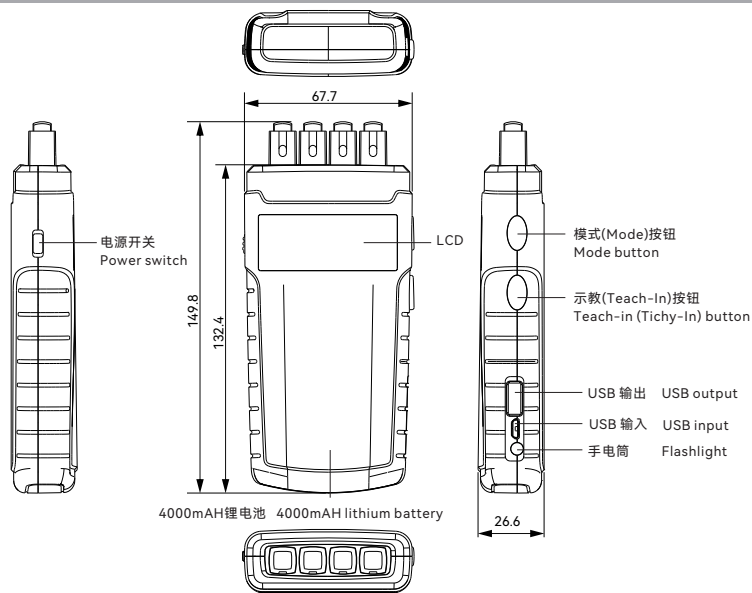


## 模拟量测试盒 Analog test cassette



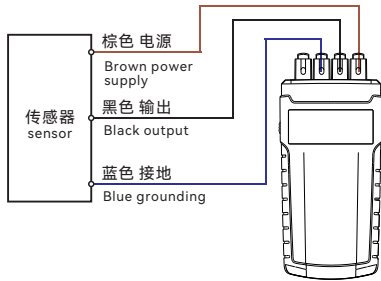
型号 Model		DWD-1	
基本特点 Basic Features			
检测类型 Detection type	NPN/PNP		自动识别 Automatic identification
电池容量 Battery capacity	4000mAh		
充电时间 Charging time	9h		
电气数据 Electrical Data			
输出电压 Output voltage	19V~24V		棕色输出端 Brown output
	4.8V~5V		USB输出端 USB output
输出电流 Output current	≤160mA		棕色输出端 Brown output
	≤500mA		USB输出端 USB output
保护电路 Protection circuits	电源过流保护 Power supply overcurrent protection		
环境条件 Environmental Conditions			
工作温度 Operating temperature	-10~45℃		
机械数据 Mechanical Data			
其他功能 Other features	休眠功能，静音功能，手电筒 Sleep function, mute function, flashlight		
尺寸 Size	67.7x26.6x149.8mm		
重量 Weight	200g		
环境条件 Environmental Conditions			
测量范围 Measuring range	0~10V		电压模式 Voltage mode
	0~20mA		电流模式 Current mode
测量精度 Measurement accuracy	≤0.04V（全范围） ≤0.04V (Full Range)	电压模式 Voltage mode	
	≤0.04mA（全范围） ≤0.04mA (Full Range)	电流模式 Current mode	
扫描周期 Scan cycle	22ms		数字模式 Digital mode
	140ms		电流模式 Current mode
	140ms		电压模式 Voltage mode
尺寸规格 Dimensions			



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### 接线示意图 Wiring Diagram

#### 三线制: Three-wire system



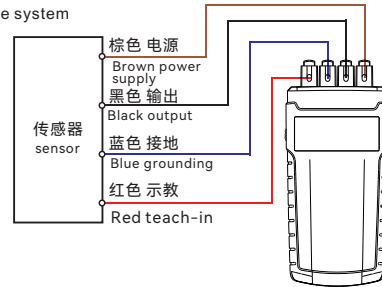
##### 普通测量

- 1 接好对应功能的端子，打开电源。
- 2 选择对应的测量模式（电压V，电流I，数字D）。
- 3 测量结果在屏幕显示。

##### Ordinary measurements

- 1 Connect the terminals of the corresponding function and turn on the power.
- 2 Select the corresponding measurement mode (voltage V, current I, digital D).
3. The measurement results are displayed on the screen.

#### 四线制: Four-wire system



##### 示教模式

- 1 接好对应功能的端子，打开电源
- 2 按下Teach-In按键，屏幕Teach-In区域显示ON，此时红色端子会输出高电平，松开Teach-In按键，屏幕Teach-In区域显示OFF，此时红色端子会输出低电平
- 3 选择对应的测量模式（电压V，电流I，开关D）
- 4 测量结果在屏幕显示

##### Teach-in mode

- 1 Connect the terminals of the corresponding function and turn on the power
- 2 Press the Teach-In button, the Teach-In area of the screen will display ON, then the red terminal will output a high level, release the Teach-In button, the Teach-In area of the screen will display OFF, and the red terminal will output a low level
- 3 Select the corresponding measurement mode (voltage V, current I, switch D)
- 4 The measurement results are displayed on the screen

### 功能说明 Feature description

#### 1 模式切换

短按MODE 键，测试盒会在电流（I）、电压（V）、开关（D）三种模式切换，客户根据传感器类型选择正确的模式及连线，测试结果将在屏幕上显示，同时测试盒会存储当前测试模式，下次开机将恢复上次状态

#### 1 Mode switching

Short press the MODE button, the test box will switch between current (I), voltage (V), switch (D) three modes, the customer selects the correct mode and connection according to the sensor type, the test result will be displayed on the screen, and the test box will store the current test mode, and the next time it is turned on, it will resume the last state

#### 2 电量显示

正常工作时候，电量显示将显示在右上方，其格数代表剩余电量，当其闪烁时表示电量不足，需要及时充电。充电时候，闪烁的格数表示充电的进度，当充满时候，满格电量符号会闪烁。

#### 2 Battery level display

When working normally, the battery level display will be displayed on the upper right, and its number of grids represents the remaining power, and when it flashes, it means that the battery is insufficient and needs to be charged in time. When charging, the number of flashing grids indicates the progress of charging, and when it is fully charged, the full grid symbol will flash.

#### 3 休眠模式

如果测试盒超过10分钟没有操作，测试盒将进入休眠，24V电源和屏幕将会关闭，按下Mode键或Teach-IN键会唤醒测试盒。

#### 3 Sleep mode

If the test box is not operated for more than 10 minutes, the test box will go to sleep, the 24V power supply and screen will be turned off, and pressing the Mode button or Teach-IN button will wake up the test box.

#### 4 Powerbank模式

关机状态下，按下mode按键，打开电源键，蜂鸣器会响两次，测试盒将不会休眠。

#### 4 Powerbank mode

In the shutdown state, press the mode button and turn on the power button, the buzzer will sound twice, and the test box will not sleep.

#### 5 静音模式

长按Teach-In超过6s，蜂鸣器会短响一次，此时测试盒已进入静音模式，相同的操作，蜂鸣器会响两次说明已退出静音模式，同时测试盒会存储状态，下次开机将保持上次状态。

#### 5 Silent Mode

Press and hold Teach-In for more than 6s, the buzzer will sound once, at this time the test box has entered the silent mode, the same operation, the buzzer will sound twice to indicate that the silent mode has been exited, and the test box will store the state, and the next time it is turned on, it will remain in the last state.

#### 6 Teach-In 功能

按下示教键，Teach-In（红色）端子将输出高电平电压，电压逻辑与棕色端子电压一致，释放按键，Teach-In（红色）端子将输出低电平电压，

#### 6 Teach-In Features

Press the teach-in button, the Teach-In (red) terminal will output a high level voltage, the voltage logic is consistent with the voltage of the brown terminal, release the button, the Teach-In (red) terminal will output a low level voltage

#### 7 手电功能

按下模式键超过2s，白光LED灯会点亮，相同的操作可以关闭LED灯。

#### 7 Flashlight function

Press the mode button for more than 2s, the white LED light will light up, and the LED light can be turned off with the same operation.

#### 8 短路保护

当测试盒输出电流过高将启动短路保护，短路保护时屏幕会显示'SCP'，短路条件撤出后，测试盒会自动恢复正常状态。

#### 8 Short Circuit Protection

When the output current of the test box is too high, the short-circuit protection will be activated, and the screen will display 'SCP' when the short-circuit protection is withdrawn, and the test box will automatically return to its normal state after the short-circuit condition is withdrawn.