

CDP 充放电装置 Charging and discharging device

概述

Overview

CDP型充放电装置是对蓄电池组进行充放电控制管理并维护电池寿命，同时对低压直流负载供电的设备。设备满足CCS、ABS、LR等国内外船级社要求，被广泛应用于港口码头、船舶、石油平台等场所。

CDP charging and discharging device is designed to control and manage the charging and discharging of storage battery and to maintain the battery life, and it also distributes power to low voltage DC loads. The device meets the requirements of CCS, ABS, LR and other classification societies at home and abroad, and is widely used on docks, ships, oil platforms and other places.

产品特点

Product features

- 高品质可控直流电源模块，采用高频开关技术，体积小、重量轻、纹波低、精度高、效率高；
High-quality controllable DC power supply module, taking high frequency switching technology, with small size, light weight, low ripple, high precision and high efficiency;
- 采用智能化多段式充电技术，最大限度匹配电池充电特性曲线，延长电池使用寿命；
Taking intelligent multi-stage charging technology so as to match the battery charging characteristic curve to a maximum extent and extend the battery life;
- 具有温度补偿功能，根据电池环境温度的变化自动补偿调整均浮充电电压，延长电池使用寿命；
With the temperature compensation, which can automatically compensate and adjust the average floating charging voltage according to the changes in battery environmental temperature, thus greatly improve the battery life;
- 充电电流和均浮充电电压可根据特定的电池电压和充电曲线及电池类型（酸性、碱性等）来设定。
Charging current and average and floating charging voltage can be set according to specific battery voltage and charging curve as well as battery types (acid and alkaline and so on).

产品功能

Product functions

- 蓄电池/供电电压、电流、电网绝缘监测功能；
Battery / supply voltage, current and power grid insulation monitoring function;
- 电源失电，充电模块故障，供电模块故障，绝缘低报警，蓄电池高/低压报警，供电电压高报警，过载短路保护等功能；
With functions such as power loss alarm, charge module fault alarm, power supply module fault alarm, insulation low alarm, battery voltage high or low alarm, power supply voltage high alarm, overload and short circuit protection;
- 直流配电监测功能（选配）：对直流配电网的电气负载设备进行监测，并对负载设备进行健康评估，为设备的维护维修提供决策支持；
DC power distribution monitoring function (optional): monitoring the electrical device of DC distribution network, carrying out the health assessment for electrical device and providing decision support for equipment maintenance and repair;

技术指标

Technical index

- 工作电压：三相AC380V/440V±10% 50/60Hz
单相AC220V±10% 50/60Hz
Working voltage: Three-phase AC380V/440V (±10%) 50/60Hz
Single-phase AC220V (±10%) 50/60Hz
- 充电电流设定范围：0.1~0.2C（C为蓄电池容量）
Setting range of charging current: 0.1~0.2C (C is the battery capacity)
- 充电电流精度：≤1%
Precision of charging current: ≤1%
- 充电电压设定范围：2.2~2.35V（单节2V蓄电池，环境温度25°C）
Setting range of charging voltage: 2.2~2.35V (a single 2V battery, ambient temperature 25°C)
- 充电电压精度：≤1%
Precision of charging voltage: ≤1%

- 温度补偿充电功能（选配）；
Temperature compensatory charging function (optional);
- 蓄电池保养性放电功能（选配）；
Battery maintenance discharging function (optional);
- 绝缘故障定位功能（选配）：对直流汇流排绝缘、支路负载的对地绝缘阻值进行监测，实时在线定位负载故障支路；
Insulation fault location function (optional): monitoring the insulation resistance value for DC bus bar and the branch load to the ground, real-time online locating the fault load branch;
- 对外通信功能（选配）：支持Modbus等通信协议。
External communication function (optional): support Modbus and other communication protocol.

- 输出电压纹波：Vp-p≤500mV
Output voltage ripple: Vp-p≤500mV
- 低压报警：≤蓄电池电压的90%
Low-voltage alarm: ≤90% of the battery voltage
- 过压报警：≥蓄电池电压的120%
Over voltage alarm: ≥120% of the battery voltage
- 绝缘报警：≤10kΩ
Insulation alarm: ≤10kΩ
- 安装方式：壁挂式、落地式
Installation: wall-mounted, floor style
- 防护等级：IP23
Protection grade: IP23
- 环境温度：-10~55°C
Surrounding temperature: -10°C~55°C



■ 产品标准尺寸见下表:

Product standard sizes are shown in the following table:

设备名称 Equipment name	外形尺寸mm Outline dimensions (mm)			安装尺寸mm Installation dimensions(mm)		备注 Remarks
	宽 (A) W	高 (B) H	深 (C) D	宽 (D) W	高 (E) H	
壁挂式充放电板 Wall-mounted CDP	600	900	300	480	940	Fig. 1
	600	1000	300	480	1040	
	700	900	300	580	940	
	700	1000	300	580	1040	
落地式充放电板 Floor type CDP	600	1600	500			Fig. 2
	600	1800	500			
	600	1800	600			
	800	1800	500			
	800	1800	600			

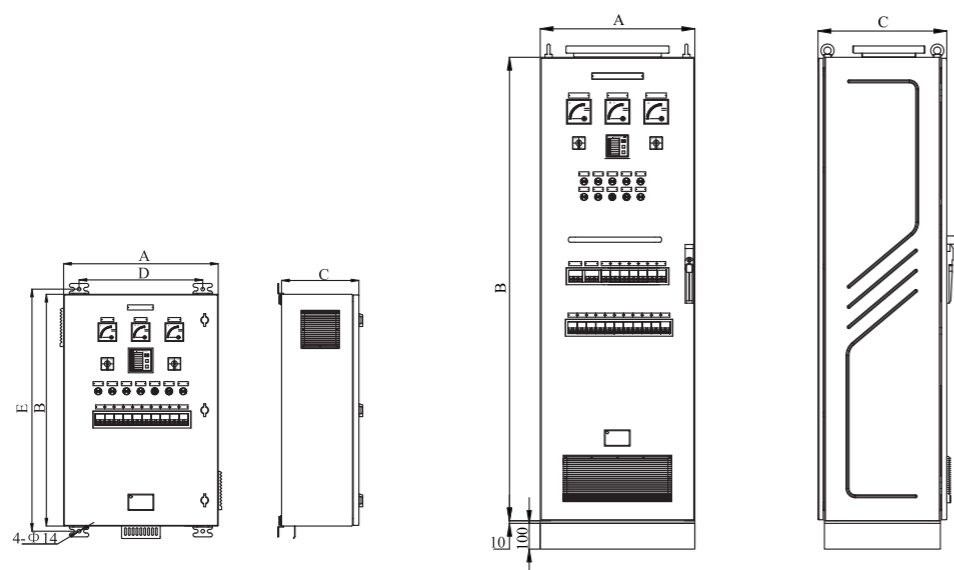


Fig.1

Fig.2

► 型号命名
Model naming

充放电装置 Charging and discharging device	CDP	-□	□	□	/□	/□	□
输入电压: M2:单相AC220V; Q3:三相AC380V; R3:三相AC440V Input voltage: M2: single phase AC220V; Q3: three-phase AC380V; R3: three-phase AC440V							
蓄电池电压: JD:DC12V; BD:DC24V; FD:DC110V; MD:DC220V Battery voltage : JD:DC12V; BD:DC24V; FD:DC110V; MD:DC220V							
蓄电池类型: S酸性; J碱性; Q其它 Battery type: S: Acid; J: Alkaline; Q: Other							
充电电流(A) Charging current (A)							
供电电流(A) Power supply current (A)							
负载路数 Number of loads							

► 选型说明
Selection description

Selection description

CDP-M2BDS/40/120

表示充放电板, 输入电压为单相AC220V, 蓄电池电压为DC24V, 酸性, 充电电流40A, 供电电流120A

It means charging and discharging panel: single-phase AC220V input voltage, DC24V battery, acid type, 40A charging current and 120A power supply current.