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Specification

Model: 6V & 12V 2/4/6A

Model No: I-7011

Revision: 1.0

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1 INPUT REQUIREMENTS

1.1 INPUT VOLTAGE

The power supply must operate on a sinusoidal input voltage defined in table 1.

Input Range	Minimum	Nominal	Maximum	Unit
180-264	180	230	264	Vac

Table 1 - Input Voltage Range

1.2 INPUT FREQUENCY

The power supply shall operate within specification 50~60 ±3 Hz.

1.3 INPUT CURRENT

Maximum steady state input current shall not exceed 1 A for any line voltage specified in table 2.

1.4 INPUT PROTECTION

1.4.1 INPUT CURRENT PROTECTION

A fuse with rating of 4 A / 250 V(Time Lag) shall be installed on the input line side near the input connector to provided protection to the power supply.

1.5 EFFICIENCY

The power supply efficiency shall not be less than 80% at the maximum load of section 2.2

2 OUTPUT REQUIREMENTS

2.1 OUTPUT POWER

Unit total output power, under steady state conditions, shall not exceed 80 W.

2.2 OUTPUT VOLTAGE AND CURRENT

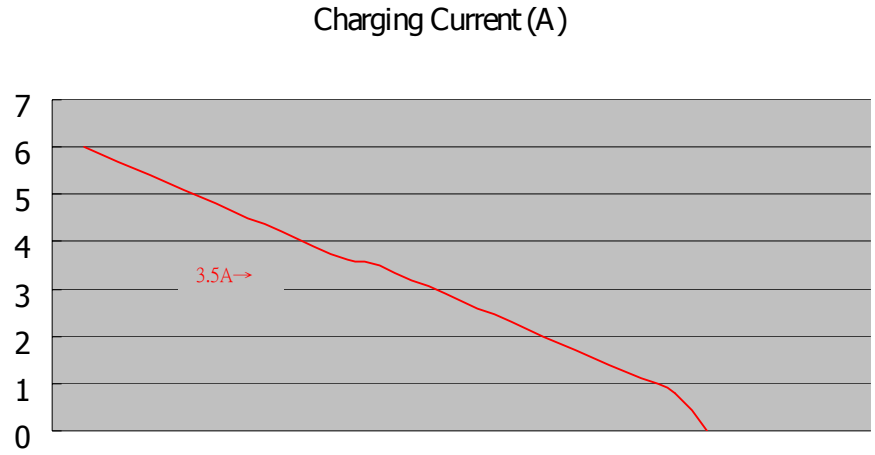
MINIMUM OUTPUT VOLTAGE

Rated Output Currrnt (A)	Minimum Output Voltage (v)	
	12(V)	6(V)
2	12.48	6.24
4	12.48	6.24
6	12.78	6.39

Table 2 – Minimum Output Voltage

2.3 REFERENCE CHARGING CURVE

12 V



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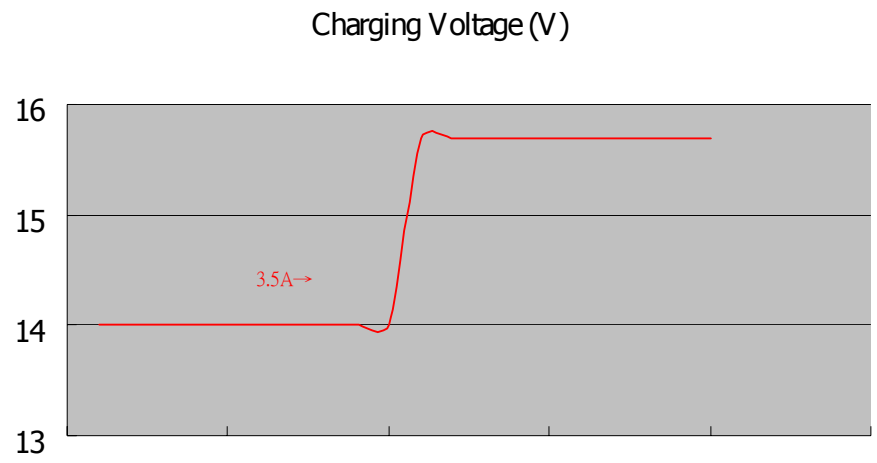
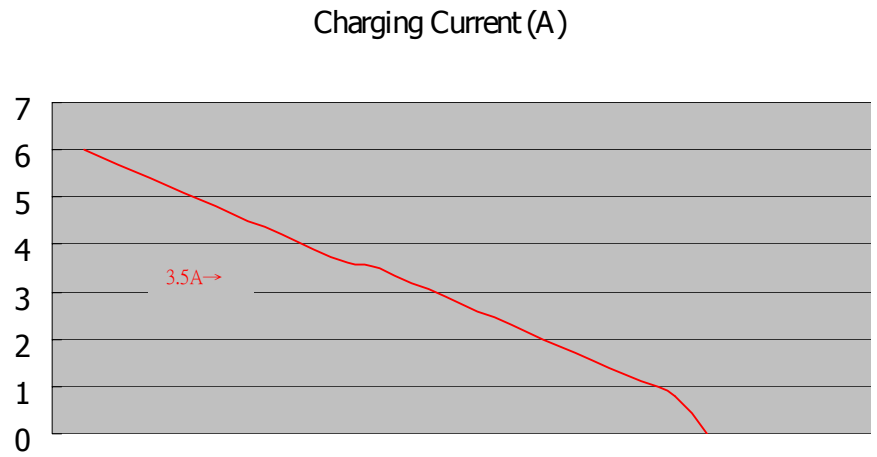
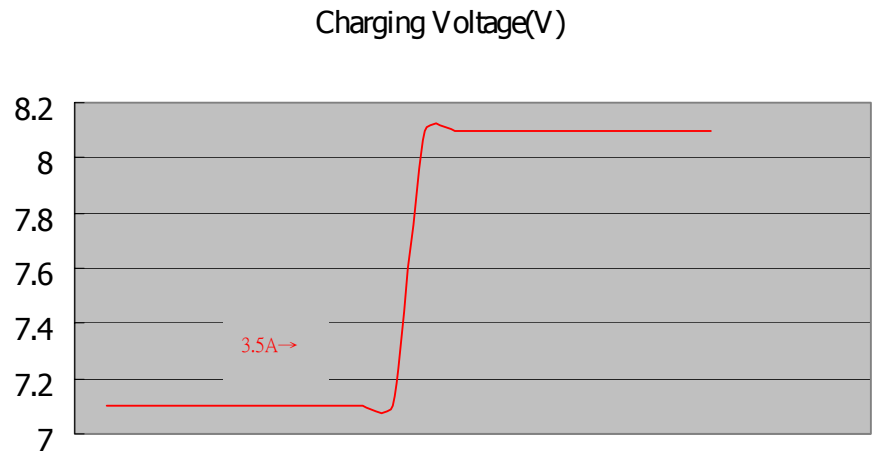


6V





2.4 OVER POWER PROTECTION

Over power protection shall operate at 110% Max. of rated power defined in section 2.2 at table-1 line input conditions.

2.5 SHORT CIRCUIT POTECTION

Power supply shall have self-limiting protection to protect against short circuit or overload conditions. No damage to the supply shall result from intermittent short circuit condition.

3 ENVIRONMENT

3.1 OPERATING / STORAGE TEMPERATURE

Operation: 0 to 40℃.

Storage: -20 to 80℃

3.2 HUMIDITY

Operation: 10% to 90% RH, non-condensation.

Storage : 5% to 95% RH, including condensation.

3.3 SHOCK AND VIBRATION

3.3.1 SHOCK NON-OPERATION

The unit shall be subjected to a series of six(6) shocks, one(1) on each side,

Top and bottom. Each shock shall consist of a 50G half sine wave pulse with

a velocity change of 167 in/sec.

3.3.2 VIBRATION

Operating: 10-250Hz, 0.25Gs peak to peak, 3 axes, 15 min sweep.

Non-Operation: 10-300Hz, 2.0Gs peak to peak, 3 axes, 15 min sweep.

3.4 CALCULATED MEAN TIME BETWEEN FAILURES (MTBF)

Power supply shall have a calculated MTBF of greater than 30,000 hours, calculated utilizing MIL-HDBK-217F with the following assumptions:

Input voltage: 220Vac / 50Hz

Output load: Rated full load

Ambient temperature: 25 degrees C

4. SAFETY

Unless otherwise specified, the supply is designed to meet IEC 60335-2-29 and/or equivalent safety standards for use in Battery Charger Equipment. Specific agency certifications will be applied at customer's request and cost.

Note: Leakage current shall be less than 0.5 mA at input voltage of 230Vac / 50Hz.

4.1 IMMUNITY

4.1.1 ELECTROSTATIC DISCHARGE (ESD), EN 61000-4-2

±8KV (Air discharge)

±4KV (Contact discharge)

±4KV (Indirectt discharge)

4.1.2 *RADIATED FIELD IMMUNITY, EN 61000-4-3*

Power supply shall withstand following condition:

Frequency Range: 80 - 1000MHz

Field Strength: 3 V/m with 80% amplitude modulation of 1kHz

4.1.3 *FAST TRANSIENT IMMUNITY, EN 61000-4-4*

Power supply shall withstand EN 61000-4-4 +/-2kV requirements.

4.1.4 *SURGE IMMUNITY, EN 61000-4-5*

Power supply shall withstand +/- 1kV (L – L) and +/- 2kV (L – PE) without functional failure

4.1.5 *CONDUCTED IMMUNITY, EN 61000-4-6*

Power supply shall withstand following condition:

Frequency Range: 0.15 - 80MHz

Field Strength: 3 V/m with 80% amplitude modulation of 1kHz

4.1.6 *POWER FREQUENCY MAGNETIC FIELD IMMUNITY, EN 61000-4-8*

Power supply shall meet EN61000-4-8 requirements

4.1.7 *VOLTAGE DIPS AND INTERRUPTIONS, EN 61000-4-11*

Power supply shall meet EN61000-4-11 requirements.

4.2 DIELECTRIC VLOTAGE WITHSTAND (HI-POT)

The power supply shall withstand following Hi-pot test without breakdown.

4242 Vdc line to ground for 1 minute.

4242 Vdc input to output for 1 minute.

Note: Time duration may reduce to 1 second on production.

4.3 PRODUCT DROP TEST

Number of Drops : 3 times.

Height: 90 cm

Floor surface: Concrete Floor

Judging Criteria : To withstand Hi-Pot Test，and without electrical breakdown.

4.4 BALL IMPACT TEST

Ball Spec.：Steel Ball，Diameter=51.8 m/m，Weight=535 gw

Height of Drop ： 90 cm

Number of Drops： 3 times.

Judging Criteria ： To withstand Hi-Pot Test，and without electrical breakdown.

4.5 STRAIN RELIEF TEST

The strain relief withstand a pull force of 35 lb applied for 1 minute in a direction mostlikely to cause damage.

4.6 CLAMP ATTACHMENT SECURITY

Conductor is securely attached to clamp，conductor to clamp connection withstands a 35 lb tensile load without separation.

4.7 HANDLE ATTACHMENT SECURITY

Handle to enclosure connection withstands 4 times weight of the charger with separation.

4.8 CLAMP RETENTION

Clamp provides good terminal gripping capability. Clamp does not become dislodged from 5/8 inch diameter lead terminal post when pulled with a force of 10 lb at 90 degrees to the axis of the clamp.

4.9 CORROSION RESISTANCE

Clamp demonstrates no excessive surface corrosion after 12 hours exposure to 100% humidity 100°F.

5 EMC SPECIFICATION

5.1 EMI REQUIREMENTS

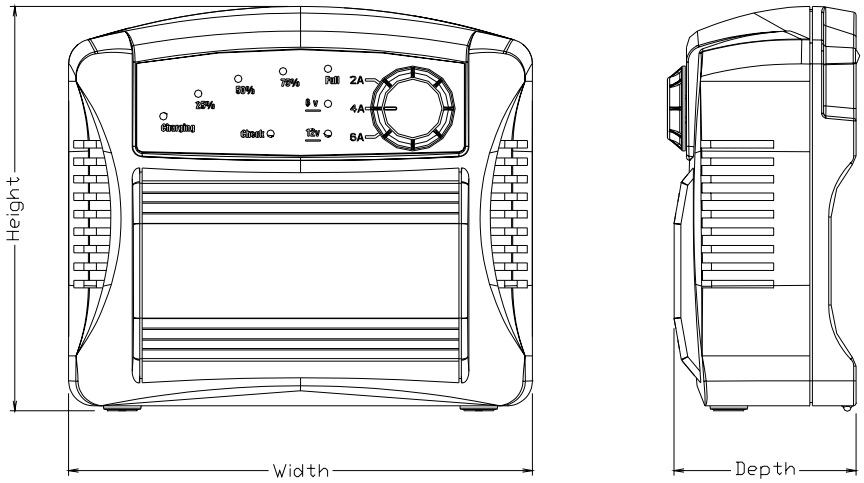
Meet CISPR-22 standard

Report No : 41217003-E

6 MECHANICAL

6.1 DIMENSION

6.1.1 PRODUCT



Height = 162 m/m

Width = 186 m/m

Depth=73 m/m

Weight=1075 gw

6.1.2 CLAMP

Length = 75 m/m

Width = 44 m/m

Jaw Length = 35 m/m

Jaw Width = 16 m/m

Weight = 17gw

6.2 MATERIAL

6.2.1 ENCLOSURE

Housing – Plastic ABS UL 94-V0

Bind Cable – Silicon Rubber

Foot Pad – NBR Rubber

6.2.3 CLAMP

Clamp – SPCC , Nickel-plate

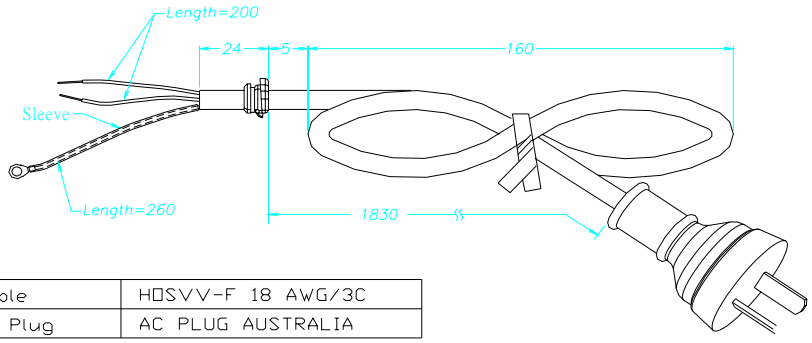
Clamp Spring – SUS-4

Handle – PVC

6.3 INPUT CONNECTOR AND OUTPUT CABLE

6.3.1 INPUT CONNECTOR

AC Input connector shall be a Class I Plug Style.



Cable	H□SVV-F 18 AWG/3C
AC Plug	AC PLUG AUSTRALIA

AC CORD: SVT TYPE

Insulation Thickness: 0.07 inch

Conductor Strand Dia: 0.16 mil

Number of Stands: 41

Total Circular Mil Area: 0.8 cir mil

6.3.2 OUTPUT CABLE:

The output cable shall be 6 ft mm long, SPT-2 18 AWGX2C wire, and Black/RED in color.

Insulation Thickness: 0.07 inch

Conductor Strand Dia: 0.16 mil

Number of Stands: 41

Total Circular Mil Area: 0.8 cir mil

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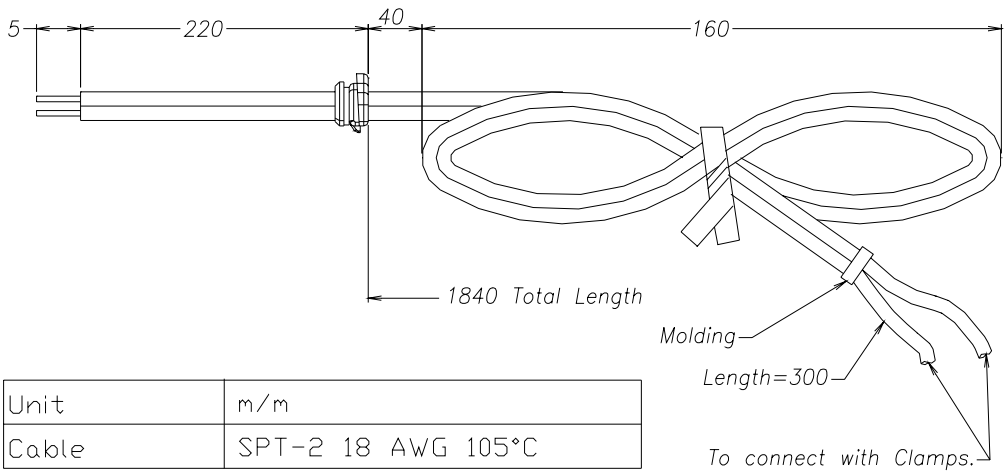

Unit	m/m
Cable	SPT-2 18 AWG 105°C