1. SAFETY PRECAUTIONS

CAUTION:Shouting a rechargeable battery or Wat Meter connected to a rechargeable battery can supply huge currents, causing fire, Explosions, personal injury, And damage to equipment. Ensure that all wiring and connections are rated to handle the input or output Current, and are properly assembled for each application.

1.1 Input Voltage & Current Handing Limitations

The Watt Meter is designed to be safe in systems using less than 60 V and carrying currents up to 130A. CAUTION: Exceeding these Limits will damage the Watt Meter and may cause personal injury.

2. WIRING, CONNECTIONS & APPLYING POWER

Warning: Loose connections can cause component damage! Only switch power between meter & LOAD. The Red SOURCE wire goes to positive (+) battery or other device terminals and black to Negative (-). User is responsible for attaching connectors rated to handle the voltage and current expected in user's application. Qualified individuals should make sure any high current connections. Verify there are no exposed wired or connectors that may shout circuit before connecting a battery or power source to the Watt Meter. Only use female connectors on batteries. By connecting an auxiliary battery (e.g. a receiver battery)of 4.8-60V to the SOURCE 3-pin connector, the Watt Meter can measure down to 0V.

3. DISPLAY SCREEN

3.1 Startup Screen

Each time power is applied across the Watt Meter
Leads (or auxiliary power connector) a startup screen with Logo is briefly displayed and peaks, minimums. Ah & Wh are reset to 0.
Then the display changes to the measurement screen.

3.2 Measurement Screen

The measurement screen continuously displays Amps, Volts and Watts. All other measured values are presented sequentially, every two seconds, in the "Data-Queue" position of the display. Data values are indentified by their units (Ah, Wh. Ap, Vm, Wp). All measurement Screen values are updated every 0.4 seconds.

The Measurement Screen layout: Amps, Volts, watts & "Data Queue"

The "Data Queue" shows:
Ah, Wh, Ap, Vm, Wp, in sequence.





3.2.1 (Current) Amps & Amps A, Ap

Only current from SOURCE to LOAD is neasured. Amps value displayed is the average current over the last screen update interval. Peak Amps value (AP) dusplay is the maximum current drawn from the LOAD side. since the meter's startup. Peaks lasting only a fraction of a second, can be captured. Supplying the auxiliary power with a voltage greater than the meter is measuring removes the Meter's operation current from measurements. To reduce meter heating, measure currents over 65 Amps for reduced time and consider using connectors which can handle large current.

3.2.2 (Voltage) Voltage & Minimum Volts, V, Vm

The display Volts value is the average voltage over the last screen update interval, The displayed Minimum Volts value(vm) is the Mnimum voltage (or "say") measured on the SOURCE side, since the startup screen ended. The Volts value is measured on the SOURCE side.

3.2.5 (Energy) Watt - hours Wh

The displayed value is the total energy delivered in Watt-hours since the startup screen ended. It is measured on the LOAD side. For accurate results, Be careful not to interrupt the SOURCE connection to the Watt Meter during an energy measurement.

3.2.4 (Charge) Amp-hours Ah

The displayed value is the total energy in Amp-hours(x1000=mAh) delivered since the startup screen ended. It is measured on the LOAD side. For accurate results, Be careful not to interrupt the SOURCE connection to the Watt Meter during an charge measurement

3.2.4 (Power) Watts & Peak Watts W, Wp

The displayed value is the average power delivered in watts (=Volts XAmps) over the last screen update interval. The displayed Peak Watts value (Wp) is the masimum power drawn on the LOAD side, since the startup screen ended. Watts values are measured on the LOAD side.

150A Art NO.:ZN08

High-precision watt meter and power analyzer

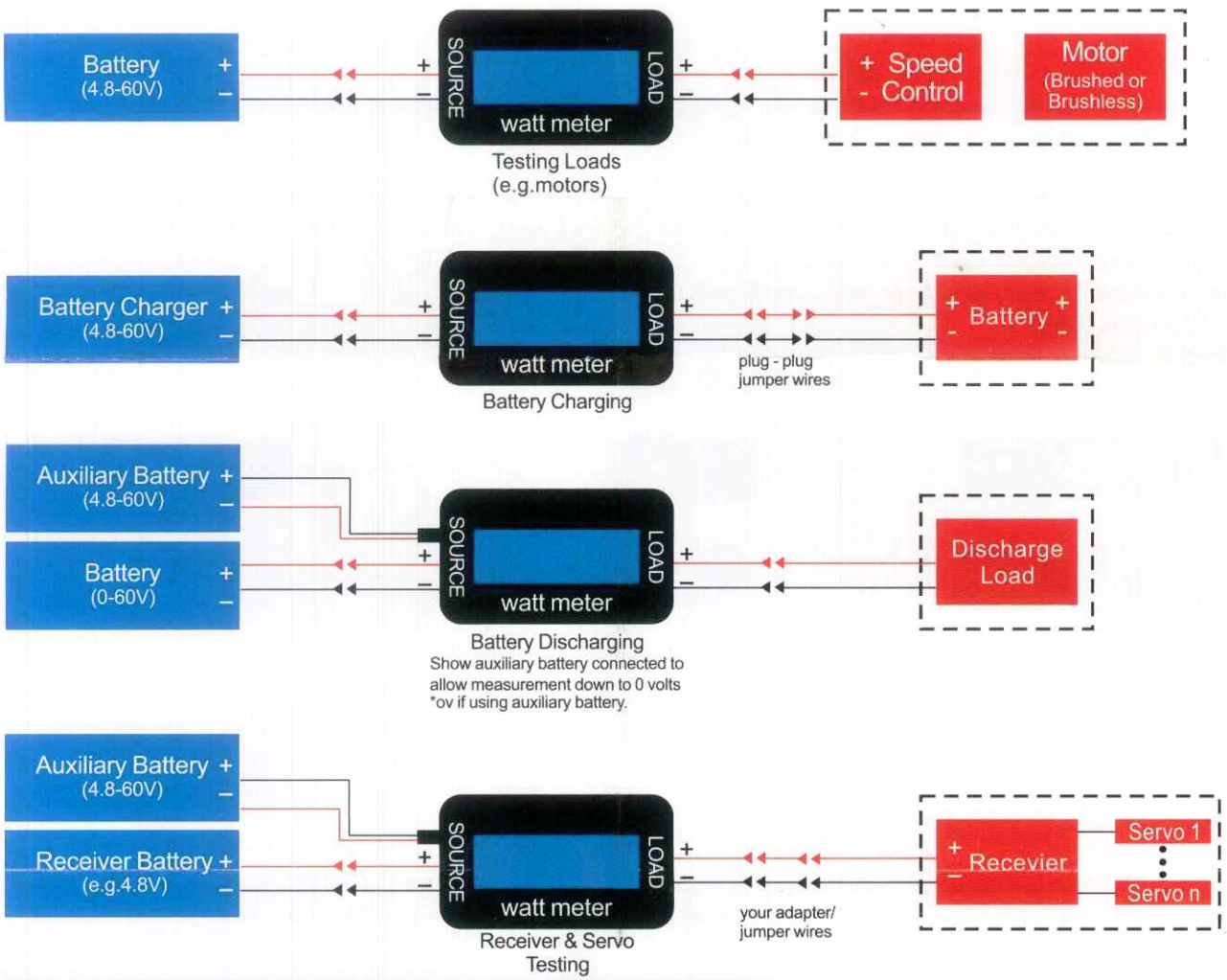
4. BUSING Watt Meter

You can think of the Watt Meter as a set of jumper wires. Connect it in the same way and you can measure what the jumper wires are Connected to. Like jumper wires, the Watt Meter is essentially a direct connection between same colored SOURCE and LOAD wires, i.e. Both the SOURCE and LOAD leads are electrically "hot" when a battery is connected to either side. Current flows from SOURCE to LOAD Make sure connections are secure to prevent component damage!

Example use #1: Battery on SOURCE side, Motor Speed Controller(ESC) and motor on LOAD side. With the ESC on, the Watt Meter shows the current into the motor, voltage and power at the battery and accumulates the Ah and Wh while the motor is running. Example use#2: with a battery charger on the SOURCE side and battery pack on the LOAD side, the Watt Meter shows the charging current into The battery, the voltage and charging power at the battery and accumulates the charge (Ah) and energy (Wh) into the battery.

※ Functions "Watt Meter" and Power Analyzer

Measures EIGHT parameters key to electric power safety & performance, Use it to: Prevent peak currents damaging battery. Motor Control, motors, wiring and connectors. Verify sufficient operating voltage under load. Set cutoff voltages, cheek battery capacity & health. Balance battery cells. Confirm proper battery charger operation. Detect receivers and actual operating current so as to make sure whether an UBEC is needed.



SPECIFICATIONS

- Operates from 5-60 V
- Operates from 7-60 V
  0V with optional auxiliary battery.
- Measures 0-100 A, resolution 0.01A; ☐
  0-150 A, resolution 0.01A; ☐
  0-60 V, resolution 0.01V;
  0-6554 W, resolution 0.1W;
  0-65 Ah, resolution 0.001Ah;
  0-6554 Wh, resolution 0.01Wh;
- 16x2, backlit, no backlight, LCD display.
- 16x2, whitelit, blue backlight, LCD display.
- Size: 85x42x25mm, Weight: 82 g.

Legend
Loads
Power Sources
Socket connector
Plug connector