CE

■ Features

- Charger for Lithium-Ion batteries (Li-ion,LiFePO4) and Lead-Acid (AGM, GEL, VRLA) batteries
- Built- in 4 stage charging curve(For Lithium batteries) and 3 stage charging curve (For Lead-Acid batteries)
- Universal AC input, world-wide range AC90-264V 50/60Hz
- With active PFC function, CE & FCC certifications
- Optional CAN or 485 communication（Defined when order）
- Protection: Short circuit / Over voltage /Over temperature /Reverse polarity protection
- Waterproof and dustproof, IP67 class level

■ Applications

- Golf carts/ Buggy/Utility EV
- Electric forklift
- AGV/ Drone/ Robot
- Electric motorcycle/ tricycle
- Energy storage system
- Marina / Ship / Boat

■ Description

The WP800 series is an aluminum alloy housing waterproof IP67 charger with a rated output power 800W at 220-240VAC input and 600W at 100-120VAC input, with programmable 3 and 4 stages charging curves for 12V 24V 36V 48V 60V Lead- acid batteries (Gel, AGM, VRLA) and Lithium batteries (Li-ion,LiFePO4). They are widely used for golf club cart, utility EV, AGV and so on.

The part-number named rule as following:

WP800-XXXYYY

- XXX — Rated current
- YYY — Rated voltage
- WP800 — Series name

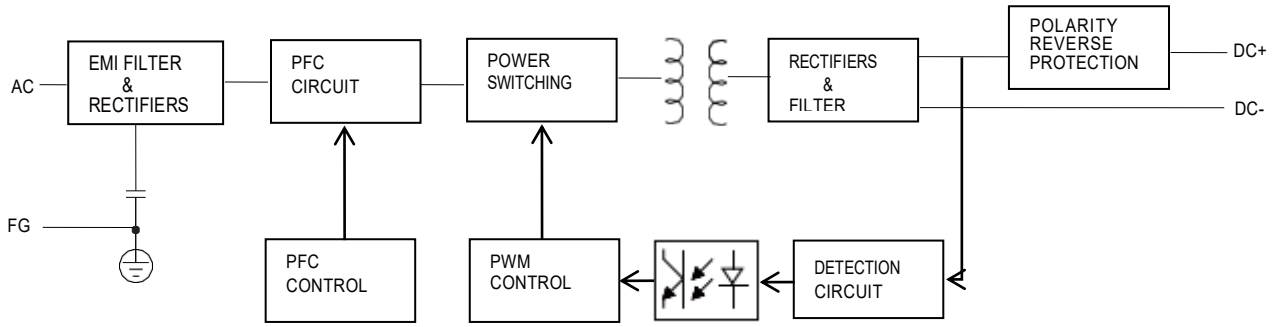
PECIFICATION (Lead-Acid battery charger)

MODEL			WP800-148400	WP800-296280	WP800-444180	WP800-592140	WP800-740110
OUTPUT	Charge voltage (High voltage)		14.8V±1%	29.6V±1%	44.4V±1%	59.2V±1%	74V±1%
	Charge voltage range		10-14.8V	20-29.6V	30-44.4V	40-59.2V	50-74V
	Float charge（Low voltage）		13.8V±1%	27.6V±1%	41.4V±1%	55.2V±1%	69V±1%
	Charge current	200-240VAC	40A±10%	28A±10%	18A±10%	14A±10%	11A±10%
		100-120VAC	35A±10%	20A±10%	13A±10%	10A±10%	8A±10%
	Charge-end current		≤8A ±20%	≤5.6A ±20%	≤3.6A ±20%	≤2.8A ±20%	≤2.2A ±20%
	Rated power	200-240VAC	592W	828.8W	799.2W	828.8W	814W
		100-120VAC	518W	592W	577.2W	592W	592W
	Recommended battery capacity Note.3		60 - 200Ah	40 - 150Ah	30 - 100Ah	20 - 80Ah	15 - 60Ah
	Leakage current from battery (Typ.)		⩽1mA				
CHARGE INDICATOR	LED		Red: battery capacity is less than 80%. Yellow: battery capacity is greater than 80%. Green: standby or battery is full				
INPUT	Rated input voltage		100 - 240VAC 50 / 60Hz				
	Input voltage range Note.4		90 - 264VAC				
	Power factor (Typ.)		PF>0. 96 @full load				
	Input current (Typ.)		6.8A@100VAC				
	Inrush current (Typ.)		Cold start 75A @230VAC				
	Standby input power		< 2.5W				
	Efficiency (Typ.)		90%	92%	93%	93%	93%
PROTECTION	Short circuit Note.5		Protection type : Shut down output				
	Over voltage		>15.5V*N				
	Reverse polarity		By internal relay				
	Over temperature		Shut down output, recovers automatically after temperature goes down				
ENVIRONMENT	Working temperature		-10 - +40℃ (Refer to " Derating Curve")				
	Working humidity		0 - 90% RH				
	Storage temperature, humidity		-40 - +70℃, 0 - 95% RH				
	Cooling		Fan convection				
	Vibration resistance		10 – 50Hz, 2G 10min. 1cycle, 60min. each along X, Y, Z axes				
SAFETY& EMC(Note.6)	Max. temperature rise		< 30℃ on casing				
	Hi-Pot Insulation		i/p to o/p: 3000V (1 min)				
	Safety standards		IEC62368				
	EMC Emission		Parameter	Standard			Test Level I Note
			Conducted	EN55032 FCC PART15			Class B
			Radiated	EN55032 FCC PART15			Class B
			Harmonic Current	EN61000-3-2			.....
			Voltage Flicker	EN61000-3-3			.....
	EMC IMMUNITY		EN61000-4-2，EN61000-4-3，EN61000-4-4，EN61000-4-5，EN61000-4-6，EN61000-4-8，EN61000-4-11				
OTHERS	MTBF		30000H				
	Dimension		288*129.5*81.7mm (L*W*H)				
	Weight		3750g				

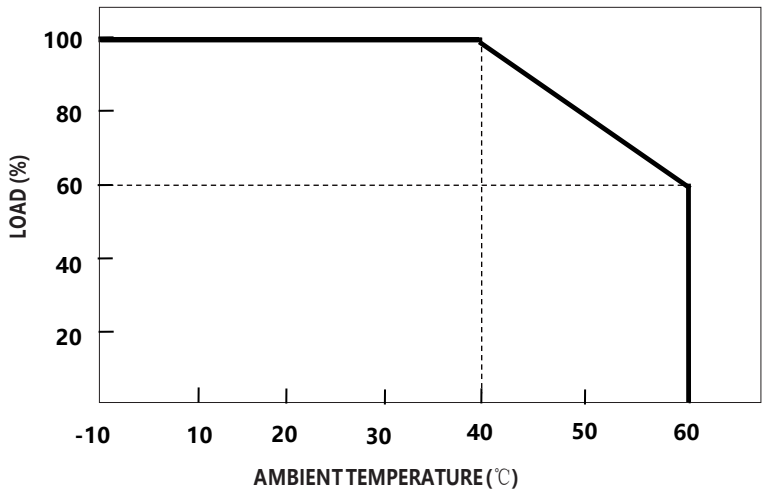
NOTE

1. Modification for charger specification may be required for different battery specification. Please contact battery vendor and Green digital power for details.
2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
3. This is Green suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. This protection mechanism is specified for the case the short circuit occurs after the charger is turned on.
6. The battery charger is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EM I testing of component power supplies."

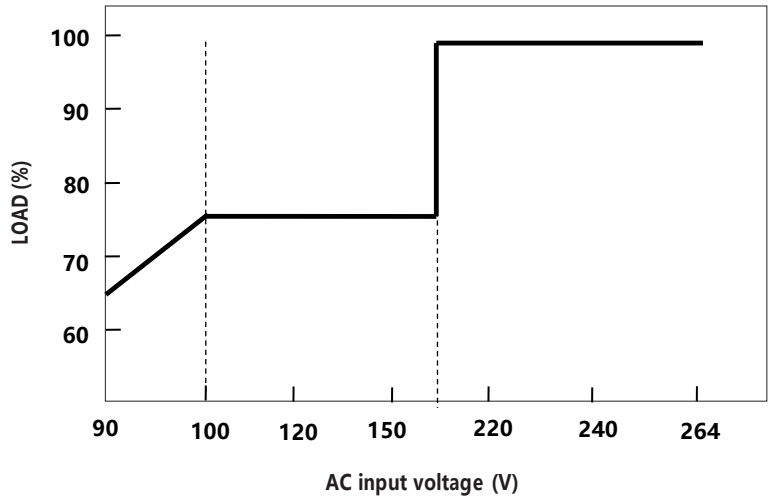
Block Diagram



Derating Curve

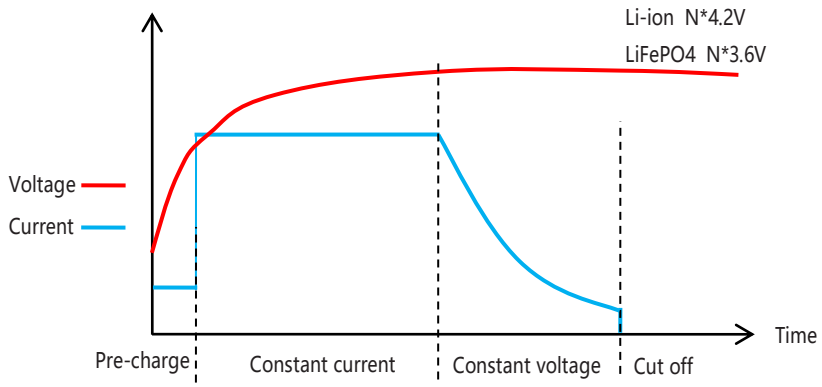


Static Characteristics

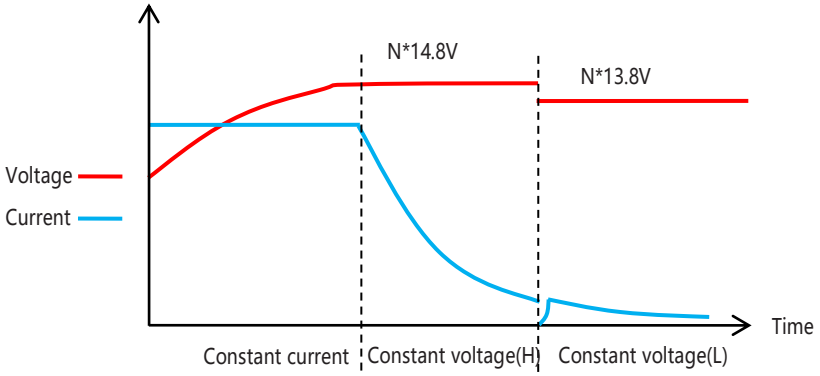


1.Charging Curve

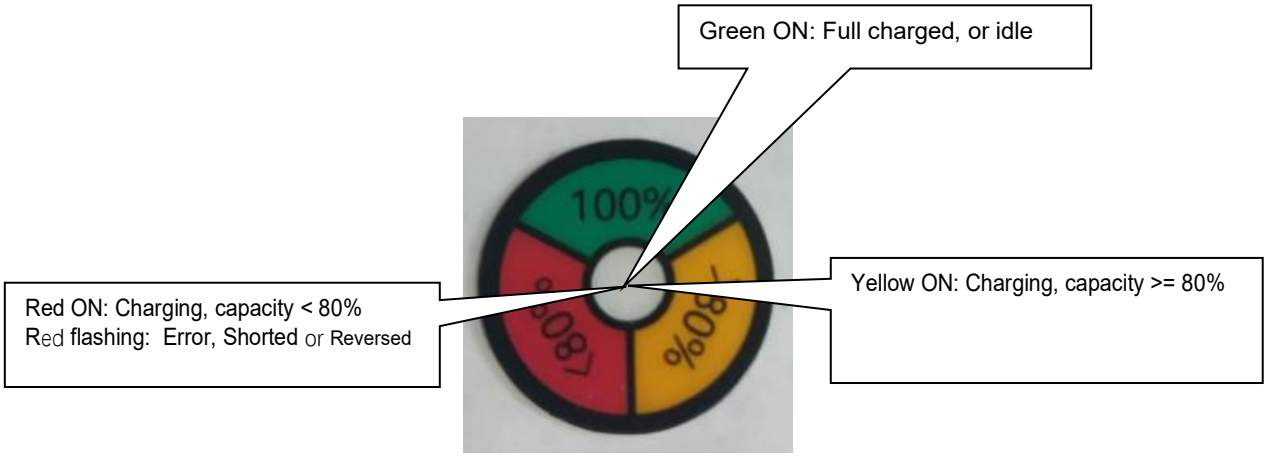
◎ 4 stage charging curve(Li-ion & LiFePO4 battery charger)



◎ 3 stage charging curve(Lead-Acid battery charger)



2.LED indication



■ Mechanical specification