

人体综合数显测试仪 LFS619 说明书

LFS619 Digital Human-Body Comprehensive Tester Manual



LFS619 产品描述

LFS619 Product Description

LFS619 测试仪可以检验操作员手腕带和防静电鞋的功能，并判断这种功能是否可以充当接地线路，确保可以作为地面设备的限流电阻。操作员手腕带和防静电鞋测试可以同时进行，无需分开测试。屏幕数值绿色，说明测试通过。屏幕数值蓝，红灯亮并伴有警鸣声，说明测试失败。可能手腕带和防静电鞋都没通过，可能是其中一项没有通过。如果是防静电鞋没有通过，可能是其中一只没有通过，左脚或者右脚。如果测试失败，测试仪会显示地面设备的电阻，看是电阻值太低还是太高。

The LFS619 tester checks the function of an operator's wrist strap and ESD shoes, and determines whether they can serve as a grounding path and provide the required current-limiting resistance for the grounded equipment. The wrist-strap and ESD-shoe tests can be performed simultaneously. A green

value on the screen indicates PASS. A blue value with a red light and an audible alarm indicates TEST FAILURE. The failure may involve both the wrist strap and the ESD shoes, or only one of them. If the ESD-shoe test fails, either the left or right shoe may be at fault. When a test fails, the tester displays the resistance of the grounded equipment so that the user can determine whether it is too low or too high.

测试值范围:

Test ranges:

手腕带: 100K-10M 750K-10M 750K-35M

Wrist strap: 100K-10M, 750K-10M, 750K-35M

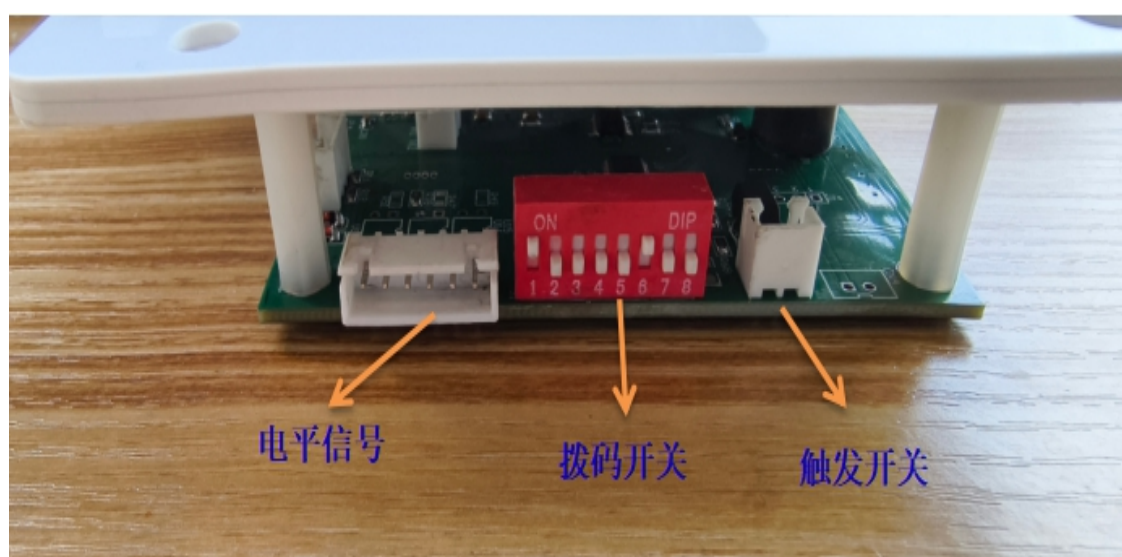
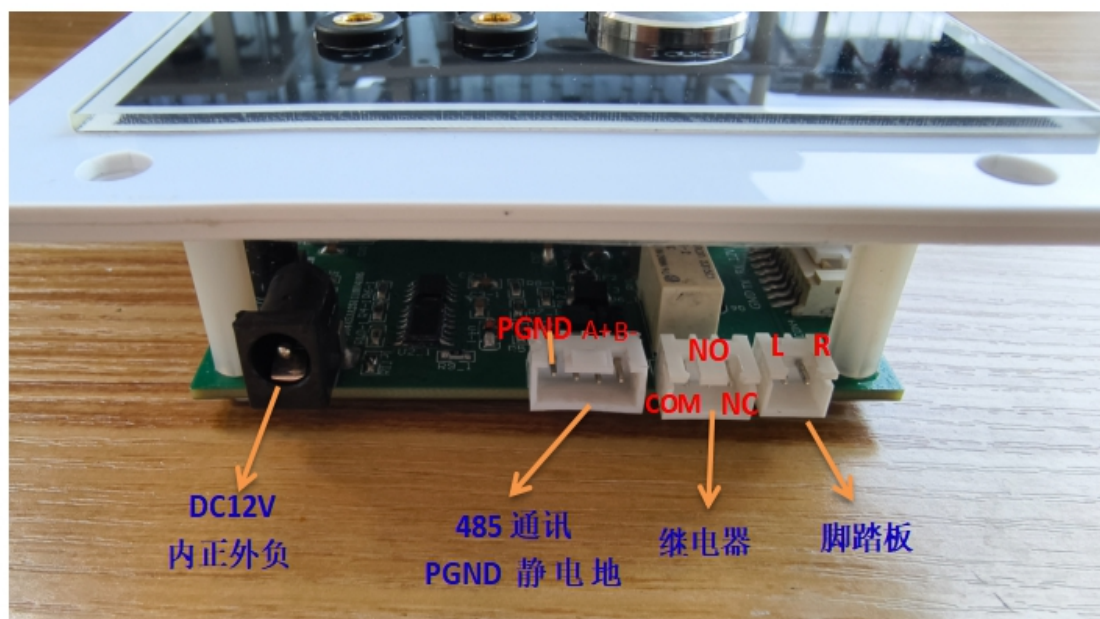
防静电鞋: 100K-35M 750k-100M 750K-1000M

ESD shoes: 100K-35M, 750K-100M, 750K-1000M

LFS619 接口定义及说明:

LFS619 Interface Definitions and Descriptions:





LFS619 特点和组件:

LFS619 Features and Components:

1. 拨码开关限值: 通过拨码开关设置测试仪的电阻值范围。
2. DIP-switch limits: Set the tester's resistance range using the DIP switches.
3. 产品设计采用触摸方式, 提高设备的使用寿命, 减少维修保养。
4. The touch-operated design extends the service life of the equipment and reduces maintenance requirements.
5. 静电鞋, 手腕带状态 3.5 寸屏幕实时显示阻值: 显示防静电鞋, 手腕带的测试阻值结果。
6. The 3.5-inch screen displays the ESD-shoe and wrist-strap status and resistance values in real time, showing the measured results.
7. 面板设计更为简洁, 人性化操作, 直观明了查看测试结果。
8. The panel has a simple design and user-friendly operation, making test results clear and easy to view.
9. 单线防静电手环插座: 插入单线手环线, 测试防静电手环。
10. Single-wire ESD wrist-strap socket: Connect a single-wire wrist-strap cord to test an ESD wrist strap.
11. 双线防静电手环插座: 插入双线手环线, 测试防静电手环。
12. Dual-wire ESD wrist-strap socket: Connect a dual-wire wrist-strap cord to test an ESD wrist strap.
7. 12VDC 电源插座: 插上电源适配器
7. 12 VDC power socket: Connect the power adapter.
8. 稳态测试触摸开关: 手指长按此处进行测试。
8. Steady-state test touch switch: Press and hold here with your finger to perform a test.
9. 继电器端口: 可与电子门锁, 灯, 蜂鸣器等集成。
9. Relay port: Can be integrated with electronic door locks, lamps, buzzers, and other devices.
10. 通讯接口为 485 方式, 大大减少 232 通讯的短板。
10. The communication interface uses RS-485, avoiding the limitations of RS-232 communication.

注意: 必须所有的测试通过, 才能激活继电器

Note: The relay can be activated only after all tests have passed.

1. 地面插座: 插将接地线插入位于测试仪底部的接地插孔中。将接地线的环形接线端与设备接地连接。该连接操作可以在测试前消除使用者自带的静电荷。

1. Ground socket: Insert the grounding wire into the ground socket on the bottom of the tester. Connect the ring terminal of the grounding wire to equipment ground. This connection removes static charge carried by the user before testing.
2. 脚板插座：脚板导线的一端连在插座上，另一端连接双重脚板。
2. Foot-plate socket: Connect one end of the foot-plate cable to the socket and the other end to the dual foot plate.

安装说明及测试仪设置：

Installation Instructions and Tester Settings:

LFS619 的底部是拨码开关，控制着防静电鞋和手腕带的电阻值。拨码开关设置以及对应的测试值如下，参考下表进行设置（如图二）

The DIP switches are located on the bottom of the LFS619 and control the resistance values for the ESD shoes and wrist strap. The DIP-switch settings and corresponding test values are shown below. Refer to the table for configuration (see Figure 2).



拨码开关 1 脚上限 1G 模式切换

DIP switch 1: Upper limit 1 GΩ mode selection.

拨码开关 2 脚上限 100M 模式切换

DIP switch 2: Foot upper-limit 100 MΩ mode selection.

拨码开关 3 脚上限 35M 模式切换

DIP switch 3: Foot upper-limit 35 MΩ mode selection.

拨码开关 4 手上限 10M/35M 模式切换

DIP switch 4: Wrist-strap upper-limit 10 MΩ/35 MΩ mode selection.

拨码开关 5 手脚下限 100K/750K 模式切换

DIP switch 5: Wrist-strap and foot lower-limit 100 KΩ/750 KΩ mode selection.

拨码开关 6 手和左右脚信号输出开关 打开必须手脚测试 OK 才能触发继电器,

DIP switch 6: Wrist-strap and left/right foot signal output. When ON, both wrist-strap and foot tests must pass before the relay is triggered. When OFF, the relay is triggered when the wrist strap, left foot, or right foot test passes.

关闭测试手或者左脚. 右脚 OK 触发继电器

When OFF, the relay is triggered when the wrist strap, left foot, or right foot test passes.

拨码开关 7 预留功能 定义中

DIP switch 7: Reserved function; definition pending.

拨码开关 8 8 寸串口屏幕切换开关, 关闭为 8 寸屏幕模式, 打开为静电仪模式出阻值

DIP switch 8: Serial-screen mode selector. OFF selects 8-inch screen mode; ON selects ESD-tester mode with resistance output.

操作事项

Operating Procedure

1. 当组合测试仪 LFS619 处于待机状态并准备执行测试时, 测试开关会待机等待测试。
2. When the LFS619 combination tester is in standby and ready for testing, the test switch remains on standby waiting for a test.
2. 佩戴手腕带和/或 ESD 防静电鞋时, 将手腕带电线插入到组合测试仪 LFS619 表面对应的插孔中。将脚放在每个脚板上。
2. Put on the wrist strap and/or ESD shoes. Insert the wrist-strap cord into the corresponding socket on the surface of the LFS619 combination tester. Place your feet on the foot plates.
3. 开始测试前, 用手指连接测试开关的内外接点。手指长按直到显示测试结果。测试中不要触摸任何其他金属, 因为这会影响测试结果。
3. Before starting the test, use your finger to connect the inner and outer contacts of the test switch. Press and hold until the result is displayed. Do not touch any other metal during testing, as this may affect the result.
4. 屏幕绿色阻值说明测试结果“通过”。屏幕红色阻值说明测试结果“低故障”。屏幕蓝灯阻值说明测试结果“高故障”。
4. A green resistance value on the screen indicates PASS. A red resistance value indicates a LOW fault. A blue indicator/value indicates a HIGH fault.

如果 ESD 测试失败, 请检查您的手腕带和防静电鞋, 确保它们功能正常, 佩戴正确或需要更换。

If the ESD test fails, check your wrist strap and ESD shoes to ensure that they function correctly, are worn properly, or need to be replaced.

注意：测试失败可能是皮肤干燥或者出汗过少造成的。对于手腕带，使用前，可以尝试涂抹被批准的耗散性护手乳液，如 Menda Reztore TM ESD 护手乳液。 可以通过走一小段路出汗来提高防静电鞋的测试结果，出汗可以提高导电性。

Note: A failed test may be caused by dry skin or insufficient perspiration. For wrist-strap testing, you may apply an approved dissipative hand lotion, such as Menda Reztore TM ESD Hand Lotion, before use. For ESD-shoe testing, walking a short distance to perspire may improve the result because perspiration increases conductivity.

该组合测试仪 LFS619 也可用于测试工作服或者衣服，这些工作服或者衣服都是接地机制中需要进行线圈连接的操作人员穿戴的。

The LFS619 combination tester can also test workwear or clothing worn by operators whose grounding system requires a coil connection.

注：本仪器另可符合其他国家标准，由客户定制测试范围的上限及下限阻值。

Note: The instrument can also be configured to meet standards of other countries. Customers may specify the upper and lower limits of the test range.

产品安装：

Product Installation:

1. 将 LFS619 测试仪固定在墙上，或者立式安装在其他位置
2. Fix the LFS619 tester to a wall or install it vertically at another location.
3. 通过配套接地线将测试仪连接起来
4. Connect the tester using the supplied grounding wire.
3. 使用配套电缆线将测试仪和脚踏板连接
4. 通过 220V AC-12V DC 变压器输入电源
3. Use the supplied cable to connect the tester and foot plate. 4. Supply power through a 220 V AC to 12 V DC transformer.

注意事项：

Precautions:

检查包装盒内物品如下：

Check that the following items are included in the package:

1. 测试仪
2. 脚踏板 支架
3. 12VDC 开关电源 (220V 输入)
3. 12 VDC switching power supply (220 V input).
4. 产品说明书
4. Product manual.
5. 安装连接线
5. Installation connection cable.

补充说明：此产品可直接驱动三棍闸，可配套我们的静电机组合，实现 ESD 系统门禁功能。

Supplementary note: This product can directly drive a tripod turnstile and can be combined with our ESD equipment to provide ESD-system access-control functionality.

一般故障排除方法

General Troubleshooting

无任何 LED 灯亮

No LED is lit

- 1、电源线是否连接：检查并确认电源线已连接至电源插座。
- 2、[Is the power cord connected? Check and confirm that the power cord is connected to the power outlet.](#)
- 3、电源适配器是否坏：用万用表拨到直流档 20V 检测电源是否输出 12V，如无输出或不正确那么判定电源适配器已坏。
- 4、[Is the power adapter damaged? Set a multimeter to the 20 V DC range and check whether the power supply outputs 12 V. If there is no output or the output is incorrect, the power adapter is faulty.](#)
- 5、如以上都没有出现那表示仪器工作不正常需送回厂商检修。
- 6、[If none of the above applies, the instrument is not operating normally and should be returned to the manufacturer for inspection and repair.](#)

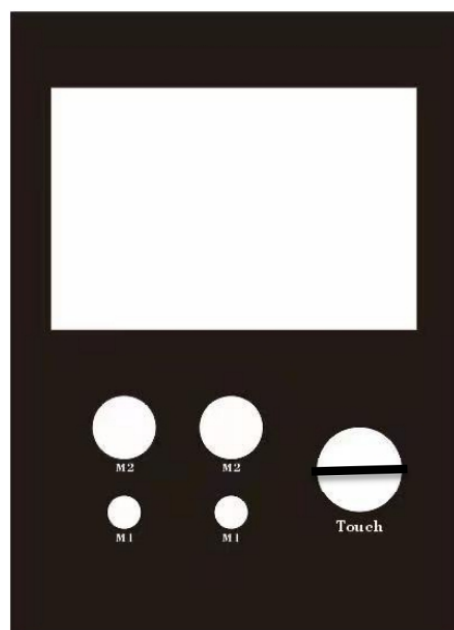
无法检测鞋和手环

Unable to test the shoes and wrist strap

- 1、仪器连接底板线是否断开：检查并确认连接线没有断开，已连接至底板螺丝上面。
- 2、[Is the tester-to-base-plate wire disconnected? Check that the connection wire is intact and connected to the base-plate screw.](#)
- 3、判断可能仪器里面的连接检测双鞋的端口线脱落了。
- 4、[The internal wire connected to the dual-shoe detection port may have come loose.](#)

器工作不正常需送回厂商检修。

[If the instrument still does not operate normally, return it to the manufacturer for inspection and repair.](#)



面板尺寸：（长）140MM X （宽）100MM

Panel dimensions: 140 mm (L) × 100 mm (W)

保用证书

Warranty Certificate

尊敬的用户：

Dear Customer:

您好！感谢选购我们的人体综合测试仪

Hello! Thank you for purchasing our human-body comprehensive tester.

本公司人体综合测试仪出厂前为确保品质优良，均经过严格检查，本公司向用户保证所出品之产品性能良好及器件完整

To ensure quality, our human-body comprehensive testers undergo strict inspection before leaving the factory. We guarantee that the products have good performance and complete components.

如果您在使用过程中出现任何问题，请及时与我们公司联系，自购买之日起，凭此卡您可享受 1 年免费保修服务

If any problem occurs during use, please contact our company promptly. With this certificate, you are entitled to one year of free warranty service from the date of purchase.

当您的仪器因维修需要运输时，请用原包装及防震保护包装，并把保用证书放在包装箱内

When the instrument must be transported for repair, use the original packaging and shock-protective packaging, and place this warranty certificate inside the shipping carton.

本保用证书由于保用产品 A、曾因错误操作、疏忽使用、意外事件或天灾人祸而引至损坏；B、曾经非本公司技术人员擅自修理或改装；C、机身号码曾被转换、除去；D、不按原厂提供之安装指示安装。本保用证书将自动失效。

This warranty certificate is automatically void if the covered product: A. is damaged by incorrect operation, negligence, accidents, or natural disasters; B. is repaired or modified without authorization by personnel who are not our technicians; C. has its serial number altered or removed; or D. is installed contrary to the manufacturer's installation instructions.

合 格 证

Certificate of Conformity

产品名称: LFS619 人体综合测试仪

Product name: LFS619 Human-Body Comprehensive Tester

检验员: _____

Inspector:

生产日期: _____

Date of manufacture:

本产品经我公司品质控制部门的检验, 其性能参数符合技术标准, 准许出厂。

This product has been inspected by our quality-control department. Its performance parameters comply with the technical standards and it is approved for release from the factory.

保 修 卡

Warranty Card

客户名称: _____

Customer name:

联系电话: _____

Contact telephone:

产品机号: _____

Product serial number:

产品型号: _____

Product model:

购买日期: _____

Purchase date:

销 售 商: _____

Distributor: