



PowerFirst Technology Company Limited

深圳市顶尖电源科技有限公司

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Technical Specification for PFC0450 (Confidential)

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
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
1 INTRODUCTION

This document specifies the requirements for PFC0450 series, it is a fan-cooling model. Dip-switches are used to select the commonly-used charging algorithms, the default setting is marked with “■”.

1#  IU1a-Acd for Wet traction batteries

2#  IU1a-GEL for Gel or AGM

3#  IUUa-GEL for Gel or AGM

4#  For customized algorithm

Below product pictures are for reference only, it is based on the standard specification sheet, physical product might have minor change subject to customer’s specific request.



2 DOCUMENT HISTORY

Table 2-1 Document History

Version	Date	Change record	Creator
V.01	10.05.10	Initial version	PowerFirst

3 SPECIFICATION

Table 3-1 Specification

No	Item	Technical specification	Remark
1	Rated input voltage	100 -240 VAC +/-10%, stepless change	Universal wide range
2	AC frequency	50-60Hz	Universal
3	Peak efficiency	91% @230VAC/24VDC, 89% @ 120VAC/24VDC	
4	Power factor	>0.98 @ 230VAC, >0.99 @ 120VAC	Advanced Active PFC



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





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No	Item	Technical specification	Remark
5	Nominal output voltage	24V	12V / 36V / 48V models optional
6	Bulk charge (CC)	15.5A, 15A, 13A or 12A @28.8V, or 16A @28.2V, switch to CV at 28.8V (2.40vpc)	Constant Current
7	Absorption charge (CV)	28.8V (2.40vpc at battery end), switch to float charge when current tapers down to 0.8A	Constant Voltage
8	Float charge	27V (2.25vpc), no time limit	Constant Voltage
9	Interlock function	Normally-closed (NC), max. 5A Wires: 2 * 1mm ² * 20cm, Red and Black Connector: customizable	Optional, customizable
10	Remote LED extension	Connector customizable	Optional, customizable
11	Charge algorithms	<p>1#  IU1a-Acd for Wet traction batteries</p> <p>2#  IU1a-GEL for Gel or AGM</p> <p>3#  IUUa-GEL for Gel or AGM (default)</p> <p>4#  For customized algorithm</p>	<p>Take out the cap near LEDs, Set charging profile by the left pair dip-switches</p> 
12	Line loss compensation	Based on 2 meters output cable's length	
13	Short circuit protection	Short circuit protection with auto-reset	
14	Reverse polarity protection	Reverse polarity protection with auto-reset	
15	Additional protection	Sparks protection AC surge protection with auto-reset Over temperature protection with auto-reset	
16	DC output power cord (customizable)	Cable: 2 * 2.5mm ² * 1000mm Connector: customizable	
17	AC input power cord (customizable)	Cable: 3 * 0.75mm ² * 600mm Connector: IEC320 / C14	
18	LED instruction	Red: On = Fault Yellow: On=Charging Green: On=Fully charged	Customizable
19	Regulatory compliant	Safety (LVD): EN60335-2-29, UL1564, CSA 107.2 Emissions (EMC): EN55014 Immunity (EMC): EN61000-3-2, EN61000-3-3	LVD, RE, CE, Harmonic, Flicker, ESD, RS, CS, EFT, Surge, DIP, PFM included



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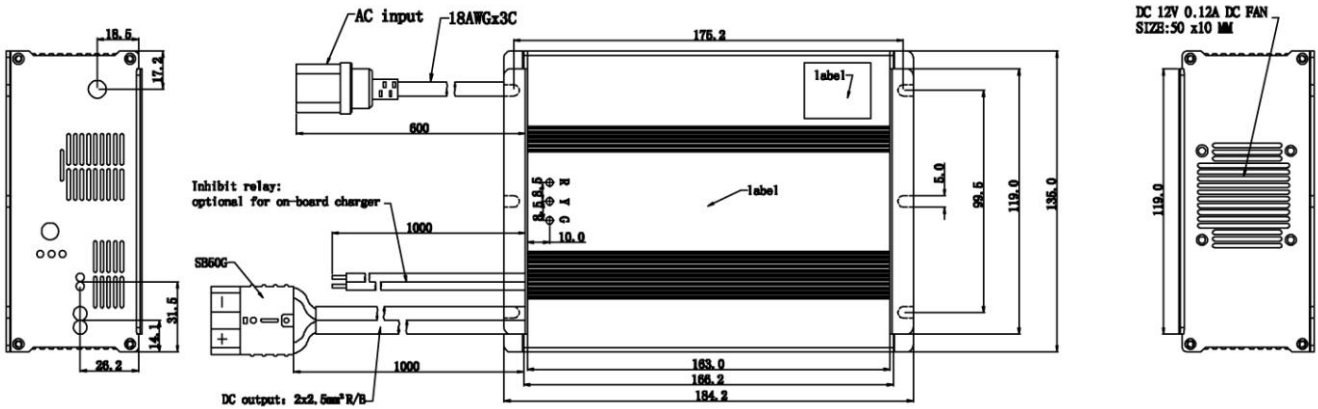
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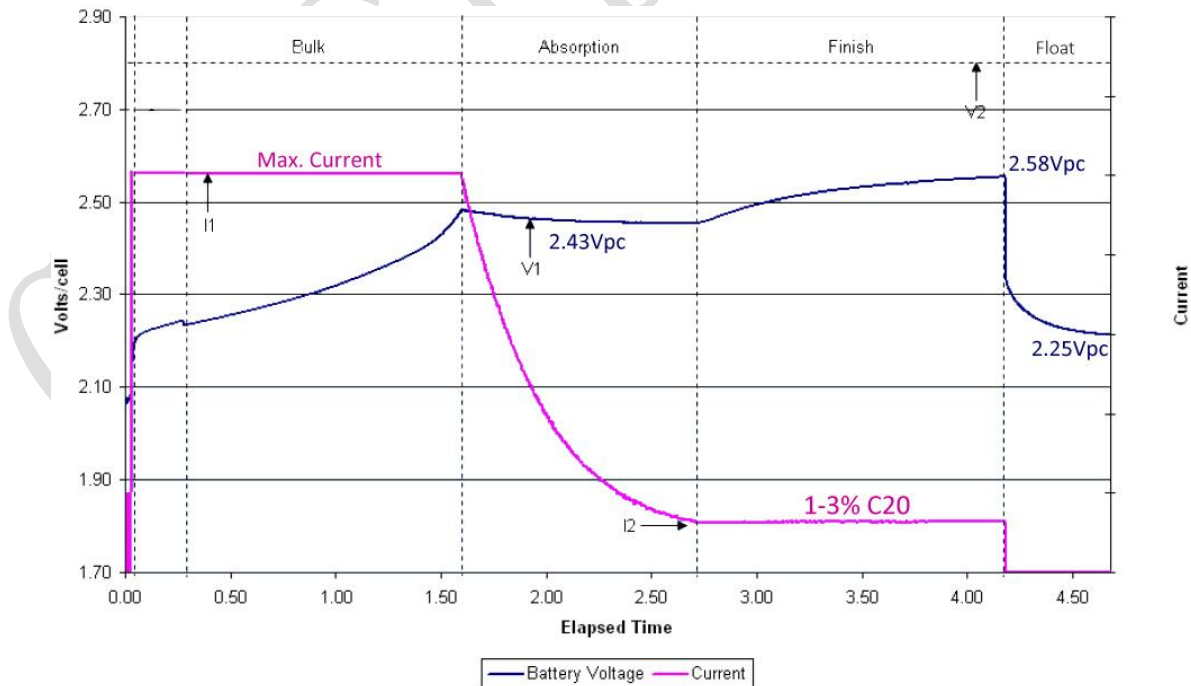
No	Item	Technical specification	Remark
20	Cooling method	Fan-cooling with long-life fans	
21	Operating temperature	-10°C to +50°C (14°F to 122°F)	
22	Storage temperature	-20°C to +65°C (-4°F to 149°F)	
23	Mechanical fixing	On-board as default	Portable as optional
24	Dimensions	L166 x W135 x H60 mm	
25	Weight	2Kg	Maybe some tolerance
26	Color	Black	Customizable

4. PRODUCT OUTLINE DRAWING



5. CHARGING ALGORITHMS

1# IULa-Acd for Wet traction batteries





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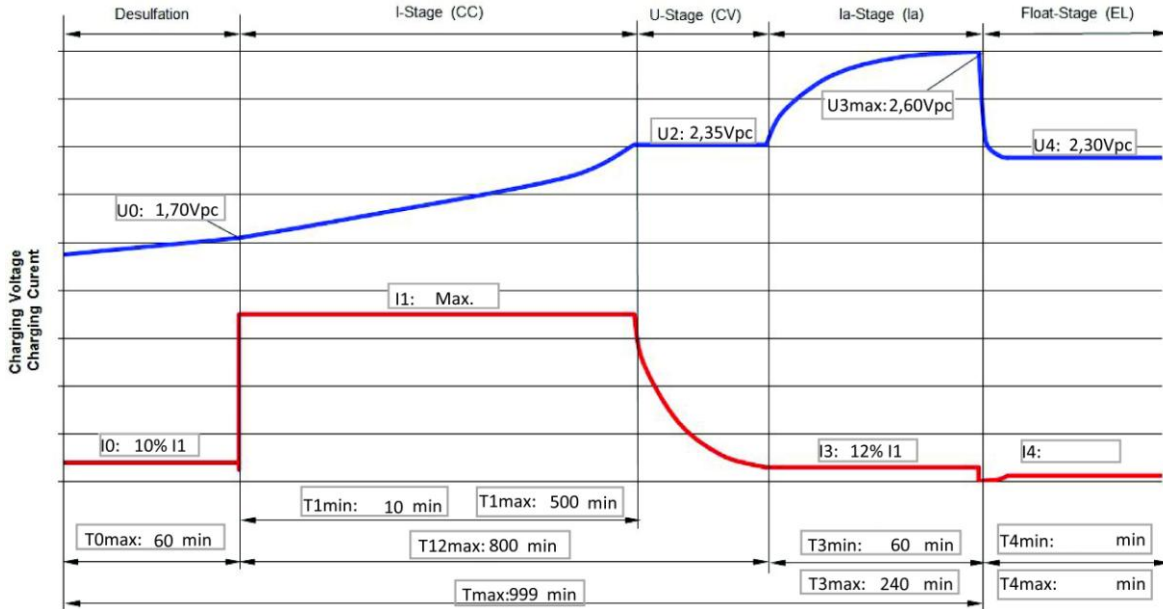
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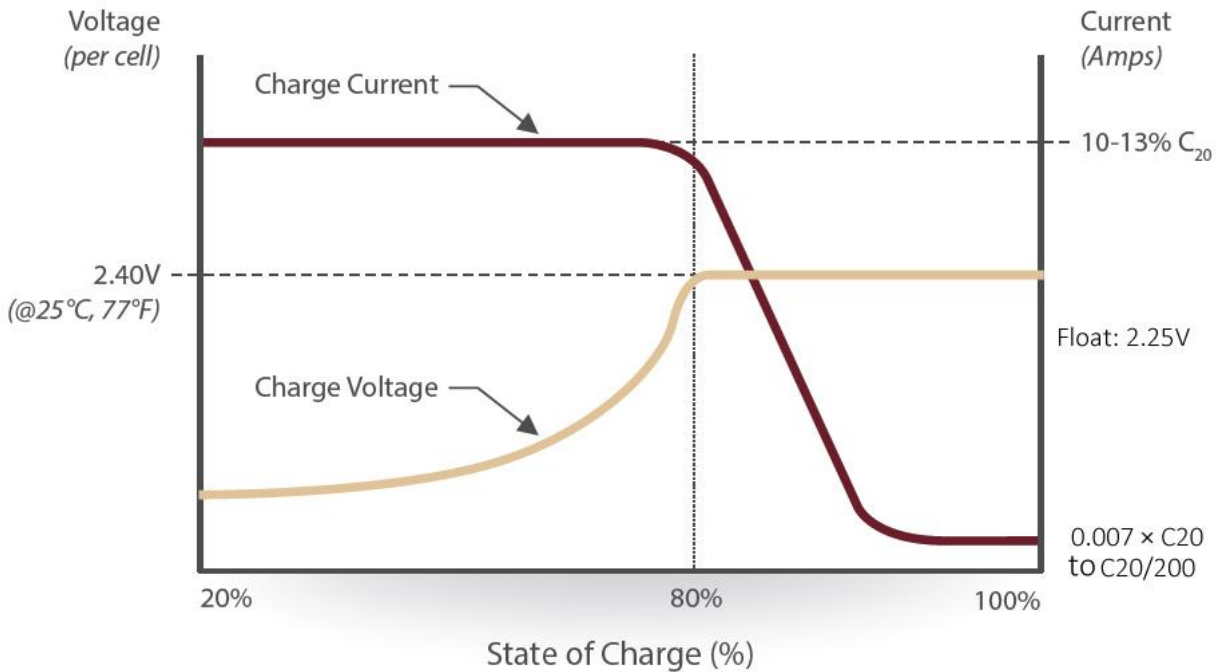
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
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2#  IU1a-GEL for Gel or AGM



3#  IUUa-GEL for Gel or AGM



4#  For customized algorithm