SPECIFICATION

MODEL NO	QQE048-5CH71
CUSTOMER NAME	
ENGINEER	Steven
Date out of ENG's sample	
FEEDBACK DATE	

PE	Sale	Engineer	Apprrove	Revison
Ocean		Steven	Arvid	01

Contents

1. General

Power supply QQE048-5CH71 is cooled No fan, can work normally under 14.5Vdc/ 4A, featuring output current limiting protection, short circuit protection, It's designation strictly follows EMC requirements, meets requirements of household electrical equipment standards and gets CE certification.

2. Main products specification

Max. output power	Input voltage range	Output voltage	Output current range	Cobined regulation
56W	100－240Vac	+14.5Vdc	3.7-4.2A	±3%

3. Environmental condition

No.	Item	Technical specification	Unit	Remark
1	Operating temperature	-5－+40，typical value 25℃	℃	Full load
2	Storage temperature	-40—+70，typical value 25℃	℃	
3	Related temperature	5%－95%		With package
4	Altitude	≤3000	m	Work normally,
5	Cooling	No FAN		Working under full load

4. Electrical characteristics

1	**Input characteristics**			
No.	**Item**	**Technical specification**	**Unit**	**Remark**
1.1	Rated input voltage	115/230	Vac	Work normally
1.2	Input voltage range	100-240	Vac	
1.3	AC input voltage frequency	47—63，typical value 50/60	Hz	
1.4	Inrush current	≤35	A	240Vac input/start-up in cold condition /environmental temperature is 25℃
1.5	Max input current	1.2	A	Vin=100Vac, rated load
2	**Output characteristics**			
No.	**Item**	**Technical requirements**	**Unit**	**Remark**
2.1	Fast charge voltage	+14..5	Vdc	
2.2	Floating voltage	+13.7	Vdc	
2.4	Constant current	4	A	
2.5	Cross regulation	±3%		
2.8	Power efficiency	≥80%		Vin=100-240Vac,rated load
3	**Protection characteristics**			
No.	**Item**	**Technical requirements**	**Unit**	**Remark**
3.1	Output over voltage protection		V	Lockout
3.2	Output current limiting protection	4.3	A	@CC MODE
3.3	Output short circuit protection			Auto recover

4	**Charger(LED) indicator**		
No.	**Item**	Status LED	**Remark**
1	**Power on**	LED(red)ON always	
2	Power on and come on charging	LED(red)ON always	
3	Fast charging	LED(yellow)ON always	
4	Floating charge	LED(red)ON always	
5	Battery fully charge	LED(red)ON always	

5. Safety & EMC

No.	**Item**		**Standard（or testing condition）**	**Remark**
1	Electric strength test	Input—output	3000Vac/10mA/1min	No breakdown
		Input—ground	1800Vac/10mA/1min	
		Output—ground	1300Vdc/10mA/1min	
2	Isolation resistance	Input—ground	≥10MΩ@500Vdc	
		Output—ground	≥10MΩ@500Vdc	
3	Leakage current		<3.5mA	Vin=264Vac
4	SAFETY		Designed to meet requirements of UL60950 CE standard.	UL60950 CE MARK
5	EMC	RE	CLASS B	EN55014
		CE	CLASS B	EN55022
		Air discharge	LEVEL 3	EN61000-4-2(discrimination B)
		Contact discharge	LEVEL 3	EN61000-4-2(discrimination B)
		RS	LEVEL 3	EN61000-4-6(discrimination A)
		CS	LEVEL 3	EN61000-4- 3 (discrimination A)
		EFT	LEVEL 3	EN61000-4-4 (discrimination B)
		Surge	LEVEL 4	EN61000-4-5,differentcial module 1 KV, common module 2KV(discrimination B)

Remark: discrimination A— function OK under technical requirement range; discrimination B--function temporarily debasement without reposition and halt is allowed; discrimination R－－ physical damage or failure of equipment are not allowed, but damage of protection device (fuse) caused by

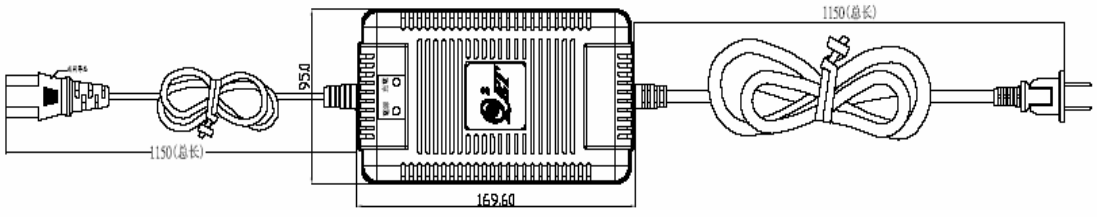
interference signal of outside is allowed, and the whole equipment can work normally after replacement of protection device and reset of running parameter.

6. Environmental testing requirements

No.	Item	Technical specification	Remark
1	High temperature operating	+40℃	Features ok
2	Low temperature operating	-5℃	Features ok
3	High temperature storage	+70℃	Work normally after recovery under normal temperature for two hours
4	Low temperature storage	-40℃	Work normally after recovery under normal temperature for two hours
5	Vibration （sine）	5—9Hz，3.5 mm amplitude； 9—200Hz ， 10 m/s^2 acceleration； sweep frequency vibration for 5 times at 3 perpendicular direction （about 3×50 min）	（1）element （2）appearance （3）each target
6	Shock	1/2 sine wave, acceleration is 20g, pulse width is 11ms，X,Y,Z three directions ， three times per direction	

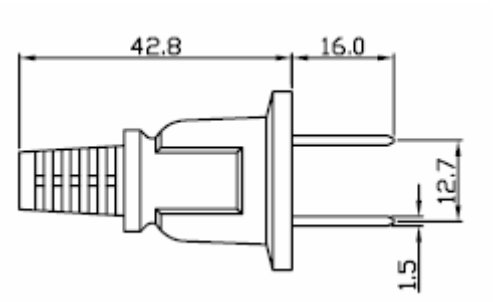
7. Mechanical characteristics

Outline dimension（Unit： mm）length ×width ×height =169.6×95×59.5

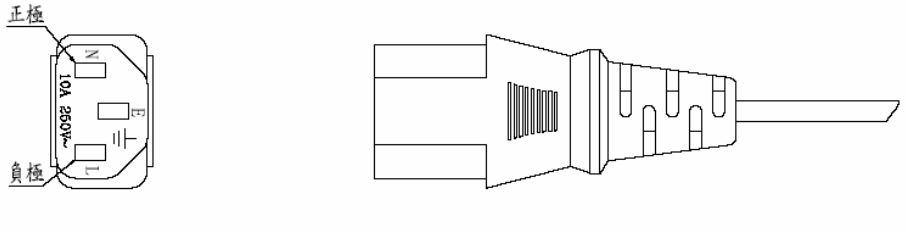


Tolerance of outline dimension is ±0.5mm，others are ±0.2mm in the diagram;

2、Input terminator diagram & definition



3、Output terminator diagram & definition:



4. Other requirements

No.	Item	Technical specification	Remark
1	Input cable	RVV(300/300) 2*0.75mm 1150mm OD:5.5	
2	Output cable	RVV(300/300) 2*0.75mm 1150mm OD:5.5	
3	Weight	0.5Kg	
4	Placement	Horizontal	

8. Package, transportation & storage

1. Package

There are product name, model, making of manufacturer, safety approval, manufacturing date on the package box, and manual of specifications and packing list in the package box.

2. Transportation

Suit for transportation by truck, ship, and plane. The products should be shielded by tent from sunshine, and loaded and unloaded carefully.

3. Storage

Products should be stored in package box when it is not used. And warehouse temperature should be －40℃—+70℃, and relative humidity is 5%—95%. In the warehouse, there should not be harmful gas, inflammable, explosive products, and corrosive chemical products, and strong mechanical vibration, shock and strong magnetic field affection. The package box should be over ground at least 20cm height, and 50cm away from wall, thermal source, and vent. Under this requirement, product has 2 years of storage period, and should be rechecked when over 2 years.

9. Reliability requirements

1. **Reliability**

MTBF（standard, environmental temperature, load requirement）≥15Khour ；testing condition：25℃， full load， testing proved value.

10. Attention

1. Distance of assembled bottom board and pin of element on power supply panel should be more than 8mm; distance of heat radiator and other conductor should be more 8mm, if cannot, isolation treatment such as placing PVC sheets or colloidal silica sheets is needed.

2. Pay attention to high voltage, avoiding touch areas marked with “high voltage” logo.

11. Label