

Datasheet




RS PRO LED Battery Indicator

Stock number: 180-9266

EN

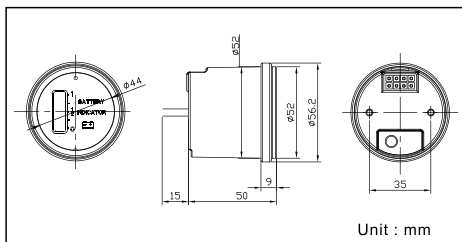
Please read and understand the following notice carefully, and correctly install and operate the product before using.

1 Notice

- 1) Please use the product strictly in accordance with the user manual
- 2) Please do not disassemble the product or its accessories
-  3) This product features a splash-proof design that can be used in rain, but not under water
-  4) When exposed to large temperature differential condensation may occur
- 5) High vibration or impact may cause product failure
-  6) Minor measurement errors may occur due to component tolerances and ambient conditions. These errors may not be consistent when comparing identical products
- 7) The product requires professional installation. Take care to avoid electric shock

2 Product parts list

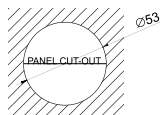
- 1 x Product
- 1 x User manual
- 1 x 8-pin connector
- 8-pin connector
- 8 x 8-pin connector contact inserts
- 2 x M4 Nuts
- 1 x Mounting bracket



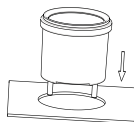
4 Installation

1. How to install

Insert the meter into the panel cut-out. The two studs on the rear of the meter must pass through the two holes in the fixing bracket which is secured using the two nuts supplied



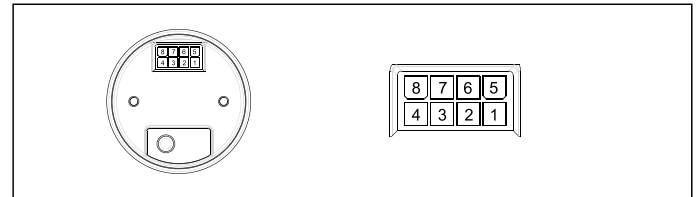
1) Insert the meter through the panel cut-out



2) Attach the fixing bracket as shown below passing the two studs through the holes in the bracket and secure with the two nuts supplied.



2. Terminal layout and button location



3. Terminal assignment

1 / 2	Relay output terminal 1, low current, 1A
3 / 4	Relay output terminal, high current, 5A
5	Power input negative terminal. Connect to battery negative pole.
6	Key switch. Connect to battery positive pole.
7	Positive battery input. (12-36V)
8	Positive battery input. (24-48V)

4. Verify the accuracy of the product installation

Turn on the key switch, LED displays the current bar, it indicates that the installation is correct.

5 Use of products

1 Measurement of battery electric discharge

- a) Battery voltage is divided into 10 LED segments.
- b) As the battery voltage falls the LED segments extinguish step by step. Each LED segment extinguishes 155 seconds after its low voltage threshold voltage is measured

※ The 155 second delay time referred to above can be customized.

7 Correlation chart between each LED segment and color

Bars	10th bar	9th bar	8th bar	7th bar	6th bar	5th bar	4th bar	3rd bar	2nd bar	1st bar
LED Colour	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red

LED's during battery discharge

100% bar	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
90% bar	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
80% bar	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
70% bar	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
60% bar	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit
50% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit
40% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit
30% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit
20% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Not lit
10% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Flash

2 Battery charging measurement

The charge voltage is displayed on the 10 LED bar segments. When the battery is flat and the charge voltage is applied only LED 1 (red) will flash. This indicates that charging is in operation. When the charge voltage increases and matches the voltage threshold of the next LED (red), it will flash in step-sequence with the 1st LED. Once the battery voltage exceeds the threshold for the third LED (Yellow) it will start to flash in sequence with the Red LED's. LED's 4 - 10 will join the flashing sequence in turn as the battery voltage increases. Activation of the next flashing LED in the sequence is delayed by 200 seconds to ensure the voltage is stable.

LED's when battery charging

100% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash
90% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Flash
80% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Flash	Flash
70% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Flash	Flash	Flash
60% bar	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Flash	Flash	Flash	Flash
50% bar	Not lit	Not lit	Not lit	Not lit	Flash	Flash	Flash	Flash	Flash	Flash
40% bar	Not lit	Not lit	Not lit	Flash	Flash	Flash	Flash	Flash	Flash	Flash
30% bar	Not lit	Not lit	Flash	Flash	Flash	Flash	Flash	Flash	Flash	Flash
20% bar	Not lit	Flash	Flash	Flash	Flash	Flash	Flash	Flash	Flash	Flash
10% bar	Flash	Flash	Flash	Flash	Flash	Flash	Flash	Flash	Flash	Flash

LED's scan upwards

3 Open-circuit voltage testing

When battery is connected, the meter will test the current voltage of the battery. And this value is regarded as initial value.

4 Power Supply Mode.

There are two input terminals for that battery: 12V/36V or 24V/48V. The voltage range of the 12/36V input = DC8-45V. The voltage range of the 24/48V input = DC18-60V.

5 Battery Types

Many kinds of batteries are suitable and can be selected by adjusting the rotary switch on the rear of the meter. The default selection is Type A

Different battery type parameter table

The voltages in the table refer to the individual cell voltage within a battery. The meter automatically calculates the number of cells in a battery. To calculate your battery voltage multiply the voltage in the table by the number of cells in your battery

Type	Battery empty value	Battery full value	Charge value	Type	Battery empty value	Battery full value	Charge value
A	1.73	2.04	2.32	D	1.90	2.03	2.31
B	1.85	2.02	2.30	E	1.98	2.08	2.36
C	1.75	1.97	2.25	F	1.63	1.97	2.26

6 Relay output

- When working normally both output relays are closed.
- When the battery voltage is < 20%, the high current relay (3/4) output drops out.
- When the battery voltage is < 10%, the low current relay (1/2) output drops out.

6 Specification

Operating Voltage	DC 8-60V	Waterproof level	IP65
Voltage accuracy	0.1V	Display model	10 segment LED bar graph
Charging delay time	200S		
Delay time of every bar	155S	Product weight	108g
Housing material	ABS+Aluminum	Dimension	Φ D56x65mm

7 Trouble shooting

Problems	Possible reasons	Solutions
No LED display	1. Power supply connection is wrong. 2. Power wires are damaged. 3. Key switch is damaged.	1. Check if the power cable wiring connected is according to the instructions. 2. Repair or replace the power wire. 3. Repair or replace the key switch.
No change of voltage value or voltage bar.	1. Power supply connection is wrong. 2. Delay time not reached.	1. Check if connected according to the instructions. 2. Wait for a moment to view.

