200506

DROK 12V Battery Capacity Voltage Monitor

Introduction:

- This unit is a multi-tester which can be used to monitor battery capacity, voltage, temperature.
- It is used for 12V Lead-acid Battery by default. If need to change the preset setting to apply it to other battery type, please set in strict accordance with the instruction.

Technical Specifications:

Parameter	Minimum	Typical	Maximum	Unit	Value
Working Voltage	10		100	V	
Working Mode Consumption		8	10	mA	Backlight ON
Adjustable Delay Time	10		120	s	10s, 20s, 30s, 60s, 120s adjustable
Sleep Mode Consumption		15	20	uA	20V
Voltage Precision		±0.1	±0.5	%	
Temperature Precision		±0.5	±1	℃	
Temperature Range	-19		80	℃	Celsius
Temperature Range	-2.2		179	°F	Fahrenheit
Working Temperature	-10	25	65	℃	
Overall Dimension				mm	61.5*33.5*13.5
Installing Size				mm	58.5*28.5
Display Size				mm	33*16.5



Using Instruction:

1. Connect the attached 1.25 terminal wire to the plug on the product backside.
2. Connect the red wire to battery positive, the black wire to battery negative, make sure the contact is firm.
3. Power on the meter, it will display battery capacity percentage, voltage and temperature.
4. Click the ON/OFF button can turn off the meter. At turned-off status, click the ON/OFF button, it will wake up the meter. If set delay turning off, after powered on, the meter will automatically turn off when reach the set delay time.
5. The 7 battery bars on the display, from right to left, indicate the battery remaining capacity from low to high.
6. The displayed voltage value is the detected voltage value 10-100V, no external power source required.
7. The displayed percentage is the battery remaining capacity percentage.
8. The temperature unit can switch between ℃ and °F. The detected temperature value is the temperature of the meter.
9. When the battery is connected to charger or high-current load for discharging, the displayed parameter will fluctuate.

10. The SET button on the meter backside can be used for setting and changing parameter.
11. If the meter is not accurate enough for some special occasion, it can set the upper and lower limit of the battery capacity through Programming Mode 3-- via the SET button.

Go into Programming Mode:

1. At power-on status, long press SET button for 2 seconds, it will enter main menu as Figure-1:



Figure-1

2. There are 6 sub-menus on the main menu: 1--, 2--, 3--, 4--, 5--, 6--.
3. After entering main menu, click SET, the 6 sub-menus loops.
4. Functions of the 6 sub-menus:

1--: Adjust the preset battery specification, L for Lithium Battery, F for Lithium Iron Phosphate Battery, P for Lead-acid Battery.

2--: Enable/Disable delay powering off, delay time range 10-120 seconds.

3--: Custom percentage upper/lower limit voltage.

4--: Low-voltage alarm ON/OFF (not available) & alarm voltage setting (not available)

5--: Over temperature alarm ON/OFF (not available) & alarm temperature setting (not available), temperature unit ℃/℉ setting.

6--: Voltage Calibration (requires a 20V standard stabilize voltage power source).

5. Click ON/OFF button, choose the sub-menu to enter. After finish setting, long press SET to exit.
6. All parameters are subject to the last save.

Sub-menu Function Description:

1--: Set Preset Battery Specification

- At this sub-menu, it can adjust the preset battery specification. The corresponding code of each battery specifications are as follow:
- L for Lithium Battery, the followed number is the series number.
- F for Lithium Iron Phosphate Battery, the followed number is the series number.
- P for Lead-acid Battery, the followed number is the voltage value.
- **e.g.** L3 presents 3 series lithium battery, 4.2V*3S=12.6V
  L7 presents 7 series lithium battery, 4.2V*7S=29.4V
  F4 presents 4 series lithium-iron phosphate battery, 3.2V*4S=12.8V
  F8 presents 8 series lithium-iron phosphate battery, 3.2V*8S=25.6V
  P12V presents 12V lead-acid battery.
  P48V presents 48V lead-acid battery.



Figure-2

Setting Steps:

Long press SET to enter sub-menu 1--, click ON/OFF button, screen displays L on the right side as Figure-2. Click SET to switch among L/F/P to choose the corresponding battery code, click ON/OFF button to enter. If choose L/F, click SET button to adjust battery series number; if choose P, click SET button to adjust voltage. After finish adjusting battery code, long press ON/OFF button to save and go back to the last interface, long press SET to exit and go back to main working interface.

Note: If the battery code doesn't match with the applied battery specification, the percentage value will be inaccurate, and only the voltage value and temperature will be accurate.

2--: Delay Powering Off Enable/Disable & Delay Time Setting

- At this sub-menu, it can enable/disable delay powering off function and set delay time.
- After entering sub-menu 2--, screen displays as Figure-3.
- Left side is delay function ON/OFF indicator. ON = Delay Enabled, OFF = Delay Disabled.
- Right side is delay time. Available delay time to choose from is 10s/30s/60s/120s.

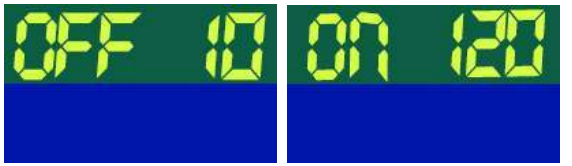


Figure-3

Setting Steps:

After entering sub-menu 2--, click SET to switch the parameter.Click ON/OFF button to carry bit; long press ON/OFF button to save. If no other parameters need to be set, long press SET to exit.

Note: If delay function is enabled, when reaches the set delay time, the meter will automatically power off and enter ultra-low-power status.

3--: Custom Upper/Lower Limit Voltage of Percentage (Not recommended for non-professionals)

- At this sub-menu, it can adjust the upper/lower voltage of the percentage. After adjusting, the meter can be used for Ni-MH battery， fuel battery， etc.
- After entering sub-menu 3--, screen displays as Figure-4.
- Left side is corresponding voltage of battery capacity 0%, low battery voltage
- Right side is corresponding voltage of battery capacity 100%, full battery voltage.



Figure-4

Setting Steps:

After entering sub-menu 3--, click SET to adjust the set voltage; click ON/OFF button to carry bit; long press ON/OFF button to save. If no other parameters need to be set, long press SET to exit.

Note:

1. If the left side value is set to be 10V, right side value is set to be 20V, then the percentage will calculate according to range of 10V-20V.
2. The upper and lower limit cannot exceed the working voltage. If the upper and lower limit are the same or difference <1V, data won't be saved.

6--: Calibration

- At this sub-menu, it can calibrate the meter. Displays as Figure-5.



Figure-5

- Before entering calibration interface, please provide accurate 20V working power for the meter.
- To avoid misoperation, to enter calibration mode, it needs to long press ON/OFF button at 6-- status; after entering, it will be automatically calibrated. If the provided power is beyond 19-21V, data won't be saved.

Note: Before entering calibration interface, make sure a 20V accurate power source is provided, otherwise the error will be larger. After entering calibration interface, it will automatically calibrate; after finish calibration, it will automatically exit to the working interface.

Common Trouble Shooting:

1. **No response after powered on:**

Check if the wiring positive and negative connected correctly and tightly. (Measure the meter input with a multimeter to check if there is voltage (10-100V) and check the polarity.)

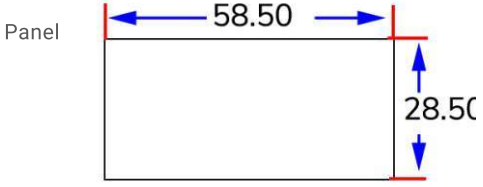
2. **Displays accurate voltage and temperature but inaccurate battery capacity:**

Make sure the preset battery code matches with the applied battery type. If not matches, set following the above instruction.

Size:



Panel Opening Hole Size:



Recommend Product on Amazon:

10-100V Digital Battery Capacity Tester

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