

200W Series Battery Charger User Manual

The ABC200 series of high frequency PWM chargers have a compact and sealed structure design, they are suitable for Lithium Iron Phosphate batteries (LiFePO₄). All are universal worldwide mains.

They are used to cycle charge or floating charge batteries in bicycles, wheelchairs, scooters, caravans, communication equipment, electric power, small boats, Lawn-Mowers, Agriculture Equipment, etc.

Active PFC and LLC new technology guarantee a good Power Factor and a very high efficiency.

The reliable hardware protections and Impeccable charging strategies ensure a safe charging process.

MODEL LIST

Model Name	Rated Output Volt / Current	Charge Voltage LiFePO ₄	Charge Voltage AGM*	Battery Type
ABC200-1210LF	12V/10A	14.4		Lithium 4S
ABC200-1210LA*	12V/10A		14.6	Lead-acid AGM 6S
ABC200-2407LF	24V/ 7A	28.8		Lithium 8S
ABC200-2407LA*	24V/ 7A		29.2	Lead-acid AGM 12S
ABC200-4804LF	48V/3.5A	57.8		Lithium 16S
ABC200-4804LA*	48V/3.5A		58.4	Lead-acid AGM 24S

*Delivery on request

SAFETY INSTRUCTIONS AND WARNINGS

- Read these instructions and warnings before use.
- The Charger must be used within the specified Operating Ambient Temperature range and humidity.
- Do use charger outside, but always in a space that has some protection from outside weather influences.
- When the charger is installed, a minimum of 100 mm space around the charger is needed.
- Make sure the wires are placed in such a way that they cannot be damaged easily.
- The Lithium Battery must have a BMS protection with balancing the cells
- Never charge dead or damaged batteries
- Do not attempt to disassemble the charger

SPECIFICATION

- AC input voltage: 100~240Vac; 50/60Hz
- AC input rated current: < 2.8A @ 100VAC , <1.4A @ 230VAC
- Power Factor > 0.9
- Input fuse internal: 250V / 5A
- Efficiency at rated output: 88% typical
- No-load input power: 0.5W
- Noise level < 25dB
- Protection Level: IP54
- Reliability MTBF: 30000 hrs
- EMC: CISPR 22, EN 55014-1:2017, EN55015-2:2015; EN 61000-3-2:2014; EN 61000-3-3:2013
- Safety: UL1012; EN60335-2-29:2004+A2; EN60335-1: 2012+A2+A3; EN62335:2008

■ PROTECTION FUNCTIONS

Over current protection	Yes
AC Input under voltage protection	When AC voltage <90Vac, the charger will switch off
Output short circuit protection	Yes, will automatic resume after short is removed
Battery reversed protection	yes
No-load protection	yes
Over temperature	The charger must be able to operate up to 45°C and will de-rate the charge current linearly to 50% when reaching 60°C. When the case reaching >80°C the charger is allowed to stop, when the temperature falls, the charger automatically resumes. No defects at high temperatures
LED indication	Yes, see chapter LED indicators

■ SAFETY AND ENVIRONMENT

Safety test AC to DC 2 seconds	≤5mA@3000Vac/1min
Max. temperature case	75gr.C max for rated output
Insulation Resistance test	AC to DC > 10MΩ/DC 500V
Insulation class	Class B; double insulated
Working ambient temperature	-25 ...+45°C ; 45...60°C linear de-rating to 50%
Storage temperature	-40 ...+75°C
Humidity	20...95 % RH

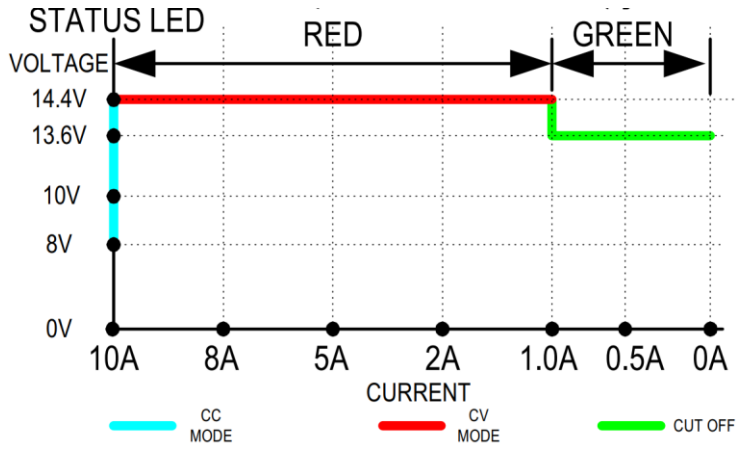
■ LED INDICATOR

Mode / MODEL	ABC200-1210LF	ABC200-2407LF	ABC200-4804LF
CHARGING mode	Red (I=10A)	Red (I=7A)	Red (I=3.5A)
CHARGING ready	Green (I < 1A)	Green (I < 0.7A)	Green (I < 0.4A)
FLOAT Mode	Green flashing	Green flashing	Green flashing

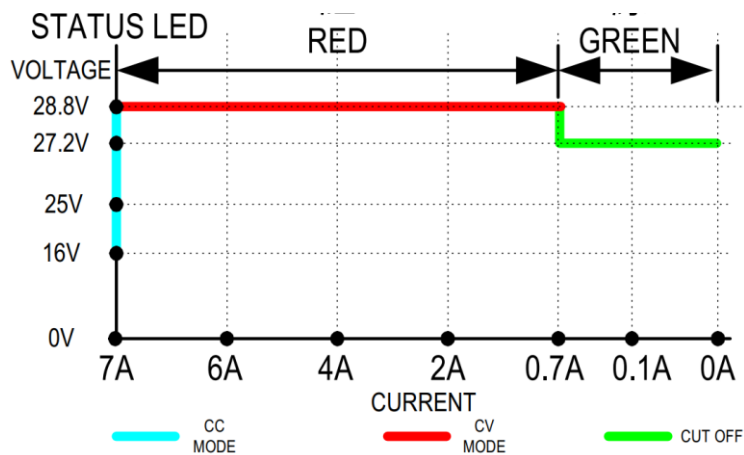
■ GENERAL SPECIFICATION

- **Dimensions:** 178 x 80 x 46 mm
- **N.W:** 0.78kg
- **Input :** Black AC cable 0.75mm² with EU 2-pin plug length 1.2 m
- **Output:** 1m cable AWG18 0.83mm² with 19mm XLR connector
- **Warranty:** 2 Years
- **Package:** Each charger in separate carton
- **Warranty:** 24 months from the date of purchase according ACES warranty conditions.

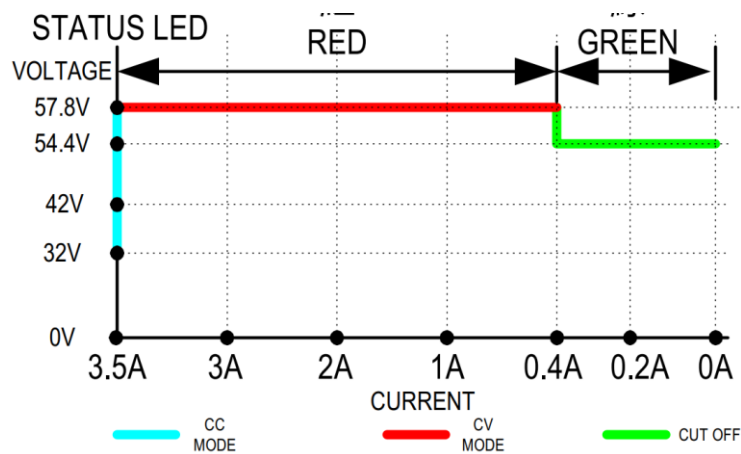
■ CHARGING CURVES FOR 12V, 24V, 48V LIFEPO4 (LFP) BATTERY



For ABC200-1210LF



For ABC200-2407LF



For ABC200-4804LF

Pictures and dimensions



MECHANICAL DIMENSIONS

UNIT:MM

