

EA-BC 800 R 320 W - 1500 W



铅酸电池自动充电器 Automatic chargers for lead-acid batteries



EA-BC 812-20 R



EA-BC 824-40 R



- 宽范围输入电压90...264 V
- 输出功率: 320 W 至 1500 W
- 电池电压: 12 V, 24 V 和 48 V
- 充电电流: 5 A 至 60 A
- 温控充电特性
- 三种不同的铅酸电池类型可选
- 可转为可调电源模式
- 有短路保护和反接保护
- 有过温保护(OT)
- 模拟接口
- 自然风冷*
- 温控风扇制冷**

概要

EA-BC 800 R系列是一款由单片机控制的电池充电器。它有3个充电阶段,能快速、完整地充完电循环,并优化电池寿命。优化的充电步骤可以极大地延长电池的寿命。

各充电循环阶段

本系列充电器可充液态、胶体(Gel 电池)、或电解液吸收在隔板内的贫液(AGM)铅酸电池。电池接到充电器上后,微处理器会检测电池极性与电池电压,再确定是否开始充电。电池极性错误或完全过放($<0.2 \times U_{Bat}$)时,则不开始充电。

稍微过放或深度过放的电池(>0.2 至 $<0.9 \times U_{Bat}$),应以小电流充电的预充开始。完成上述阶段后,紧接着进行快充阶段,以全电压和最大电流进行,直到充电电流下降到输出电流的5%以下。第三阶段就是涪充,此时一直保持给电池充电,防止电池自放电。

- Wide input voltage range 90...264 V
- Output powers: 320 W up to 1500 W
- Battery voltages: 12 V, 24 V and 48 V
- Charging currents: 5 A up to 60 A
- Temperature controlled charging characteristics
- Three different lead-acid battery types selectable
- Switchable to adjustable power supply
- Short circuit and reverse polarity protection
- Overtemperature protection (OT)
- Analog interface
- Natural convection for cooling*
- Temperature controlled fans for cooling**

General

The microprocessor controlled battery chargers from series EA-BC 800 R operate with a 3-stage charging process for a rapid and complete charging cycle, optimising the life of the battery. An optimised charging result can significantly increase battery life.

Charging cycles

The chargers can be used to charge lead-acid batteries with liquid, gel (Gel Cell) or felt soaked (AGM) electrolyte.

After connecting the battery to the charger, the microprocessor checks the polarity and voltage of the battery and determines if the charging process is allowed to start. At false polarity or complete discharge ($<0.2 \times U_{Bat}$) the charging procedure can not be started.

Normally or deeply discharged batteries (>0.2 to $<0.9 \times U_{Bat}$) start with a precharge cycle at reduced current. This stage is followed by a **boost charge cycle**, using full voltage and maximum current until the charging current sinks below 5% of the nominal output current.

The third stage is a **trickle charge cycle** in which the total charge in the battery is kept constant, preventing self-discharge.

* 600 W型号以下 / ** 1 kW型号以上

* Models up to 600 W / ** Models from 1 kW

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温度补偿充电循环

电池充电时建议装一个温度感测器，它根据电池的温度调节电压，从而限制危险气体的释放，并防止过充。

输出

本系列有不同型号，可对12 V，24 V，和48 V的电池充电，充电电流有从5 A至60 A，功率从320 W至1500 W的型号。

远程感测端

远程感测输入端可直接连到负载输入端，以补偿连线上的压降。本充电器会自动调整输出电压，确保电池获得准确所需的电压。

模拟接口

内置模拟接口上有一温度补偿输入端。想要监控实际充电电压和电流，可在模拟输出端接上 0 V...10 V 电压。此外，还有几个数字输入端和输出端，可用来控制和监控产品状态。

Temperature compensated charging cycle

It is recommended to use the included temperature sensor for battery charging. The charging voltage will then be adjusted by the temperature of the battery and thus limit the emissions of dangerous gases and prevent overcharging.

Output

Different units for batteries with 12 V, 24 V or 48 V battery voltage, for charging currents from 5 A to 60 A with power ratings from 320 W to 1500 W are available.

Remote sensing

The sensing input can be connected to the battery to compensate voltage drops along the power cables. The battery charger will adjust the voltage automatically in order to ensure that the correct voltage is available on the battery.

Analog interface

The built-in analog interface features an input for a temperature sensor for temperature-compensated charging. To monitor the actual charging voltage and current, analog outputs are realised with voltage ranges from 0 V...10 V. Several digital inputs and outputs are available for controlling and monitoring the status.



技术参数	Technical Data	Series EA-BC 800 R / 系列
交流输入电压	Input voltage AC	90...264 V, 1ph+N
- 频率	- Frequency	45...65 Hz
- 功率因素	- Power factor	>0.99
输出：直流电压	Output: Voltage DC	
- 精确度	- Accuracy	<0.2%
- 0-100%的负载调整率	- Load regulation 0-100%	<0.05%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.02%
- 10-100%负载调整需时	- Regulation 10-100% load	<2 ms
- 过压保护	- Overvoltage protection	固定的，同步偏移 / fixed, concurrent offset
输出：电流	Output: Current	
- 精确度	- Accuracy	<0.2%
- 0-100% ΔU _{DC} 的负载调整率	- Load regulation 0-100% ΔU _{DC}	<0.15%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.05%
安规标准	Standards	EN 60950, EN 61326, EN 55022 等级 B / Class B
工作温度	Operation temperature	0...50 °C
储存温度	Storage temperature	-20...70 °C

型号	充电电压	电流	功率	U纹波	I纹波	电源模式可 调范围	尺寸 宽×高×深	安装尺寸 宽×高×深	外壳类型	重量	订购编号
Model	Charging voltage	Current	Power	Ripple U	Ripple I	Adjust- ment range PS mode	Dimensions WxHxD	Installation dimensions WxHxD	Enclosure type	Weight	Ordering number
BC 812-20 R	12 V	20 A	300 W	<40 mV _{pp}	<60 mA _{pp}	10...15 V	218x83x163 mm	218x190x85 mm	1	2.2 kg	27150311
BC 824-10 R	24 V	10 A	300 W	<100 mV _{pp}	<35 mA _{pp}	20...30 V	218x83x163 mm	218x190x85 mm	1	2.2 kg	27150312
BC 848-05 R	48 V	5 A	300 W	<150 mV _{pp}	<12 mA _{pp}	40...60 V	218x83x163 mm	218x190x85 mm	1	2.2 kg	27150313
BC 824-20 R	24 V	20 A	600 W	<100 mV _{pp}	<65 mA _{pp}	20...30 V	218x83x163 mm	218x190x85 mm	1	2.2 kg	27150314
BC 848-10 R	48 V	10 A	600 W	<150 mV _{pp}	<25 mA _{pp}	40...60 V	218x83x163 mm	218x190x85 mm	1	2.2 kg	27150315
BC 812-40 R	12 V	40 A	600 W	<10 mV _{pp}	<19 mA _{pp}	10...15 V	90x360x240 mm	90x370x265 mm	2	6.5 kg	27150316
BC 812-60 R	12 V	60 A	900 W	<10 mV _{pp}	<19 mA _{pp}	10...15 V	90x360x240 mm	90x370x265 mm	2	6.5 kg	27150317
BC 824-40 R	24 V	40 A	1200 W	<10 mV _{pp}	<19 mA _{pp}	20...30 V	90x360x240 mm	90x370x265 mm	2	6.5 kg	27150318
BC 824-60 R	24 V	60 A	1500 W	<10 mV _{pp}	<19 mA _{pp}	20...30 V	90x360x240 mm	90x370x265 mm	2	6.5 kg	27150319
BC 848-40 R	48 V	40 A	1500 W	<10 mV _{pp}	<19 mA _{pp}	40...60 V	90x360x240 mm	90x370x265 mm	2	6.5 kg	27150320