



■ **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**

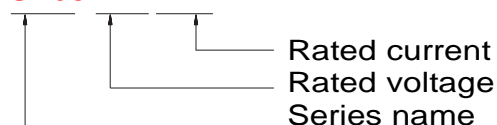
- Radio system backup solution
- Electric scooter charger
- Surveillance system
- Electric motorcycle \ Electric sweeper

■ **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**

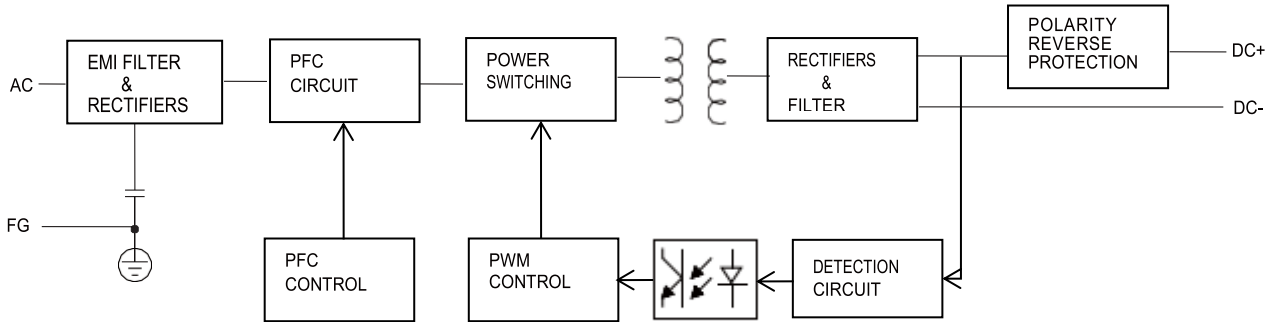
**G168-XXXXYY**



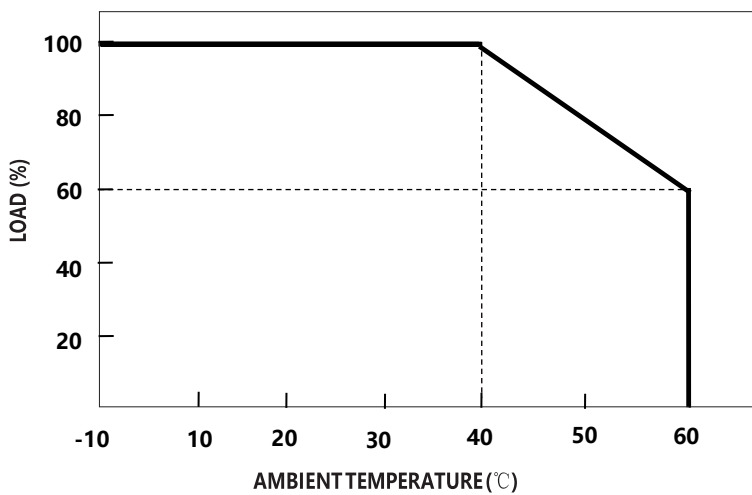
## SPECIFICATION(Li-ion battery charger)

MODEL		G168-126130	G168-168100	G168-294057	G168-420040	G168-546030	
OUTPUT	Charge voltage	12.6V±1%	16.8V±1%	29.4V±1%	42.0V±1%	54.6V±1%	
	Charge voltage range	7.5-12.6V	10.0-16.8V	17.5-29.4V	25.0-42.0V	32.5-54.6V	
	Charge current	13.0A±7%	10.0A±7%	5.7A±7%	4.0A±7%	3.0A±7%	
	Pre-charge current	2.6A±7%	2A±7%	1.14A±7%	0.8A±7%	0.6A±7%	
	Charge-end current	≤1.3A ±10%	≤1A ±10%	≤0.57A ±10%	≤0.4A ±10%	≤0.3A ±10%	
	Rated power	163.8W	168W	167.58W	168W	163.8W	
	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 current (Typ.)	2.2A@100VAC					
	Inrush current (Typ.)	PF>0.98 @Full load, Input:115VAC ; PF>0.94 @Full load, Input: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	-					
ENVIRONMENT	Working temperature	-10 - +40°C (Refer to " Derating Curve")					
	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   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	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>						

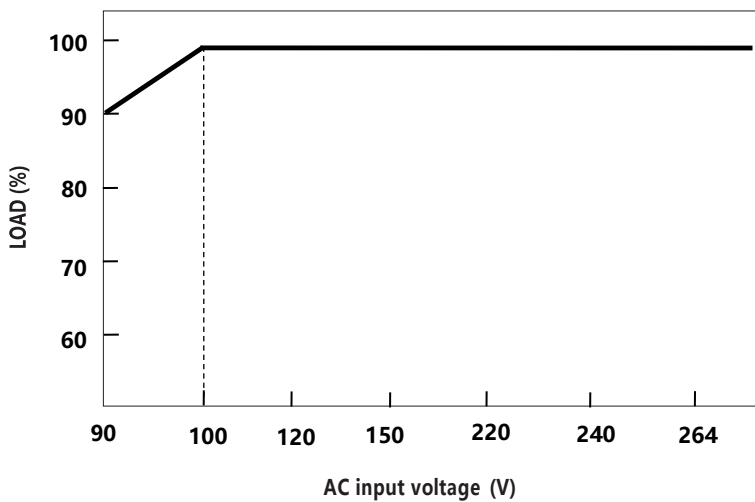
■ **Block Diagram**



■ **Derating Curve**



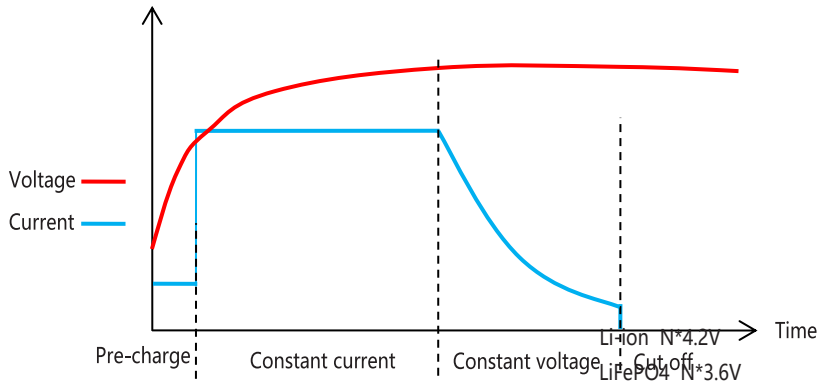
■ **static Characteristics**



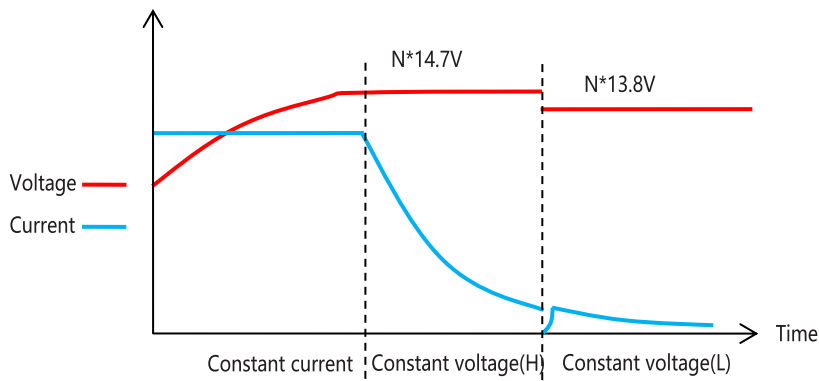
**Function Manual**

**1. Charging Curve**

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



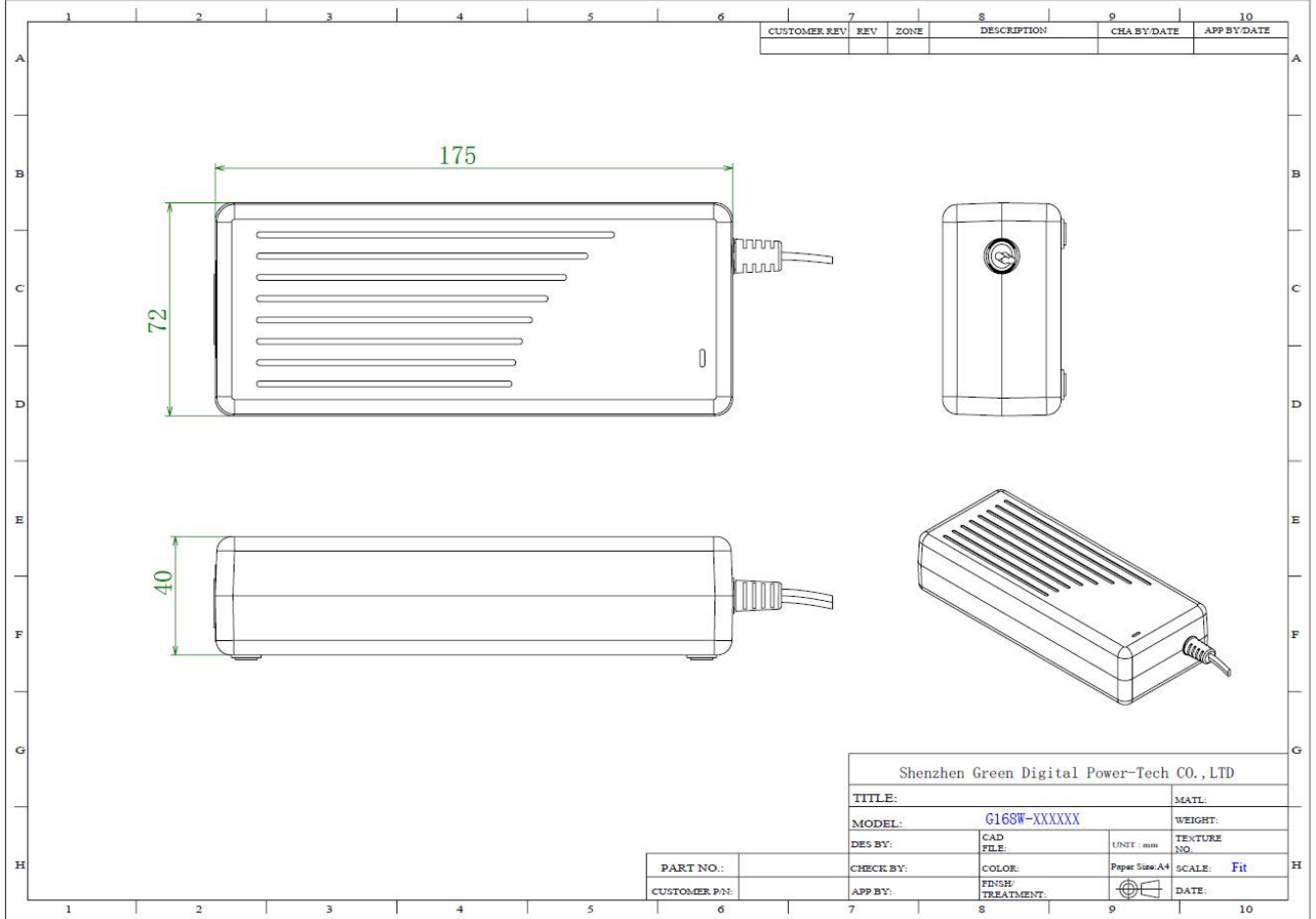
© 3 stage charging curve(Lead-Acid battery charger)



**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**



Shenzhen Green Digital Power-Tech CO., LTD			
TITLE:		MATERIAL:	
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:

PART NO.:	
CUSTOMER P.N.:	