

GWL/ Power Group Technology Solutions – Stay Powered for the Future

POW48V30A/BLI CHARGER SPECIFICATION

for LFP/LiP (58.8V) + BMS connector



1. Input characteristics				
No.	Item	Technical specification	Unit	Remark
1-1	Rated input voltage	230V	Vac	
1-2	Input voltage range	180V – 264V	Vac	
1-3	AC input voltage frequency	47 - 63	Hz	
1-4	Inrush current	< 50 A	A	@ 264Vac start-up in cold condition
1-5	Max input current	10 A	A	

2. Output characteristics				
No.	Item	Technical specification	Unit	Remark
2-1	Nominal charge voltage	48V	Vdc	16 cells @ 3.00V 4 batteries @ 12.00V
2-2	Fast charge voltage (V-max)	58,8V	Vdc	Tolerance to stop charging according to the battery capacity ± 0.5 V
2-3	Maintain voltage	58,8V	Vac	(Float voltage, same as V-MAX)
2-4	Constant current (I-CC)	30A	A	Maximal current during full charge
2-5	Deep voltage level (V-deep)	43V	Vac	Deep discharge voltage level, bellow this voltage, the current is limited to I-min
2-6	Deep discharge current (I-min)	2A	A	The limited current bellow V-Deep
2-7 opt	BMS limit current (I-BMS)	approx 2A	A	The limited current for cell balancing (controlled by BMS)
2-8	Power efficiency	>80%		@ 230Vac

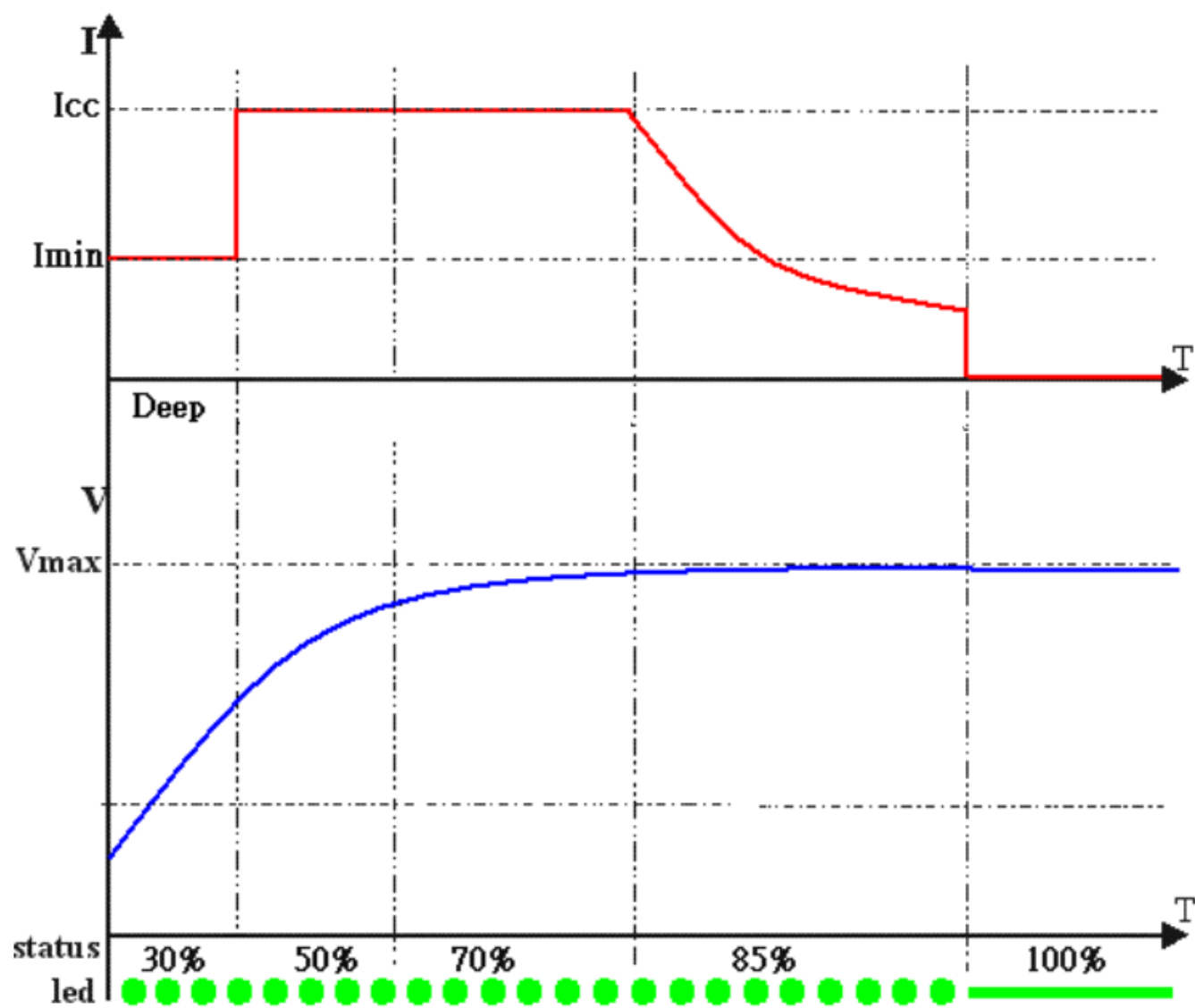
3. Protection characteristics				
No.	Item	Technical specification	Unit	Remark
3-1	Output over voltage protection	140 V	Vdc	
3-2	Software over voltage protection	The charger software limits the maximum output voltage to a level suitable for the connected battery system		
3-3	Thermal cutback	The internal temperature monitor reduces the charger output power in extreme operational temperature to prevent damage		
3-4	Output current limiting protection	35 A	A	@ CC Mode
3-5	Output short circuit protection	Short circuit protection at the output terminals. Automatic recovery after restoring to normal conditions.		
3-6	Electronic reverse battery protection	The charger is electronically protected against permanent reversed battery connection.		

4. Charge indicator (LED)				
No.	Item	Technical specification	Unit	Remark
4-1	Deep charging	LED flashing (slow)		
4-2	Fast charging	LED flashing (fast)		
4-3	Complete charge	LED on		
4-4	Voltage indicator	not available	V	
4-5	Current indicator	not available	A	

5. Safety & EMC (CE Conformity Requirements)				
No.	Item	Technical specification	Unit	Remark
5-1	Electric strength test input – output	1500 V / 10 mA /1 minute	Vac	No breakdown
5-2	Isolation resistance	> 10 MOhm @ 500 Vdc	MOhm	Input – ground (GND)
5-3	Isolation resistance	> 10 MOhm @ 500 Vdc	MOhm	Output – ground (GND)
5-4	Leakage current	< 3.5 mA	A	Vin = 264Vac, 50-60 Hz
5-5	Safety	EU standards for small electrical appliances		CE MARK
5-6	EMC – RE	Class B		EN55014
5-7	EMC – CE	Class B		EN55014
5-8	EMC – air discharge	Level 3		EN61000-4-2 (dis. B)
5-9	EMC – contact discharge	Level 3		EN61000-4-2 (dis. B)
5-10	EMC – RS	Level 3		EN61000-4-6 (dis. A)
5-11	EMC – CS	Level 3		EN61000-4-3 (dis. A)
5-10	EMC – EFT	Level 3		EN61000-4-4 (dis. B)
5-10	EMC – Surge	Level 3		EN61000-4-5 (dis. A) 1 kV, 2 kV (dis. B)

6. Environmental test requirements				
No.	Item	Technical specification	Unit	Remark
6-1	High ambient operating temperature	+40 °C	deg C	continuous operation
6-2	Low ambient operating temperature	-10 °C	deg C	continuous operation
6-3	Highest storage temperature	+70 °C	deg C	allow 2 hours to recover to normal temperature
6-4	Lowest storage temperature	-40 °C	deg C	allow 2 hours to recover to normal temperature
6-5	Drop shock	40 g peak		EN60068-2-32:1993

7. Charging curve (current A – red, voltage V - blue)



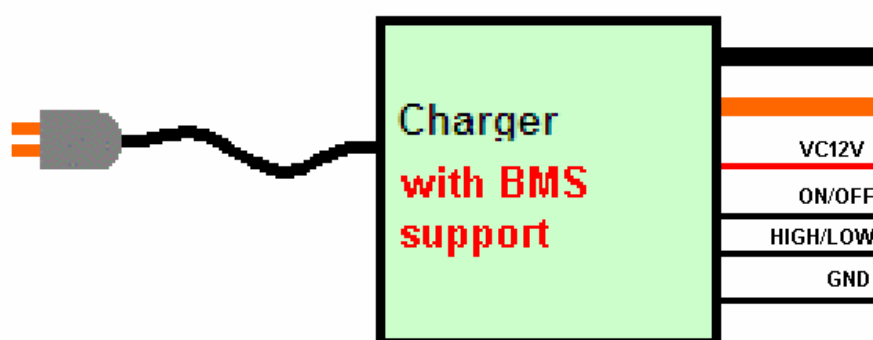
8. BMS connector operation (OPTIONAL, only for the model with BMS option)

Contacts	Status	Comment
VC12V	not connected	the charger works the standard way at MAX power
ON/OFF	not connected	
HIGH/LOW	not connected	
GND	not connected	

Contacts	Status	Comment
VC12V	+12V	the charger works the standard way at MAX power
ON/OFF	GND	
HIGH/LOW	GND	
GND	GND	

Contacts	Status	Comment
VC12V	+12V	the charger stops working
ON/OFF	not connected	
HIGH/LOW	any	
GND	GND	

Contacts	Status	Comment
VC12V	+12V	the charger works the standard way at REDUCED power (10%)
ON/OFF	GND	
HIGH/LOW	not connected	
GND	GND	



9. Product photos A



(The delivered product may differ from the image)

9. Product photos B



(The delivered product may differ from the image)

<http://www.ev-power.eu>

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