



PowerFirst Technology Company Limited

深圳市顶尖电源科技有限公司

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Technical Specification for PRO1000 (Confidential)

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1 INTRODUCTION

This document specifies the requirements for PRO1000 series, it is a natural-cooled water-proof model with an IP66 enclosure. A yellow wire loop is used to set two commonly-used charging algorithms, the default setting is marked with “■”.

Yellow wire loop closed

IUIa for Trojan Deep Cycle Wet Batteries

Yellow wire loop cut

IUIa for US Deep Cycle Wet Batteries

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	10.05.14	Initial version	PowerFirst

3 SPECIFICATION

Table 3-1 Specification

No	Item	Technical specification	Remark
1	Rated input voltage	100 -240 VAC +/-10%	Universal wide range
2	AC frequency	50-60Hz	Universal



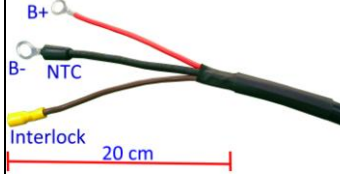

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No	Item	Technical specification	Remark
3	Peak efficiency	93% @230VAC/24VDC, 91% @120VAC/24VDC	CEC compliant
4	Power factor	>0.98 @ 230VAC, >0.99 @ 120VAC	Advanced Active PFC
5	Nominal output voltage	24V	36V / 48V / 72V optional
6	Bulk charge (CC)	30A or 25A, switch to CV at 29.6V (2.47vpc)	Constant Current
7	Absorption charge (CV)	28.2~29.4V (2.35~2.45vpc), switch to Finish charge when current drops to 4.5A (2% C20)	Constant Voltage
8	Finish charge (CC)	Charge with current 4.5A (2% C20), switch to Float Charge at 31V (2.58vpc)	Constant Current
9	Float charge	27V (2.25vpc), no time limit	
10	Line loss compensation	Based on 2 meters output cable's length	
11	Interlock function	Single brown wire, max 10A, normally-closed with "B +", do not connect to "B-" or "Earth"	Comes with DC power cord
12	Temperature compensation	For too high or too low ambient temperature applications. NTC 10K sensor.	Optional, see output definition
13	Output definition & connector (Customizable)	Terminals: B + (Brown) : 8mm(5/16") ring terminal B - (Blue) : 8mm(5/16") ring terminal (B- connected with the NTC sensor) Interlock(Brown): Female 1/4" or 250 spade terminal, insulated sheathed Temperature sensor: NTC 10K	Size of cable: 4 * 10AWG * 2m 
14	AC input power cord (customizable)	Cable: 3 * 14AWG * 20cm Connector: IEC320 / C14	
15	Charge algorithms	For standard model, Set charge algorithm via a yellow wire loop: closed for IUIa Wet batteries (Set as default) cut for customized profile Wire: 1 * 24AWG * 16cm, yellow	
16	iCharge functions	Charge history data download, charging algorithms configuration, charged capacity indication, real time monitoring of charging status, deep discharge record, selection of max output current, etc. This function is achieved via USB 2.0 port and a professional Windows application.	Optional (for advance model)
17	Short circuit protection	Short circuit protection with auto-reset	
18	Reverse polarity protection	Reverse polarity protection with auto-reset	
19	Additional protection	Sparks protection AC surge protection with auto-reset Over temperature protection with auto-reset	



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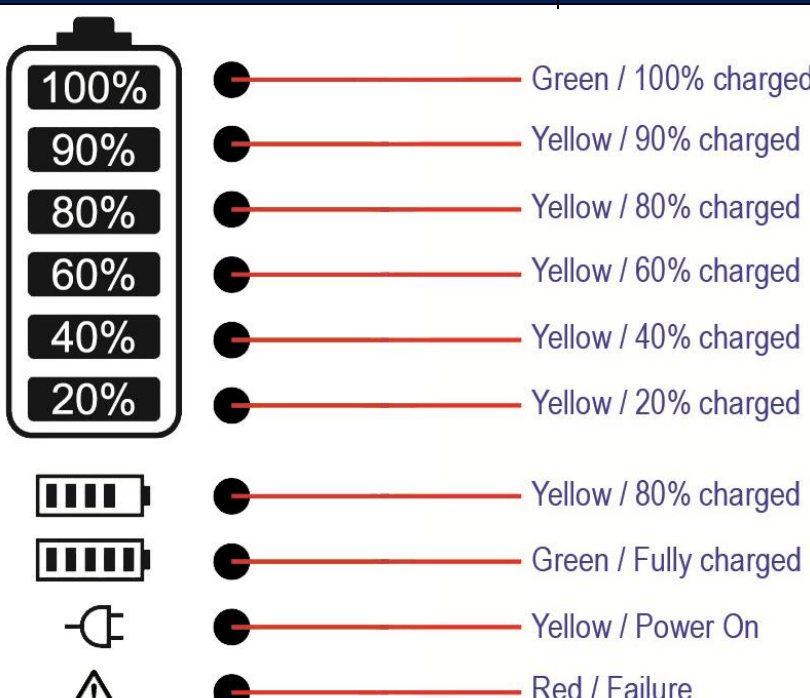
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No	Item	Technical specification	Remark
20	LED instruction		
21	Regulatory compliant	<p>Safety: EN60335-2-29, UL1564, CSA 107.2</p> <p>Emissions: FCC Part 15 / ICES 003 Class A, EN55011</p> <p>Immunity: EN61000-3-2, EN61000-3-3, EN61000-6-2, EN61000-6-4</p> <p>CEC: California Energy Commission</p>	
22	Enclosure	IP66 (NEMA4)	
23	Cooling method	Natural convection cooled via optimized fin	Without fan
24	Operating temperature	-10°C to +50°C (14°F to 122°F)	Output current derates when internal temperature higher than pre-alert point, and back to normal charging when cooled down
25	Storage temperature	-20°C to +65°C (-4°F to 149°F)	
26	Mechanical fixing	On-board as default	Portable as optional
27	Dimensions	L 246 x W 219 x H 98 mm	
28	Weight	5 Kg	Maybe some tolerance
29	Color	Black	Customizable



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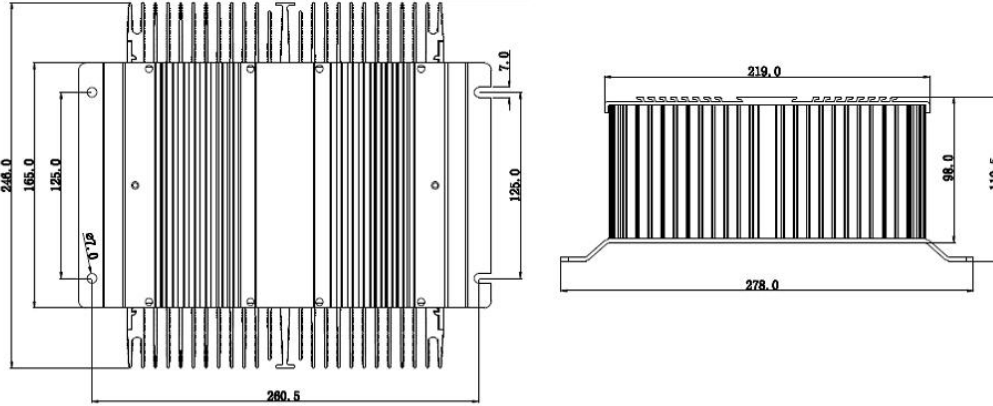
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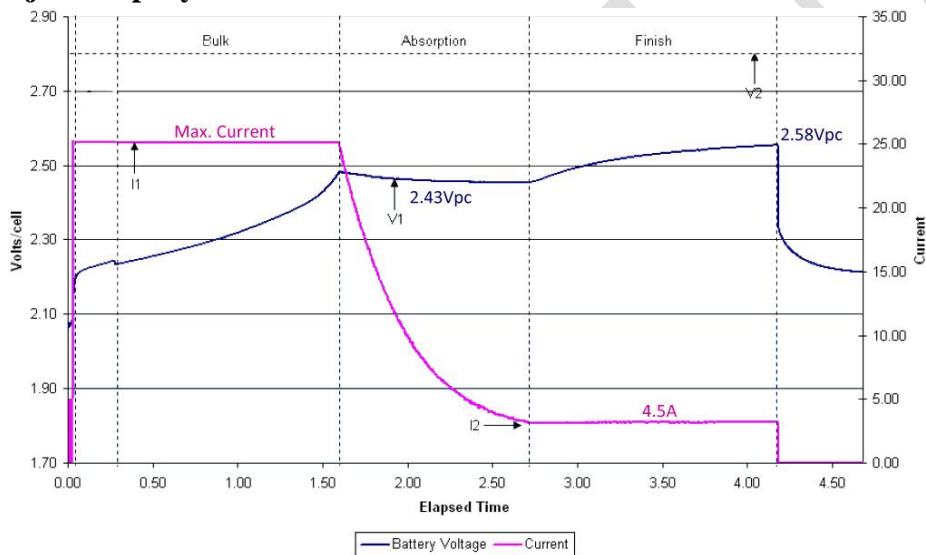
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4. PRODUCT OUTLINE DRAWING



5. CHARGING ALGORITHMS

■ IUIa for Trojan Deep Cycle Wet Batteries



□ IUIa for US Deep Cycle Wet Batteries

