WATT METER

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 minimum(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 0.001Ohms 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.Else4.0V
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	Notes
MeaurementUpdatePeriod	400ms	650ms for Doc
Signal Sampling Rate	Samples/S	
Data QueueSequence time	2seconds	
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
Display 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 nessary action to ensure safe use.Shorting a rechargeable battery or 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.

Please carefully read the entire SAFTY PRECAUTIONS second to ensure safe product use.

2.1 Safe Operation Limitations

The Watt Meter is designed to be safe to use when operated within the parameter limits it was designed for.Typical applications are well within these limits,but it

Is the user's responsibiltity 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 of35℃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 and may personal injury and may cause fire.

2.2 Electrical Connections and Wiring

There are risks associated with the potentially high currents measured by the Watt Meter. These in clude,but are not limited to ,fire,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 connctors and wires chosen for use be appropriately sized and rated for the intended application and attached in the manner recommended by their

respective manufactures.

CAUTION:Poor connections and reckless wire handling in electrical systems may have serious consequences including personal injury,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 so .This means the "other"side is electricaly "hot" when a battery

or othe power source is connected to either side.

CAUTION:Shorting a rechargeable battery to a Watt Meter connected to a rechargeable battey 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 Equipment

The Watt Meter may have mesurement capabilities,operating ratings and electrical signal handling abilities that exceed those of equipment to which it is

Connected.This means the Watt Meter may be able to make measurements on a connected component despite that component being operated outside of

Its safe cperating 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 Meter provides no protection for those components.Examples of possible hazards include,without limitation:charging or discharging batteries outside their voltage and

Current ratings,application of excessive voltage or currents to electronic speed controls(ESC) and motors, application of currents that cause dangerous heating

or voltages that present a shock hazard.Other hazards may exist.