WATT METER

COMcharger

1. FEATURES AND SPECIFICATIONS

1.1 Features

Measures energy(AH),Power(W).Current(A) and Voltage(V).Connector to use an optional receiver battery for measurement down to 0V.Accurate&precise 0.01A current and 0.01V voltage resolutions.Measures peak Amps,peak Watts(except for Doc Wattson) and voltage minimu m(sag). Rugged-handles 50A continuous and 100A peak at 60V.14 ga,super fine stranded,high temperature, silicone rubber insulated wire.Small&light with a tough plastic case available in several colors.Acts like a wire,so doesn't affect model's performance. Precision Alu-Chrom current sensing resistor,with only 0.001 0hms resistance and circuitry that draws only 7mA.Uses DSP to increase ADC resolution and differential measurement amplifiers to increase noise immunity.Powerful. 8MIPS micro-controller.

Made in USA to ISO9001 :2000 quality standards.One-year warranty and complete user manual.

1.2 Specifications talbes

Table 1 Electrical Measurement Ranges

Parameter	Range	Resolution	Notes
Voltage	0-60V	0.01V	0Vmin.w/auxiliary Power E.g.a receiver Bat.Else 4.0V
Current	0-100A.P	0.01A	50A continuous
Power	0-6554W	0.1W	
Charge	0-65AH	0.001AH	0-6554AH for Doc wattson 0.1Ah resolution
Energy	0-6554Wh	0.1Wh	0-655Kwh for Doc Wattson 0.01Kwh resolution

Table 2 Miscellaneous Specifications

Parameter	Value	Note
Measurement Update period	400ms	650ms for Doc
Signal Sampling Rate	Samples/S	
Data Queues Sequence time	2s	
In circuit Resistance	0.001Ohms	
Operation Current	7mA	
Auxiliary Power Voltage	4.0V-60V	e.g for Rec.Bat
Dimensions(LxWxD)	84*50*20mm	
Weight	132g	Net 100g
Diplay Screen	1602 STN LCD	
Normal Operate Conditions	0-50℃ ambient temperature. Non-humidity	Max Temp reduced at 100A

2. SAFETY PRECAUTIONS

CAUTION: High power electrical systems pose dangers independent of devices like the Watt Meter and it is the user's responsibility to be familiar with these Dangers and take any neccesary action to ensue safe use.Shorting a rechargeable battery or a Watt Meter connected to a rechargeable battery or battery charger can supply huge currents and have consequences ,including explosions,causing fire,damage to equipment and personal injury. Please carefully read the entire SAFTY PRECAUTIONS to ensure safe product use.

2.1 Safe Operation Limitations

The Watt Meter is designed to be safe to use when operated with the parameter limits it was designed for.Typical applications are well within these limits.but it is the user's responsibilitv to be familiar with the Watt Meter specifications and ensure the unit is operated within its limits.

Table 3 Safe Operating Limits(Do Not Exceed)

Parameter	Operating Range	Notes
Voltage	0V-60V	
Current	0-100A intermittent 50A continuous	Assumes device's wires are in free air and attached to connections at or below temperature of 35℃ with adequate air flow.100A operation time depends on ambient&wire temperature
Normal Operating Conditions	0-50℃ ambient Temp.	Max. temperature must be reduced at Max. current rating.

CAUTION: Exceeding these limits may permanently camage the Watt Meter,personal injury and causing fire.

2.2 Electrical Connections and Wiring

There are risks associated with the potentially high currents mcasured Loy Lhe Watt Meter. These in clucie,but are not limitecl to . fi re,burns and personal injury. The user must be familiar with the relevant methods.procedures and connection components before using or making any connection to it.It's suggested that any connetors and wires chosen for use be appropriately sized ancl rated for the intended application and attached in the manner recommended by their respective manufactures.

CAUTION: Poor connections and reckless wire handling in electricai systems may have serious consequences including personal inj ury,fire and property damage Intermittent and loose connections can cause component damage!

2.3 powering up

Verify there are no exposed wires or connectors at risk for a short circuit before connecting a battery or power Source to the Watt Meter.The Red?SOURCE?and "LOAD"leads of the Watt Meter are connected to each other and the Black leads are essentially .This means the ';other"side is electricaly "hot" when a battery or other power source is connectecl to either side.

CAUTION: Shorting a rechargable battery to a Watt Meter connected to a rechargeable battery or battery charger can supply huge currents and have serous consequences including explosions,causing fire,damage to equipment and personal injury.

2.4 Limits of connected Equiment

THe Watt Meter may have mesurement capabilityes, operating ratings and electrical signal handling abilities that exceed those of equipment to which it is connected.This means that the Watt Meter may be able to make measurements on a component despite that component being operated outside of its safe operating ratings.

CAUTION: It is the user's responsibility to consider the limitations of any equipment connected to the Watt Meter and not to exceed them since the Watt Metter provides no protection for those components.Examples of possible hazards include,without limitation: charging or discharing batteries outside their voltage and current ratings,application of excessive voltage or currents ot electronic speed controls(ESC) and motors, or voltages that present a shock hazard.Other hazards may exist.