











#### ■ 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

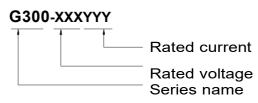
## Applications

- •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





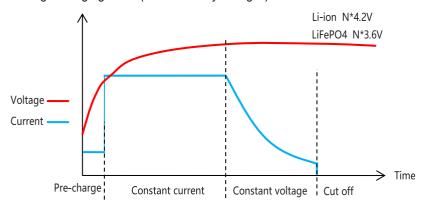
MTBF 30000H  Dimension 220*105*43mm (L*W*H)  Weight 1300g  1.Modification for charger specification may be required for different battery specification. Please contact battery vendor and Green digital power for details.  2.All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.	MODEL		G300-148180	G300-296100	G300-444067	G300-	588050	
Place Charge (Low voltage)   13.8V±1%   27.6V±1%   41.4V±1%   55.2V±1%		Charge voltage (High voltage)	14.8V±1%	29.6V±1%	44.4V±1%	58.8V±	: 1%	
Charge-current   18.0A27%   10.0A27%   5.7A27%   5A27%   5A27%   Charge-end current   <3.6 A ± 20%   <2A ± 20%   <1.0A37%   \$1.3A4 ± 20%   <1.0A47%   \$1.0A27%   \$2.0A27%   \$2.0	ОИТРИТ	Charge voltage range	10.0-14.8V	20.0-29.6V	30.0-44.4V	40.0-58.8V		
Charge current		Float charge (Low voltage)	13.8V±1%	27.6V±1%	41.4V+1%			
Charge-end current   \$3.6A ± 20%   \$2A ± 20%   \$1.34A ± 20%   \$1A ± 20%   \$29 W   \$2								
Rated power Recommended battery capacity 00 - 200Ah		•						
Recommended battery capacity 30 - 200Ah Note. 3 Leskage current from battery (Typ.) < 1mA  Red LED flashing 2Hz Error  CHARGING LED  Red LED flashing 1dle  Red LED on Charging Green LED on Charging Green LED on Charging Green LED on Charging Input voltage range Note. 4 99 - 284VAC Power factor (Typ.) PP-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input under tryp.) Leskage and tryp. 4 4.5A@ 100VAC Input current (Typ.) PP-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:115VAC ; PF>0.94 @Full load. Input:230VAC Input current (Typ.) P9-59 98@Full load. Input:230VAC Input current				1-11				
Note 3   Leakage current from battery (Typ.)   ≤.tm.A.		•				-		
Leskage current from battery (Typ.)  Red LED flashing 2Hz Error  Red LED on Charging Green LED flashing 1de  Red LED on Full  Rated Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 90 - 240VAC 50 / 60Hz Input voltage range Note.4 95 / 60Hz Input voltage Protection type : Shut down output Range Note.4 95 / 60Hz Input voltage Note.4 95 / 60Hz Input voltage Range Note.4 95 / 60Hz Input voltage Range Note.4 95 / 60Hz Input voltage Note Range N			90 - 200Ah	50 - 150Ah	35 - 100Ah	25 - 80	An	
Red LED flashing   2Hz Error   Green LED flashing   Idie			≤1mA	<1m\(\lambda\)				
Red LED on   Charging   Green LED on   Full								
Red LED on   Charging   Green LED on   Full	CHARGING	Green LED flashing	Idle					
Rated input voltage			Charging					
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   Input current (Typ.)   4.5A@100VAC   Input current (Typ.)   4.5A@100VAC   Input current (Typ.)   4.5A@100VAC   Input current (Typ.)   94%   95%		Green LED on						
Power factor (Typ.)	INPUT	Rated input voltage						
INPUT		Input voltage range Note.4	90 - 264VAC					
Inrush current (Typ.)   Cold start75A @230VAC		Power factor (Typ.)						
Standby input power Efficiency (Typ.) 94% 95% 95% 95%  Short circuit Note.5 Protection type: Shut down output Over voltage Protection type: Shut down output  Working temperature - Working humidity 0 90% RH  ENVRONNENT  Cooling Natural convection Vibration resistance 10-50Hz_2G1omin.1cycle.60min.eachalongX,Y,Zaxes  Max. temperature rise 4.40°C (Refer to "Derating Curve")  Working humidity 0 90% RH  Cooling Natural convection Vibration resistance 10-50Hz_2G1omin.1cycle.60min.eachalongX,Y,Zaxes  Max. temperature rise 4.40°C on casing Hi-Pot Insulation 10 to 100; 3000 V(1 min) Safety approval CB/CE/FCC/CC/CTU/us  Parameter Standard Test Level I Note Conducted EN55932 FCC PART15 Class B Radiated EN56932 FCC PART15 Class B Natural Conducted EN61000-3-2 Voltage Flicker EN61000-3-3  EMC IMMUNITY EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-6, EN61000-4-8, EN61000-4-8, EN61000-4-8, EN61000-4-3, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-8, EN61000-4-1 11000		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `						
Efficiency (Typ.)   94%   95%   95%   95%   95%		\ 31 /						
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")  Working humidity 0 - 90% RH  Storage temperature, humidity 40 - +70°C, 0 - 95% RH  Cooling Natural convection  Vibration resistance 10-50Hz_2G10min.teycle.60min.eachalongX,Y_Zaxes  Max. temperature rise				05%	05%	050/		
PROTECTION   Reverse polarity   Protection type: Shut down output					95 /0	95 /6	95%	
PROTECTION   Reverse polarity   Protection type : Shut down output   Over temperature   -10 - +40°C (Refer to "Derating Curve")								
Over temperature	PROTECTION		7.					
Working temperature			-	1 rotocolori type . Onat down output				
Working humidity 0 - 90% RH  Storage temperature, humidity -40 - +70°C, 0 - 95% RH  Cooling Natural convection  Vibration resistance 10-50Hz,2610min.1cycle,60min.eachalongX,Y,Zaxes  Max. temperature rise 40°C on casing  Hi-Pot Insulation lip to o/p: 3000V (1 min)  Safety approval CB/CE/FCC/CCC/cTUVus  Parameter Standard Test Level I Note  Conducted EN55032 FCC PART15 Class B  Radiated EN55032 FCC PART15 Class B  Harmonic Current EN61000-3-2  EMC IMMUNITY EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-111  OTHERS  MTBF 30000H  Dimension 220°105°43mm (L*W*H)  Weight 1300g  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°C 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.		·	-10 - +40°C (Refer to " Derating Curve")					
Storage temperature, humidity   -40 - +70°C, 0 - 95% RH		• .	, ,					
Cooling Natural convection  Vibration resistance 10-50Hz,2G10min.1cycle,60min.eachalongX,Y,Zaxes  Max. temperature rise 40°C on casing  Hi-Pot Insulation lip to o/p; 3000V (1 min)  Safety approval CB/CE/FCC/CCC/cTUVus  Parameter Standard Test Level I Note  Conducted EN55032 FCC PART15 Class B  Radiated 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, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-11  OTHERS Dimension 220°105°43mm (L*W*H)  Weight 1300g  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°C 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.	ENVIRONMENT							
Vibration resistance   10-50Hz,2G10min.1cycle,60min.eachalongX,Y,Zaxes			,					
Max. temperature rise   < 40°C on casing   Hi-Pot Insulation   i/p to o/p: 3000V (1 min)   Safety approval   CB/CE/FCC/CCC/cTUVus   Parameter   Standard   Test Level   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, EN61000-11   MTBF   30000H   Dimension   220*105*43mm (L*W*H)   Weight   1300g    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.								
Hi-Pot Insulation   i/p to o/p: 3000V (1 min)   Safety approval   CB/CE/FCC/CCC/cTUVus    Parameter   Standard   Test Level   Note   Conducted   EN55032 FCC PART15   Class B   Radiated   EN55032 FCC PART15   Class B   Harmonic Current   EN61000-3-2   voltage Flicker   EN61000-3-2   voltage Flicker   EN61000-3-3      EMC IMMUNITY   EN61000-4-2, EN61000-4-3, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-11    OTHERS   MTBF   30000H   Dimension   220*105*43mm (L*W*H)   Weight   1300g    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°C 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.								
SAFETY& EMC(Note.6)  EMC Emission  EMC Emission  EMC Emission  EMC IMMUNITY  EMC IMMUN		Hi-Pot Insulation	"					
SAFETY& EMC(Note.6)  EMC Emission  EMC Emission  EMC IMMUNITY  EN61000-4-2, EN61000-3-3  EN61000-4-2, EN61000-4-3, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-11  OTHERS  MTBF  30000H  Dimension  220*105*43mm (L*W*H)  Weight  13000  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°C 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.		Safety approval	CB/CE/FCC/CCC/cTUV					
EMC Emission  Radiated EN55032 FCC PART15 Class B Harmonic Current EN61000-3-2 Voltage Flicker EN61000-4-3, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000- 11  MTBF 30000H  OTHERS  Dimension 220*105*43mm (L*W*H) Weight 1300g  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°C 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.		EMC Emission	Parameter	Standard			Test Level I Note	
Radiated   ENSSIST FCC PARTIS   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								
ENG1000-4-2, ENG1000-4-3, ENG1000-4-5, ENG1000-4-6, ENG1000-4-8, ENG1000-4-8  MTBF  30000H  Dimension  220*105*43mm (L*W*H)  Weight  1300g  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°C 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.								
OTHERS    Dimension   220*105*43mm (L*W*H)		EMC IMMUNITY	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-					
Dimension  220*105*43mm (L*W*H)  Weight  1300g  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°C 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.	OTHERS	MTBF						
<ul> <li>Weight 1300g</li> <li>1.Modification for charger specification may be required for different battery specification. Please contact battery vendor and Green digital power for details.</li> <li>2.All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>3.This is Green suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.</li> <li>4.Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>5.This protection mechanism is specified for the case the short circuit occurs after the charger is turned on.</li> </ul>		Dimension	220*105*43mm (L*W*H					
and Green digital power for details.  2.All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.		Weight						
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.	NOTE							

# **■** Block Diagram POLARITY REVERSE PROTECTION DC+ POWER SWITCHING RECTIFIERS **EMIFILTER** PFC & FILTER & RECTIFIERS CIRCUIT AC DC-PWM CONTROL PFC DETECTION CIRCUIT CONTROL **■** Derating Curve 100 80 60 40 20 50 -10 10 20 30 40 60 AMBIENTTEMPERATURE( $^{\circ}$ ) **■** Static Characteristics 100 90 80 70 60 90 100 150 220 240 120 264

AC input voltage (V)

#### ■ Charging Curve

4stage charging curve(Li-ion battery charger)



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

