



■ 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

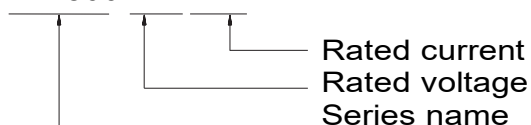
- Golf carts/ Buggy/Utility EV
- Electric forklift
- AGV/ Drone/ Robot
- Electric motorcycle/ tricycle
- Energy storage system
- Marina / Ship / Boat

■ 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:

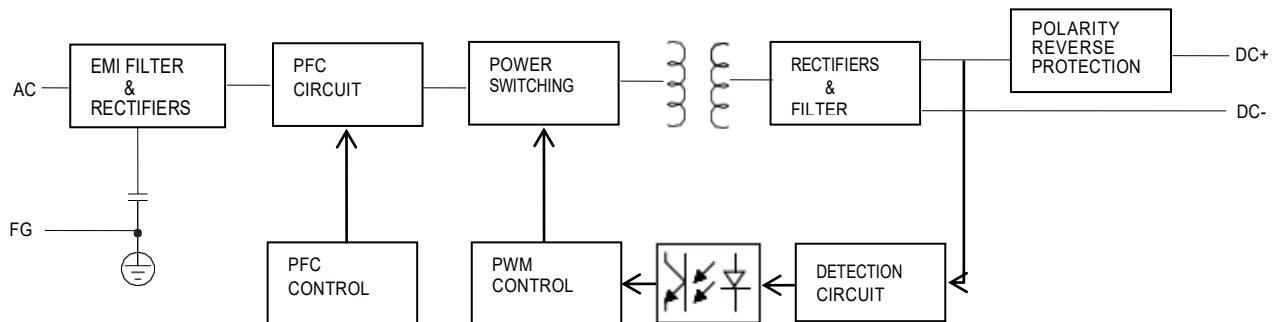
WP800-XXXYYY



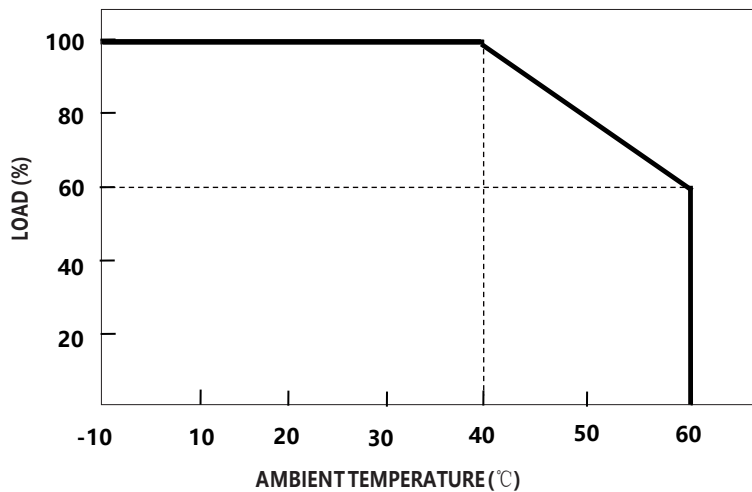
SPECIFICATION(Li-ion battery charger)

MODEL		WP800-168350	WP800-294280	WP800-420200	WP800-588140	WP800-714115	WP800-840100	
OUTPUT	Charge voltage	16.8V±1%	29.4V±1%	42.0V±1%	58.8V±1%	71.4V±1%	84.0V±1%	
	Charge voltage range	10-16.8V	17.5-29.4V	25-42.0V	35-58.8V	42.5-71.4V	50-84V	
	Charge current	200-240VAC	35A±10%	28A±10%	20A±10%	14A±10%	11.5A±10%	10A±10%
		100-120VAC	30A±10%	20A±10%	14A±10%	10A±10%	8A±10%	7A±10%
	Pre-charge current	≤7A ±20%	≤5.6A ±20%	≤4A ±20%	≤2.8A ±20%	≤2.3A ±20%	≤2A ±20%	
	Charge-end current	≤3.5A ±20%	≤2.8A ±20%	≤2.0A ±20%	≤1.4A ±20%	≤1.1A ±20%	≤1A ±20%	
	Rated power	200-240VAC	588W	823.2W	840W	823.2W	821.1W	840W
		100-120VAC	504W	588W	588W	588W	571.2W	588W
Recommended battery capacity Note.3		60 - 200Ah	40 - 150Ah	30 - 100Ah	20 - 80Ah	15 - 60Ah	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						
PROTECTION	Efficiency (Typ.)	90%	92%	93%	93%	93%	93%	
	Short circuit Note.5	Protection type : Shut down output						
	Over voltage	>4.35V*N						
	Reverse polarity	By internal relay						
ENVIRONMENT	Over temperature	Shut down output, recovers automatically after temperature goes down						
	Working temperature	-10 - +40℃ (Refer to " Derating Curve")						
	Working humidity	0 - 90% RH						
	Storage temperature, humidity	-40 - +70℃, 0 - 95% RH						
	Cooling	Fan convection						
SAFETY & EMC (Note.6)	Vibration resistance	10 - 50Hz, 2G 10min. 1cycle, 60min. each along X, Y, Z axes						
	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 FCCPART15				Class B	
		Radiated	EN55032 FCCPART15				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."							

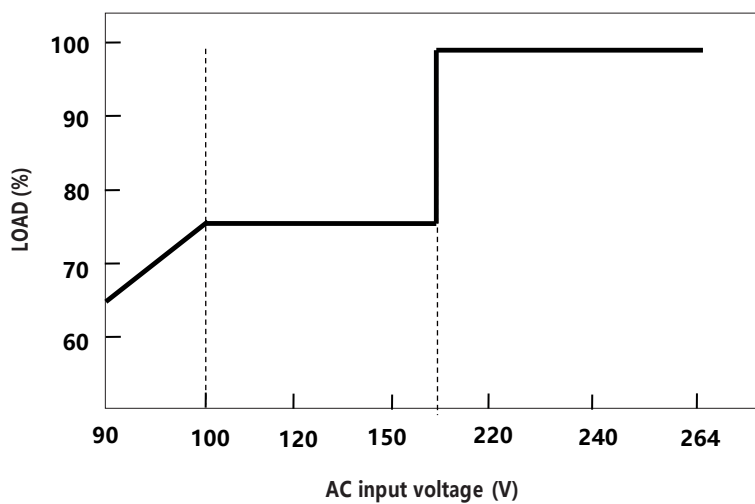
■ Block Diagram



■ Derating Curve

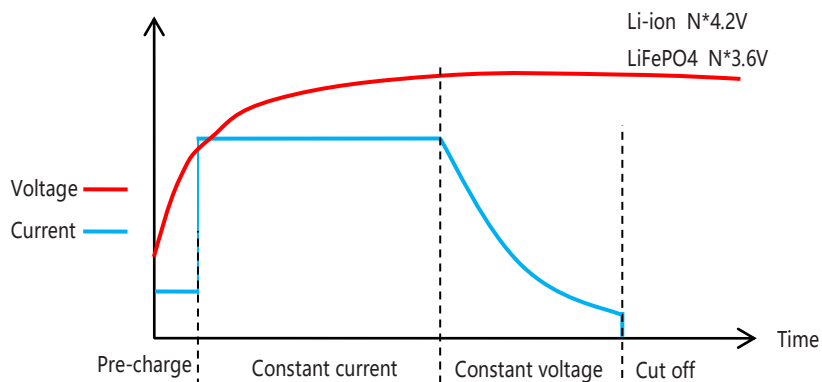


■ Static Characteristics

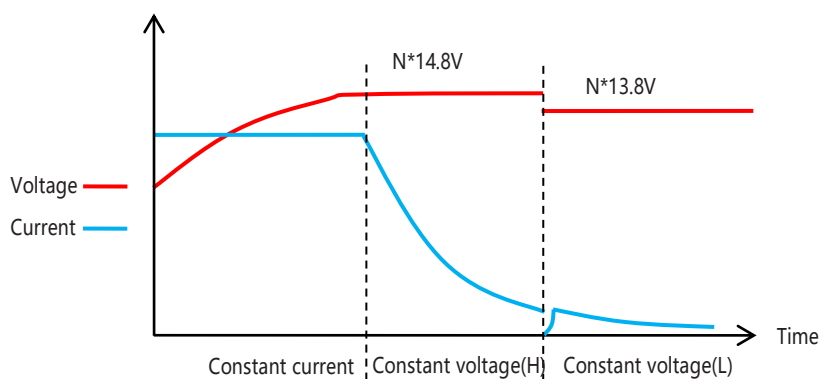


1.Charging Curve

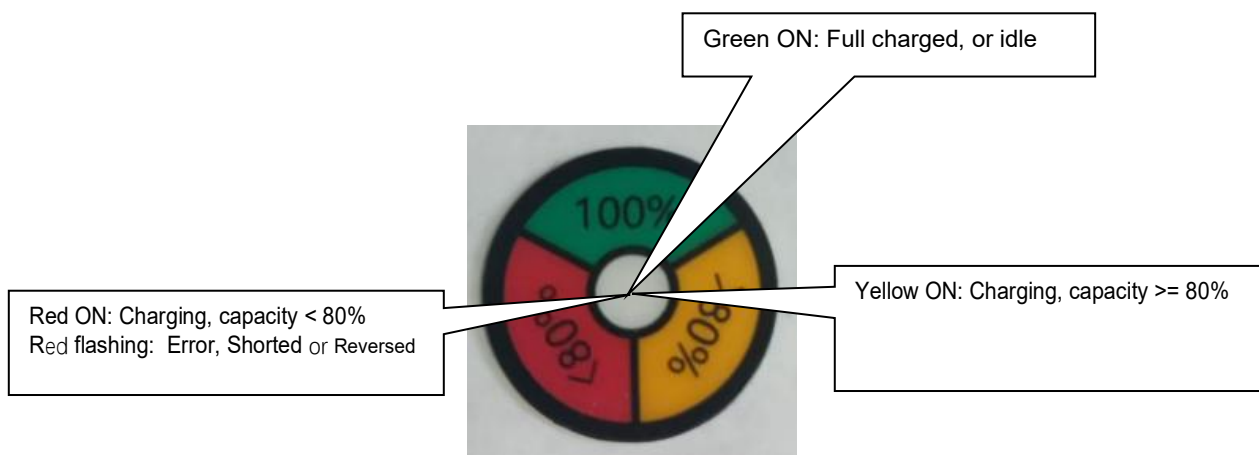
© 4 stage charging curve(Li-ion & LiFePO4 battery charger)



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



2.LED indication



■ Mechanical specification

