SPECIFICATION

192W Charger power supply

QQE192-4CH12

Apr. 27 ’05

P.E	R/D	APPROVED	REV.
	James Huang		00

Electrical Specification

History

REV.	Description	Date	Drawn	Mechanical	Electrical	Approved
S00	SPEC.ISSUE	12/10/04’	-			
S01	SPEC.ISSUE	01/11/05’				
S02	SPEC.ISSUE	04/27/05’				

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Electrical Requirements

1．Input Characteristics：　※Measured the output voltage at the output connector

ITEM	CONDITION	SPECIFICATION
1.1 Rated Input Voltage	Selected Switch	115Vac/230Vac
1.2 Input Voltage Range	Selected Switch	90-132Vac/180- 264 Vac
1.3 Input Frequency Range	Continuously	47Hz to 63 Hz
1.4 Input Current	Maximal	5A
1.5 Efficiency:	115/230Vac @ full load	≥80%

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2・Output Characteristics：　※Measured the output voltage at the output connector

2.1 Output Rated Voltage

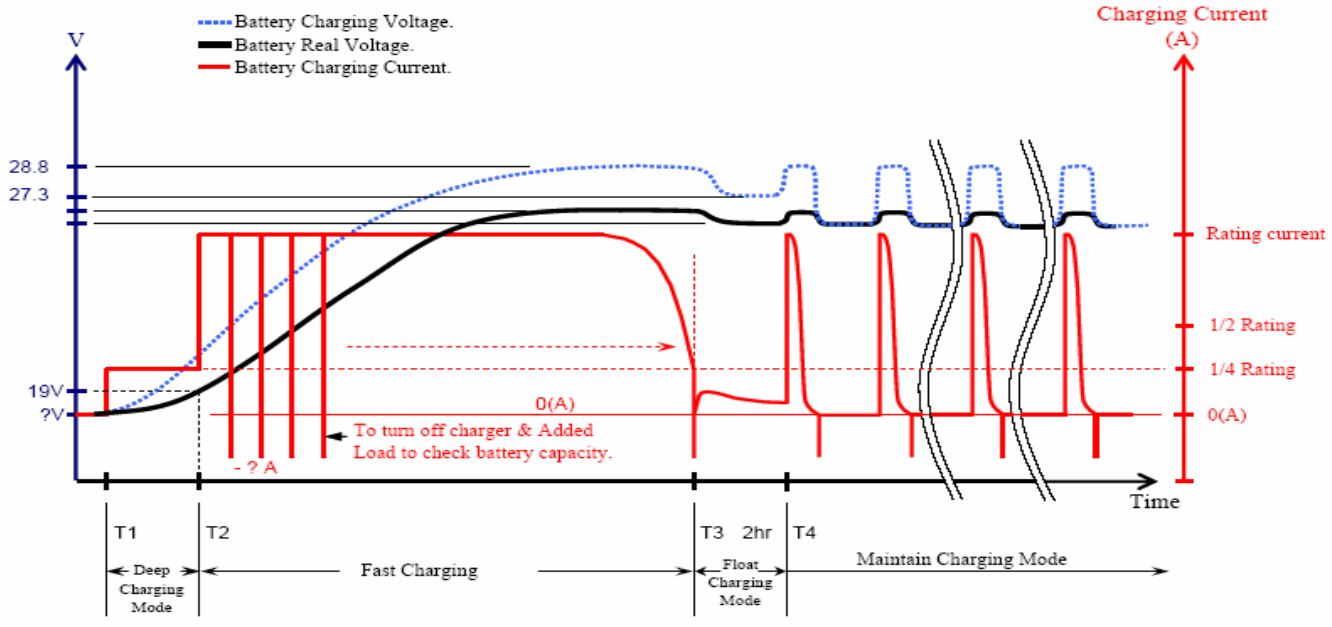
No.	Symbol	Output Current	Float Charge(V)	Fast Charge.(V)	Remark
1	24 V	8A	27.3	28.8	+/- 5%

2.2. Five Step Charging Mode

Charging Mode	V	A	Time
-Deep Charging Mode	28.8V	2A	---
-Fast Charging Mode	28.8V	8A	≦10 hours
-Floating Charging Mode	27.3V	---	2 hours
-Maintain Charging Mode	0~28.8V*1	-3A~8A*1	---

Note1: -3A discharge & +8A Fast charging to recover. Battery & Turn off charger when charger waiting.

2.3 Charging Curve:



— T1 : Check Battery Level ≦ 19V go to Deep Charging Mode / > 19V go to Fast Charging Mode

— T2 : Started to Fast Charging Mode

— T3 : Changed to Float Charging Mode

— T4 : Maintain Charging Mode

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3．Protection Characteristics：

ITEM	CONDITION	SPECIFICATION
3.1 Short Circuit Protection	When an internal fault occurs, or an external fault is applied to the power supply, such that short circuit is applied to the output, the power supply shall shut down. It will enter into normal condition if the fault condition is removed.	Shutdown and no damage.
3.2 Over-Voltage Protection:	When over voltage happened at output terminal that caused by internal fault. The output trip voltage will be less than 34V. It will enter into normal condition if the fault condition is removed.	No damage.
3.3 Over Current Protection:	Output current limit	Less than 8.5A (C. C. Mode)
3.4 Output Reverse Protection		Output fuse off

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4．Environmental Characteristics：

ITEM	CONDITION	SPECIFICATION
4.1 Electric Fast Transients: Refer to IEC1000-4-4 level 3	Impulse:±1KV applied to L, N, pulse duration 50nS period 5 min. Input voltage 110Vac and full load. Impulse: ±2KV applied to L-chassis an N-chassis, pulse duration 50nS period 5 min. Input voltage 110Vac and full load.	Normal operation shall be continued. Normal operation shall be continued
4.2 Lightning Surge: Refer to IEC1000-4-5 level 3	±1KV applied between L, N, pulse rise time1.2us and duty time 50uS, 10 times test each one. ±2KV applied between L-chassis an N-chassis, pulse rise time 1.2us and duty time 50uS, 10times test each one.	Normal operation shall be continued. Normal operation shall be continued
4.3 Electron Static Discharge: (Refer to IEC1000-4-2 Energy Storage Capacitor 150pF; Discharge Resistor 330Ω)	Air Discharge:±8KV. Contact Discharge:±4KV.	Normal operation shall be continued
4.4 Cooling	The power supply is cooled by 40mm 24VDC ball-bearing fans	
4.5 EMI: AC power Supply comply with the Following national standards: EMI Conducted Emission EMI Radiated Emission	115Vac / 240Vac The AC power supply internal filter to meet, combine with customer's system.	 FCC CLASS B CISPR 22 CLASS B VCCI LEVEL II
4.6 Safety conforming:	UL1012; EN60335	
4.7 Leakage Current	240Vac / 50Hz	≤3.5mA
4.8 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied AC 1.5KV / test time 1 minute / cut off current shall be less than 10mA Between AC input and the grounding conductor. AC 1.5KV/ 1 minute/ 10mA	

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ITEM	CONDITION	SPECIFICATION
4.9 Temperature	Operating Storage	0 to 40℃ -20 to +85℃
4.10 Humidity:	Operating Storage	20%~90% 5%~95%

5．LED Indicator：

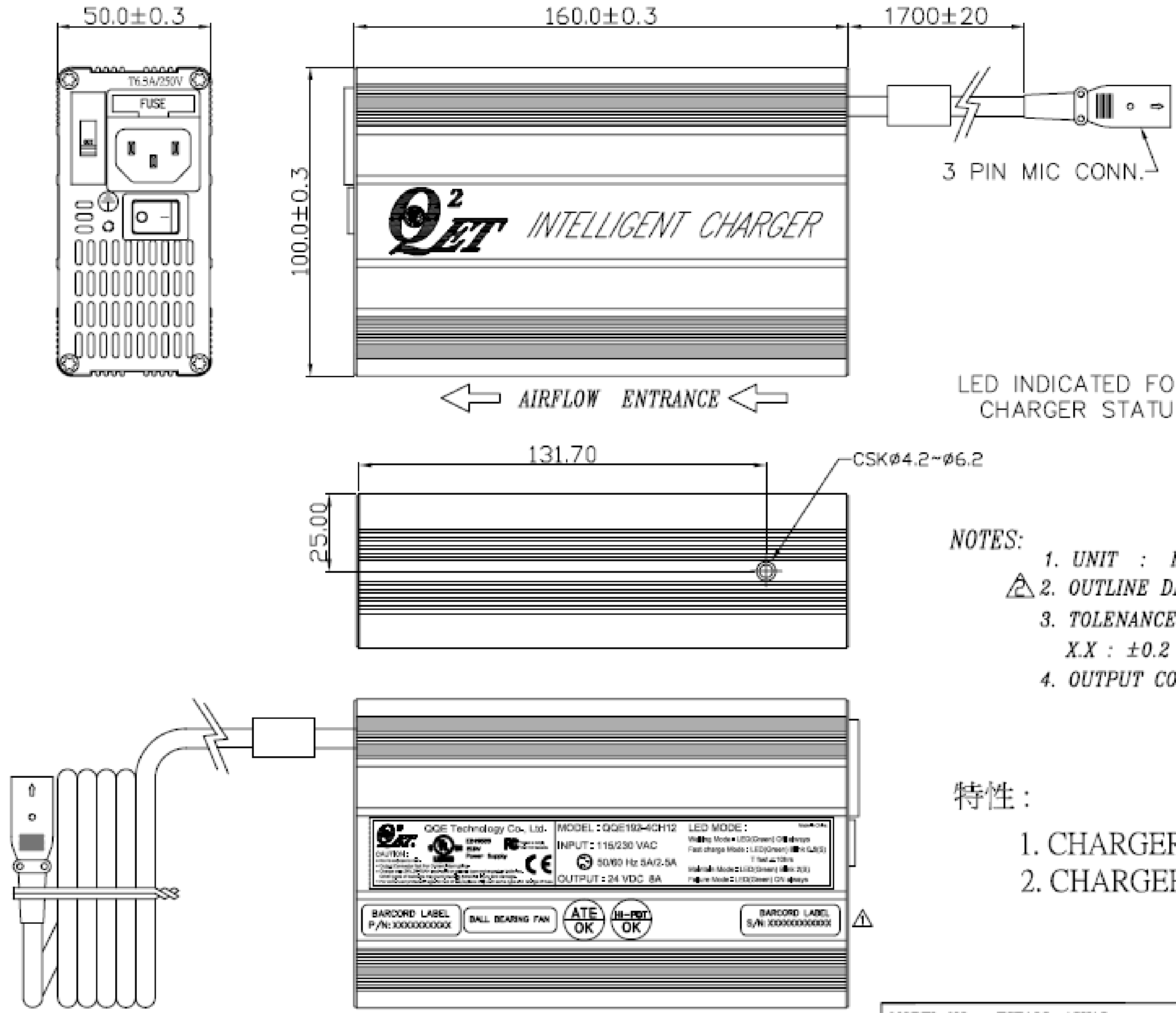
ITEM	CONDITION
5.1 Status LED	
5.1.1 Waiting Mode	LED “ON” always
5.1.2 Deep Charge Mode	LED Flashing 2 times. ._.._.._
5.1.3 Fast Charge Mode	LED Blinking 0.5 (S). Tfast ≤ 10 hrs.
5.1.4 Float Charge Mode	LED Blinking 2 (S).
5.1.5 Maintain Mode	LED Flashing 4 times. *_….*_….
5.1.6 Failure Mode	
5.1.6.1 Charger Fail	LED “OFF” always
5.1.6.2 Battery Fail	LED “ON” always
5.2 Indicator LED	
5.2.1 30%	When battery capacity below 30% the LED is on.
5.2.2 50%	When battery capacity above 50% the LED is on.
5.2.3 70%	When battery capacity above 70% the LED is on.
5.2.4 85%	When battery capacity above 85% the LED is on.
5.2.5 100%	When battery fully charger the LED is on.

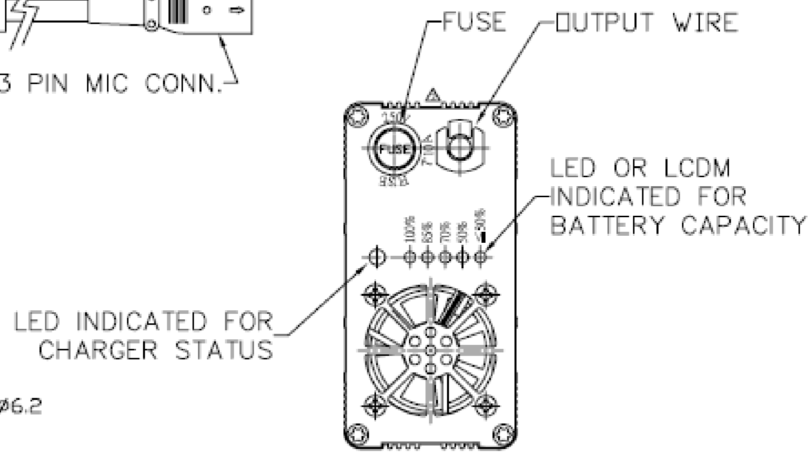
6．Mechanical Characteristics：

ITEM	CONDITION	SPECIFICATION
6.1 Dimension (Length x Width x Height)		160*100*50 mm
6.2 Input AC socket Type		IEC320 C14 Type
6.3 Output DC connector		

Pin assignment

Pin No.	1	2	3
Signal Name	24V	GND	GND





NOTES:

1. *UNIT : MM*
2. *OUTLINE DIMENSION : 160.0*100.0*50.0*
3. *TOLENANCE :*
   X.X : ±0.2   X.XX : ±0.15
4. *OUTPUT CONNECTOR : STANDARD MIC 3 PIN CONN.*

特性：

1. CHARGER ON OR OFF皆可判讀目前電池容量
2. CHARGER ON 可判讀電池好壞

P/N.:9GB1920101

MODEL NO. : FSP192-4CH12		TITLE: OUTLINE DRAWING	SHEET: 1 OF 1	REV:03
R&D	PE	DRAWN	DATE	
			Feb.14.2005	
INTERIOR COUNTERSIGN:			DAVID	

UNIT:mm

Mechanical Drawing(外觀/機構圖)表單編號7000P-0111