KINRI® INNOVATE

BATTERY CHARGER 1200W SERIES

Features

. Wide input 90V to 264VAC, 50~60Hz suitable for worldwide
. Output voltage selectable from 14.6V to 87.6Vdc
. Class B Conducted and Radiated EMI for information devices
. Charging current and voltage displayed on LCD screen
. Metal case and fan forced convection better for cooling
. High Efficiency up to 90% and power factor up to 0.98
. Over Temperature/ Reverse Connection/ Short Circuit Protections

Safety Standards

. IEC60335-1:2010+A1:2013 + A2:2016 /IEC60335-2-29 CB
. UL1310:2018 Ed.7+R:09 + CSA C22.2#223:2015 Ed.3
. EN 60335-2-29 /EN60335-1:2012 for European Union
. AS/NZS 60335.2.29: 2017 for Australia and New Zealand
. J61558-1/J61558-2-16 /J3000 /J55014-1 for Japan market.

UL62368-1 BS EN/EN62368-1 R33100 RoHS J62368-1 K60950-1 AS/NZS60950-1 GB4943.1

Product Description:

It is a highly reliable 1200W desktop style battery charger solution with wide range 90-264Vac input and single output available from 14.6V to 87.6Vdc for different voltage batteries. Equipped with a standard IEC320-C14 AC inlet. The entire series supplies different models which is suitable for 12V /24V /36V /48V /56V /72V lead-acid batteries and Li-ion batteries.This 1200W series battery charger is widely used in charging electric bicycles, tricycles, scooters, power tools, robots and other electric-related equipment.

With the efficiency up to 90% and built-in active PFC with PF>0.98, this battery charger is designed according to worldwide satisfy standards. The charger utilizes aluminum alloy case and smart chip controlled fan for cooling keeping the charger in low temperature rise.

Technical Specification

Typ. Model	AP-PF1200CH01460700	AP-PF1200CH02920400	AP-PF1200CH04200300	AP-PF1200CH07140170	AP-PF1200CH08760140
Output					
Output Voltage	14.6VDC	29.2VDC	42.0VDC	71.4VDC	87.6VDC
Charging Current	70A	40A	30A	17A	14A
Output Power	1022.0W Max.	1168.0W Max.	1260.0W Max.	1213.8W Max.	1226.4W Max.
Voltage Accuracy	±0.2V	±0.2V	±0.2V	±0.2V	±0.2V
LED Indicator	Power on: Green light flashed / Charging: Blue light on / Full charged: Green light on / Abnormal: Red light flashed				
Input					
Input voltage	90 - 264Vac or 127- 374Vdc				
Input Frequency	50-60Hz (When the input is AC)				
Input Current	15A Max. @ 100 ~240Vac 50/60Hz input				
Inrush Current	100A Max. @ 100 ~240Vac 50/60Hz input				
Power Factor	>0.98 @ 120Vac 60Hz input; >0.95 @230Vac 50Hz input				
Efficiency (Typ.)	90%	90%	90%	91%	91%
Leakage Current	≤3.5mA @ full input range				
Protections					
Over temperature	Shut down o/p voltage, re-power on to recover				
Short Circuit	When Short Circuit happened ,charger will turn off. No damage.				
Reverse Connection	When the battery is polarity reversed ,the charger will cut off the connection between the circuit and the battery				
Environmental					
Operation Temperature	-10℃ to +45℃, 10%RH to 90%RH				
Operation Altitude	≤2000m @ full load and rated operating temperatures				
MTBF	≥50000Hrs @ full load and rated operating temperatures				
Mechanical					
Dimensions (W x L x H)	312.0 x 142.0 x 91.0mm (12.28 x 5.59 x 3.58 inch)				
Unit Weight	3.0kg±200 grams				
Packing Information	5pcs/ Carton, carton dimensions:47*37*20cm, 16.0kgs/ Carton				

TEST REPORT

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-0.2V ~ +0.2V	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD / Ta:25℃	-0.08V ~ +0.09V	P
2	CONTINUOS OUTPUT CURRENT	70A	I/P:230VAC /I/P:115VAC O/P:CV=12V / Ta:25℃	68.95A /230VAC 68.88A/115VAC	P
3	LED INDICATOR	Charging (CC): BLUE Floating charging: GREEN	I/P:230VAC O/P: SETTING / Ta:25℃	>1.985A, LED: BLUE <1.663A, LED: GREEN	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	VOLTAGE RANGE	90VAC~264VAC	I/P:TESTING O/P:FULL LOAD / Ta:25℃	85V~264V	P
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 100VAC ~ 240VAC O/P:FULL~MIN LOAD / Ta:25℃	TEST: OK	P
3	POWER FACTOR	0.96 / 230VAC 0.98 / 115VAC	I/P:230VAC IP: 115VAC O/P: FULL LOAD & Ta:25℃	PF=0.978 / 230VAC PF=0.991 / 115VAC	P
4	EFFICIENCY	90% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25℃	91.32%	P
5	AVERAGE EFFICIENCY	>90%	I/P:115/230VAC &O/P:25%、50%、75%、100% LOAD & Ta:25℃	90.96% (115VAC) 90.88% (230VAC)	P
6	AC CURRENT	15.0A (Max)	I/P:100VAC & O/P:FULL LOAD Ta:25℃	13.62A	P
7	INRUSH CURRENT	<120A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25℃	66.71A	P
8	LEAKAGE CURRENT	< 3.5mA	I/P:240VAC & O/P:Min LOAD Ta:25℃	L-FG:1.12mA N-FG:1.02mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	OVER LOAD PROTECTION	95 ~ 115%	I/P:230VAC I/P:115VAC O/P:TESTING Ta:25℃	100.7% /230VAC 100.7% /115VAC Constant current limiting recovers automatically after fault condition is removed	P
2	OVER VOLTAGE PROTECTION	15.0V ~ 16.5	I/P:230VAC /I/P:115VAC O/P:MIN LOAD Ta:25℃	15.22V /230VAC 15.26V /115VAC Shut down o/p voltage, re-power on to recover	P
3	SHORT PROTECTION	SHORT OUTPUT 1 HOUR NO DAMAGE	I/P:264VAC O/P:FULL LOAD & Ta:25℃	NO DAMAGE HICCUP MODE	P
4	REVERSE CONNECTION	REVERSE CONNECTION for 1H NO DAMAGE	I/P: 230VAC O/P: TESTING Ta:25℃	Shut down O/P voltage, no damage. Re-power on to recover	P

SAFETY TEST & E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 1.5KVAC/min I/P- FG: 1.5KVAC/min O/P-FG:0.5KVAC/min	I/P-O/P: 1.6 KVAC/min I/P-FG: 1.6 KVAC/min O/P-FG:0.6 KVAC/min Ta:25℃	I/P-O/P:2.33mA I/P-FG: 2.18mA O/P-FG:1.116mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>10M Ω I/P-FG: 500VDC>10M Ω O/P-FG:500VDC>10M Ω	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25℃	I/P-O/P: 9999M Ω I/P-FG: 9999M Ω O/P-FG:9999 M Ω NO DAMAGE	P
3	CONDUCTION	BS EN/EN55014(CISPR32), FCC PART 15 / CISPR22 CAN	I/P：230 VAC (50HZ) O/P：FULL/50% LOAD Ta：25℃	PASS Test by certified Lab	P
4	RADIATION	BS EN/EN55014(CISPR32), FCC PART 15 / CISPR22 CAN	I/P： 230 VAC (50HZ) O/P：FULL LOAD Ta：25℃	PASS Test by certified Lab	P
5	SURGE	BS EN/EN61000-4-5 LIGHT INDUSTRY L-N: 1KV	I/P： 230 VAC/50HZ O/P：FULL LOAD Ta：25℃	CRITERIA B	P
6	E.S.D	BS EN/EN61000-4-2 LIGHT INDUSTRY AIR：8KV / Contact：4KV	I/P： 230 VAC/50HZ O/P：FULL LOAD Ta：25℃	CRITERIA B	P

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	LINDA	JUDY	ZHANG DL