EA-BC 800 R 320 W - 1500 W

铅酸电池自动充电器 / AUTOMATIC LEAD ACID BATTERY CHARGERS

外壳类型 1 / Enclosure type 1

EA-BC 812-20 R

- 宽范围输入电压90. . . 264 V
- 效率：高达 92%
- 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
- 单片机控制充电特性
- 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
- 有过压保护(OVP)
- 有过温保护(OT)
- 可自动检测的远程感测端
- 模拟接口
- 自然风冷*
- 温控风扇制冷**

- **Wide input voltage range 90...264 V**
- **High efficiency up to 92%**
- **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**
- **Microprocessor controlled charging characteristics**
- **Three different lead-acid battery types selectable**
- **Switchable to adjustable power supply**
- **Short circuit and reverse polarity protection**
- **Overvoltage protection (OVP)**
- **Overtemperature protection (OT)**
- **Remote sensing with automatic detection**
- **Analog interface**
- **Natural convection for cooling***
- **Temperature controlled fans for cooling****

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、完整地完成充电循环，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型和电池电压，再确定是否开始充电。电池极性错误或完全过放(<0.2 x 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 x U_{Bat})，应以小电流充电的**预充循环**阶段开始。

完成上述阶段后，紧接着进行**快充循环**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**涓充循环**阶段，此时一直保持给电池充电，防止电池自放电。

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, optimizing 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 stOrd. At false polarity or complete discharge (<0,2 x U_{Bat}) the charging procedure can not be started.

Normally or deeply discharged batteries (>0,2 to <0,9 x 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.

* 650 W以下型号
** 1000 W以上型号

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

温度补偿充电循环阶段
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。

外壳类型 2
Enclosure type 2

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 sense
The sense 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.

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。

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
AC输入电压	**Input voltage AC**	90...264 V, 1ph+N
-频率	- Frequency	45...65 Hz
-功率因数	- Power factor	>0.99
输出：DC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%
-负载10%-100%调整需时	- Regulation 10-100% load	<2 ms
-过压保护值	- Overvoltage protection	固定，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

Model / 型号	充电电压 Charging voltage	电流 Current	功率 Power	U纹波 Ripple U	I纹波 Ripple I	电源模式可调范围 Adjustment range PS mode	尺寸 宽x高x深 Dimensions WxHxD	安装尺寸 宽x高x深 Installation dimensions WxHxD	外壳类型 Enclosure type	重量 Weight	订购编号 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