■ Features

•Charger for lithium batteries (Li-ion,LiFePO4and 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

• 1 years warranty

■ Applications

•Radio system backup solution

•Electric scooter charger

•Surveillance system

•Electric motorcycle\Electric sweeper

■ Description

G300 is a single output 300W 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

G300-XXXYYY

Rated current

Rated voltage

Series name

For Li-ion battery*(Only the adopted models are listed in table, for other output please reach our sales)*

MODEL		G300-126180	G300-168170	G300-294100	G300-420070	G300-546050
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	25-42.0V	32.5-54.6V
	Charge current	18.0A±7%	17.0A±7%	10.0A±7%	7.0A±7%	5.0A±7%
	Pre-charge current	3.6A±7%	3.4A±7%	2.0A±7%	1.4A±7%	1.0A±7%
	Charge-end current	≤1.8A ±10%	≤1.7A ±10%	≤1.0A ±10%	≤0.7A ±10%	≤0.5A ±10%
	Rated power	226.8W	285.6W	294W	294W	273W
	Recommended battery capacity Note.3	40 - 200Ah	40 - 150Ah	20 - 100Ah	15 - 80Ah	15 - 60Ah
	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.)	4.5A@100VAC				
	Inrush current (Typ.)	Cold start 75A @230VAC				
	Standby input power	< 1W				
	Efficiency (Typ.)	94%	95%	95%	95%	95%
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,2G10min.1cycle,60min.eachalongX,Y,Zaxes				
SAFETY& EMC(Note.6)	Max. temperature rise	< 40℃ on casing				
	Hi-Pot Insulation	i/p to o/p: 3000V (1 min)				
	Safety approval	CB/CE/FCC/CCC/cTUVus				
	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	220*105*43mm (L*W*H)				
	Weight	1300g				

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 LFP battery*(Only the adopted models are listed in table, for other output please reach our sales)*

MODEL		G300-144180	G300-288100	G300-360080	G300-432069	G300-576050
OUTPUT	Charge voltage	14.4V±1%	28.8V±1%	36.0V±1%	43.2V±1%	57.6V±1%
	Charge voltage range	10-14.4V	20-28.8V	25-36.0V	30-43.2V	40-57.6V
	Charge current	18.0A±7%	10.0A±7%	8.0A±7%	6.9A±7%	5.0A±7%
	Pre-charge current	3.6A±7%	2.0A±7%	1.6A±7%	1.38A±7%	1.0A±7%
	Charge-end current	≤1.8A ±10%	≤1A ±10%	≤0.8A ±10%	≤0.69A ±10%	≤0.5A ±10%
	Rated power	259.2W	288W	288W	298.08W	288W
	Recommended battery capacity Note.3	40 - 200Ah	40 - 150Ah	20 - 100Ah	15 - 80Ah	15 - 60Ah
	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.)	4.5A@100VAC				
	Inrush current (Typ.)	Cold start 75A @230VAC				
	Standby input power	< 1W				
	Efficiency (Typ.)	94%	95%	95%	95%	95%
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,2G10min.1cycle,60min.eachalongX,Y,Zaxes				
SAFETY& EMC(Note.6)	Max. temperature rise	< 40℃ on casing				
	Hi-Pot Insulation	i/p to o/p: 3000V (1 min)				
	Safety approval	CB/CE/FCC/CCC/cTUVus				
	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	220*105*43mm (L*W*H)				
	Weight	1300g				

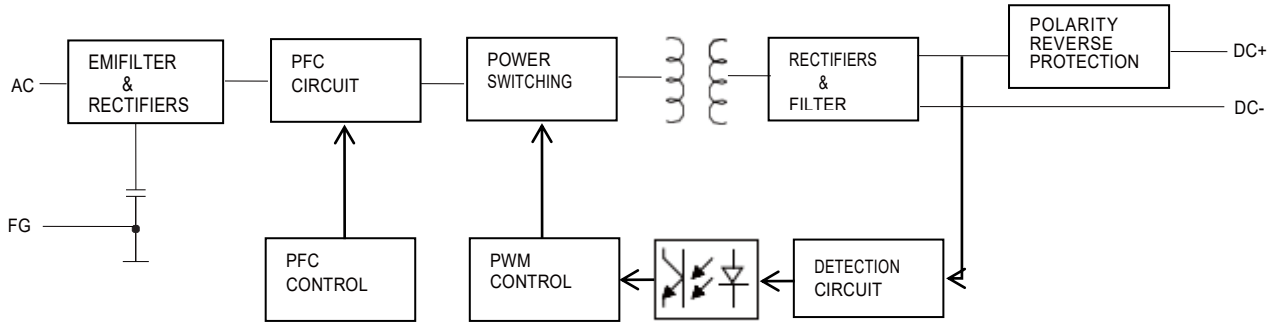
NOTE

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.

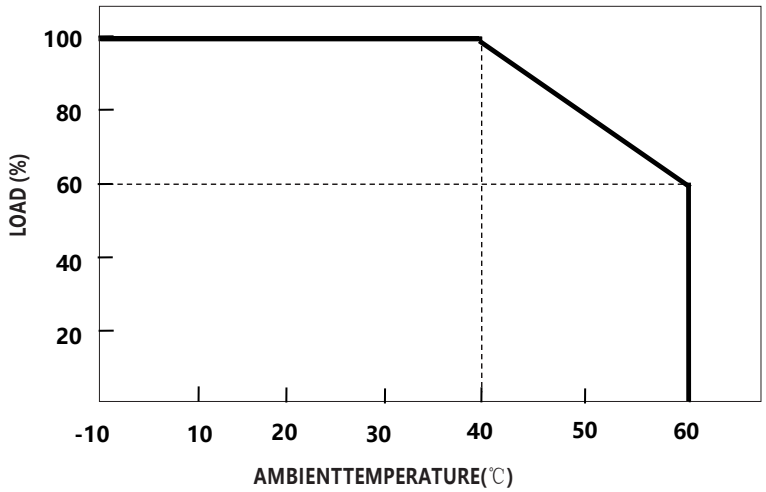
For Lead-Acid battery*(Only the adopted models are listed in table, for other output please reach our sales)*

MODEL		G300-148180	G300-296100	G300-444067	G300-588050
OUTPUT	Charge voltage (High voltage)	14.8V±1%	29.6V±1%	44.4V±1%	58.8V±1%
	Charge voltage range	10.0-14.8V	20.0-29.6V	30.0-44.4V	40.0-58.8V
	Float charge（Low voltage）	13.8V±1%	27.6V±1%	41.4V±1%	55.2V±1%
	Charge current	18.0A±7%	10.0A±7%	6.7A±7%	5A±7%
	Charge-end current	≤3.6A ±20%	≤2A ±20%	≤1.34A ±20%	≤1A ±20%
	Rated power	266.4W	296W	297.48W	294W
	Recommended battery capacity Note.3	90 - 200Ah	50 - 150Ah	35 - 100Ah	25 - 80Ah
	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.)	4.5A@100VAC			
	Inrush current (Typ.)	Cold start75A @230VAC			
	Standby input power	<1W			
	Efficiency (Typ.)	94%	95%	95%	95%
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,2G10min.1cycle,60min.eachalongX,Y,Zaxes			
SAFETY& EMC(Note.6)	Max. temperature rise	< 40℃ on casing			
	Hi-Pot Insulation	i/p to o/p: 3000V (1 min)			
	Safety approval	CB/CE/FCC/CCC/cTUVus			
	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	220*105*43mm (L*W*H)			
	Weight	1300g			
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.				

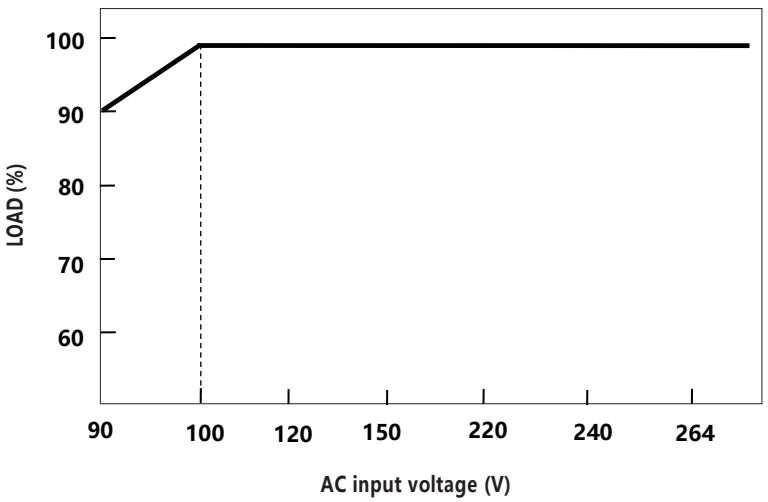
Block



Derating Curve



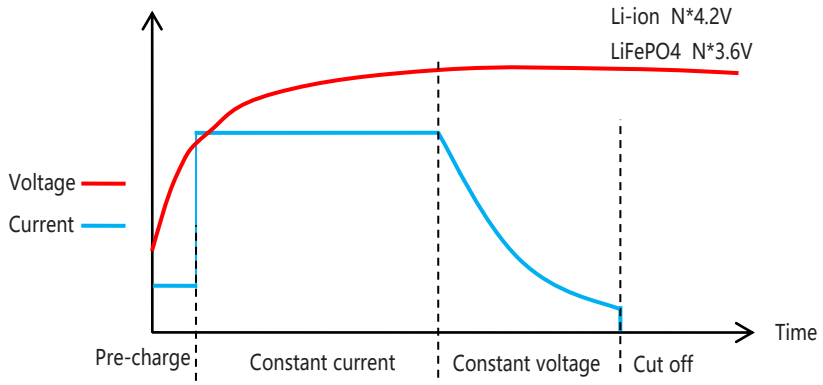
static Characteristics



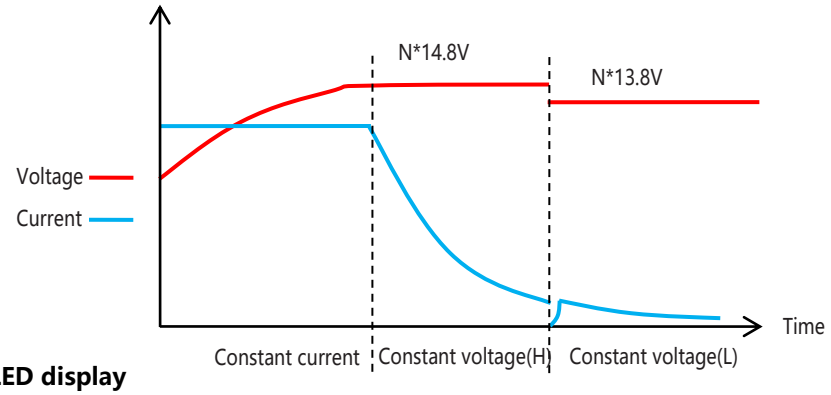
■ Function Manual

1. Charging Curve

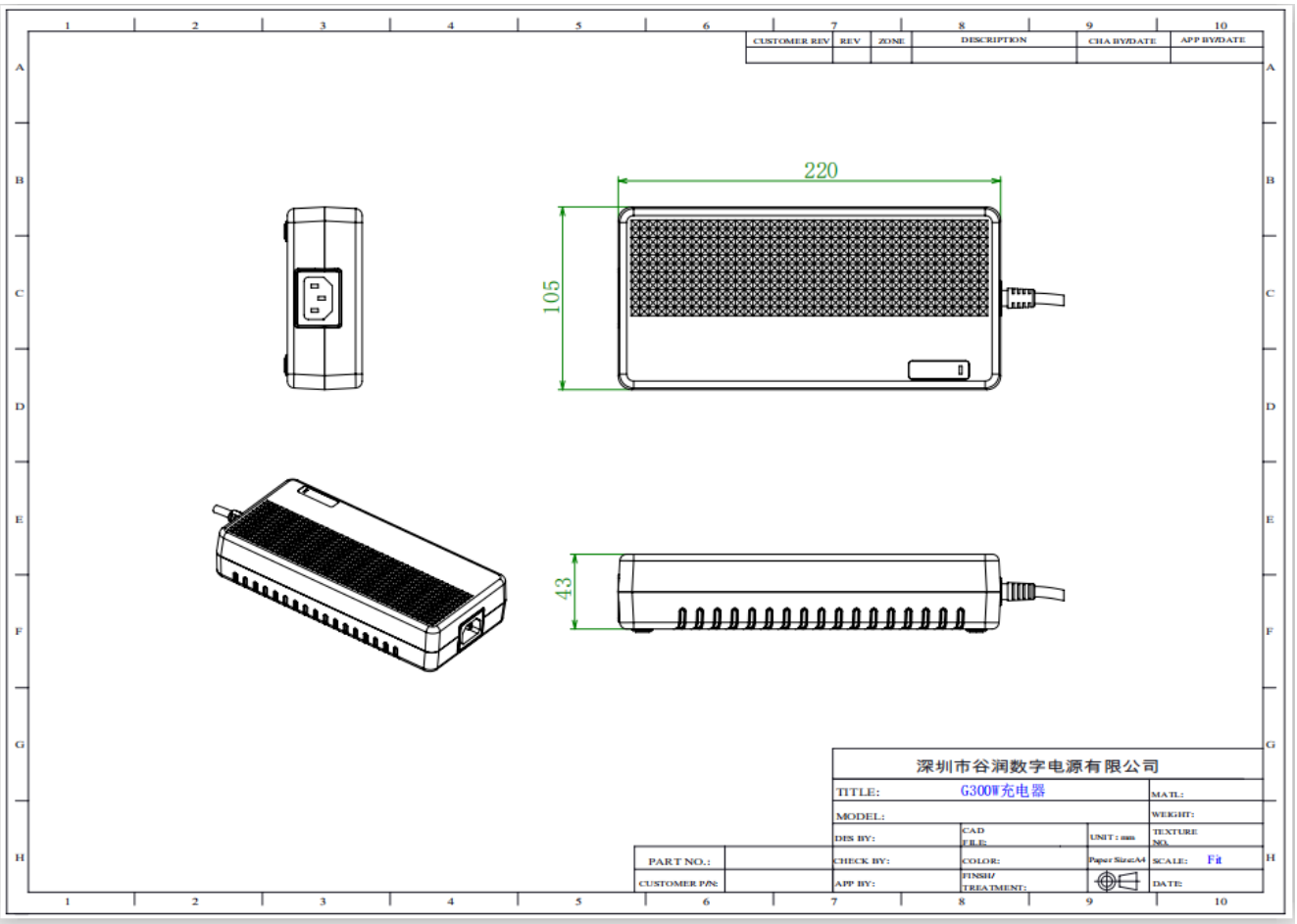
◎ 4stage charging curve(Li-ion battery charger)



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



2. LED 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