

POWER PROBE®

PPDRAW

User Manual / MANUAL DEL USUARIO

Manuel d'utilisation / Benutzer-Handbuch

使用者手冊 / 使用者手冊 / ユーザー マニュアル



Intertek

UK
CA

CE







2
YEARS
LIMITED
WARRANTY

- EN** Draw Monitor
- ES** Medidor de corrientes parásitas en baterías
- FR** Testeur de drain parasite dans les batteries
- DE** Parasitäres Abflussmessgerät in Batterien
- TC** 車用電能監測器
- SC** 车用電能監測器
- JP** モーター電気エネルギーモニター

I. Introduction of Product Functions

Welcome to use our company's Draw Monitor product. This product is designed for use in monitoring car battery voltage, leakage current, and serving as a backup power supply when replacing the battery. The product is connected to the car's OBDII interface via an OBDII connection cable to supply 12V power to the car and monitor the car system's leakage current for diagnosing various faults. It can also serve as a backup power supply for the car during battery replacement, preventing the car's mainboard from losing power and data. Draw Monitor can also monitor battery voltage through the OBDII port. Please read this manual carefully before using the product.

Symbols as marked on the Meter and Instruction manual

	See instruction card
	Conforms to EU directives
	Conforms to UL STD. 61010-1, and 61010-2-030; Certified to CSA STD. C22.2, NO. 61010-1, and 61010-2-030.
	Do not discard this product or throw away

FCC statement

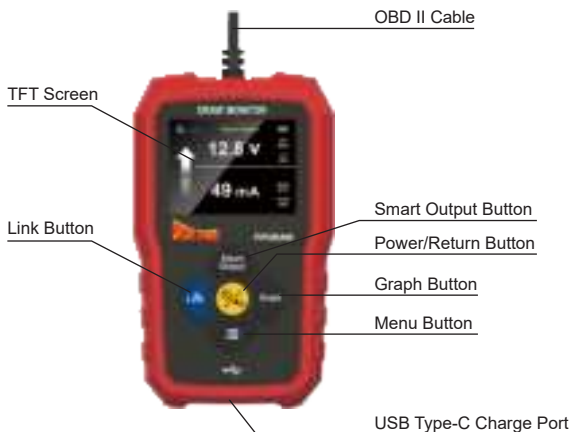
CAUTION: Changes or Modifications not expressly approved by the party responsible could void the user's authority to operate this device.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

II. Appearance, Button Definition, and Icons



III. Operation Instructions

1. Power On/Off

When the device is powered off, long press the power button to turn it on, and long press the power button to turn it off when it is powered on.

2. Smart Output

The smart output function generates a 12V voltage. If this voltage is higher than the car battery voltage, it will output power through OBDII; otherwise, the output will be cut off to monitor the battery voltage. By default, smart output is turned off after booting up. Press the smart output button to activate it, and press the smart output button again to turn it off.

3. Graphic Mode

The graphic mode is different from the normal display mode. This mode displays the voltage and current values from the last 20 seconds as a waveform on the LCD screen. The default mode after power on is the normal display mode. Press the Graph button to switch to graphic display mode, and press the button again to return to normal mode.

4. System Settings

Press the menu button to enter the menu, where you can set the auto power-off time and current alarm value.

- Auto Power-off Time: This setting determines how long the device will automatically power off when there is no operation. You can adjust the auto power-off time by selecting the option and using the left or right buttons.
- Current Alarm Value: In the normal display mode and smart output state, if the output current exceeds or equals the preset alarm value, the interface will display a red warning. You can set this value in the menu by selecting the option and using the left or right buttons.

5. Bluetooth Connection

In both the normal display mode and graphic display mode, you can use the link button to turn the Bluetooth device on or off. When turned on, you can use the PowerProbe Link App to scan for and connect to the device.

6. Charging

The device has a built-in high-capacity lithium battery and can be charged through a USB Type-C port, supporting PD fast charging. Please use a standard charger to charge the device.

7. Min/Max Value Reset

To reset the Min/Max amperage values during a draw test, simply press the Power/Return button and the values will reset.

IV. Measuring Parasitic Draw

Step #1:

Press and hold power button to turn on PPDRAW.



Step #2:

Connect the PPDRAW to the vehicle's OBDII interface via the PPDRAW OBDII cable.



When first connected, the PPDRAW should display the voltage of the vehicle's battery. If no voltage is displayed on connection to the OBDII port, there may be an open OBD fuse or other connection problem to the vehicle's OBDII port. This will need to be repaired for correct operation.



If the vehicle's battery voltage is correctly displayed upon connection of the PPDRAW, proceed to the next step.

Step #3:

Select the Smart Output function by pressing the Smart Output button on the PPDRAW. The PPDRAW should display an arrow on the left of the display screen indicating the PPDRAW is now providing power from the internal battery of the PPDRAW to the vehicle.



Step #4:

In order to obtain an accurate Parasitic Draw reading, the vehicle's battery must be disconnected from the vehicle being tested. After the vehicle's battery is disconnected, all power to the vehicle is now supplied from the PPDRAW internal battery and the PPDRAW will display the total parasitic draw to the vehicle. (Make sure all vehicle doors are closed and no lights are left on to ensure all modules go to sleep and the tool displays an accurate reading).



Step #5:

After testing is completed, first reconnect the vehicle's battery before disabling Smart Output or disconnecting the PPDRAW from the vehicle.



NOTE: Follow steps carefully to avoid any power interruptions while disconnecting and reconnecting the vehicle's battery. The PPDRAW can also function as a Memory Saver during battery replacements.

V. Precautions

1. This product can only be connected to the OBDII port of a car to complete the corresponding functions. Please do not connect it directly to active devices without using the OBDII port. Before connecting to the OBDII port, please make sure that the car's OBDII port is a standard OBDII port and the wiring is correct. It is recommended to verify that there are no major faults in the car's power supply system before connecting the unit. If the OBDII port is not standard, wiring errors and other reasons cause damage to the machine or car circuit, our company will not be held responsible.
2. The maximum output current of this product is 10A. The limited current of the OBDII port of some cars is lower than this value, and there may be current limiting measures such as fuses. Therefore, after connecting the Smart Output of this product, it is recommended not to make the current of the entire car system greater than the limited current of the OBDII port of the car itself, so as to avoid problems such as the car's own OBDII fuse being blown. Do not input voltages exceeding the device's range (30V) into the OBDII port. If a voltage exceeds the range, disconnect the voltage as soon as possible. If the voltage exceeds 30V, an overvoltage warning interface will be displayed.
3. The device can output a maximum of 10A current. If the current exceeds this limit, an overcurrent warning interface will be displayed. Do not output current exceeding 10A for an extended period. If an overcurrent warning appears, restore the current to normal as soon as possible. It is prohibited to input negative voltage to the OBDII port of this machine.
4. The device can output a maximum of 10A current. If the current exceeds this limit, an overcurrent warning interface will be displayed. Do not output current exceeding 10A for an extended period. If an overcurrent warning appears, restore the current to normal as soon as possible.

5. The machine has temperature protection. If the temperature of the battery or the internal body of the machine is too high, the output voltage will be automatically turned off and a temperature alarm interface will be displayed. If temperature protection occurs, you need to wait until the temperature returns to normal before outputting voltage again.
6. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
7. While PPDRAW MONITOR is still on the OBD circuit, it is necessary to ensure that the battery voltage of the car is greater than 12V before connecting the battery to the car's circuit.
8. Before connecting the PPDRAW MONITOR into the OBD circuit, it is necessary to ensure that the battery voltage of the car is greater than 12V.

VI. Troubleshooting

Fault phenomenon	Solution
The Smart Output function cannot be used and it prompts that the temperature is too high.	After the temperature rise reaches the upper limit after high current operation, the temperature protection program starts and the output is prohibited. The user waits for a while and the fault disappears automatically after the temperature returns to normal.
Unable to turn on and off	This product requires a long press of the power button to turn it on and off. Please ensure that the long press time is more than two seconds. If long pressing does not solve the problem, the battery may be too low. Please use the charging cable to charge the battery.
Unable to charge or not fully charged	Please use standard chargers and charging cables.
APP cannot connect	Please make sure the machine's Bluetooth connection function is turned on.

VII. Product specifications and Accessories

Product specifications

Smart Output function output: 12V 10A

Monitor function input: 0-30V

Voltage display accuracy: 1%+5dig resolution 0.1 V

Current display accuracy: 3%+5dig resolution 1mA/0.01 A

Built-in lithium battery: 18650 14.4V/3000mAh

Display: 2.8-inch TFT color screen 240*320

Wireless connection: Bluetooth 5.0

Input and output interface: OBDII interface

Charging interface: USB TYPE-C interface, supports PD fast

Certification: FCC, CE, cETLus, UKCA, EAC

Battery Life	10 minutes under 10A output condition.
Charge Type	DC 5V/1.5A (Option: DC 12V/1.5A)
Operating Temperature	0°C to 50 °C (\leq 80% R.H.)
Storage Temperature	-20°C to 60 °C (\leq 80% R.H., no batteries)
Operating Altitude	2000m (6562 ft)
Indoor IP Rating	IP54 dust and water resistant
Max. Continuous output Time of In-Line Mode	Max. 90 sec. for 10A output @ OBDII terminal with 15 minutes rest time

Accessories

Canvas bag

Color box

Manual

100cm USB Type A to Type C Cable

Limited Warranty

This meter is warranted to the original purchaser against defects in material and workmanship for 2 years from the date of purchase. During this warranty period, Manufacturer will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction.

This warranty does not cover fuses, disposable batteries, or damage from abuse, neglect, accident, unauthorized repair, alteration, contamination, or abnormal conditions of operation or handling.

Any implied warranties arising out of the sale of this product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expense or economic loss. Some states or countries laws vary, so the above limitations or exclusions may not apply to you.



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