

Owner's Manual

Warning & Danger

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

This manual contains important safety and operating instructions read before using charger.

Warning: Use charger only with an algorithm selected that is appropriate to the specific battery type. Other usage may cause personal injury and damage. Lead acid batteries may generate explosive hydrogen gas during normal operation. Keep sparks, flames, and smoking materials away from batteries. Provide adequate ventilation during charging. Never charge a frozen battery. Study all battery manufacturers specific precautions, i.e. maximum charge rates and if cell caps should be removed while charging.

Danger: Risk of electric shock. Connect charger power cord to an outlet that has been properly installed and grounded in accordance with all local codes and ordinances. A grounded outlet is required to reduce risk of electric shock – do not use ground adapters or modify plug. Do not touch uninsulated portion of output connector or uninsulated battery terminals. Disconnect the AC supply before making or breaking the connections to the battery. Do not open or disassemble charger. Do not operate this charger if the AC supply cord is damaged or if the charger has received a sharp blow, been dropped, or otherwise damaged in any way—refer all repair work to the manufacturer, or qualified personnel. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

INFORMATIONS IMPORTANTES DE SÉCURITÉ

Ce manuel contient des instructions importantes concernant la sécurité et le fonctionnement.

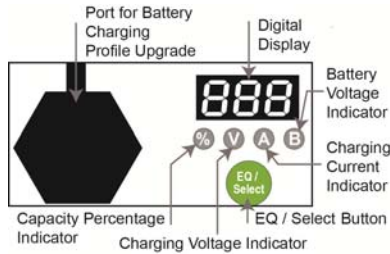
Attention: Utiliser le chargeur seulement avec un algorithme approprié au type spécifique de batterie. D'autres types de batteries pourraient éclater et causer des blessures ou dommages. Les batteries peuvent produire des gaz explosifs en service normal. Ne jamais fumer près de la batterie et éviter toute étincelle ou flamme nue à proximité des batteries. Fournissez une ventilation adéquate du chargeur. Ne jamais charger une batterie gelée. Prendre connaissance des mesures de précaution spécifiées par le fabricant de la batterie, p. ex., vérifier s'il faut enlever les bouchons des cellules lors du chargement, et les taux de chargement.

Danger: Risque de chocs électriques. Ne pas toucher les parties non isolées du connecteur de sortie ou les bornes non isolées de la batterie. Toujours connecter le chargeur à une prise de courant mise à la terre. Déconnectez la source AC avant de faire ou défaire les connections à la batterie en chargement. Ne pas utiliser le chargeur si le cordon d'alimentation AC est endommagé ou si le chargeur est abîmé suite à une chute ou autre incident. Ne pas ouvrir ni désassembler le chargeur – référer toute réparation aux personnes qualifiées. Cet appareil n'est pas destiné à un usage par des personnes (dont les enfants) avec des facultés motrices, sensorielles ou mentales réduites, ou ayant une expérience et des connaissances insuffisantes, à moins qu'elles sont sous la supervision ou reçoivent les instructions sur l'utilisation de l'appareil d'un répondant garant de leur sécurité. Les enfants devraient être surveillés afin qu'il ne jouent en aucun temps avec l'appareil.

Operation Instructions

1. LED Indicator & Digital Display

Charger will enter charging model when connecting to battery & AC input cable. Digital display on the front panel will show in turn: AC XXX (Current AC input voltage), CPU X.XX (corresponding software version number), b**(Current charging profile code)



To change the charging profile, press & hold the Select button for 5 seconds, then press the Select button to choose the desired profile. Once selected, press & hold the Select key for 5 seconds, and the charging profile selection will be completed.

To start EQ mode, press & hold the Select button for 10 seconds, and display will show EQ mode. The next charging cycle will go into EQ mode. If you want to quit the EQ mode, hold the Select button for 10 seconds. When display shows OFF, the charger will quit the EQ mode.

2. Common Mode(Default) & BMS Mode

- The charger enters BMS mode when being connected to lithium-ion battery through Can Bus;
- For safety reason, the charger will flash "bnS" if being reconnected to Lead-acid battery under a BMS mode;
- The charger will only charge Lead-acid type battery again if we refresh the charger through USB port with the desired lead acid battery charging profile via USB drive.

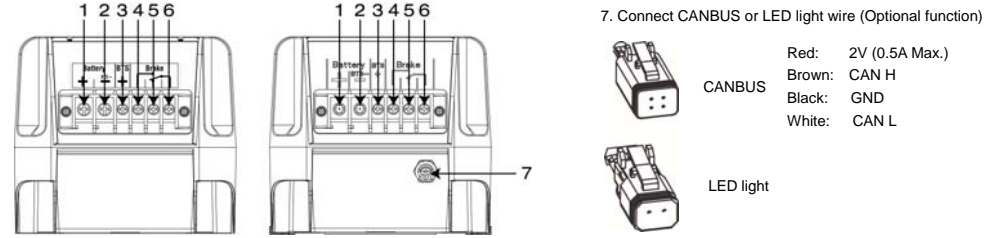
3. Charging Status indicator and digital display

- %** Capacity Percentage Indicator: Display shows charging percentage. i.e. 10 20 30.....100 (%)
- V** Charging Voltage Indicator: Display shows charging voltage. i.e. 24.0 (V)
- A** Charging Current Indicator: Display shows charging current. i.e. 36.0 (A)

4. Additional Battery Voltmeter Function

- B** Battery Voltage Indicator: To check battery voltage, disconnect charger AC input and press "Select" button for 1s. Display shows battery voltage. i.e. 24.0 (V)

5. The instruction for cable connection



- Connect to the positive terminal of the battery
- Connect to the negative terminal of the battery/BTS-
- Connect to the BTS+
- 4,5,6: Interlock Cable (4,6: **NO** The interlock cables will form an open circuit with no voltage. 5,6: **NC** The interlock cable will form a short circuit with no voltage)
7. Connect CANBUS or LED light wire (Optional function)

Warning: Assure the battery connection cable is well connected with the charger before it is connected to the battery. Otherwise, the battery short circuit may occur and cause personal injury or damage to the battery.

Fault Indicator

Blinking Frequency	Fault Cause	Solution
E01 bAt	The battery is not well connected or battery reversely connected or battery damaged	1) Check battery connection is correct. 2) Check charger connection is correct. 3) Check each battery is good.
E02 AC	Abnormal AC Power Input (Voltage)	1) Check AC input cord is connected between charger and AC outlet. 2) Make sure AC plug is tightly inserted into AC outlet.
E03 Hot	Charger High Temperature Protection	1) Charger shuts down and enters protection mode due to charger/environmental temperature is too high. Please place the charger in a well-ventilated environment. 2) Disconnect the charger and wait for 15-20mins before reconnecting for charging.
E04 bAt	Battery High Temperature Protection	1) Charger will reduce current even stop charging to prevent the battery from overheating when battery temperature exceeds the preset value. 2) When the battery temperature drops, the charger will restart automatically.
E05 Err	Internal error in product	Return to the factory for repairing.
E06 bAt	Battery Voltage is too high	Check and assure that the correct output battery voltage is connected.

Product Specifications

DC Output	Voltage-Range(V)	0-34V (GPSC3024)	0-34V (GPSC3624)	0-51V (GPSC2036)	0-68V (GPSC1548)
	Current -Range(V)	0-30A	0-36A	0-20A	0-15A
	Power-max(W)	1020W	1224W	1020W	1020W
	Power Error(%)	1%			
AC Input	Applicable to Battery	AGM, WET, GEL, Lithium			
	Reverse Polarity	Electronic protection-auto-reset			
	Short Circuit	Electronic protection-auto-reset			
	Voltage-Range(V)	100-240V			
Frequency(Hz)	50-60Hz				
Current-max(A)	10.5A	10.5A	10.5A	10.5A	
Power-max(W)	1100W	1320W	1100W	1100W	
Full Load AC Power Factor	>0.98				
Dimensions	20.7*18.0*16.0cm				
Weight	4.6KG	4.8KG	4.6KG	4.6KG	
Operating Temperature	-40°C~+65°C				
Storage Temperature	-40°C~+70°C				

Maintenance Instructions

- Do not expose charger to oil, dirt, mud or direct heavy water spray when cleaning vehicle.
- The enclosure of the charges has been tested successfully to IEC 60529, meeting IP66.
- If the detachable input power supply cord set is damaged, replace with a cord that is a safety approved detachable cord, 3 conductors, 1.5 mm² minimum, and rated appropriate for use in the country of destination and, on the other end, an output grounding type IEC 60320 C14 plug.

使用说明书

警告信息

请在使用本产品前详细阅读使用说明书，理解这些安全指导，并保存好此说明书以方便取阅。

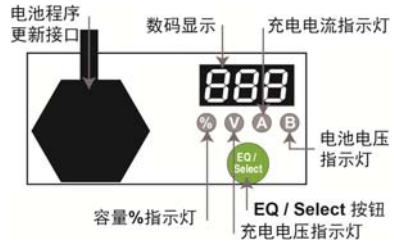
警告：只可以使用稳压电源系统中可选择的供电程序来选取适当的电池类型。其它的使用可能会造成人身伤害或稳压电源的损坏。在供电的过程中，铅酸电池可能产生爆炸性的氢气，请远离火花、火焰、或易燃易爆的物体。在供电过程中，保持通风良好，在有对流的环境下工作。不可充冰冻电池。阅读所有电池厂商的注意事项，比如：供电速度及可单独供电或不可单独供电的电池单元。

危险：雷击的危险，连接稳压电源输入线的插座必需是按当地安规条例安装有地线的插座，接地良好的插座减少电击的危险。不能接转接器或更改过的插头。不要用手接触稳压电源输出端非绝缘部分和电池端非绝缘部分。当稳压电源正在供电时，需要断开 AC 线，才可以终止电池连接。不可打开或拆散稳压电源。假如 AC 线损坏或是稳压电源被重击、跌落地下，以及其它的任何情况下损坏，都不可使用稳压电源。有关修理工作，请让有相关资格证的人员进行。有精神缺陷或缺乏使用经验和安全知识者勿用此机器，除非在专人监督和指导下安全使用。不可让小孩使用稳压电源。

操作说明

1. LED 指示灯和数码显示

将稳压电源与电池连接好，接通市电，稳压电源进入供电模式；数码显示会依次显示：AC XXX(当前 AC 输入电压)，CPU X.XX(表示本稳压电源的软件版本号)；b**(显示当前的供电曲线代码)。



按住 Select 键 5 秒松开，数码显示当前供电曲线代码；轻按 1 秒松开，切换供电曲线代码，如选定供电曲线代码，按住 Select 键 5 秒，供电曲线代码闪烁，松开按键，电池设置完成。如需更改请重复以上操作。

按住 Select 键 10 秒，数码显示快闪 EQ 字符松开按键，此时代表稳压电源进入 EQ 模式；如要退出 EQ 模式，同样按住 Select 键 10 秒，数码显示快闪 OFF 字符，松开按键，稳压电源将退出 EQ 模式。

2 普通模式和 BMS 模式（默认为普通模式）

- a 稳压电源通过 CAN 总线与锂电连接，稳压电源进入 BMS 模式。
- b 为了安全起见，如果在 BMS 模式下重新接上铅酸电池，稳压电源会闪烁“bnS”，提示没有通讯，不能供电。
- c 通过 USB 写入相应的铅酸电池曲线，稳压电源退出 BMS 模式，恢复普通模式，方可充铅酸电池。

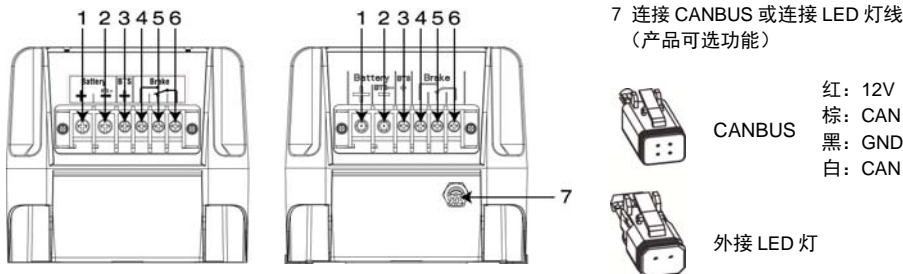
3 供电状态指示灯及数码显示：

- % 容量百分比指示灯：显示当前供电%，数码显示具体百分比值，例如：10 20 30.....100 (%)
- V 供电电压指示灯：显示当前供电电压，数码显示具体电压值，例如：24.0 (V)
- A 供电电流指示灯：显示当前供电电流，数码显示具体电流值，例如：36.0 (A)

4 附加电池电压功能显示：

- B&V 电池电压指示灯：电池与稳压电源连好，断开 AC 市电，按住 Select 键 1 秒显示当前电池电压值，例如：24.0 (V)

5 接线示意图（图示仅作参考，接线及外接功能请以实物为准）



- 1 连接电池的正极 2 连接电池的负极(BTS 负极) 3 连接 BTS 正极 4, 5, 6 供电锁车线 (4, 6: 供电锁车线为开路, 无电压; 5, 6 : 供电锁车线为短路, 无电压) 7 连接 CANBUS 或者连接 LED 灯线 (产品可选功能)

警告：在将电池连接线连接到电池之前，必须确保电池连接线与稳压电源连接完好，否则，可能会引发电池短路，造成人身伤害及电池损坏的危险。

故障显示

错误代码	故障原因	排除办法：
E01 bAt	输出没接电池或接反，短路，坏节	1) 检查电池组是否连接正确。 2) 检查稳压电源是否连接正确。 3) 检查电池组中的单个电池是否损坏。
E02 AC	市电不正常（电压）	1) 检查 AC 电源线是否连接在稳压电源和 AC 插座之间。 2) 确保 AC 插头紧插在 AC 插座上无松动。
E03 Hot	稳压电源高温保护	1) 稳压电源内部或环境温度过高，稳压电源将关闭并进入高温保护模式。请把稳压电源放在通风良好的环境工作。 2) 断开稳压电源，等 15~20 分钟后再重新连接供电。
E04 bAt	电池高温保护	1) 当电池温度超过预设值后，稳压电源会关闭输出，防止电池继续过热。 2) 当电池温度下降后，稳压电源会自动重启。
E05 Err	内部故障	退回返修。
E06 bAt	电池电压过高	检查并确保连接正确的输出电池电压。

产品规格参数

DC 输出	电压范围	0-34V GPSC3024	0-34V GPSC3624	0-51V GPSC2036	0-68V GPSC1548
	电流范围	0-30A	0-36A	0-20A	0-15A
	最大功率	1020W	1224W	1020W	1020W
	功率误差%	1%			
	适用电池	AGM, Flooded, GEL, Lithium			
	极性接反	自动保护			
AC 输入	短 路	自动保护			
	电压范围	100-240V			
	频 率	50-60Hz			
	最大电流	10.5A	10.5A	10.5A	10.5A
	最大功率	1100W	1320W	1100W	1100W
	满载时功率因数	>0.98			
尺 寸	20.7*18.0*16.0cm				
重 量	4.6KG	4.8KG	4.6KG		
工作温度	-40°C~+65°C				
存放温度	-40°C~+70°C				

保养建议

1. 洗车时，请勿将稳压电源暴露在有油、污垢、淤泥的场所或用高压水枪直射稳压电源。
2. 稳压电源通过 IEC 60529 测试，且符合 IP66 等级。
3. 如果可拆卸的输入线损坏，请使用符合安规认证及工业适用等级最小 1.5 平方毫米的 3 芯电源线，线的一端，带地线并符合国家标准的插头，另一端，接地类型 IEC 60320C14 的插头。

Battery category and program code contrast table/电池曲线对应表:

Numbering	Battery Model	Battery brand
b01	Common type of Flooded	Generic
b02	Trojan T105	Trojan
b03	Discover AGM (80-150Ah)	Discover
b04	Discover AGM (250Ah)	Discover
b05	US_Flooded (250Ah)	US Battery
b06	Trojan 30XHS	Trojan
b07	Trojan T125	Trojan
b08	Trojan J305P-AC	Trojan
b09	Generic Flooded(200-255Ah)	Generic
b10	Trojan T145	Trojan
b11	Trojan T1275 (2 in series and 2 in Parallel)	Trojan
b12	Discover AGM (220Ah)	Discover
b13	Trojan T605	Trojan
b14	12TB-115 AGM	Hoppecke
b15	Generic Flooded (140-200Ah)	Generic
b17	Generic Flooded (400Ah)	Generic
b18	Trojan T875	Trojan
b19	US 2000XC2	US Battery
b20	US 2200XC2	US Battery
b21	US 250HCXC2	US Battery
b22	6TB-170 AGM	Hoppecke
b23	Generic GEL (140-200Ah)	Generic
b24	Generic GEL (200-255Ah)	Generic
b25	Fullriver DC224-6	Fullriver
b26	Generic AGM (140-200Ah)	Generic
b27	Trojan L16P-AC	Trojan
b28	Common type of AGM	Generic
b29	US 8VGCXC2	US Battery
b30	US 12VXC2	US Battery
b31	US 305XC	US Battery
b32	US 125XC2	US Battery
b33	US 145XC2	US Battery
b34	Crown CR-235	Crown
b35	Crown CR-245	Crown
b38	User-defined	
b40	6-D-120G	骆驼
b41	3-EVF-180	天能
b42	3-EVF-200	天能
b43	3-MD-220	丰日
b44	4TTM435 (6PZS320)	FAAM
b45	EB100	G&Yu
b46	DC85-12	Fullriver
b47	DC115-12	Fullriver
b48	EV31A-A	Discover
b49	6-EVF-100A	超威
b50	6-EVF-200A	超威
b54	31XHS	Trojan
b55	LN3	ZincFive
b56	6 TB 220	Hoppecke
b57	AGM16	Lucas
b58	DT106	Leoch(理士)
b59	DT146	Leoch(理士)
b60	DT1275	Leoch(理士)
b61	6-EV-150	Leoch(理士)
b62	ZL060110	Zenith
b63	ZL060125	Zenith
b64	BF105	奔放
b65	SWE122000	SunnyWay
b66	3FM200D-X	Vision

Numbering	Battery Model	Battery brand
b67	JCB-Lithium	JCB
b68	EV6390	Leoch(理士)
b69	FDEPF-75118155/10Ah-001(48V120Ah)	浙江福得尔电器
b70	6-EVFH-120	汇源电池
b71	3-EV-200	山东圣阳
b72	3-EV-170	山东圣阳
b73	3-EV-100	山东圣阳
b74	4-EVF-150	火炬
b75	T105AGM	Trojan
b77	US 27DC XC2	US Battery
b78	SB12V160E-ZC	Super B
b79	24TMX	Trojan
b80	27TMH	Trojan
b81	DC115-12_(3-Stage-Mode)	Fullriver
b82	US L16XC2	US Battery
b83	EV512A-150	Discover
b84	UL220AGM	Lucas
b86	Generic 200~300Ah	QUIMO
b87	NPD62250	Neuton Power
b88	DT-126	Leoch(理士)
b89	DT-1275(两并两串)	Leoch(理士)
b90	DC-150	Fullriver
b91	DC-150(两并两串)	Fullriver
b92	DC-250	Fullriver
b93	J305-AGM	Trojan
b94	EVL16A-A	Discover
b95	GC3-105	EXIDE
b96	CA100 (锂电)	CALB 中航锂电
b97	6-EV-120	火炬
b98	6-EV-120 (并联)	火炬
100	DT1275 并联-(LG)	Leoch
101	DT1275 (LG)	Leoch
102	DT126 (LG)	Leoch
103	DT106(LG)	Leoch
104	27TMH(LG)	Trojan
105	DC115-12(LG)	Fullriver
106	DC150-12(LG)	Fullriver
107	DC150-12 (并联)(LG)	Fullriver
108	DC224-6(LG)	Fullriver
109	DC250-6(LG)	Fullriver
110	Hoppecke 200Ah(DiLing)	Hoppecke
111	6-EVF-100 (并联)	天能
112	30Q-14S17P-51AH	三星
113	30Q-14S23P-69AH	三星
114	EV12-155A-AM	Vision
115	EVGT6-280A	Vision
116	L-105	火箭
117	L-125	火箭
118	L-1275	火箭
119	L-605	火箭
120	3-EV-200	Leoch
121	3-EV-225	Leoch
122	6-EV-100	Leoch
123	6v-GEL	Trojan
124	TE35-GEL	Trojan

Please scan QR code in the front panel to know more about the information of battery charging profile
用户可以通过扫描产品的二维码获取电池曲线信息.

Warning: Do not charge non-rechargeable batteries.
警告: 不可充一次性(不可再充)的电池。