



**■ 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 4 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**

G600 is a single output 600W AC/DC desktop type charger with 4 and 3 stage charging curve. In addition to the embedded pre-defined charging curves, The default curve is programmable and thus able to accommodate different types of batteries, such as Lead- acid batteries ( Gel, flooded and AGM) and Lithium batteries (Li-ion, LiFePO4 and Lithium manganese). G600 can be set different charging voltage value, charging current value and charging end current value through USB, according to customer's own requirements. The LCD screen of G600 can display the voltage, current, capacity, and preset voltage and current.

**■ Mode Encoding**

**G600-XXXYYY**



**SPECIFICATION(Li-ion battery charger)**

MODEL		G600-168330	G600-294200	G600-420142	G600-588102	G600-714084	
OUTPUT	Charge voltage	16.8V±1%	29.4V±1%	42.0V±1%	58.8V±1%	71.4V±1%	
	Charge voltage range	10-16.8V	17.5-29.4V	25-42.0V	35-58.8V	42.5-71.4V	
	Charge current	33.0A±10%	20.0A±10%	14.2A±10%	10.2A±10%	8.4A±10%	
	Pre-charge current	6.6A±10%	4A±10%	2.8A±10%	2A±10%	1.7A±10%	
	Charge-end current	≤3.3A ±20%	≤2A ±20%	≤1.4A ±20%	≤1A ±20%	≤0.85A ±20%	
	Rated power	554.4W	588W	596.4W	599.76W	599.76W	
	Recommended battery capacity Note.3	60 - 200Ah	40 - 150Ah	30 - 100Ah	20 - 80Ah	15 - 60Ah	
	Leakage current from battery (Typ.)	≤1mA					
CHARGE INDICATOR	LCD display	Display voltage,current,capacity					
COMMUNICATION FUNCTION	USB / CAN / 485	The battery type (Lead acid, Lithium battery,LiFePO4 battery), charging voltage and charging current can be set by USB interface, Communication with external devices via CAN or RS485.					
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.)	5.8A@115VAC 2.8A@230VAC					
	Inrush current (Typ.)	Cold start 75A @230VAC					
	Standby input power	< 2.5W					
	Efficiency (Typ.)	92%	93%	93%	94%	94%	
PROTECTION	Short circuit Note.5	Protection type : Shut down output					
	Over voltage	>4.35V*N					
	Reverse polarity	By internal relay					
	Over temperature	Shut down output, recovers automatically after temperature goes down					
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	Fan 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 standards	IEC60950.1					
	EMC Emission	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, EN61000-4-11						
OTHERS	MTBF	30000H					
	Dimension	240*117*66mm (L*W*H)					
	Weight	1000g					
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>						

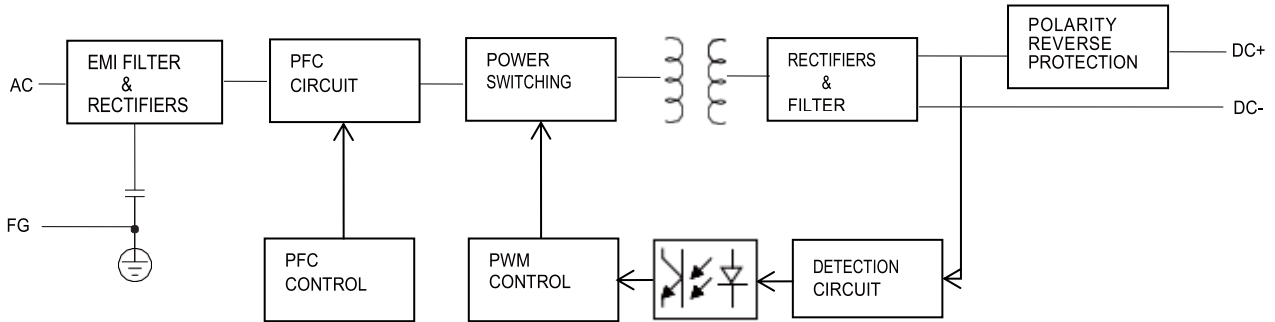
## SPECIFICATION(Li-Fe battery charger)

MODEL		G600-144350	G600-288200	G600-360166	G600-576104	G600-720083	
OUTPUT	Charge voltage	14.4V±1%	28.8V±1%	36.0V±1%	57.6V±1%	72.0V±1%	
	Charge voltage range	10-16.8V	17.5-28.8V	25-36.0V	35-57.6V	42.5-72.0V	
	Charge current	35.0A±10%	20.0A±10%	16.6A±10%	10.4A±10%	8.3A±10%	
	Pre-charge current	7A±10%	4A±10%	3.3A±10%	2A±10%	1.7A±10%	
	Charge-end current	≤3.5A ±20%	≤2A ±20%	≤1.6A ±20%	≤1A ±20%	≤0.85A ±20%	
	Rated power	504W	576W	597.6W	599.04W	597.6W	
	Recommended battery capacity Note.3	60 - 200Ah	40 - 150Ah	30 - 100Ah	20 - 80Ah	15 - 60Ah	
	Leakage current from battery (Typ.)	≤1mA					
CHARGE INDICATOR	LCD display	Display voltage,current,capacity					
COMMUNICATION FUNCTION	USB / CAN / 485	The battery type (Lead acid, Lithium battery,LiFePO4 battery), charging voltage and charging current can be set by USB interface, Communication with external devices via CAN or RS485.					
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.)	5.8A@115VAC 2.8A@230VAC					
	Inrush current (Typ.)	Cold start 75A @230VAC					
	Standby input power	< 2.5W					
	Efficiency (Typ.)	92%	93%	93%	94%	94%	
PROTECTION	Short circuit Note.5	Protection type : Shut down output					
	Over voltage	>3.7V*N					
	Reverse polarity	By internal relay					
	Over temperature	Shut down output, recovers automatically after temperature goes down					
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	Fan 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 standards	IEC60950.1					
	EMC Emission	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, EN61000-4-11						
OTHERS	MTBF	30000H					
	Dimension	240*117*66mm (L*W*H)					
	Weight	1000g					
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>						

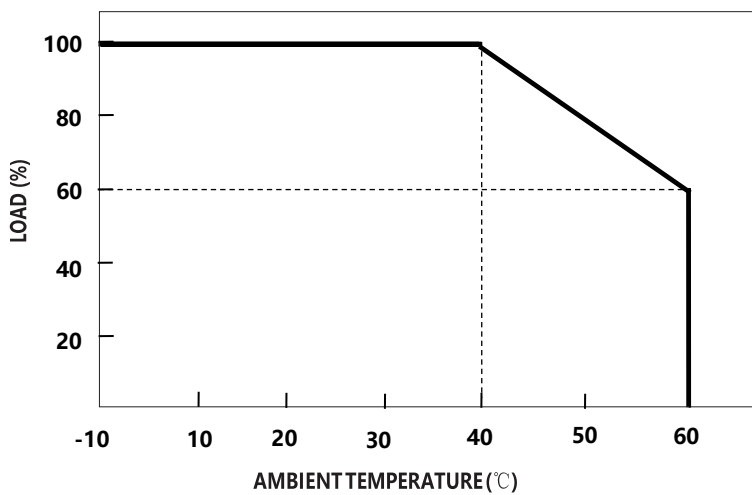
**SPECIFICATION (Lead-Acid battery charger)**

MODEL		G600-147350	G600-294200	G600-441136	G600-588102	G600-735082	
OUTPUT	Charge voltag (High voltage)	14.7V±1%	29.4V±1%	44.1V±1%	58.8V±1%	73.5V±1%	
	Charge voltage range	10-14.7V	17.5-29.4V	25-44.1V	35-58.8V	42.5-73.5V	
	Float charge (Low voltage)	13.8V±1%	27.6V±1%	41.4V±1%	55.2V±1%	69V±1%	
	Charge current	35.0A±10%	20.0A±10%	13.6A±10%	10.2A±10%	8.2A±10%	
	Charge-end current	≤7A ±20%	≤4A ±20%	≤2.7A ±20%	≤1A ±20%	≤1.6A ±20%	
	Rated power	514.5W	588W	599.76	599.76W	602.7W	
	Recommended battery capacity Note.3	60 - 200Ah	40 - 150Ah	30 - 100Ah	20 - 80Ah	15 - 60Ah	
	Leakage current from battery (Typ.)	≤1mA					
CHARGE INDICATOR	LCD display	Display voltage,current,capacity					
COMMUNICATION FUNCTION	USB / CAN / 485	The battery type (Lead acid, Lithium battery,LiFePO4 battery), charging voltage and charging current can be set by USB interface, Communication with external devices via CAN or RS485.					
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.)	5.8A@115VAC	2.8A@230VAC				
	Inrush current (Typ.)	Cold start 75A @230VAC					
	Standby input power	< 2.5W					
	Efficiency (Typ.)	92%	93%	93%	94%	94%	
PROTECTION	Short circuit Note.5	Protection type : Shut down output					
	Over voltage	>15.5V*N					
	Reverse polarity	By internal relay					
	Over temperature	Shut down output, recovers automatically after temperature goes down					
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	Fan 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 standards	IEC60950.1					
	EMC Emission	Parameter	standard			Test Level I 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	240*117*66mm (L*W*H)					
	Weight	1000g					
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>						

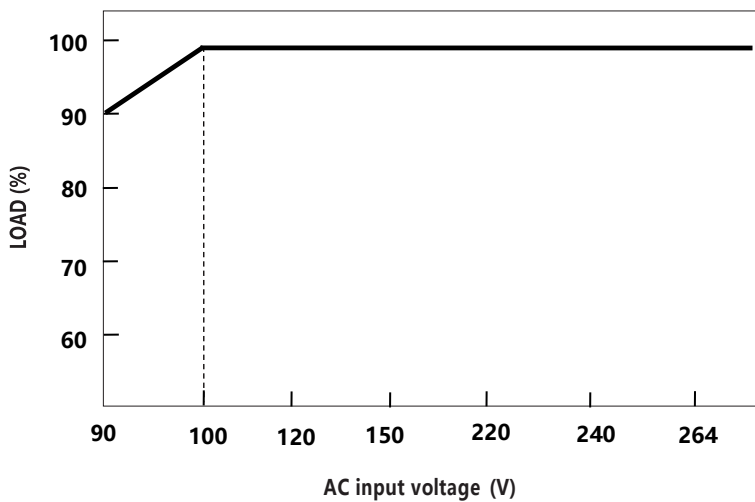
■ **Block Diagram**



■ **Derating Curve**



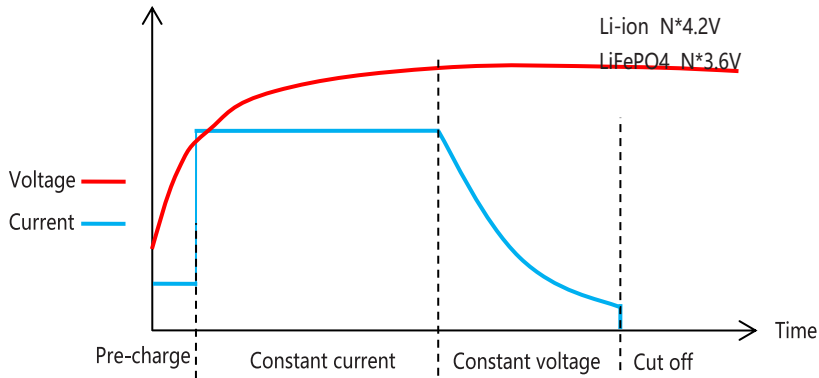
■ **static Characteristics**



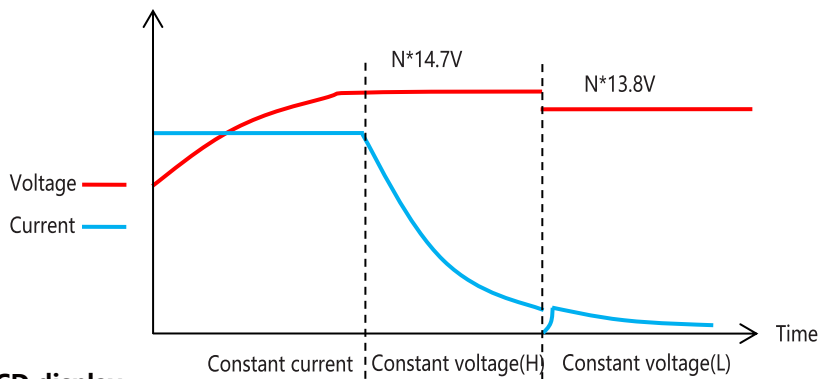
■ **Function Manual**

**1. Charging Curve**

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



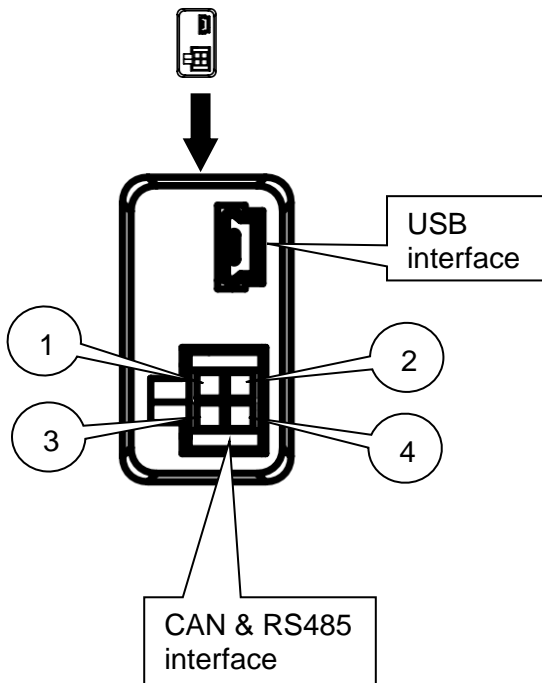
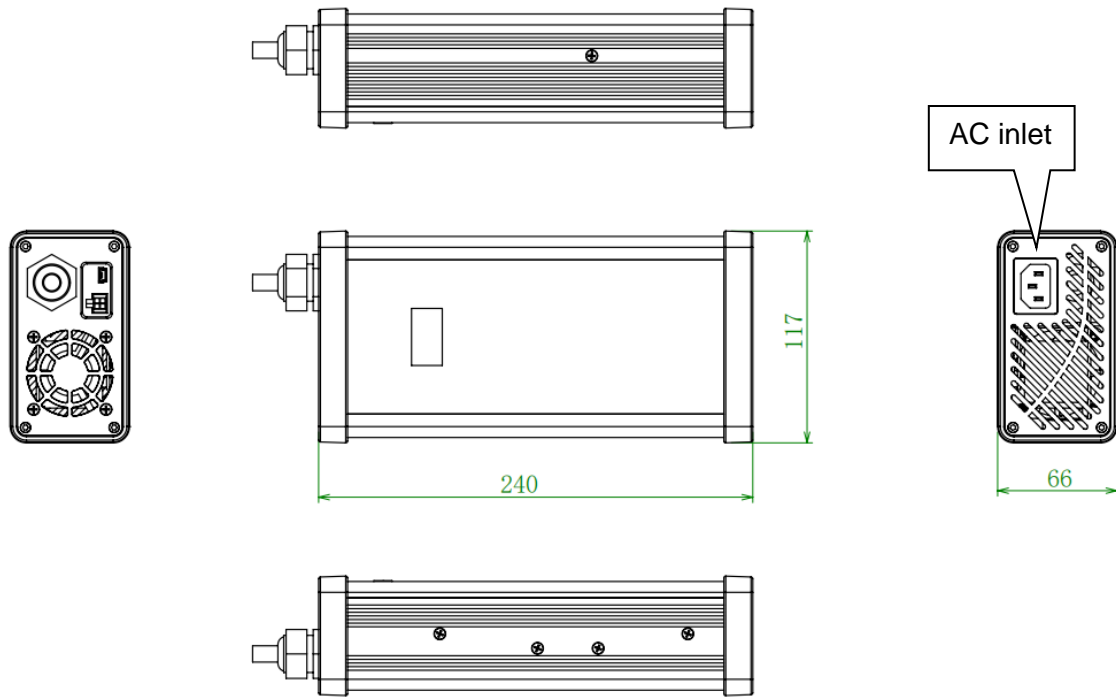
© 3 stage charging curve(Lead-Acid battery charger)



**2. LCD display**

Working Status	Charging...
Battery SOC level	S. O. C : 88%
Running time	TIMER : 1h33m
Power consumption	ENERGY : 603Wh
Fueled battery capacity	FUELED : 30 Ah
Charge voltage	27.8V
Charge current	20.0A

■ Mechanical specification



Communication Terminal Pin No. Assignment

- When using CAN communication

Pin No.	Assignment
1	CANH
2	5V+
3	CANL
4	5V-

- When using RS485 communication

Pin No.	Assignment
1	RS485-B
2	5V+
3	RS485-A
4	5V-