■ 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

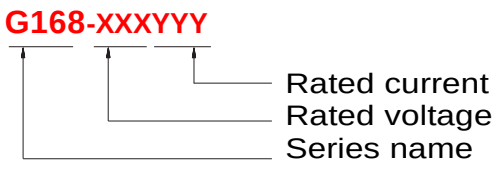
■ Applications

- 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



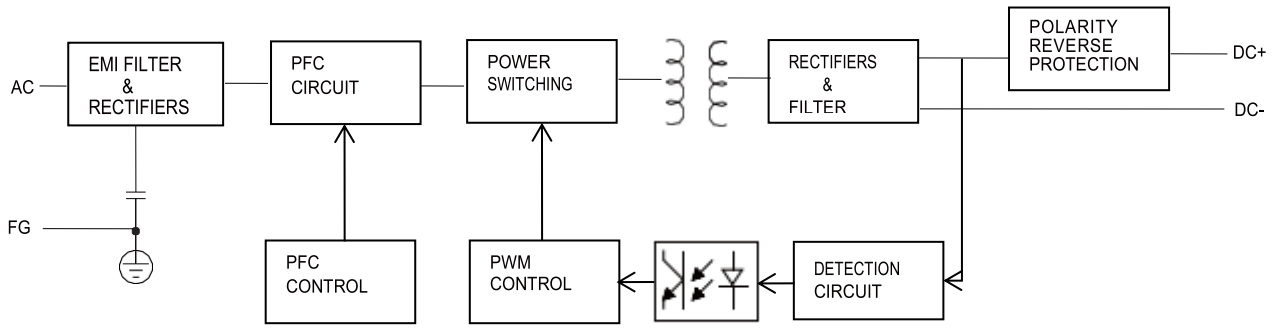
SPECIFICATION (Lead-Acid battery charger)

MODEL		G168-148110	G168-296056	G168-444037	G168-592028
OUTPUT	Charge voltag (High voltage)	14.8V±1%	29.6V±1%	44.4V±1%	59.2V±1%
	Charge voltage range	10.0-14.8V	20.0-29.6V	30.0-44.4V	40.0-59.2V
	Float charge（Low voltage）	13.8V±1%	27.6V±1%	41.4V±1%	55.2V±1%
	Charge current	11.0A±7%	5.6A±7%	3.7A±7%	2.8A±7%
	Charge-end current	≤2.2A ±10%	≤1.12A ±10%	≤0.74A ±10%	≤0.56A ±10%
	Rated power	162.8W	165.76W	164.28W	165.76W
	Recommended battery capacity Note.3	60 - 100Ah	30- 60Ah	20 - 40Ah	15 - 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%
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℃ (Refer to " Derating Curve")			
	Working humidity	0 - 90% RH			
	Storage temperature, humidity	-40 - +70℃, 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℃ 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			

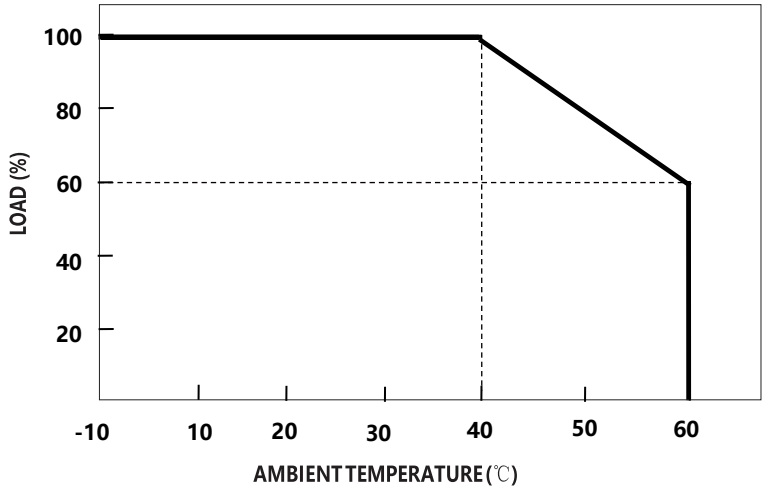
NOTE

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.

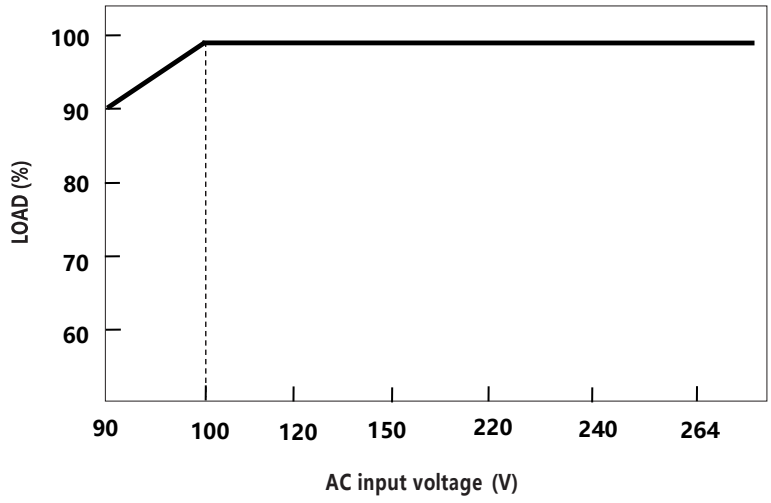
Block Diagram



Derating Curve



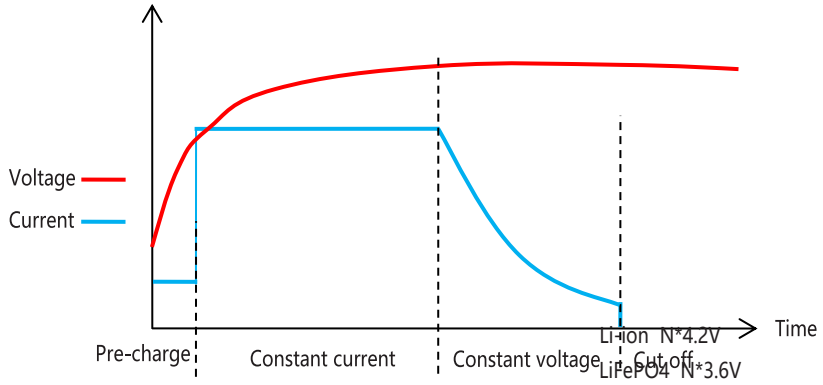
static Characteristics



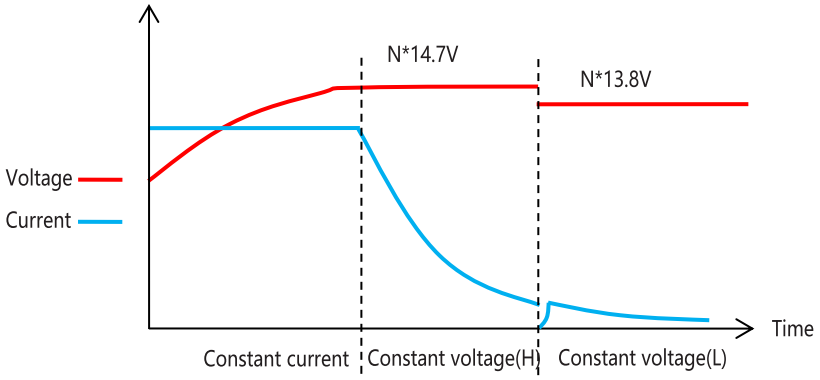
■ Function Manual

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