



■ **Features**

- Charger for lithium batteries (Li-ion, LiFePO4 and lithium manganese) and Lead-Acid batteries
- Built- in 4 stage charging curve (For Lithium batteries) and 3 stage charging curve (For Lead-Acid batteries)
- Universal AC input / Full range (90-264V~)
- Built- in active PFC function
- Protection: Short circuit / Over voltage / Over temperature / Battery over voltage / Battery reverse polarity protection
- 2 years warranty

■ **Applications**

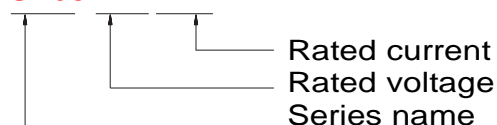
- Radio system backup solution
- Electric scooter charger
- Surveillance system
- Electric motorcycle \ Electric sweeper

■ **Description**

G168 is a single output 168W AC/DC desktop type charger with 4 and 3 stage charging curve, suitable for lithium battery (lithium ion, lithium iron phosphate, lithium manganese) and lead-acid battery (colloid battery, liquid battery, AGM battery). When charging, the LED can indicate the battery capacity when charging.

■ **Mode Encoding**

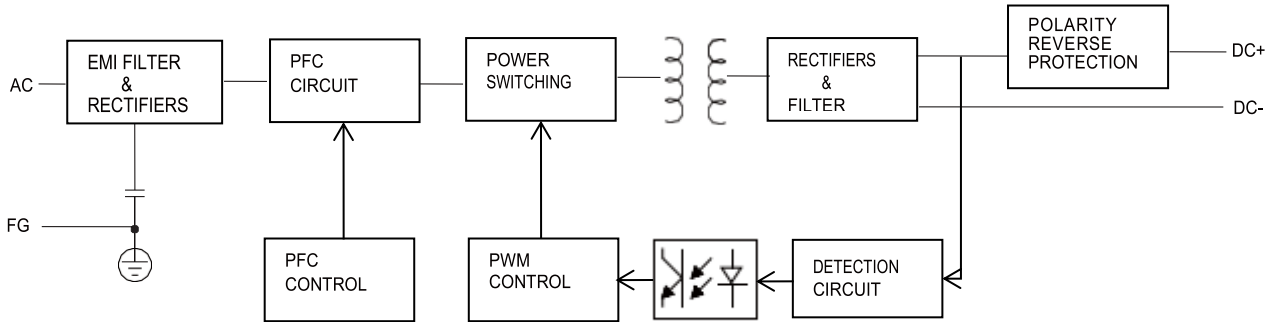
G168-XXXXYY



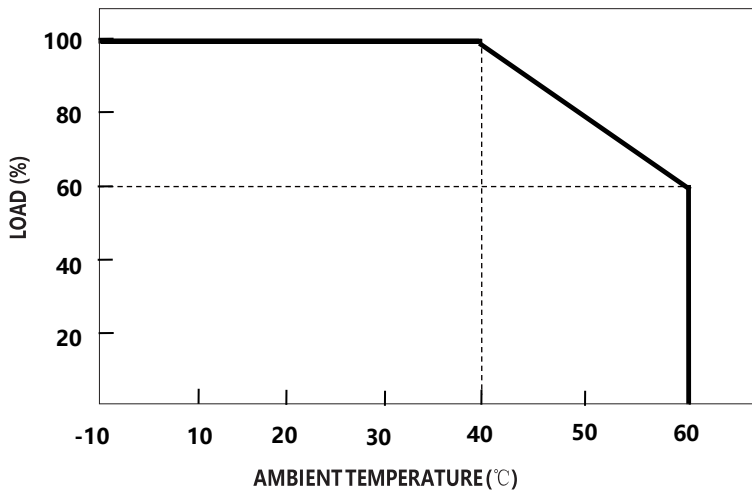
SPECIFICATION(Li-Fe battery charger)

MODEL		G168-144110	G168-216070	G168-360045	G168-432038	G168-576029	
OUTPUT	Charge voltage	14.4V±1%	18.0V±1%	36.0V±1%	43.2V±1%	57.6V±1%	
	Charge voltage range	10.0-14.4V	15.0~21.6V	25-36.0V	30-43.2V	40-57.6V	
	Charge current	11.0A±7%	9.3A±7%	4.5A±7%	3.8A±7%	2.9A±7%	
	Pre-charge current	2.2A±7%	1.54A±7%	0.9A±7%	0.76A±7%	0.58A±7%	
	Charge-end current	≤1.1A ±10%	≤0.77A ±10%	≤0.45A ±10%	≤0.38A ±10%	≤0.29A ±10%	
	Rated power	158.4W	166.32W	162W	164.16W	167.04W	
	Recommended battery capacity Note.3	30 - 100Ah	20 - 100Ah	10 - 50Ah	8 - 40Ah	6 - 30Ah	
	Leakage current from battery (Typ.)	≤1mA					
Charging LED	Red LED flashing	2Hz Error					
	Green LED flashing	0.45Hz No battery; 0.83Hz <25% Capacity; 1.25Hz ≥25% Capacity; 1.66Hz ≥50% Capacity; 2.5Hz ≥75% Capacity;					
	Green LED on	Full					
INPUT	Rated input voltage	100 - 240VAC 50 / 60Hz					
	Input voltage range Note.4	90 - 264VAC					
	Power factor (Typ.)	PF>0.98 @Full load, Input:115VAC ; PF>0.94 @Full load, Input:230VAC					
	Input current (Typ.)	2.2A@100VAC					
	Inrush current (Typ.)	Cold start 75A @230VAC					
	Standby input power	< 1W					
	Efficiency (Typ.)	94%	94%	94%	94%	94%	
PROTECTION	Short circuit Note.5	Protection type : Shut down output					
	Over voltage	Protection type : Shut down output					
	Reverse polarity	Protection type : Shut down output					
	Over temperature	-					
	Working temperature	-10 - +40°C (Refer to " Derating Curve")					
ENVIRONMENT	Working humidity	0 - 90% RH					
	Storage temperature, humidity	-40 - +70°C, 0 - 95% RH					
	Cooling	Natural convection					
	Vibration resistance	10 - 50Hz, 2G 10min. 1cycle, 60min. each along X, Y, Z axes					
	Safety & EMC (Note 6)	Max. temperature rise	< 40°C on casing				
Hi-Pot Insulation		i/p to o/p: 3000V (1 min)					
Safety approval		CE/PSE/SAA/FCC/CCC/cTUVus/CB/BS					
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	175*72*40mm (L*W*H)					
	Weight	680g					
NOTE	<p>1.Modification for charger specification may be required for different battery specification. Please contact battery vendor and Green digital power for details.</p> <p>2.All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>3.This is Green suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.</p> <p>4.Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5.This protection mechanism is specified for the case the short circuit occurs after the charger is turned on.</p> <p>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.</p>						

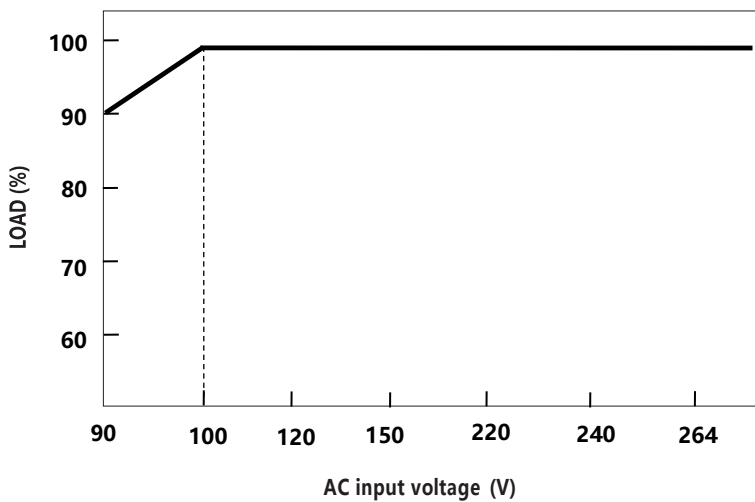
■ Block Diagram



■ Derating Curve



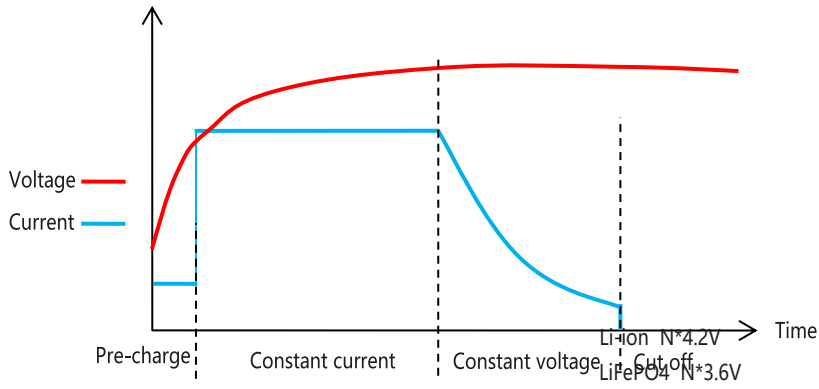
■ static Characteristics



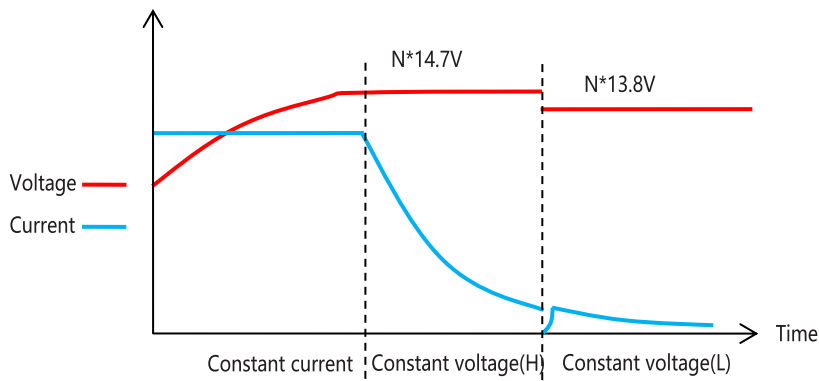
■ **Function Manual**

1. Charging Curve

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



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



2. LCD display

Green	No battery	25%	50%	75%	100%	Full
	0.45Hz flicker	0.83Hz flicker	1.25Hz flicker	1.66Hz flicker	2.5Hz flicker	Fixed lighting

Mechanical specification

1	2	3	4	5	6	7	8	9	10		
						CUSTOMER REV	REV	ZONE	DESCRIPTION	CHA BY/DATE	APP BY/DATE
A											A
B											B
C											C
D											D
E											E
F											F
G											G
H											H
						Shenzhen Green Digital Power-Tech CO.,LTD TITLE: _____ MATL: _____ MODEL: G168W-XXXXXX WEIGHT: _____ DES BY: _____ CAD FILE: _____ UNIT: mm TEXTURE NO. _____ CHECK BY: _____ COLOR: _____ Paper Size: A4 SCALE: Fit APP BY: _____ FINISH/TREATMENT: _____ DATE: _____ CUSTOMER P/N: _____					
1	2	3	4	5	6	7	8	9	10		