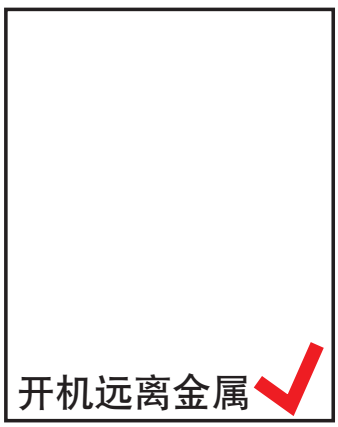
长时间不使用时，先把产品充满电，并每半年再充电一次，以免电池损坏。

仪器的开机和关机

- 短按 REC 键开机，长按 REC 键关机。



图示1 靠近金属底材开机是不正确的



图示2 远离金属底材开机是正确的

用户需在远离金属材质至少5cm的地方按 REC 键开机，或开机后迅速提升仪器离开底材。靠近金属材质开机，仪器会“嘀…嘀…嘀…”连续报警。因仪器在开机瞬间会进行校准平衡，靠近金属开机，可能影响仪器正常使用。

校准

本仪器出厂时根据标准底材(随机的铁块和铝块)，已校准好基准数据。用户如需对特定材料进行测量，请对需要测量的底材进行零点校准和校准片校准，以保证数据的准确性。

● 零点校准

零点校准是对底材零点进行零校准，零点校准操作只为获得更精确的零点。

注：零点校准只适用于当前开机状态，关机后不保存。

基本操作：

A.对底部材料进行一次测量，屏幕显示一组数据，仪器发出“滴”提示音。

B.长按 ▼ 键，屏幕主数据清零，并且发出“滴滴”两声提示音，完成校准。

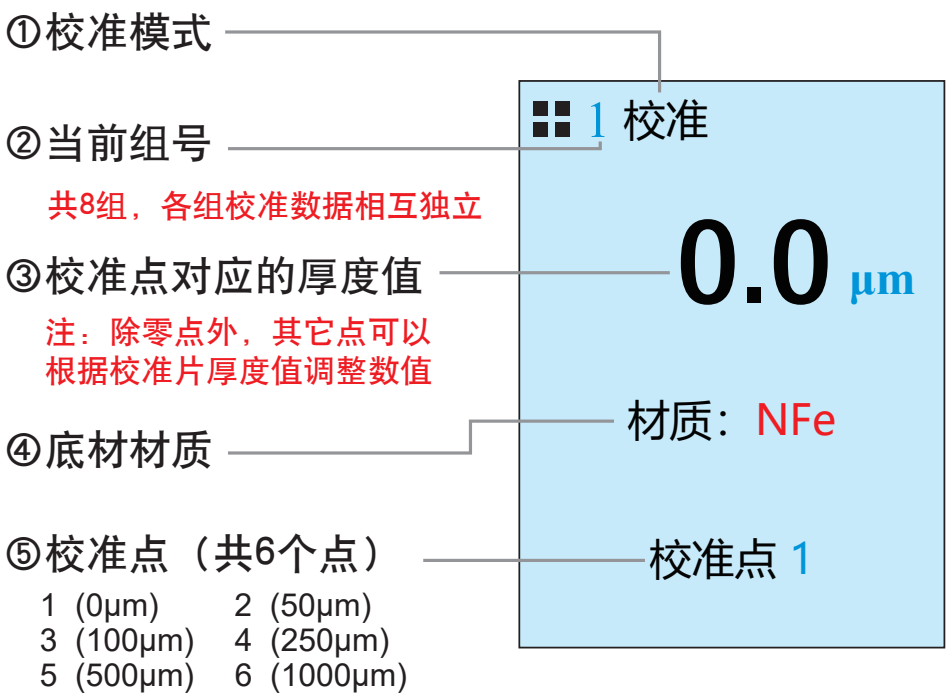
C.重复A,B步骤，以获取更准确的校准数据。

● 校准片校准

校准片校准通过用不同规格的校准片对底材进行多点校准，以保证仪器在不同特性的底材上测量时数据的正确性。

基本操作：

A.在主界面，先切换到需要校准的分组，长按SET CAL键，进入校准模式，屏幕显示如下图：



B.此时屏幕下方显示“校准点1”，主显示区显示校准厚度值“0.0μm”，表示校准零点。在磁性金属底材或者非磁性金属底材上测量一次，仪器发出“滴滴”两声，零点校准完成，仪器自动跳到下一个校准点。

C.此时屏幕下方显示“校准点2”，主显示区显示校准厚度值“50.0μm”（注：可能是45~55之间的某个值），表示校准50μm。把50μm校准片（可能是50μm上下的某个厚度值）垫到刚才校准零点用的底材上，先对比仪器校准值是否和校准片一致，如果不一致，可按μm/mil键或键调整到同样数值后，再测量一次，50μm校准完成，并自动跳到下一个校准点。

D.参考上一步（C），继续校准校准点3（100μm）、校准点4（250μm）、校准点5（500μm）、校准点6（1000μm）。校准完第6点（1000μm），自动退出校准模式。

E.如果只想对某个点进行校准，可在校准模式下，按SET CAL键切换校准点。校准模式下，按REC键退出校准模式。

注意：

1.校准一个周期（6个点）只能使用同一种底材，中途更换底材可能导致数据不准确。

2.校准非磁性底材（如铝片）的时候，要远离磁性材料（如铁片），否则可能导致数据不正确。

3.各组校准数据相互独立，比如校准第1组，则第2至8组都不受影响。

** 校准期间，如果仪器显示“Err”，再测量一次当前厚度即可。如果测量几次还是显示“Err”，请按REC键返回主界面并选用符合标准的校准片和底材重新校准。

基本测量

A.准备待测试件。

B.将仪器放置在空置的空间，远离金属材质开机。

C.开始测量：将仪器垂直轻压在待测量件上，仪器发出“滴”一声，完成测量，数据显示在主显示区。迅速把仪器移开待测件5cm以上，约1秒钟后便可进行下一次测量。

D.此时如果仪器的语音功能开启，则自动读出测量结果。

查看数据和删除数据

● 查看数据

A.在主界面，按SET CAL键进入菜单设置，选中“查看数据”选项，再按SET CAL键进入数据保存列表。

B.按μm/mil／键能查看上一页记录／下一页记录。

C.短按REC键返回上一级，或者直接测量返回主界面。

D.当仪器无存储记录时，短按μm/mil／键无法进入查看记录模式。

图3

图4

● 删除数据

①删除全部数据：

A.在查看数据界面，长按SET CAL键，数据列表全部清空，并且发出“滴滴”两声提示完成操作。

B.短按REC键返回上一级，或者直接测量返回主界面。

②删除单个数据：

A.在查看数据界面，按SET CAL键，当前页首个数据被选中，通过μm/mil键或键选中想要删除的数据后，短按SET CAL键选中的数据记录被删除，并且发出“滴”一声提示完成操作。

B.短按REC键返回上一级，或者直接测量返回主界面。

统计数据

统计数据会统计测量的次数，所有数据的平均值，数据中的最大值和最小值，数据的标准差。

A.在主界面，按SET CAL键进入菜单设置，通过μm/mil或键选中“统计数据”选项，再按SET CAL键进入统计数据列表。

B.短按REC键返回上一级，或者直接测量返回主界面。

图5

图6

恢复出厂

A.在主界面，按SET CAL键进入菜单设置，通过μm/mil或键选中“恢复出厂”选项，再按SET CAL键进入恢复出厂设置界面。按SET CAL键选择[确定]，将恢复出厂时的参数及校准默认值。

B.短按REC键返回上一级，或者直接测量返回主界面。

注：选择恢复出厂设置后，8个组所有的校准数据都会被清除，并恢复到出厂默认值。

图7

图8

报警限值

限值可以设置仪器测量时报警提示的上限和下限，可关闭。

当仪器测量值大于上限值，屏幕闪烁显示，并且发出“嘀…嘀…”报警。

当仪器测量值小于下限值，屏幕闪烁显示，并且发出“嘀…嘀…”报警。

当仪器上限或下限报警时，按任意键可退出报警。

A.在主界面，按SET CAL键进入菜单设置，通过μm/mil或键选中“报警限值”选项，再按SET CAL键进入报警限值设置界面。

B.通过 μm/mil 或 键选中“上限” “下限” “开关”选项，再按 SET CAL 键进入对应设置界面。

C.在上限或下限设置界面中，短按 μm/mil 或 键可向上或向下调整数值，长按则为快速调整数值。

D.在开关界面中，短按 μm/mil 或 键可向上或向下选择“打开”或“关闭”，按 SET CAL 键确定。

E.短按 REC 键返回上一级，或者直接测量返回主界面。

** 上下限设置范围为0~1999μm；
上限值设置为1999μm时，关闭上限报警；
下限值设置为0μm时，关闭下限报警。

图9

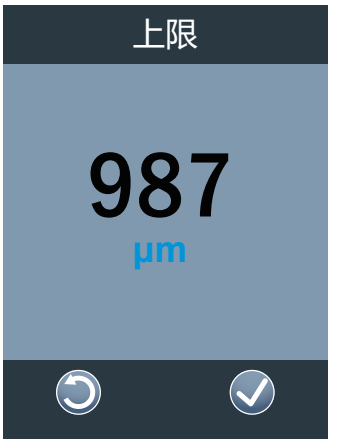


图10

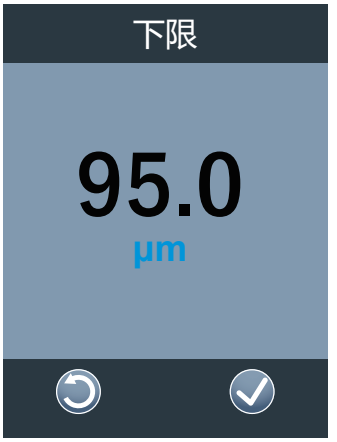


图11

图12

参数设置

A.在主界面，按SET CAL键进入菜单设置，通过μm/mil或键选中“参数设置”选项，再按SET CAL键进入参数设置界面。

B.通过μm/mil或键选中“测量模式”“语音提示”“自动关机”“组模式”“语言”选项，再按SET CAL键进入对应设置界面。

图13

图14

● 测量模式

单次：每次测量只会更新一个数据，请将仪器垂直迅速轻压于测量件上。

连续：只需把仪器轻压在测量件不放开，数据将不断更新，每次更新数据都会发出“嘀”一声。

A.在测量模式界面，通过μm/mil或键选中“单次”“连续”选项，再按SET CAL键确定。

B.短按REC键返回上一级，或者直接测量返回主界面。

图15

● 语音提示（仅限中国大陆版）

A.在语音提示界面，通过μm/mil或键选中“语音关”“语音开”选项，再按SET CAL键确定。

B.短按REC键返回上一级，或者直接测量返回主界面。

图16

● 自动关机

仪器提供5种自动关机时间供用户选择，以节省能源。当仪器在所选定的自动关机时间内无任何操作时，仪器自动关机。

A.在自动关机界面，通过μm/mil或键可选“30秒”“1分钟”“2分钟”“5分钟”“10分钟”自动关机的时间，再按SET CAL键确定。

B.短按REC键返回上一级，或者直接测量返回主界面。

图17

● 组模式

仪器提供8组数据组，方便用户选择使用，主界面显示对应的组号“ 1”，每组可存储32笔数据，存储的数据相互独立。各组校准参数相互独立，用户可根据不同测试环境进行校准存储；

A.在组模式界面，通过μm/mil或键切换数据组，按SET CAL键设置选定的数据组。

B.短按REC键返回上一级，或者直接测量返回主界面。

C.在主界面下，可短按μm/mil键快速切换分组。

图18

● 语言

A.在语言界面，通过μm/mil或键切换选择“中文”或“English”，按SET CAL键设置选定显示语言。

B.短按REC键返回上一级，或者直接测量返回主界面。

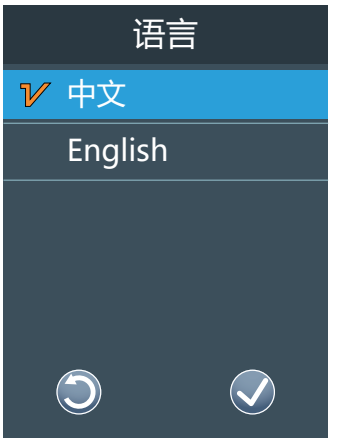


图19

单位设置

本仪器提供2种测量单位（μm,mil）可供选择，用户可根据自己的要求，选择合适的测量单位。

在主界面，长按μm/mil键，可快速切换单位。

转换关系：

1mil=25.4μm;

1μm=0.03937mil;

图20

图21

条形图模式

在主界面，短按键，可将数据转换为条形图显示。短按键或直接测量退出。

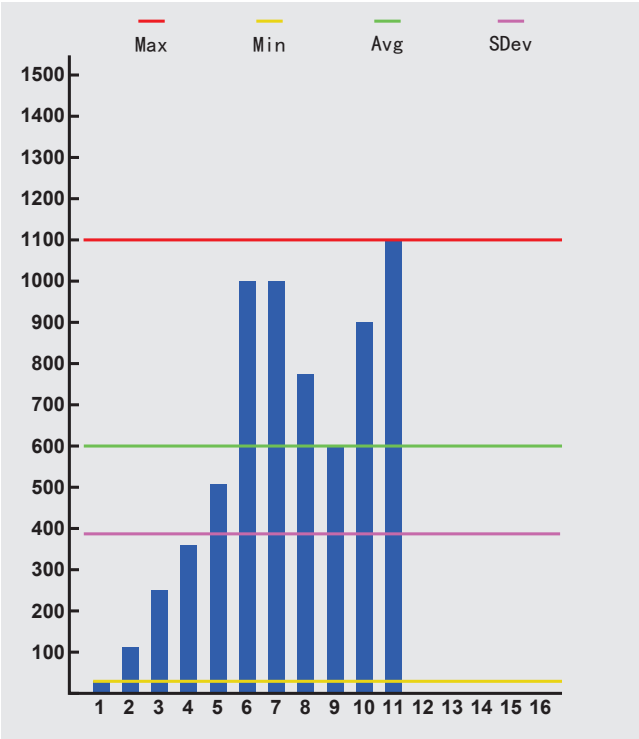


图22

转屏

在主界面，长按 键，可实现屏幕翻转，每长按一次翻转90度。

电脑软件

仪器配有电脑软件CTM(Coating Thickness Meter)，CTM具有导出记录、生成条形图、计算最大/最小/平均值、生成可打印报表、导出到excel、系统设置等功能。

具体操作说明请参考软件包里的《安装和使用说明》文档。

软件界面图：

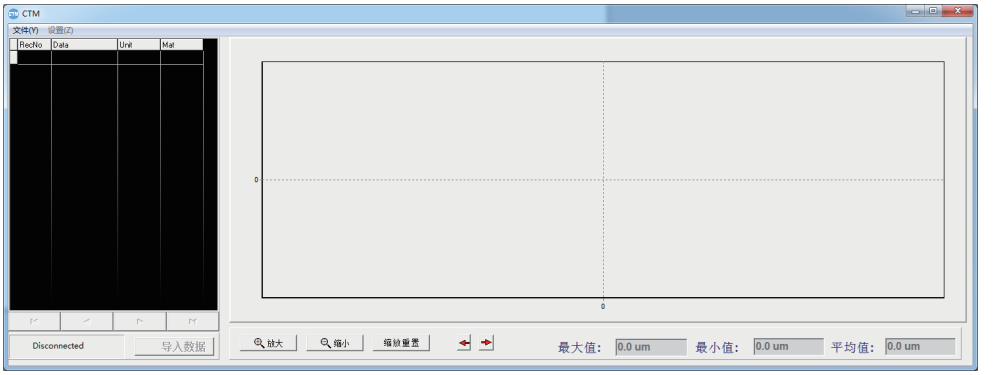


图23

技术参数

项目	SW-6310B
测量范围	磁性0~1700μm; 非磁性0~1700μm
分辨率	0.1μm @ (0~99.9μm); 1μm @ (100~1700μm)
示值误差	±(2+2%*H)μm @ (0~500μm) ±(2.5%*H)μm @ (500~1700μm)
最小测量区域	磁性25x25mm; 非磁性25x25mm
最小曲率	凸面5mm; 凹面30mm
最小底材厚度	磁性0.2mm; 非磁性0.05mm
显示屏	2寸彩屏
数据存储	8组x32笔
数据导出	通过USB连接电脑导出
电池规格	3.7V 850mAh锂电池
充电规格	Type-C DC5V 0.8A
充电时长	约1.5小时
电池续航	约8小时
工作温湿度	0˚C~50˚C, 10%~80%RH
存储温湿度	-10˚C~60˚C, 10%~70%RH
外形尺寸	120x52x26mm

仪器日常保养

- 禁止将仪器长期放置在高温高湿的环境中储存，长期不使用仪器时，请把仪器装入布包盒，并存放在干爽阴凉处。
- 请保持仪器表面清洁，可用湿的软布擦拭表面灰尘，不可用带有腐蚀性洗液清洁仪器。
- 长时间不使用时，先把产品充满电，并每半年再充电一次，以免电池损坏。

装箱清单

购买仪器时请按下列清单认真检查仪器所有附件是否完整。

项目	名称	单位	数量	备注
1	主机	台	1	
2	布包盒	个	1	
3	挂绳	条	1	
4	Type-C线	条	1	
5	说明书	本	1	
6	保修合格证	张	1	
7	彩盒	个	1	
8	铁基材	块	1	
9	铝基材	块	1	
10	校准片	片	5	
11	小PP盒	个	1	装基材与校准片

检验员：　　日期：

USER INSTRUCTIONS

Please read this manual carefully before your first utilization

1>By any means, do not disassemble or repair the meter; reforming illegally is not allowed. Keep it properly away from children and irrelevant people.

2>Do not use it nearby planes or medical instruments which could be interfered by electromagnetic radiation of this meter. Do not use it in combustiable, explosive places.

3>Do not throw away the meter at the end of its working life with the normal household waste, please dispose it by nation or local related laws and regulations.

4>The broken-down meter which is beyond the warranty time could be handed over to the company for repairing according to its charging standards.

5>The warranty service is not available for any of the below situations: disassembling the product by yourself; transportation damage; improper safekeeping; all kinds of wrong operations without looking over the manual and altering warranty card.

6>If there are any troubles on quality, or any doubts about utilization, please contact the local agent or us, we will solve it as soon as possible.

Professional casts quality
Quality accomplishes reputation

Introduction

- Based on the magnetism and the eddy current feature of metal substrate, the meter can distinguish the property of metal substrate precisely. With high-precise probe, the meter can accurately measure the non-magnetic coating thickness on magnetic substrate surface(like, the coating of painting, rubber and enamel, etc.), and the non-conducting coating thickness on non-magnetic metal substrate surface (like, the coating of painting, rubber, etc.).
- Researched with constant testing and improvement, the basic standard of complex environments of all kinds of major industries, the end comes to the final meter, it can measure the coating thickness accurately, rapidly and un-harmfully, suitable for all kinds of major industrial workshops, labs and outside environment.

Features

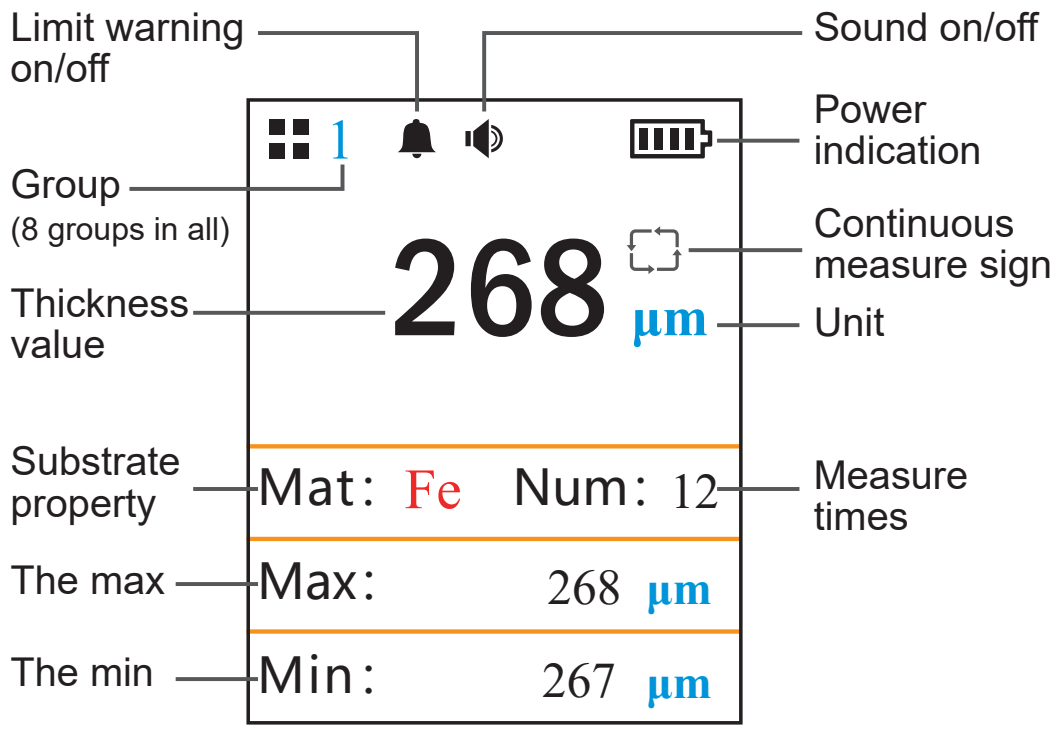
- **The main functions and features**

1. 2 inches color screen
2. Rotatable screen with four directions
3. Built-in 850mAh lithium battery
4. USB port connecting PC to export data
5. Voice broadcast (only in chinese)
6. Data grouping, 8 groups and each 32 sets of data
7. Calibrated data grouping, corresponding to calibrating 8 groups of base-metal
8. On screen shows directly the thickness of the cover and the material of the base-metal

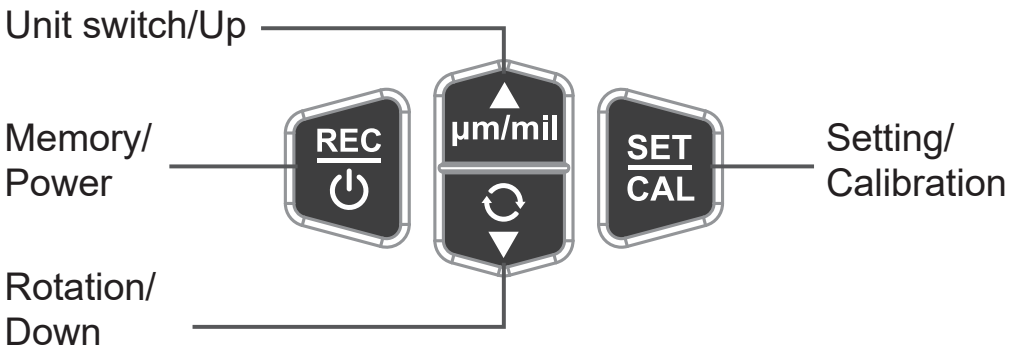
● Other functions and features

9. Histogram display
10. Upper/Lower limit warning function
11. The time of auto-OFF is settable
12. Restoring factory settings and calibration values
13. Statistics: the average(Avg), the max(Max), the min(Min), and the standard deviation(SDev)

Functions introduction and keys



And Fe is for magnetic material, NFe is for non-magnetic material.



The Home page

On the Home screen, the upper left corner shows the group number “ ▪▪ * ”	
SET CAL	Short press for the Menu; Long press for the calibration mode of current group.
µm/mil	Short press to switch groups; Long press to switch units between µm and mil.
	Short press to display datum in histogram; Long press to rotate the screen (When the data is 0, it is screen rotation, if it is not 0, it is zero calibration function.)
REC	Short press to save the current measured values; Long press to power off.

Attention: After switching groups, the error of measured value could be caused by the difference of calibrated data.

The Menu

On the Home page, short press the SET CAL key to enter the menu page	
SET CAL	Short press to choose the options in the menu page
µm/mil	Short press to move forward or increase the value by 1
	Short press to move backward or decrease the value by 1
REC	Short press to return to the previous

Calibration mode

On the Home page, long press the SET CAL key to enter the calibration mode, and calibrate the datum in the current group	
SET CAL	Short press to switch the calibrating spots: 1(0μm), 2(50μm), 3(100μm), 4(250μm), 5(500μm), 6(1000μm), six spots in all
μm/mil	Short press to increase the thickness by 1
	Short press to decrease the thickness by 1
REC	Short press to exit the calibration mode

* In any case: Long press the REC key beyond 15 seconds to shut it down or restart compulsively.

The lithium battery charging

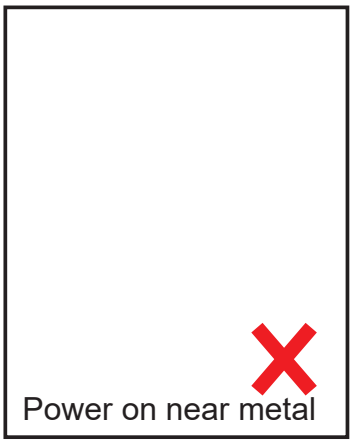
- The product is equipped with 3.7V/850mAh lithium battery which is built-in and non-removable
- Please charge it if it can not be turned on or there is no power indication after starting up
- Please use charging adapter with DC5V and over 1A to charge it, the charging port is the Type-C port. (We recommend to use phone charger)
- The battery icon will be displayed in scrollable way during charging process. The battery icon will show green color and be full when the charging process is completed.

The battery maintenance

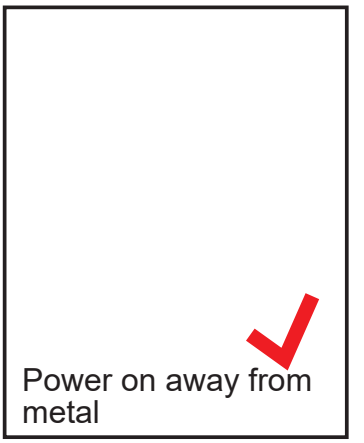
Keep it with full power if no operations for a long time; and charge it once every half year to avoid the battery damage.

Power on/off

- Short press REC to power on, long press REC to power off.



PIC 1 Turning it on nearby the metal substrate is not the right way.



PIC 2 Turning it on away from the metal substrate is the right way.

The least 5cm is necessary distance between the meter and the metal substrate for turning the meter on, or the other way is to lift the meter away from the metal substrate quickly after turning the meter on. The meter will sound the warning in succession "beep...beep...beep" if turning it on nearby the metal substrate. The operation of turn-on nearby the metal substrate could affect the meter's regular measuring, because the meter will go through the calibration balance the moment its turn-on.

The calibration

The meter is released with calibrated benchmark datum which is based on standard substrate(random iron and aluminum block). To the measuring of individual materials, please go through the Zero-spot calibration and calibration-film calibration over the to-be-tested substrate for accurate datum.

- Zero-spot calibration

This operation is to go through the zero calibration over the substrate's zero-spot and aimed to get the more accurate zero-spot.

Attention: The zero-spot calibration is only applicative in the current boot status, and can not be saved after power-off.

Basic operations:

A. Process single measuring over the substrate, a set of datum is showed on screen, the meter sound "beep".

B. Long press the ↻ key, the main data returns to zero on screen, and the meter sound "beep" twice, and the calibration is completed.

C. Repeat the process A and B for more accurate calibrated datum.

- Calibration-film calibration

With different specification calibration-films, process multi-spots calibrations over the substrate to guarantee the validity of measured datum on different property substrates.

Basic operations:

A. On the Home page, switch to the group that need calibration, long press the SET CAL key to enter the calibration mode, the screen shows the following figure:

①the calibration mode

②the current group number

(8 groups in all, and each group of calibrated datum is mutual independence)

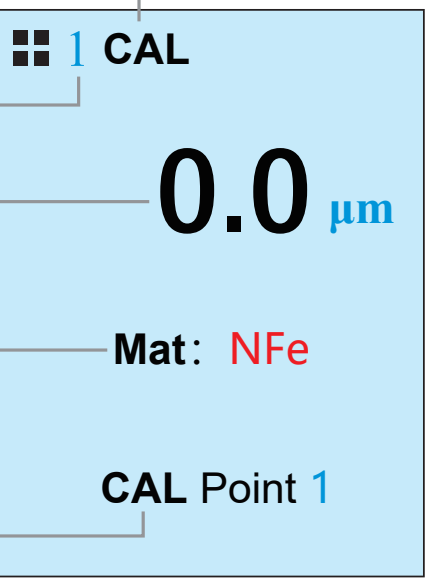
③the thickness value corresponding to the calibrating spot

④Substrate material

Attention: Except for the zero spot, in other spots, the thickness can be adjusted based on the calibration sample of thickness

⑤the calibrating spots (six spots in all)

1 (0μm) 2 (50μm) 3 (100μm)
4 (250μm) 5 (500μm) 6 (1000μm)



B. At this moment, the bottom of the screen shows "CAL Point 1", the main display area shows the standard thickness value which is "0.0μm", and it means the zero-spot is already calibrated. Measuring once over magnetic metal substrate or non magnetic, the meter sounds "beep" twice, then the zero-spot calibration is completed, and the meter goes to next calibration spot automatically.

C. At this moment, the bottom of the screen shows "CAL Point 2", the main display area shows "50.0μm"(Attention: this value could be some one data from 45 to 55), and it means the second spot with 50μm is already calibrated. Put the calibration-film with 50μm thickness(the thickness could be around 50μm)on the substrate which is used to calibrate the zero-spot previously, first compare the meter's reading with the calibration-film thickness, if it's inconsistent, then press the μm/mil key or key to adjust the reading till it is same with the calibration-film thickness, then measure again to complete the 50μm calibration, and the meter goes to next calibration spot automatically.

D. Refer to the previous step C, continue to calibrate the 3(100μm), 4(250μm), 5(500μm), 6(1000μm). After the sixth spot is calibrated, the meter exits the calibration mode automatically.

E. If just want to calibrate one of the six spots, then press the SET CAL key to switch the calibration spots in calibration mode. Press REC key to exit the calibration mode.

Attention:

1. Only use same one substrate for calibrating the six spots which forms a period one by one, changing the substrate during this process could cause the wrong datum.
2. Calibrating the non magnetic materials(such as aluminium), keeping the magnetic materials away is necessary for right datum.
3. Each group of calibrated datum is mutual independence, such as, calibrate the first group, the other seven groups will not be affected.

* * During the calibrating process, if the meter shows "Err", then measure the current thickness once again. If this message does not disappear after measurement a few times, then please press the REC key to return to the Home page and calibrate again with eligible calibration sample and substrate.

Basic measurement

A. Prepare the sample to be tested.

B. Place the meter in vacant space away from metal material for turn-on.

C. Start to measure: Press slightly the meter vertically on the sample, the meter sounds "beep" once, the measurement is completed, on the main display area shows the result data, move the meter away from the sample over 5cm quickly, and process next measurement after 1 second.

D. At this moment, if the phonetic function is on, the meter will broadcast the result automatically.

View and delete data

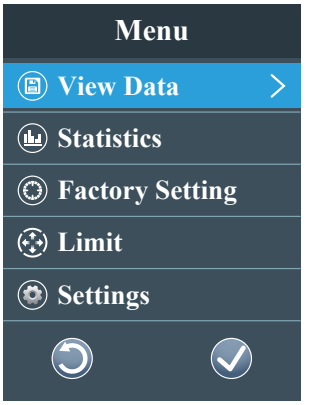
● View data

A. On the Home page, press the SET CAL key for the menu page, choose the option of "View Data", and press the SET CAL key for the list of saved datum.

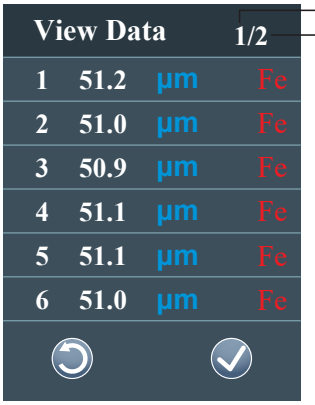
B. Press the μm/mil or ↕ key to view the last/next page of record.

C. Short press the REC key to return to the previous, or measure directly to return to the Home page.

D. Shorting press the μm/mil or ↕ key will not enter the viewing-data mode if there is no stored record.



PIC 3



PIC 4

● Delete data

①Delete all datum:

A. On the Viewing-data page, long press the SET CAL key to clear all lists of datum, and the meter sounds "beep beep" to indicate the completion.

B. Short press the REC key to return to the previous, or measure directly to return to the Home page.

②Delete individual data:

A. On the Viewing-data page, press the SET CAL key to choose the first set of datum in the current page, then choose the wanted set by the μm/mil or ↕ key, and short press

the SET CAL key to delete it, and the meter sounds "beep" to indicate the completion.

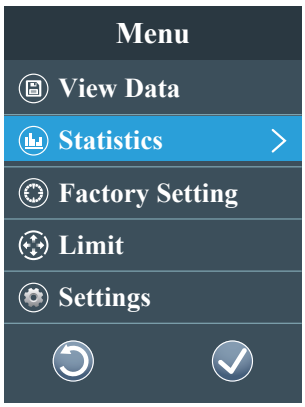
B. Short press the REC key to return to the previous, or measure directly to return to the Home page.

The statistics

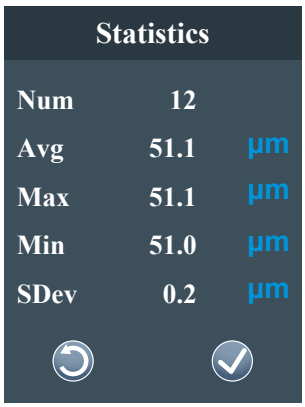
The statistics includes the measuring times, the average, the max, the min, and the standard deviation.

A. On the Home page, press the SET CAL key for the menu page, choose the option of "Statistics" by the μm/mil or ↕ key, and press the SET CAL key for the list of the statistics.

B. Short press the REC key to return to the previous, or measure directly to return to the Home page.



PIC 5



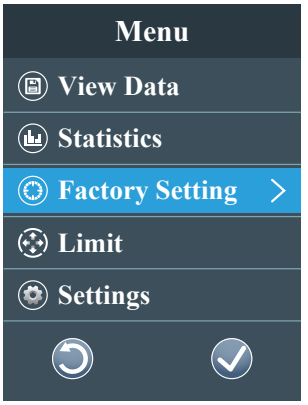
PIC 6

Restore factory settings

A. On the Home page, press the SET CAL key for the menu page, choose the option of "Factory Setting" by the μm/mil or ↕ key, and press the SET CAL key for the setting page. Press the SET CAL key to choose "Yes", the meter will be restored to factory state with all parameters and calibrated default value.

B. Short press the REC key to return to the previous, or measure directly to return to the Home page.

Attention: All calibrated datum in 8 groups will be cleared and restored to factory default values after this operation.



PIC 7

PIC 8

The warning limit value

User can set the warning upper or lower limit value which can be turned off during measuring process.

When the measured value is greater than the upper limit value, on the screen flashes the icon , and the meter sounds "beep...beep..." to warn the user.
When the measured value is less than the lower limit value, on the screen flashes the icon , and the meter sounds "beep...beep..." to warn the user.

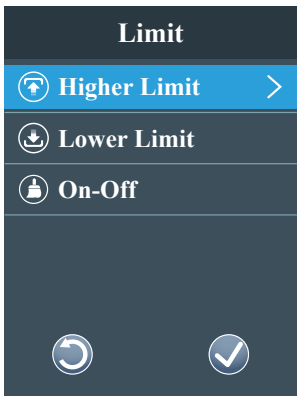
Press any one of keys to stop the warning when the meter gives upper or lower limit value warning.

A. On the Home page, press the SET CAL key for the menu page, choose the option of “Limit” by the μm/mil or key, and press the SET CAL key for the setting page.
B. By the μm/mil or key, choose the option of "Higher Limit", or "Lower Limit", or "On-Off", and press the SET CAL key for the corresponding setting page.
C. On the higher or lower limit value's setting page, short press the μm/mil or key to increase or decrease the value, long press the same keys to adjust the value in succession.

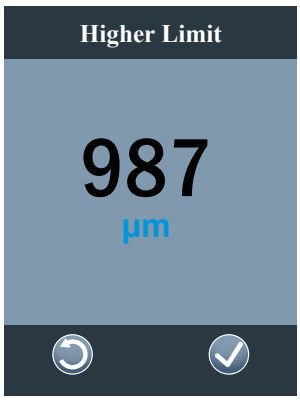
D. On the On-Off's setting page, short press the μm/mil or key to choose "On" or "Off" upwards or downwards, and press the SET CAL key to enter.

E. Short press the REC key to return to the previous, or measure directly to return to the Home page.

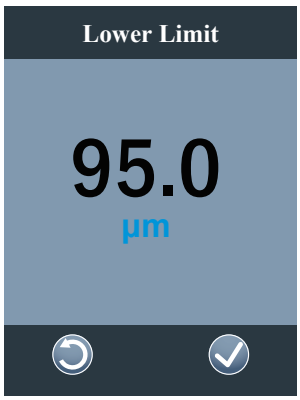
* * The setting range of the limit value is 0~1999μm;
The upper limit warning is Off when the higher limit value is set as 1999μm;
The lower limit warning is Off when the lower limit value is set as 0μm.



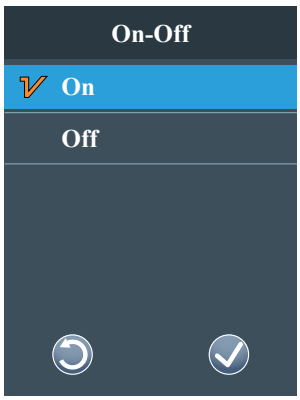
PIC 9



PIC 10



PIC 11

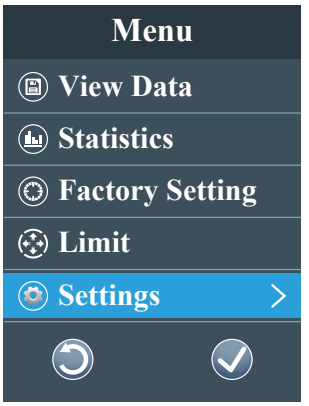


PIC 12

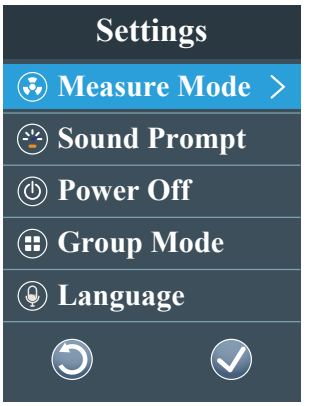
The parameter settings

A. On the Home page, press the SET CAL key for the menu page, choose the option of "Settings" by the μm/mil or ▽ key, and press the SET CAL key for the setting page.

B. By the μm/mil or ▽ key, choose one of the following options: Measure Mode, Sound Prompt, Power Off, Group Mode, Language; and press the SET CAL key for the corresponding setting page.



PIC 13



PIC 14

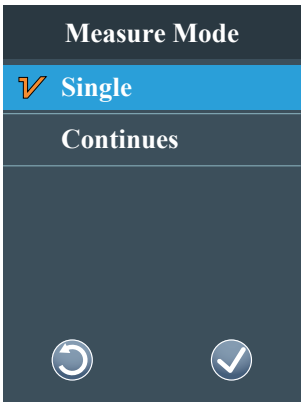
● Measure Mode

Single: Each measurement updates only one data, please softly press the meter on the measured part swiftly and perpendicularly.

Continues: Just softly press the meter on the measured part and do not remove it, the data will update automatically in succession. Each updating accompanied by sound "beep" once.

A. On the Measure-Mode's setting page, choose the option of "Single" or "Continues" by the μm/mil or ▽ key, and press the SET CAL key to enter.

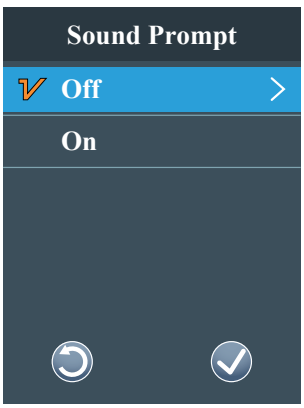
B. Short press the REC key to return to the previous, or measure directly to return to the Home page.



PIC 15

- **Sound Prompt**(Only available in mainland China)

A. On the Sound-Prompt's setting page, choose the option of "On" or "Off" by the μm/mil or key, and press the SET CAL key to enter.
B. Short press the REC key to return to the previous, or measure directly to return to the Home page.

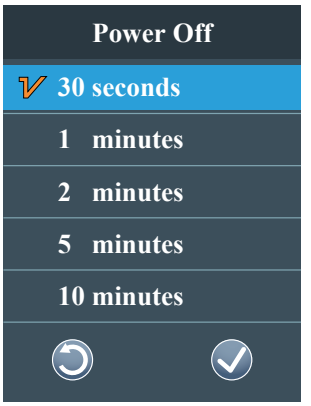


PIC 16

- **Power Off**

The meter provides five choices of auto-OFF time for user to save power. The meter will automatically shut down without any operations in the specified auto-OFF time.

A. On the Power-Off's setting page, choose the time of auto-OFF by the μm/mil or key, as follows: "30 seconds", "1 minute", "2 minutes", "5 minutes", "10 minutes",, and press the SET CAL key to enter.
B. Short press the REC key to return to the previous, or measure directly to return to the Home page.



PIC 17

● Group Mode

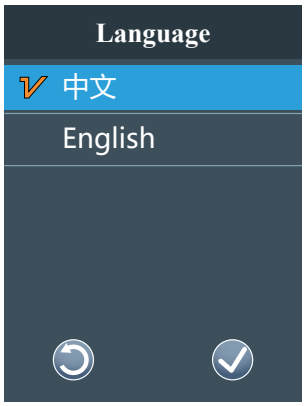
The meter provides eight data-groups for convenience, on the Home page shows the corresponding group number “ 1 ” ,each group storing 32 sets of datum which is mutual independence. The calibrated parameters in each group is mutual independence, user can operate calibration and storage according to different measuring circumstance.

A. On the Group-Mode's setting page, switch data-groups by the μm/mil or key, and press the SET CAL key to set the chosen data-group.
B. Short press the REC key to return to the previous, or measure directly to return to the Home page.
C. On the Home page, short press the μm/mil key to switch data-groups quickly.

PIC 18

● Language

A. On the Language page, choose "Chinese" or "English" by the μm/mil or key, and press the SET CAL key to enter.
B. Short press the REC key to return to the previous, or measure directly to return to the Home page.



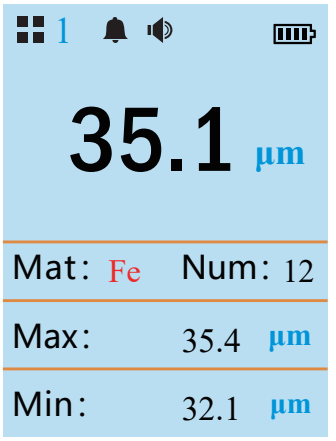
PIC 19

Unit setting

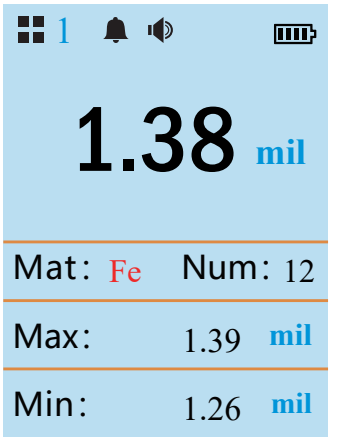
There are two alternative units, user can choose appropriate unit according to the demands.

On the home screen, long press the μm/mil key to switch the unit quickly.

The conversion relationship:
1mil=25.4μm;
1μm=0.03937mil;



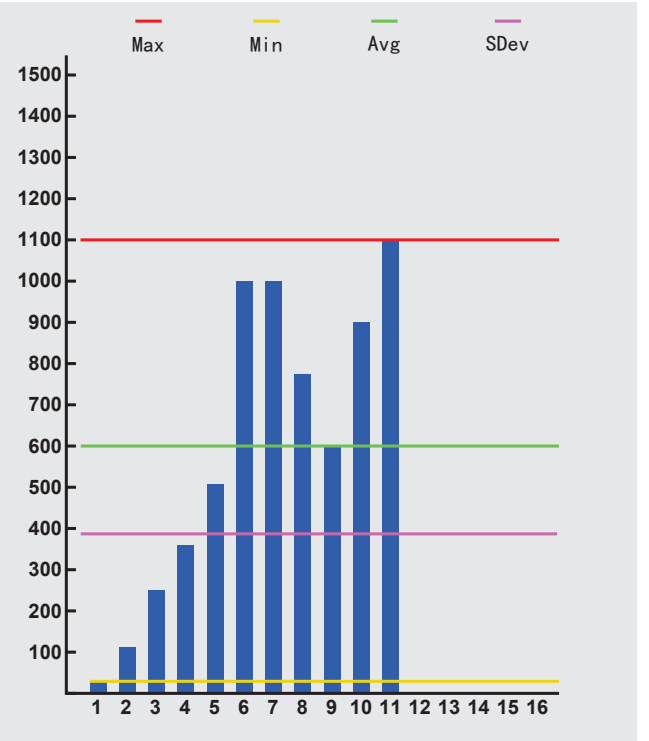
PIC 20



PIC 21

Histogram mode

On the Home page, short press the key to turn the datum display into histogram display, short press the REC key or measure directly to exit the mode.



PIC 22

Screen rotation

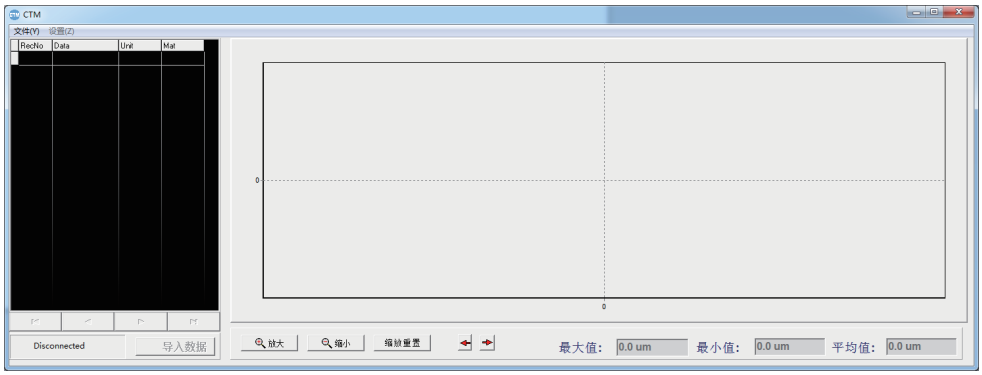
On the Home page, long press the key to rotate the screen, each time with screen rotating 90 degree.

The computer software

The meter is equipped with the computer software CTM (Coating Thickness Meter). The CTM software has below functions: export records, produce histogram, calculate the max/the min/the average value, produce printable statement, export information to EXCEL software, and system setting.

For the specific operation introduction, please refer to the Installation and Instruction document.

The software interface diagram:



PIC 23

Specifications

Items	SW-6310B
Measuring range	magnetic material 0~1700μm; non magnetic material 0~1700μm
Resolution	0.1μm @ (0~99.9μm); 1μm @ (100~1700μm)
Indication error	±(2+2%*H)μm @ (0~500μm) ±(2.5%*H)μm @ (500~1700μm)
Min measuring area	magnetic material 25×25mm; non magnetic material 25×25mm
Min curvature	convexity 5mm; concave 30mm
Min substrate thickness	magnetic material 0.2mm; non magnetic material 0.05mm
Screen	2 inches color screen
Memory	8 groups and each 32 sets of data
Data Export	USB port connecting PC to export
Battery specification	3.7V 850mAh lithium battery
Charging specification	Type-C DC5V 0.8A
Charging time	about 1.5 hours
Battery life	about 8 hours
Working temp and humidity	0˚C~50˚C, 10%~80%RH
Storage temp and humidity	-10˚C~60˚C, 10%~70%RH
Dimension	120x52x26mm

General maintenance

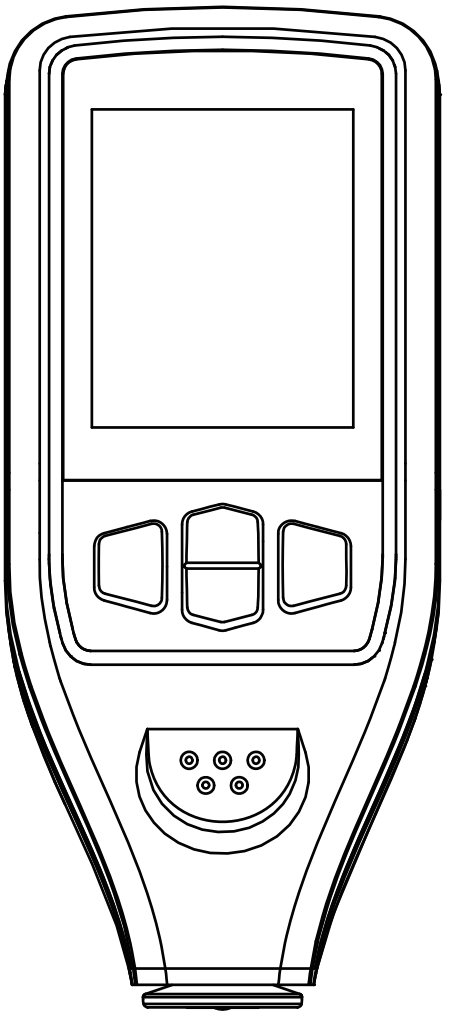
- Keeping in high temp and humidity environment in the long run is not allowed; please put it inside the box and keep the box in dry and cool place.
- Please keep the surface clean, wipe the dust with wet soft cloth, do not use corrosive cleaning fluid.
- Keep it with full power if no operations for a long time; and charge it once every half year to avoid the battery damage.

Detail packing list

Please check if there are all appendixes according to the following list when purchase this meter.

Items	Name	Unit	Quantity	Remark
1	The Meter	PC	1	
2	Pouch	PC	1	
3	Sling	PC	1	
4	Type-C Cable	PC	1	
5	The Manual	PC	1	
6	Color-box Package	PC	1	
7	Iron Substrate	PC	1	
8	Aluminium Substrate	PC	1	
9	Calibration Film	PC	5	
10	Small PP Box	PC	1	for storing the substrates and the calibration films

Inspector: Date:



深达威科技（广东）股份有限公司

Sndway Technology (Guangdong) Co., LTD

地 址：东莞市虎门镇虎门团结路58号深达威科技园

Add: Sndway Science & Technology Industrial Park, 58 Tuanjie Road, Humen 523930, Dongguan, China

全国咨询服务热线/Service Hotline：400-125-6969

电 话/Tel：0769-85265688

网 址/Web：www.sndway.com

邮 箱/E-mail：market@sndway.com