P/N:110401113152X

UNI-T®

UT625A/B

100A/200A回路电阻测试仪使用说明书

100A/200A Low Resistance Ohmmeter User Manual

前言

尊敬的用户：

您好！感谢您选购全新的优利德仪器，为了正确使用本仪器，请您在使用仪器前仔细阅读本说明书全文，特别是有关“安全注意事项”的部分。

若您已经阅读完本说明书全文，建议您将此说明书进行妥善保管，最好与仪器一同放置或放在您随时可以查阅的地方，以便在将来使用的过程中进行查阅。

有限担保及责任声明

公司担保本产品自购买日起一年内，在材料和工艺上均无任何缺陷。本担保不适用于由于意外、疏忽、误用、改装、污染及非正常操作或处理所引起的损坏。经销商无权以公司的名义给予其它任何担保。若在保修期内需要保修服务，请您与就近的授权服务中心联系并获取产品退还授权信息，然后将产品寄至该服务中心并附上产品问题描述。

本项担保是您能获得的唯一补偿。除此以外，公司不提供任何明示或隐含的担保，例如适用于某特殊意图的隐含担保。同时，公司不对基于任何原因或推测而导致的任何特殊、间接、附带或继起的损坏或损失负责，由于某些州或国家不允许对默示担保及附带或继起的损坏加以限制，故上述的责任限制与规定或许对您不适用。

目 录

一、概述 ---------- 4
二、开箱检查 ---------- 5
三、安全准则 ---------- 5
四、技术规格 ---------- 7
五、外观及配件 ---------- 9
六、按键面板 ---------- 10
七、设备检查 ---------- 11
八、测量原理 ---------- 12
九、测量操作 ---------- 13
1. 测量接线 ---------- 13
2. 常规测量 ---------- 15
3. 比较测量 ---------- 16
4. 数据保存 ---------- 18
5. 数据查阅 ---------- 19
6. 数据删除 ---------- 20
7. 数据打印 ---------- 21
8. USB通信 ---------- 22
9. 其它设置 ---------- 24
十、保养与维护 ---------- 27

一、概述

UT625A/B台式100A/200A回路电阻测试仪，用于检测各种高压断路器、隔离开关等设备的回路电阻、可对电力电缆的导体电阻进行测量，判断电缆的导电性能是否良好;对于功率较大的电机，可测试定子和转子的回路电阻，是一个重要的参数；在工业生产中，电气控制柜内的各种电气元件之间的连接电阻也可进行检测。

本仪器可测量高压开关、断路器、分合器等电气设备的回路电阻，可以广泛应用于电力系统和工业领域的测量检测。

本产品使用说明书包含警告信息及安全规定，当使用本仪器时，请仔细阅读并严格遵守相关规定以确保使用者操作安全及仪器安全。

1. 产品型号

产品型号	电流范围	电流步进	开路电压	量程
UT625A	5A(min)~100A(max)	5A/10A	约5V	0.1μΩ~1000mΩ
UT625B	5A(min)~200A(max)	5A/10A	约10V	0.1μΩ~2000mΩ

2. 产品功能

1. 回路电阻测量：开尔文四线法测量(输出：I+和I-/输入：U+和U-)；
2. 阻值测量范围：0.1μΩ~1000mΩ(UT625A)/0.1uΩ~2000mΩ(UT625B)；
3. 输出电流范围：5A~100A(UT625A)/5A~200A(UT625B)，步幅：5A/10A；
4. 比较测量：支持任意设置比较值，测量结果小于比较值则"PASS"，否则"FAIL"；
5. 连续测量：支持设置测试时间10s~60s，步幅1s；
6. 低限提示：回路电阻测量低限时，测量界面显示“LO”；超限提示：回路电阻测量超限时，测量界面显示“OL”；
7. 数据存储：默认自动保存，可更改为循环保存或手动保存，最多可存储200组数据；
8. 数据查阅：支持查阅已保存的数据及时间日期等信息；
9. 数据删除：支持删除单条或全部已保存的数据及时间日期等信息；
10. 时间日期：支持设置合适时间和日期并实时显示，保存测试数据同时记录时间日期；
11. 语言设置：支持中文和英文两种语言；
12. 亮度调节：支持5级背光亮度调节；
13. USB通信：支持设备与PC端连接，双向传输（上传数据和下传指令）；
14. 蓝牙通信：支持（需进入设置模式中开启或关闭），预留蓝牙模块，支持客户进行二次开发app；
15. 热敏打印机：支持打印测试中数据或已保存数据及时间日期等信息；
16. 蜂鸣器提示：具备按键声效（按键有效声："滴"；按键无效声："滴滴"）；
17. 温度过高提示：内部温度过高，设备显示高温符号并自动停止测试；
18. 使用帮助：支持设备端查阅相关操作指引；
19. 恢复出厂设置：支持恢复设备系统默认参数。

二、开箱检查

● 打开包装盒，请仔细检查以下项目是否缺失或损坏。若发现缺失或损坏，请立即与您的供货商进行联系并确认。

1. 仪器设备：---------- 1台
2. 使用说明书：---------- 1本
3. 保修证/合格证：---------- 1张
4. 红黑带夹测试线：---------- 1对
5. 黑色带夹接地线：---------- 1条
6. 三脚插头电源线：---------- 1条
7. 双头USB通信线：---------- 1条
8. 热敏打印纸（一卷装于机身，一卷在布包内）：---------- 2卷
9. 带线分流器（测试配件：100A/75mV(UT625A)或200A/75mV(UT625B)：------ 1个
10. 布包---------- 1个

三、安全准则

感谢您购买了本公司的100A(UT625A)/200A(UT625B)回路电阻测试仪，为正确使用本仪器，使用前请务必详细阅读本说明书并理解其内容。本说明书包含警告信息及安全规定，当使用本仪器时，请严格遵守相关规定以确保使用者操作安全及仪器安全。

- 使用前请仔细阅读理解说明书中的内容并严格按照“安全操作准则”内容进行操作。
- 请将说明书随身保存以确保可随时参阅。
- 理解并遵守安全操作指示，必须严格遵守上述操作说明。若不遵守，测量时可能会导致人身伤害和仪器毁坏。
- 本仪器必须由受过正规训练且合格的技术人员进行操作并在本说明书规定的条件下使用。
- 如若使用不当或违反本说明书及安全操作规定而造成设备损坏或其它损失的，本公司不负任何责任。

⚠ 危险

- 本仪器供电电源是AC220V(50Hz/60Hz)。
- 当进行测试时，请勿触摸任何裸露的导线、连接器、鳄鱼夹等物体。
- 当进行测试时，须确保在安全环境下肢体方可接触测试导线。
- 当进行测试时，严禁拆卸仪器，机身内部存在危险电压，可能会发生触电事故。

⚠ 警告

- 请勿随意更改仪器内部接线，以免损坏仪器和危及安全。
- 请勿在仪器表面潮湿或操作者手潮湿时使用。
- 请勿在高温、高湿、易燃、易爆和强电磁场环境中存放或使用仪器。
- 请勿超出量程允许的最大范围测量。
- 请勿带电测量，被测物须断电后再进行测量。
- 未连接好测试线时，请勿按下测试键进行测量。
- 仪器正在测量时，输出电流会较大，请勿随意拔插测试线，容易产生放电火花现象，错误操作可能会造成测试中断、损坏仪器或被测物。
- 使用前应检查仪器和测试线，谨防任何损坏或不正常的现象。若发现本仪器的测试线、壳体绝缘已明显损坏以及TFT屏无显示等情况或者您认为本仪器无法正常工作，请勿再使用本仪器。
- 若仪器出现故障（例如：显示不全、乱码，机身破损和测试时出现异常噪声等情况），请移交专业人员进行检查及维修。

⚠ 注意

- 为保证安全，请使用本公司提供经过严格认证考核的测试线，严禁使用其它测试线来代替测量。
- 请勿将本仪器暴露于太阳底下、极端温度和潮湿等恶劣环境中。
- 维护保养请使用软布及中性清洁剂清洁仪器外壳，切勿使用研磨剂及溶剂，以防外壳被腐蚀，损坏仪器和危及安全。
- 当仪器潮湿时，请使其干燥后再储存。

四、技术规格

- 误差极限：±（a%读数+字数），保证期一年
- 环境温度：23±5℃
- 环境湿度：45~75%RH
- 外部电场：无（地球磁场）
- 供电电源：AC220V（50Hz/60Hz）
- 温度系数：指标温度范围外测试（即28℃以上或低于18℃时），每摄氏度增加测试误差±0.25%

1. 回路电阻测量指标

设备型号	UT625A	UT625B
输出电流	5A(min)~100A(max), 步幅5A/10A	5A(min)~200A(max), 步幅5A/10A
测量范围	0.1μΩ~1000mΩ	0.1μΩ~2000mΩ
200A	/	0.1μΩ~1999.9μΩ (0.1μΩ)
100A	0.1μΩ~1999.9μΩ (0.1μΩ)	2.000mΩ~9.999mΩ (0.001mΩ)
	2.000mΩ~9.999mΩ (0.001mΩ)	
50A	10.00mΩ~99.99mΩ (0.01mΩ)	10.00mΩ~99.99mΩ (0.01mΩ)
5A	100.0mΩ~499.9mΩ (0.1mΩ)	100.0mΩ~499.9mΩ (0.1mΩ)
	500mΩ~1000mΩ (1mΩ)	500mΩ~2000mΩ (1mΩ)
精确度	±(0.4%rdg+0.04%FS) (≥10A)	
	±(0.4%rdg+0.6%FS) (5A)	
开路电压	约5V	约10V
测试时间	10s~60s（可设置）	10s~60s（可设置）

- 1Ω=1000mΩ；1mΩ=1000μΩ；
- 低限提示：回路电阻测量低限时，测量界面显示“LO”；
- 超限提示：回路电阻测量超限时，测量界面显示“OL”；
- 注意：设备持续大电流输出测量时，被测物体容易发热，这可能会引起被测物体的阻值变化，进而影响测量结果。

2. 其它功能参数

供电电压	AC198V~242V(50Hz/60Hz)
显示屏幕	7寸TFT
测试时间	10s~60s（可设置时间，步幅1s）
比较测量	支持（可设置比较值）
数据保存	支持（最多可存储200组带时间和日期的数据）
数据保存方式	支持3种（自动保存、循环保存和手动保存）
数据查阅	支持（最多可查阅200组带时间和日期的数据）
数据删除	支持（可删除当前存储数据或全部存储数据）
热敏打印机	支持（可打印正在测试数据或已存储数据）
USB通信	支持（设备与PC端连接，双向传输）
蓝牙通信	支持（需进入设置模式中开启或关闭），预留蓝牙模块，支持客户进行二次开发app
时间日期设置	支持（需进入设置模式中设置）
语言设置	支持中英文切换（需进入设置模式中设置）
背光设置	支持5级亮度调节（需进入设置模式中设置）
电阻比较开关	支持（需进入设置模式中开启或关闭）
USB开关	支持（需进入设置模式中开启或关闭）
蓝牙通讯开关	支持（需进入设置模式中开启或关闭），预留蓝牙模块，支持客户进行二次开发app
帮助	支持（需进入设置模式中查阅设备操作方法）
恢复出厂设置	支持（恢复系统默认参数）
蜂鸣器提示	支持（按键有效声：“滴”；按键无效声：“滴滴”）
温度过高提示	支持（内部温度过高，设备显示高温符号）
工作环境	0℃~35℃相对湿度75%以下（无结露）
存储环境	-20℃~60℃相对湿度80%以下（无结露）
操作海拔高度	≦2000m
设备规格	357mm（L）*293mm(W)*193mm(D)
设备重量	约6.4kg(UT625A)/约7.5kg(UT625B)

五、外观及配件

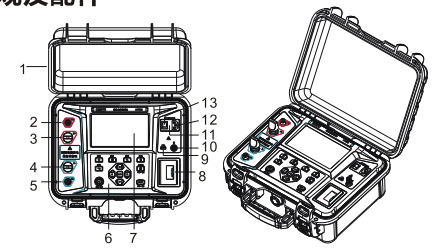


图5.1 设备外观示意图

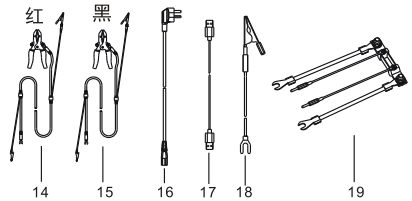


图5.2 设备配件示意图

1	设备箱体外壳	11	电源保险丝（250V/10A）
2	采样电压正端（U+）	12	设备供电插口（电源输入）
3	激励电流正端（I+）	13	电源开关（带电源指示灯）
4	激励电流负端（I-）	14	红色带夹测试线：100A(UT625A)，200A(UT625B)
5	采样电压负端（U-）	15	黑色带夹测试线：100A(UT625A)，200A(UT625B)
6	功能按键操作面板	16	设备供电电源线
7	7寸TFT	17	双头USB通信线
8	热敏打印机	18	带夹接地线
9	USB通信接口	19	带线分流器(测试配件：100A/75mV (UT625A)或200A/75mV(UT625B)
10	接地端子		

六、按键面板

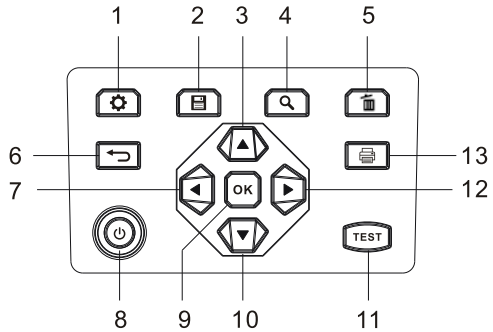


图6.1 操作按键示意图

1	设置按键（短按进入系统设置模式；长按无效）
2	保存按键（长按选择保存方式；短按手动保存数据）
3	上选择按键（长按或短按均具备有效功能）
4	查阅按键（短按进入数据查阅模式；长按无效）
5	删除按键（短按弹出删除数据窗口；长按无效）
6	返回按键（短按返回主界面；长按无效）
7	左选择按键（长按或短按均具备有效功能）
8	开/关机按键（长按>2s开机或关机）
9	OK按键（短按确认选择操作；长按无效）
10	下选择按键（长按或短按均具备有效功能）
11	TEST按键（长按>2s启动测试；短按停止测试）
12	右选择按键（长按或短按均具备有效功能）
13	打印机按键（长按>2s启动数据打印；短按无效）

七、设备检查

● **通电检查：**

开启设备箱体，连接好供电电源线（标配）并插入AC220V的三孔插座，打开电源开关，观察电源指示灯是否亮起及留意散热风扇是否启动，若电源指示灯不亮且散热风扇也不启动，则需排查插座是否带电或保险丝是否损坏或供电电源线是否损坏等可能出现的情况，以确保设备供电正常，如图7.1所示。

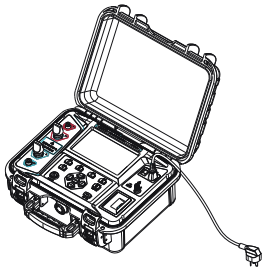


图7.1 设备供电接线示意图

● **开机检查：**

设备正常供电后，长按开机键>2s，设备正常开机并进入主界面，此时可操作功能按键且伴随声效提示，若设备无法开机或按键操作无效且重复上述操作均如此时，请尽快联系本公司市场部售后服务中心或代理商进行维修或更换设备，如图7.2所示。

图7.2 设备开机主界面

● **测量检查：**

设备开机且按键操作正常时，将带线分流器（测试配件：200A/75mV）与设备的接线端子连接并保证接触良好，长按“TEST”键>2s启动测试，主界面显示测试电流值及分流器阻值（约等于0.375mΩ），若界面无显示测试电流值和分流器阻值或数值偏差过大等异常情况，并且确保接线无误及重复上述操作均如此时，请尽快联系本公司市场部售后服务中心或代理商进行维修或更换设备，如图7.3所示。

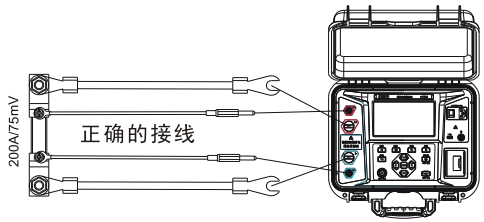


图7.3 带线分流器接线示意图

八、测量原理

本仪器采用开尔文四线法测量，其由一组电流输出线和一组电压输入线组成，两者分开连接被测物体的部位，这样解决了引入导线内阻误差和输出大电流引起导线发热而造成温漂的问题，保证测量的精确度和稳定度。

测量原理：仪器自身输出恒定的电流(Io)激励被测物体（Rx），使其两端产生电压(Ui)并输入仪器，然后经过仪器的处理和运算(Rx = Ui / Io)，最终得到被测物体的阻值（即回路电阻值），如图8.1所示。

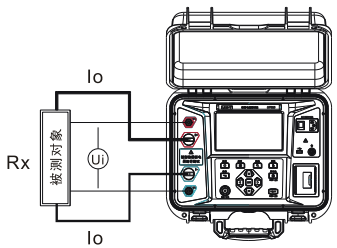


图8.1 回路电阻测量原理示意图

九、测量操作

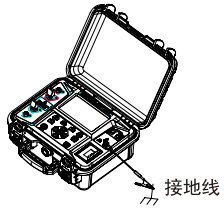
1.测量接线

注意事项：

- 测试前，请佩戴好绝缘手套并做好个人防护措施，然后再进行接线及测量操作。
- 测试前，被测物体须断电再进行测试，切勿测量带电物体或带电回路的电阻。
- 为确保人身及设备的安全，使用本仪器前需要可靠接地。
- 本仪器存在大电流输出，请小心操作，确保被测物体与测试线夹子接触良好（测试线的Y型端子与本设备的接线柱需要接触到底并紧锁端子），避免接触不良导致温度过高，双手离开测试线夹后，再按仪器上的TEST键启动测试。
- 请勿在测试过程中（即大电流输出时）触碰测试线夹或被测物体，这种不当操作容易危害人身安全或产生火花而引起火灾事故，甚至还会损坏仪器本身。
- 由于长时间大电流持续输出测量会导致仪器内部温度上升，因而使用大电流输出测量时，仪器单次测量时长设定不超过60s。当内部温度过高时，仪器显示高温符号并自动停止测试，须待高温符号消失后（即内部温度已下降），才能再次进行测试。

- **设备可靠接地：**

将黑色接地线的开口端子与设备接地柱连接并紧锁，然后将另一端夹子夹住具备接地良好的金属裸露位置，保证设备可靠接地，如下图所示。



- **标准测试线连接设备：**

将红色测试线的开口端子与设备的红色电流接线柱（I+）连接并紧锁，然后将测试线上的红色插子插入设备的红色电压端口(U+)，接着再按上述操作将黑色测试线与设备的黑色电流接线柱（I−）和黑色电压端口（U−）连接好即可，如图9.1所示。

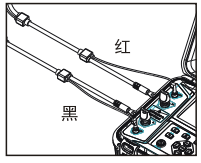


图9.1 标准测试线连接设备示意图

- **标准测试线连接被测物体：**

将红色测试线的大夹子夹紧被测物体的电流输入端并保持接触良好，然后将测试线上的红色小夹子在电流输入端附近夹住被测物体的金属部分并保持接触良好，接着再按上述操作将黑色测试线与被测物体的另一端（电流输出端）连接好并保持接触良好即可，如图9.2所示。

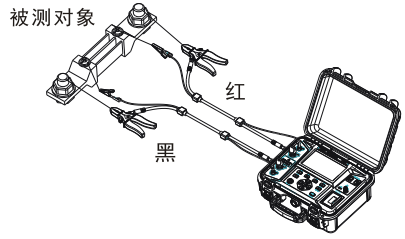


图9.2 标准测试线连接被测物体示意图

- **内部温度过高提示：**

当连续多次使用大电流持续输出测量时，仪器内部温度容易过高，此时仪器会显示高温符号并自动停止测试，须待高温符号消失后（即内部温度已下降），才能再次进行测试，如图9.3所示。

图9.3 内部温度过高提示界面

2.常规测量

● **输出电流设置：**

设备正常开机进入主界面后，通过短按上键或下键移动红色背景块，选择电流设置，依据被测物体的特性确定大致电流量程，再通过短按左键或右键进行切换电流值（长按左键和右键可快速切换电流值），如图9. 4所示。

图9. 4 输出电流设置界面

● **测试时间设置：**

通过短按上键或下键移动红色背景块，选择测试时间，再通过短按左键和右键进行调整测试时间值（长按左键和右键可快速调整测试时间值），如图9. 5所示。

图9. 5 测试时间设置界面

● **启动或停止测试：**

设备通过标准测试线与被测物体连接正确且接触良好，然后设定好输出电流和测试时间，长按“TEST”键大于2s启动测试，倒计时结束后自动停止测试或短按“TEST”键即可停止测试，如图9. 6所示。

图9. 6 500 μ Ω电阻测量界面

3. 比较测量

● **打开电阻比较：**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择电阻比较，然后再通过短按左键或右键关闭或打开电阻比较功能，如图9. 7所示。

图9. 7 选择电阻比较界面

● **比较值设置：**

短按返回键退出系统设置界面，同时进入主界面，通过短按上键或下键移动红色背景块，选择比较值，如图9. 8所示。

图9. 8 比较值选择界面

短按“OK”键进入比较值设置界面，短按左键或右键循环选择数值位（即位选），长按左键或右键循环选择小数点位，选择合适数值位并短按上键或下键步进设置数值（0~9），长按上键或下键可快速设置数值（0~9），当设置好合适的数值和小数点后，短按“OK”键确认设置并切换至电阻单位选择，通过短按左键或右键选择合适单位（μΩ或mΩ），电阻设置值位于界面右下角处显示，选择好合适单位后，再短按“OK”键确认设置并返回主界面，如图9.9所示。

图9.9 电阻比较值设置界面

● **电阻比较测量：**

设备通过标准测试线与被测物体连接并保持接触良好，按上述操作进行设置好后，长按“TEST”键>2s启动测试。当测试结果大于比较值，测量比较失败且界面显示“FAIL”；反之，测试结果小于或等于比较值，测量比较通过且界面显示“PASS”，如图9.10所示。

图9.10 测量比较通过界面

4. 数据保存

数据保存方式有三种，分别为自动保存（默认）、循环保存和手动保存。设备最多可存储200组数据（带时间和日期记录），当存储数据已满200组后，设备无法继续存储新数据，此时需将部分旧数据删除后，才能继续存储新数据。主界面右上方显示当前已存储组数。

● **自动保存（默认方式）：**

在主界面且非测量时，长按保存键弹出保存方式选择窗口，通过短按左键或右键移动红色背景块，选择自动保存（当测试结束后，设备自动保存一组当前有效数据），再短按“OK”键确认并退出弹窗，如图9.11所示。

图9.11 选择自动保存界面

● **循环保存：**

在主界面且非测量时，长按保存键弹出保存方式选择窗口，通过短按左键或右键移动红色背景块，选择循环保存（当进行连续测量时，每间隔5s设备自动保存一组当前有效数据直至测量结束），再短按“OK”键确认并退出弹窗，如图9.12所示。

图9.12 选择循环保存界面

● **手动保存：**

在主界面且非测量时，长按保存键弹出保存方式选择窗口，通过短按左键或右键移动红色背景块，选择手动保存（当进行测量或测量结束且界面显示有效数据时，通过短按保存按键保存一组当前有效数据），再短按“OK”键确认并退出弹窗，如图9. 13所示。

图9. 13 选择手动保存界面

5. 数据查阅

● **进入数据查阅：**

在主界面且非测量时，短按查阅键进入数据查阅界面，通过短按左键或右键切换查阅存储数据，长按左键或右键快速切换查阅，如图9. 14所示。

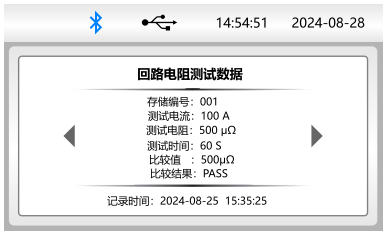


图9. 14 存储数据查阅界面

● **退出数据查阅：**

在数据查阅界面时，短按返回键退出数据查阅模式并返回主界面，如图9. 15所示。

图9. 15 返回主界面

6. 数据删除

● **删除当前数据：**

在数据查阅界面，短按删除键弹出数据删除选择窗口，通过短按左键或右键移动红色背景块，选择删除当前并短按“OK”键确认删除当前数据，如图9. 16所示。

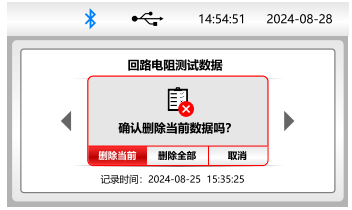


图9. 16 选择删除当前界面

● **删除全部数据：**

在数据查阅界面，短按删除键弹出数据删除选择窗口，通过短按左键或右键移动红色背景块，选择删除全部并短按“OK”键确认删除全部数据，如图9. 17所示。

图9. 17 选择删除全部界面

● **取消删除数据：**

在数据查阅界面，短按删除键弹出数据删除选择窗口，通过短按左键或右键移动红色背景块，选择取消并短按“OK”键确认取消删除数据，如图9.18所示。

图9.18 选择取消删除界面

7. 数据打印

● **打印测量数据：**

正在测量或测量结束且界面显示测量数据时，长按打印机键>2s弹出是否打印询问窗口，通过短按左键或右键移动红色背景块选择确认或取消，默认选择确认，短按“OK”键确认选择并进行测量数据打印，如图9.19所示。

图9.19 测量数据打印界面

● **打印存储数据：**

进入数据查阅模式并切换至需打印的存储数据页面，长按打印机键>2s弹出是否打印询问窗口，通过短按左键或右键移动红色背景块选择确认或取消，默认选择确认，短按“OK”键确认选择并进行存储数据打印，如图9.20所示。

图9.20存储数据打印界面

● **打印失败提示：**

当打印机出现异常或无法打印数据时，界面弹出打印失败和原因提示的窗口并闪烁5次，打印失败的原因有缺少纸张、卡纸堵转、打印过热或其它原因等，如图9.21所示。

图9.21 打印失败提示界面

8. USB通信

● **上位机软件：**

通过优利德官网获取本设备型号的上位机软件并进行合理安装于PC端，该软件支持Windows 10及以上操作系统。

● **设备连接PC:**

使用标配双头USB线，其中一端插入设备的USB端口，另一端插入电脑的USB端口，如图9. 22所示。

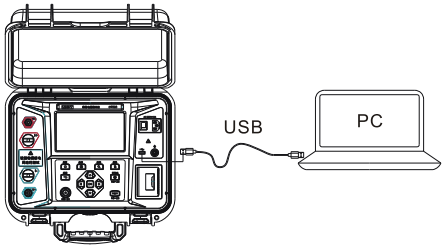


图9. 22 设备与PC连接图

● **打开上位机功能:**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择上位机开关，然后再短按左键或右键关闭或打开上位机功能。当上位机功能开启时，界面上方显示USB符号，如图9. 23所示。

图9. 23 选择上位机开关界面

● **软件操作:**

运行上位机软件并点击连接。设备实时上传数据于PC端，同时可在PC端发送操作命令控制设备各功能的运行。

9. 其它设置

● **日期时间设置:**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择日期时间设置，如图9. 24所示。

图9. 24 选择日期时间设置界面

短按“OK”键进入日期时间设置页面，短按左键或右键循环选择年、月、日或时、分、秒数值位（即位选）；短按上键或下键调整数值。当日期和时间均设置合适后，短按“OK”键确认并返回系统设置界面，可通过短按返回键取消当前设置并返回系统设置界面，如图9. 25所示。

图9. 25 日期时间设置页面

● **语言设置:**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择语言，然后再短按左键或右键切换中文语言或英文语言，如图9. 26所示。

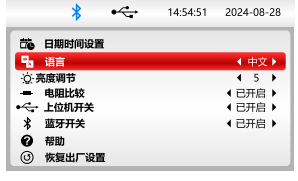


图9. 26 选择语言界面

- **亮度调节：**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择亮度调节，然后再短按左键或右键循环调节亮度等级（1~5），如图9. 27所示。

图9. 27 选择亮度调节界面

- **蓝牙开关（供用户二次开发）：**

本产品有蓝牙传输通讯功能，供用户进行二次开发（无蓝牙app功能）。
短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择蓝牙开关，然后再短按左键或右键关闭或打开蓝牙。当蓝牙开启但未连接时，界面上方闪烁显示蓝牙符号，连接后则常显，蓝牙关闭后则符号消失，如图9. 28所示。

图9. 28 选择蓝牙开关界面

- **帮助：**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择帮助，然后再短按“OK”键进入操作查阅页面，如图9. 29所示。

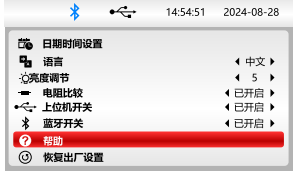


图9. 29 选择帮助界面

进入帮助页面，通过短按左键或右键切换查阅操作图和使用说明，可通过短按返回键退出帮助页面，如图9. 30所示。

图9. 30 帮助页面

- **恢复出厂设置：**

短按设置键进入系统设置界面，通过短按上键或下键移动红色背景条，选择恢复出厂设置，然后短按“OK”键弹出是否恢复出厂设置询问窗口，默认确认，再次短按“OK”键确认选择即可恢复出厂设置，如图9. 31所示。

图9. 31 恢复出厂设置界面

十、保养与维护

1. 保养

- 用清水湿润软布或海绵擦拭仪器表面；
- 为避免损坏仪器，切勿将其浸入水中；
- 当仪器潮湿时，请先干燥后存储。

2. 维修

若需对仪器进行检验或维修时，请将仪器交给具备维修资格的专业人员或指定维修部门进行维修。若仪器出现了以下问题，请及时联系本公司市场部售后服务中心或代理商。

- 仪器机壳破损或器件损坏；
- 显示屏容易显示异常数据、乱码或花屏；
- 按键操作失灵或混乱动作；
- 测试时出现异常噪声等。

＊ 本说明书内容若有变更，恕不另行通知 ＊

优利德®

优利德科技(中国)股份有限公司

地址：广东省东莞市松山湖园区工业北一路6号
电话：(86-769) 8572 3888
邮编：523 808
http://www.uni-trend.com.cn

Preface

Thank you for purchasing a brand-new Uni-Trend instrument, in order to use this instrument correctly, please read the full text of this manual carefully before use, especially the "Safety Information" section.

If you have read the full text of this manual, it is recommended that you keep it in a safe place, preferably with the instrument or in a place where you can access it at any time, so that you can refer to it in future use.

Limited warranties and liability statement

The Company warrants that this product will be free from any defects in materials and workmanship for a period of one year from the date of purchase. This warranty does not apply to damage caused by accident, negligence, misuse, modification, contamination and abnormal operation or handling. The Distributor is not entitled to any other warranties in the name of the Company. If warranty service is required during the warranty period, please contact the nearest authorized service center to obtain the product return authorization information, and then send the product to the service center with a description of the product problem.

This guarantee is your sole remedy. Otherwise, the Company disclaims all warranties, express or implied, such as those applicable to a particular purpose. The Company shall not be liable for any special, indirect, incidental or consequential damages or losses arising from any cause or presumption, and the above limitations and provisions of liability may not apply to you because some states or countries do not allow limitations on implied warranties and incidental or consequential damages.

Contents

1. Overview ---------- 32
2. Unpack to check ---------- 33
3. Safety Information ---------- 34
4. Specifications---------- 35
5. External Structure and Accessories ---------- 38
6. Buttons ---------- 39
7. Check for the Tester ---------- 40
8. Measurement Principle ---------- 41
9. Operating Instructions ---------- 42
   - 9.1 Wiring for measurement ---------- 42
   - 9.2 Regular measurement ---------- 44
   - 9.3 Comparative measurement ---------- 46
   - 9.4 Data saving ---------- 48
   - 9.5 Data viewing ---------- 49
   - 9.6 Data deletion ---------- 50
   - 9.7 Data printing ---------- 52
   - 9.8 USB communication ---------- 53
   - 9.9 Other settings ---------- 54
10. Maintenance and Repair ---------- 58

1. Overview

UT625A/B desktop 100A/200A circuit resistance tester, used to detect a variety of high-voltage circuit breakers, disconnect switches and other equipment, circuit resistance, can be measured on the conductor resistance of power cables, to determine whether the conductivity of the cable is good; for the power of the motor, you can test the stator and rotor circuit resistance, is an important parameter; in industrial production, the electrical control cabinet of the The connection resistance between various electrical components can also be tested.

This instrument can measure the circuit resistance of high-voltage switches, circuit breakers, splitters and other electrical equipment, and can be widely used in power systems and industrial fields of measurement and testing.

The instruction manual of this product contains warning information and safety regulations, when using this instrument, please read carefully and strictly abide by the relevant regulations to ensure the user's operational safety and the safety of the instrument.

1.1 Product Model

Product Model	Current range	Current step	Open circuit voltage	Range
UT625A	5A(min)~100A(max)	5A/10A	Approx 5V	0.1μΩ~1000mΩ
UT625B	5A(min)~200A(max)	5A/10A	Approx 10V	0.1μΩ~2000mΩ

1.2 Product Features

1. Loop resistance measurement: Kelvin four-wire method (output: I+ and I-/input: U+ and U-);
2. Resistance measurement range: 0.1μΩ~1000mΩ(UT625A)/0.1uΩ~2000mΩ(UT625B);
3. Output current range: 5A~100A(UT625A)/5A~200A(UT625B), step: 5A/10A;
4. Comparison measurement: support arbitrary setting of the comparison value, the measurement result is less than the comparison value is “PASS”, otherwise “FAIL”;
5. Continuous Measurement: Support to set the test time from 10s to 60s, with a step of 1s.
6. Low Limit Alert: When the loop resistance measurement is low limit, the measurement interface will display “LO”;Over-limit indication: when the loop resistance measurement exceeds the limit, the measurement interface will display “OL”;

7. data storage: default auto-save, can be changed to cycle save or manual save, up to 200 groups of data storage;
8. data access: support for access to the saved data and time and date and other Information;
9. data deletion: support for deleting single or all saved data and time and date information. 10. time and date: support for setting the appropriate time and date;
10. time and date: support for setting the appropriate time and date and real-time display, save the test data and record the time and date;
11. language settings: support for Chinese and English language;
12. Brightness Adjustment: Support 5 levels of backlight brightness adjustment;
13. USB communication: support the connection between the device and PC, two-way transmission (uploading data and downloading commands);
14. Bluetooth communication: support (need to enter the setting mode to turn on or off), reserved Bluetooth module, support for customers to carry out secondary development app;
15. thermal printer: support printing data under test or saved data and time and date information;
16. Buzzer alert: with key sound (key valid sound: “drop”; key invalid sound: “drop”);
17. high temperature prompt: if the internal temperature is too high, the device displays a high temperature symbol and stops the test automatically;
18. Help: support the device end to consult the relevant operating guidelines;
19. Restore Factory Settings: support to restore the default parameters of the device system.

2. Unpack to check

Open the package box, please double-check whether the following items are missing or damaged. If you find any item is missing or damaged, please contact your supplier immediately to confirm.

1. Tester: 1 pc
2. User manual: 1 pc
3. Warrant Certificate/Certificate of Conformity: 1 pc
4. Red and black test leads with clips: 1 pair
5. Black grounding wire with clip: 1 pc
6. Power cord : 1 pc
7. Dual-ended USB communication cable: 1 pc
8. Thermal printing paper (One roll is packed in the tester and the other roll is in a cloth bag) : 2 roll
9. Shunt with wire (test accessory: 100A/75mV (UT625A) or 200A/75mV (UT625B) : 1 pc
10. Cloth bag-------1pc

3. Safety Information

Thank you for purchasing our company's 100A (UT625A)/200A (UT625B) Low Resistance Ohmmeter, in order to use this instrument correctly, please be sure to read this manual carefully and understand its contents before use. This manual contains warning information and safety regulations, please strictly follow the relevant regulations when using this device to ensure the safety of the user and instrument.

- Please read and understand the contents of the manual carefully before use, and operate in strict accordance with the content of the "Guidelines for Safety Operation".
- Please keep the manual with you to ensure that you can refer to it at any time.
- Understand and follow the instructions for safe operation, and must strictly follow the above operation instructions. Failure to comply may result in personal injury and damage to the instrument.
- This instrument must be operated by a properly trained and qualified technician and used under the conditions specified in this manual.
- The company does not assume any responsibility for any damage or other losses caused by improper use or violation of this manual and safety operation regulations.

The safety symbol " ⚠ " has three meanings in this manual, and the user should pay special attention to the operation of the " ⚠ " symbol when reading.
Danger: Indicates that a certain environment and operation are likely to cause serious or fatal injury!
Warning: Indicates that a certain condition and operation can cause serious or fatal injury!
Caution: Indicates that a certain environment and operation can cause minor injury or damage to this instrument!

⚠ Danger

- The power supply of this instrument is AC220V (50Hz/60Hz).
- When conducting the test, do not touch any exposed wires, connectors, crocodile clips, etc.
- When conducting the test, ensure that the test lead is only accessible to the body in a safe environment.
- When the test is carried out, it is strictly forbidden to disassemble the instrument, there is a dangerous voltage inside the instrument, and electric shock accidents may occur.

⚠ Warning

- Do not change the internal wiring of the instrument without authorization, to avoid damaging the instrument and endangering safety.
- Do not use when the surface of the instrument is wet or the operator's hands are wet.
- Do not store or use the instrument in high temperature, high humidity, flammable, explosive and strong electromagnetic field environments.
- Do not exceed the allowable maximum measurement range.
- Do not measure live objects, please disconnect the power before measurement.
- Do not press the test button if the test lead is not connected well.
- When the instrument is measuring, the output current will be large, do not plug and unplug the test lead at will, it is easy to produce discharge sparks, and the wrong operation may cause test interruption, damage to the instrument or the measured object.
- The instrument and test lead should be inspected before use, and beware of any damage or abnormal phenomenon. Please stop use if you find that the test line and housing insulation of this instrument have been obviously damaged, and the TFT screen displays nothing, or you think that this instrument cannot work normally.
- If the instrument is faulty (e.g., incomplete display, garbled characters, damaged body and abnormal noise during testing), please send it to a professional for inspection and maintenance.

⚠ Caution

- To ensure safety, please use the test leads provided by the company that has passed strict certification and assessment, and it is strictly forbidden to use other test leads for measurement.
- Do not expose this instrument to harsh environments such as the sun, extreme temperatures, and humidity.
- Please use soft cloth and neutral detergent to clean the instrument housing, do not use abrasives and solvents to prevent the housing from being corroded, damaging the instrument and endangering safety.
- When the instrument is wet, please allow it to dry before storing.

4. Specifications

- Error limit: ± (a% of reading + b counts), the warranty period is one year.
- Ambient temperature: 23±5°C
- Ambient humidity: 45~75%RH
- External electric field: None (earth's magnetic field)
- Power supply: AC 220V (50Hz/60Hz)
- Temperature coefficient: When tested outside the temperature range of the specification (i.e. above 28°C or below 18°C), the test error increases by ±0.25% per degree Celsius.

4.1 Specifications for low resistance measurement

Model	UT625A	UT625B
Output current	5A(min)~100A(max) Step: 5A/10A	5A(min)~200A(max) Step: 5A/10A
Measurement range	0.1uΩ~1000mΩ	0.1uΩ~2000mΩ
200A	/	0.1uΩ~1999.9uΩ (0.1uΩ)
100A	0.1uΩ~1999.9uΩ (0.1uΩ)	2.000mΩ~9.999mΩ (0.001mΩ)
	2.000mΩ~9.999mΩ (0.001mΩ)	
50A	10.00mΩ~99.99mΩ (0.01mΩ)	10.00mΩ~99.99mΩ (0.01mΩ)
5A	100.0mΩ~499.9mΩ (0.1mΩ)	100.0mΩ~499.9mΩ (0.1mΩ)
	500mΩ~1000mΩ (1mΩ)	500mΩ~2000mΩ (1mΩ)
Accuracy	± (0.4%rdg+0.04%FS) (≥10A)	
	± (0.4%rdg+0.6%FS) (5A)	
Open-circuit voltage	About 5V	About 10V
Test time	10s~60s (can be set)	10s~60s (can be set)

- 1Ω=1000mΩ; 1mΩ=1000uΩ
- Low Limit Alert: When the loop resistance measurement is low limit, the measurement interface will display “LO”;
- Over-limit indication: when the loop resistance measurement exceeds the limit, the measurement interface will display “OL”;
- Note: When the Tester measures high current output continuously, the measured object is easy to heat, this may cause the resistance of the measured object to change, which will affect the measurement result.

4.2 Other function parameters

Supply voltage	AC198V~242V (50Hz/60Hz)
Display screen	7-inch TFT
Test time	10s~60s (the time can be set. Step: 1s)
Comparative measurement	√ (Comparison values can be set)
Data storage	√ (Up to 200 groups of data with time and date can be stored)

Data storage modes	Supports 3 modes (Automatic storage, cyclic storage, and manual storage)
Data viewing	√ (Up to 200 groups of data with time and date can be viewed)
Data deletion	√ (Current or all stored data can be deleted)
Thermal printer	√ (The data under test or the stored data can be printed)
USB communication	√ (Connect the Tester to PC, enabling two-way transmission)
Bluetooth communication	√ (need to enter the setting mode to turn on or off), reserved Bluetooth module, support for customers to carry out secondary development of apps
Time and data setting	√ (need to enter the setting mode)
Language setting	Support switching Chinese and English (need to enter the setting mode)
Backlight setting	Supports adjusting 5 levels of brightness (need to enter the setting mode)
Resistance comparison switch	√ (need to enter the setting mode to turn on/off)
USB switch	√ (need to enter the setting mode to turn on/off)
Bluetooth switch	√ (need to enter the setting mode to turn on/off)
Help	√ (need to enter the setting mode to view the operation method of the Tester)
Factory reset	√ (Restore the default parameter)
Buzzer prompt	√ (Sound of enabled key: "Beep"; Sound of disabled key: "Beep, Beep")
High temperature prompt	√ (If the internal temperature is too high, the Tester will display a high temperature symbol)
Operating environment	0°C~35°C; below 75%RH (no condensation)
Storage environment	-20°C~60°C; below 80%RH (no condensation)
Operating altitude	≦2000m
Dimensions	357mm (L)*293mm (W)*193mm (D)
Weight	UT625A/B about (6.4kg/7.5kg)

5. External Structure and Accessories

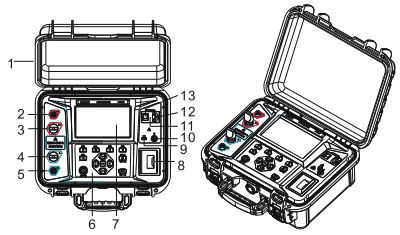


Figure 5.1 External structure

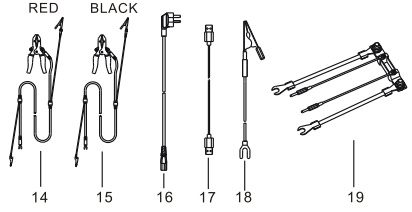


Figure 5.2 Accessories

1	Tester housing	11	Power fuse (250V/10A)
2	Positive terminal of sampling voltage (U+)	12	Power switch (with power indicator light)
3	Positive terminal of excitation current (I+)	13	Power supply socket (Power input)
4	Negative terminal of excitation current (I-)	14	Red test lead with clip: 100A (UT625A), 200A (UT625B)
5	Negative terminal of sampling voltage (U-)	15	Black test lead with clip: 100A (UT625A), 200A (UT625B)
6	Buttons operation panel	16	Power cord
7	7-inch TFT	17	Dual-ended USB communication cable
8	Thermal printer	18	Grounding wire with clip
9	USB communication port	19	Shunt with wire (test accessory: 100A/ 75mV (UT625A) or 200A/75mV (UT625B)
10	Earth terminal		

6. Buttons

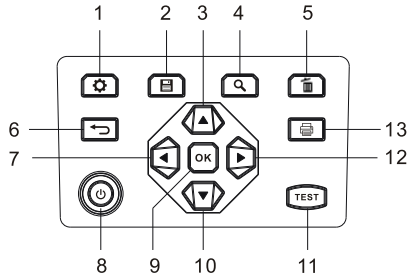


Figure 6.1 Buttons

1	Setting button (short press to enter the system setting mode; disabled for long press)
2	Save button (long press to select a saving mode; short press to save data manually)
3	Select upward (enabled for long or short press)
4	Viewing button (short press to enter the data viewing mode; disabled for long press)
5	Deletion button (short press to pop up the data deletion window; disabled for long press)
6	Return button (short press to return to the main interface; disabled for long press)
7	Select leftwards (enabled for long or short press)
8	Power on/off (long press >2s to power on/off the Tester)
9	OK button (short press to confirm the selection; disabled for long press)
10	Select downward (enabled for long or short press)
11	TEST button (long press >2s to start test and short press to stop test)
12	Select rightwards (enabled for long or short press)
13	Printer button (long press >2s to start printing data; disabled for short press)

7. Check for the Tester

- **Check for powering on the Tester**

Open the Tester cabinet, connect the power cord (supplied) and plug it into the AC220V three-pin socket, turn on the power switch, observe whether the power indicator is on and pay attention to whether the cooling fan is activated, if the power indicator is not lit and the cooling fan is not activated, you need to check whether the socket is live or whether the fuse is damaged or whether the power cord is damaged to ensure that the power supply of the Tester is normal, as shown in Figure 7.1.

Figure 7.1 Connection of powering on the Tester

- **Check for turning on the Tester**

After the Tester is powered normally, long press the power button for >2s, the Tester will be turned on normally and enter the main interface, at this time, the functional buttons can be operated along with the sound effect prompt, if the Tester cannot be turned on or the key operation is disabled (or such situation still occurs after the above operations are repeated), please contact the distributor or the after-sales service center in time to repair or replace the Tester, as shown in Figure 7.2.

Figure 7.2 Main interface of turning on the Tester

- **Check for measurement**

When the Tester is turned on normally and the key operation is normal, connect the shunt with wire (test accessory: 200A/75mV) to the wiring terminal of the Tester and ensure good contact, long press the TEST button to start the test, the main interface will display the tested current and shunt resistance (about 0.375mΩ). In the case of correct wiring, if the interface does not display the tested current and shunt resistance or the value deviation is too large (or such situation still occurs after repeating the above operations), please contact the distributor or the after-sales service center in time to repair or replace the Tester, as shown in Figure 7.3.

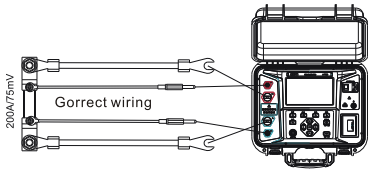


Figure 7.3 Connecting the shunt with wire

8. Measurement Principle

The Tester adopts the Kelvin four-wire method for measurement, that is, a set of current output lines and a set of voltage input lines are connected to the measured object separately, so as to solve the problem of temperature drift due to the introduction of the error of wire internal resistance and the wire heating caused by the large output current, and ensure the accuracy and stability of measurement.

Measurement principle: The Tester outputs a constant current (Io) to excite the measured object (Rx), so that the both ends of the tested object generates a voltage (Ui) and input it to the Tester, then the Tester process and calculate it, finally, the resistance value (i.e., the low resistance value) of the tested object is obtained, as shown in Figure 8.1.

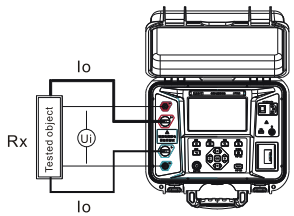


Figure 8.1 Diagram of the principle of measuring low resistance

9. Operating Instructions

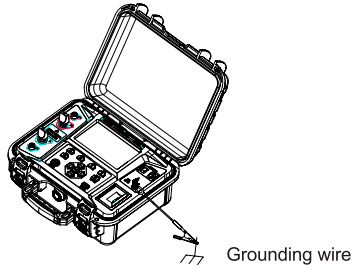
9.1 Wiring for measurement

⚠ Precaution:

- Please wear insulated gloves and take personal protective measures before wiring and measuring.
- The measured object must be powered off before test, and do not measure the resistance of the charged object or live circuit.
- In order to ensure the safety of persons and equipment, reliable grounding is required before using this instrument
- There is a high current output in this instrument, please operate carefully, make sure the object under test has good contact with the test wire clamp (the Y-type terminal of the test wire and the terminal of the device
- Need to be contacted to the end and lock the terminal), avoid poor contact resulting in high temperature, hands off the After leaving the test wire clamp, press the TEST button on the instrument to start the test.Do not touch the test lead clip or the measured object during test (i.e., when large current is outputted), otherwise it can cause personal injury, fire, or damage to the Tester.
- Because the internal temperature of the Tester will rise due to the continuous output measurement of large current for a long time, the single measurement time of should not exceed 60s for large current output measurement. When the internal temperature is too high, the Tester displays a high temperature symbol and automatically stops the test, and the test can only be performed again after the high temperature symbol disappears (i.e., the internal temperature has dropped).

- **Reliable grounding of equipment:**

Connect and lock the open terminal of the black grounding wire to the equipment grounding post, and then clamp the other end to an exposed metal location that has a good ground to ensure that the equipment is reliably grounded, as shown in the following figure.



- **Connect standard test leads to the Tester:**

Connect the open terminal of the red test lead with the red current binding post (I+) of the Tester and lock it tightly, then insert the red plug of the test lead into the red voltage port (U+) of the Tester, and then connect the black test lead with the black current binding post (I-) and black voltage port (U-) of the Tester according to the above operation, as shown in Figure 9.1.

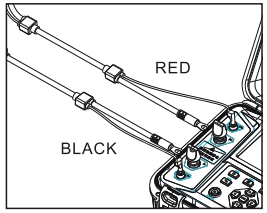


Figure 9.1 Connecting standard test leads to the Tester

- **Connect standard test leads to the measured object:**

Clamp the big clip of the red test line to the current input terminal of the measured object and keep it in good contact, then clamp the small red clip of the test lead near the current input terminal and keep the metal part of the measured object in good contact, and then connect the black test wire with the other end of the measured object (current output terminal) and keep it in good contact, as shown in Figure 9.2.

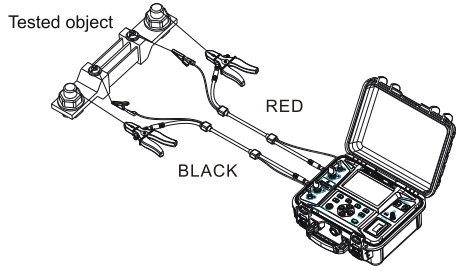


Figure 9.2 Connecting standard test leads to the measured object

- **Prompt for high internal temperature:**

When measuring with high current output consecutively for several times, the internal temperature of the Tester will be too high, and the Tester will display the high temperature symbol and automatically stop the test, and the test can only be performed again after the high temperature symbol disappears (that is, the internal temperature has dropped), as shown in Figure 9.3.

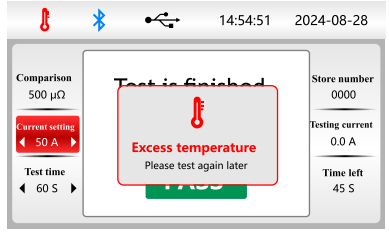


Figure 9.3 Prompt for high internal temperature

9.2 Regular measurement

- **Output current setting:**

After the Tester is powered on normally and enters the main interface, move the red background block by short pressing the up or the down button to select the current setting, determine the approximate current range according to the characteristics of the measured object, and then switch the current value by short pressing the left or right button (long press the left button and the right button to quickly switch the current value), as shown in Figure 9.4.

Figure 9.4 Output current setting

- **Test time setting:**

Move the red background block by short pressing the up or down button to select the test time, and then adjust the test time by short pressing the left and right buttons (long press the left button and right button to quickly adjust the test time value), as shown in Figure 9.5.

Figure 9.5 Test time setting

- **Start or stop testing:**

Connect the Tester with the measured object by using the standard test leads, make sure the contact is good, then set the output current and test time, long press the "TEST" button for more than 2s to start the test, and the test is automatically stopped after the countdown is over, or press the "TEST" button to stop the test, as shown in Figure 9.6.

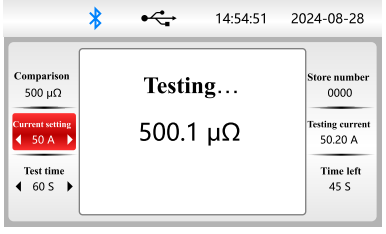


Figure 9.6 500 μΩ measurement

9.3 Comparative measurement

- **Open "Resistance Comparison":**

Short press the setting button to enter the system settings interface, move the red background bar by short pressing the up or down button to select resistance comparison, and then turn off/on the resistance comparison function by short pressing the left or right button, as shown in Figure 9.7.

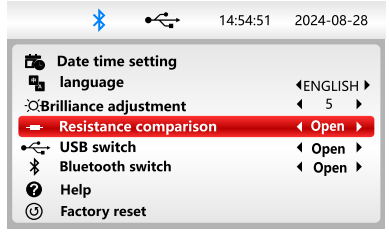


Figure 9.7 Select "Resistance Comparison"

- **"Comparative Value" setting:**

Short press the back button to exit the system setting interface and enter the main interface, move the red background block by short pressing the up or down button to select the comparison value, as shown in Figure 9.8.

Figure 9.8 Select "Comparative Value"

Short press the "OK" button to enter the comparison value setting interface, short press the left or right button to cycle through the value place (i.e., bit selection), long press the left or right button to cycle through the decimal point, select the appropriate value place and short press the up or down button to set the value (0~9) by step, long press the up or down button to quickly set the value (0~9). When the appropriate value and decimal point are set, short press the "OK" button to confirm the setting and switch to the resistance unit selection, short press the left or right button to select the appropriate unit (uΩ or mΩ). The set resistance value is displayed in the lower right corner of the interface. After selecting the appropriate unit, short press the "OK" button to confirm the setting and return to the main interface, as shown in Figure 9.9.

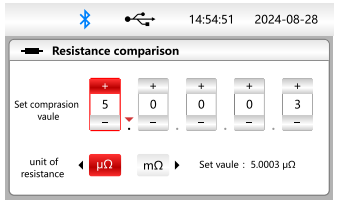


Figure 9.9 Setting comparative resistance value

● **Comparative resistance measurement:**

Connect the Tester with the measured object by using the standard test leads, make sure the contact is good, after setting it up according to the above operations, long press the "TEST" button for >2s to start the test. When the test result is greater than the comparison value, the measurement comparison fails and the interface displays "FAIL". Conversely, if the test result is less than or equal to the comparison value, the measurement comparison passes and the interface displays "PASS", as shown in Figure 9.10.

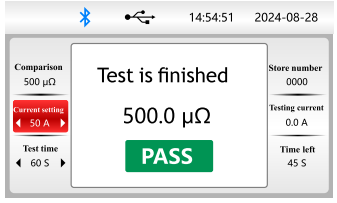


Figure 9.10 Comparative measurement is PASS

9.4 Data saving

There are three data saving modes: Auto Save (default), Cyclic Save, and Manual Save. The Tester can store up to 200 groups of data (with time and date records), and when the stored data reaches 200 groups, the Tester cannot continue to store new data. The upper right corner of the main page displays the number of stored groups.

● **Auto Save (default):**

In the main interface and when the Tester is not measuring, long press the save button to pop up the saving modes selection window, move the red background block by short pressing the left or right button to select Auto Save (when the test is over, the Tester will automatically save a group of current valid data), and then press the "OK" button to confirm and exit the pop-up window, as shown in Figure 9.11.

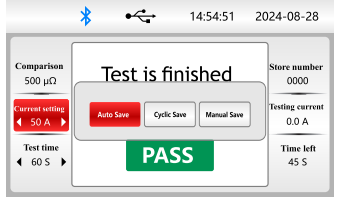


Figure 9.11 Select “Auto-saving”

● **Cyclic Save:**

In the main interface and when the Tester is not measuring, long press the save button to pop up the saving modes selection window, move the red background block by short pressing the left or right button to select Cyclic Save (when continuous measurement is carried out, the Tester will automatically save a group of current valid data at intervals of 5s until the end of the measurement), and then press the "OK" button to confirm and exit the pop-up window, as shown in Figure 9.12.

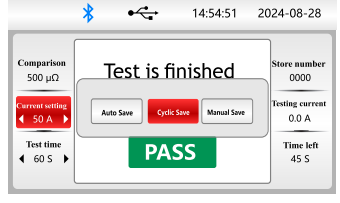


Figure 9.12 Select “Cyclic Save”

● **Manual Save:**

In the main interface and when the Tester is not measuring, long press the save button to pop up the saving modes selection window, move the red background block by short pressing the left or right button to select Manual Save (when the measurement is carried out or the measurement is finished and the interface displays valid data, save a group of current valid data by short pressing the save button), and then press the "OK" button to confirm and exit the pop-up window, as shown in Figure 9.13.

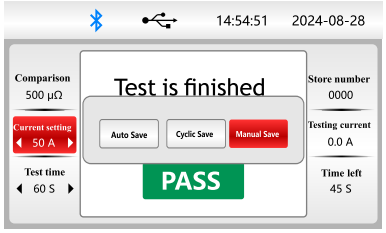


Figure 9.13 Select “Manual Save”

9.5 Data viewing

● **Enter the data viewing mode:**

In the main interface and when the Tester is not measuring, short press the viewing button to enter the data viewing interface, short press the left or right button to view the stored data, and long press the left or right button to quickly view the stored data, as shown in Figure 9.14.

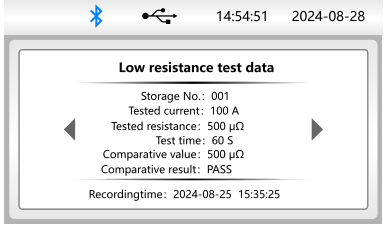


Figure 9.14 Viewing the stored data

● **Exit the data viewing mode:**

In the data viewing interface, short press the back button to exit the data viewing mode and return to the main interface, as shown in Figure 9.15.

Figure 9.15 Return to main interface

9.6 Data deletion

● **Deletes current data:**

In the data viewing interface, short press the delete button to pop up the data deletion selection window, move the red background block by short pressing the left or right button, select Delete Current and short press the "OK" button to confirm the deletion of the current data, as shown in Figure 9.16.

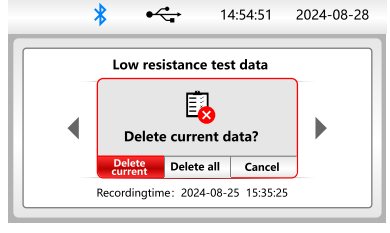


Figure 9.16 Deleting current data

- **Deletes all data:**

In the data viewing interface, short press the delete button to pop up the data deletion selection window, move the red background block by short pressing the left or right button, select Delete All and short press the "OK" button to confirm the deletion of all data, as shown in Figure 9.17.

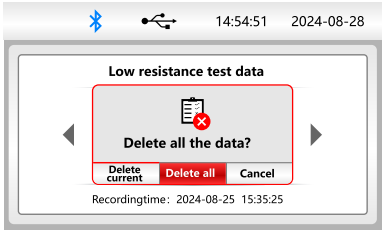


Figure 9.17 Deleting all data

- **Cancel data deletion:**

In the data viewing interface, short press the delete button to pop up the data deletion selection window, move the red background block by short pressing the left or right button, select Cancel and short press the "OK" button to confirm canceling the deletion of the data, as shown in Figure 9.18.

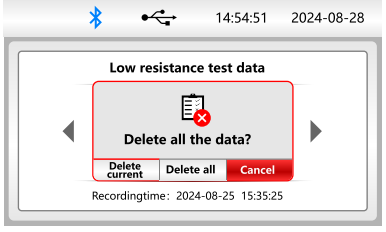


Figure 9.18 Canceling data deletion

9.7 Data printing

- **Prints measurement data:**

When the measurement is in progress or the measurement is over and the measurement data is displayed on the interface, long press the printer key >for 2s to pop up the question dialog box of whether to print, move the red background block by short pressing the left or right button to select Yes or Cancel, the default selection is Yes, and then short press the "OK" button to confirm the selection and print the measurement data, as shown in Figure 9.19.

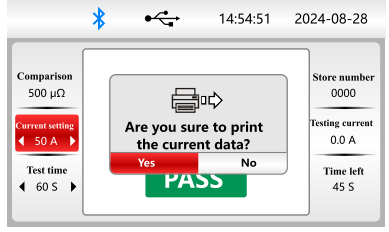


Figure 9.19 Measurement data printing

- **Prints stored data:**

Enter the data viewing mode and switch to the page of stored data to be printed, long press the printer key for more than 2s to pop up the question dialog box of whether to print, short press the left or right button to move the red background block to select Yes or Cancel, the default selection is Yes, short press the "OK" key to confirm the selection and print the stored data, as shown in Figure 9.20.

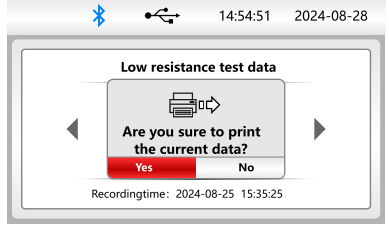


Figure 9.20 Stored data printing

- **Prompt for “Printing Failed”:**

When the printer is abnormal or cannot print data, the interface pops up the window of “Printing Failed” (with a prompt for the cause of failure) and flashes 5 times, the causes for “Printing Failed” include lack of paper, paper jam, printing overheating or others, as shown in Figure 9.21.

Figure 9.21 Prompt for “Printing Failed”

9.8 USB communication

- **PC software:**

Obtain the PC software of the Tester model on the official website of Uni-Trend and install it to the PC. The PC software supports Windows 10 and newer operating systems.

- **Connects the Tester to PC:**

Use the supplied dual-ended USB cable, one end of which is plugged into the USB port of the Tester and the other end into the USB port of the PC, as shown in Figure 9.22.

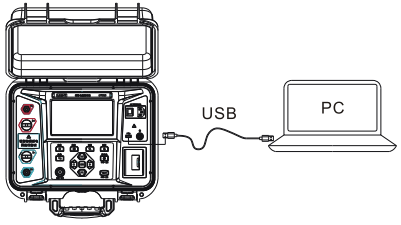


Figure 9.22 Connecting the Tester to PC

- **Turn on the USB function:**

Press the setting button to enter the system setting interface, press the up or down button to move the red background bar to select the USB switch, and then press the left or right button to turn off or turn on the USB function. When the USB function is enabled, the USB symbol is displayed at the top of the interface, as shown in Figure 9.23.

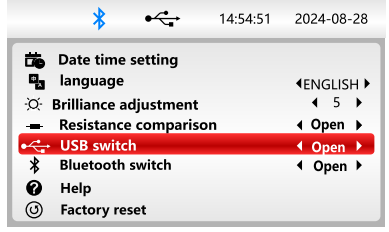


Figure 9.23 Selecting USB switch

- **Software operation:**

Run the PC software and click Connect. The Tester uploads data to the PC in real time, and can send operation commands on the PC to control the operation of each function of the Tester.

9.9 Other settings

- **Date and time setting:**

Short press the setting button to enter the system settings interface, then short press the up or down button to move the red background bar to select the date and time setting, as shown in Figure 9.24.

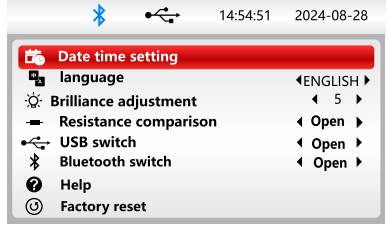


Figure 9.24 Select the date and time setting

Short press the "OK" button to enter the date and time setting page, short press the left or right button to cycle through the year, month, day, hour, minute, and second digits (i.e., bit selection), and short press the up or down button to adjust the value. When the date and time are set appropriately, short press the "OK" button to confirm and return to the system setting interface, and you can cancel the current setting and return to the system setting interface by short pressing the back button, as shown in Figure 9.25.

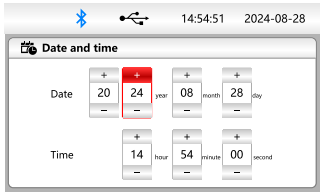


Figure 9.25 Date and time setting page

- **Language setting:**

Short press the setting button to enter the system setting interface, short press the up or down button to move the red background bar to select the language, and then short press the left or right button to switch Chinese or English, as shown in Figure 9.26.

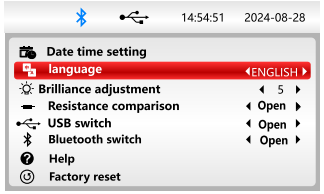


Figure 9.26 Select language

- **Brightness adjustment:**

Short press the setting button to enter the system setting interface, short press the up or down button to move the red background bar to select brightness adjustment, and then short press the left or right button to cycle through the brightness level (1~5), as shown in Figure 9.27.

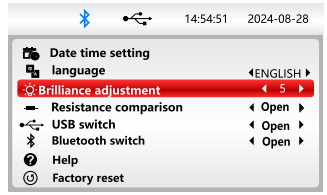


Figure 9.27 Select brightness level

- **Bluetooth switch (for secondary development by users):**

This product has Bluetooth transmission communication function for user's secondary development (no Bluetooth app function).

Short press setup key to enter the system setup interface, move the red background bar by short press up key or down key to select Bluetooth switch, then short press left key or right key to turn off or turn on Bluetooth. When bluetooth is on but not connected, the bluetooth symbol flashes at the top of the interface, when connected, it is always displayed, and when bluetooth is off, the symbol disappears, as shown in Figure 9.28.

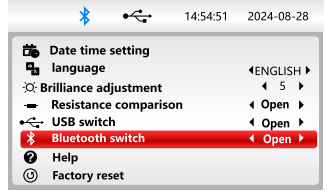


Figure 9.28 Select Bluetooth switch

- **Help:**

Short press the setting button to enter the system setting interface, short press the up or down button to move the red background bar to select Help, and then press the "OK" button to enter the operation review page, as shown in Figure 9.29.

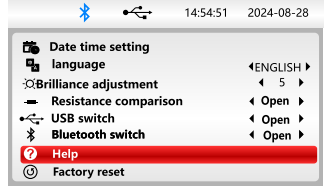


Figure 9.29 Select Help

On the Help page, short press the left or right button to view the operation diagram and the instructions, and short press the back button to exit the Help page, as shown in Figure 9.30.

Figure 9.30 Help page

- **Factory reset:**

Short press the setting button to enter the system setting interface, short press the up or down button to move the red background bar to select factory reset, and then short press the "OK" button to pop up the question dialog box of whether to restore factory settings (default to Yes), and short press the "OK" button again to confirm the selection to restore factory settings, as shown in Figure 9.31.

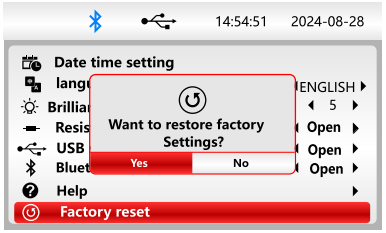


Figure 9.31 Factory reset

10. Maintenance and Repair

10.1 Maintenance

- Wipe the surface of the Tester with a soft cloth or sponge moistened with water
- To avoid damaging the Tester, never immerse it in water.
- When the instrument is wet, please dry it before storing.

10.2 Repair

The Tester shall be calibrated or repaired by a qualified professional or designated service center. If there are any of the following problems with the Tester, please contact the distributor or the after-sales service center in time.

- The housing or component is damaged.
- The display screen shows abnormal data and is garbled or blurred.
- The buttons are malfunctioning.
- The Tester makes noises during test.

⚠ WARNING:

Cancer and reproductive harm-See www.P65Warnings.ca.gov for more information

The contents of this manual are subject to change without notice

UNI-T
UNI-TREND TECHNOLOGY (CHINA) CO., LTD.
No. 6, Gong Ye Bei 1st Road,
Songshan Lake National High-Tech Industrial
Development Zone, Dongguan City,
Guangdong Province, China

彩盒 菲林做货要求

序号	项目	内容	备注
1	尺寸	150*110mm	
2	材质	封面128g铜板+内页60g书纸	
3	颜色	单色	
4	外观要求	完整清晰、版面整洁，无斑墨、残损、毛边、刀线错位等缺陷。	
5	装订方式	钉装	
6	表面处理		
7	其它	无	
版本		REV .0	

DWH 设 计	宣浩	MODEL 机型: Ut625AB	Part NO. 物料编号: 110401113152X
CHK 审核		UNI-T 优利德科技（中国）有限公司 UNI-TREND TECHNOLOGY (CHINA) LIMITED	
APPRO. 批 准			