



ISO9001 国际质量管理体系认证企业
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CZB6E智能充电机概述

CZB6E系列充电机，主电路使用可靠的漏磁变压器与整流二极管，通过充电控制器，实现标准的Wsa充电控制；充电控制器内置的充电曲线，采用优化的充足判断方式，满足各种不同特性的蓄电池在各种应用工况下的充电要求。

充电机控制器在充电过程中，实时监测蓄电池的状态、输入电源电压变化、充电电流的数值，智能的控制每一次的充电过程，及时的适应蓄电池的状态与电源参数的变化，保证充电效果的一致性，满足不同状态下蓄电池充电要求。

CZB6E系列充电机结构简单、操作方便，各项保护功能齐全，是全智能的充电机，适合为各种铅酸蓄电池充电，为电动托盘车、叉车、搬运车、升降车、游览车等车辆的铅酸蓄电池的充电。

CZB6E Series ChargerProduct Introduction

The main circuit of CZB6E Series intelligent charger use reliable leakage transformer , rectifier diode and charge controller to achieve standard control of Wsa charging control; The built-in charging curve adopts improved judgement to judge whether the battery is fully charged, and the built-in charging curve can meet charging requirement of different batteries in different applications and work conditions.

The charge controller will monitor the real time battery status, change of the input power supply and the charging current when in charging process. It will intelligently control charging process every time to fit the battery's status and the change of the power parameters which ensure the consistency of the charging effect and meet the battery's charging requirement in different status.

The CZB6E series charger is such an intelligent charger which is simple in structure, easy to use with various protection function. It applies to all kinds of lead acid batteries and those electric vehicles such as electric pallet, forklift, carrier, lift, sightseeing bus who use lead acid batteries.

► **CZB6E系列智能充电机:** 适用于电动托盘车、电动叉车、电动搬运车、电动升降车、电动游览车等各种电动车辆上的铅酸蓄电池的充电。

► **CZB6E series Intelligent Charger:** This device would be applicable to recharge of lead-acid batteries which could be used in various electric vehicle such as power pallet trucks, fork-lift truck, lift truck, electronic tour bus.

CZB6E

系列智能充电机

CZB6E Smart Battery Charger



► 主要功能

- 1)采用标准的Wsa充电曲线，适用于为各种不同类型的开口式铅酸蓄电池的充电；
- 2)充电状态、参数显示：高亮度LED指示充电机的运行状态，数码管显示充电过程中蓄电池电压、充电电流、容量、时间等充电参数，故障时，显示故障代码；
- 3)按键功能：不同的按键组合，实现启动、暂停，数据查询与参数设置功能。
- 4)延时启动功能：充电机自动检测充电开机条件，开机时有延时启动功能，延时5秒左右接通主电路，保证充电操作人员安全。
- 5)充足判断：自动测试充电电流、电压，输入电压，智能判断充电过程的相关测试变化趋势，通过内置的充电判断方法，保证每一次充电过程都最优，适应各种蓄电池的内置特性，达到蓄电池比重到位，温升最低的目的。
- 6)充电系数可调：通过调整充电系数，改善充电效果，适应不同特性的铅酸蓄电池充电要求，保证充电效果。充电系数范围1.00-1.30。
- 7)充电机数据记录功能：充电机内置存储器件，可记录70次充电结束时的充电数据；通过按键与数码管显示，供用户现场使用检查，查询充电过程历史数据。
- 8)完善的充电机保护、报警功能：充电机有开路、过载、短路、变压器超温、电源缺相、电源过欠压等故障保护和报警功能；
- 9)各种标准的充电模式选择：充电机具有手动均衡充电、脉冲充电、脱硫充电模式，定时补充充电满足蓄电池生命周期需要的各种充电要求。

► Main functions

- 1) Adopt standard charging curve Wsa which applies to different kinds of open-end lead acid batteries.
- 2) The high light LED will indicate the charger's running status. The Nixie tube will display charging parameters in charging process such as battery voltage, charging current, capacity and time. When the fault happens, it will display the fault code.
- 3) Button function: Different combination of the buttons can achieve the functions of start, pause, data query and parameters setting.
- 4) Delay start function: The charger will automatically check the start up condition. 5 seconds were delayed to connect the main circuit which ensure the safety of the operator.
- 5) Judgement of fully charged: Automatically test the charging current, voltage, input voltage and judge the variation trend of the related testing. The built-in charging judgement method will ensure that every charging process is the best to fit the built-in properties of the different kinds of battery and achieve the suitable proportion of the battery with lowest temperature rise.
- 6) Adjustable charging coefficient: Through adjusting the charging coefficient, the charging effect will be improved and apply to the charging requirements of different kinds of lead acid batteries. The charging coefficient range: 1.00-1.30.
- 7) Function of charging data record: The charger has built-in memory devise which can record 70 charging records after finishing charging. The users can check and query the charging history.
- 8) Completed functions of protection and alarm: The charger functions of fault protection and alarm such as open circuit, over load, short circuit, overheating of the transformer, fault phase of power, over, under voltage of power and so on.
- 9) Selection of various charging mode: The charger has different charging modes such as manual equalizing charge, plus current charge, desulfurization charge mode and timed supplement charge to meet different charging requirements of different batteries in different life cycle.

► 主要技术参数 Main technical parameters (CZB6E 系列充电机，分-E单相充电机与-D三相充电机，电源频率：50/60Hz)

规格 specifications						参数指标 Parameter Index																				
充电机规格 Type		输入电源参数 Input power parameter				可充电电池范围 (V/Ah) chargeable battery range (V/Ah) (@80%DOD, 额定输入电压 50Hz, rated input voltage 50Hz)				箱体类型 Dimension (mm)		重量 Weight (KG)														
电压 (V)	电流 (A)	电压 (V)	容量 (KVA)	电流 (A)	电源保险 (A)	充电电流 (DCA)	充电电压 (DCA)	8-10H	10-12H	宽*深*高 (mm)																
24	25	E 220V	1.0	4.4	10	25	24	155-200	200-280	240*350*295	21	48	35	E 220V	2.7	12.3	20	35	48	215-280	280-390	280*430*300	28			
	30	E 220V	1.2	5.3	10	30	24	185-240	240-335	240*350*295	21		40	D 380V	3.1	4.7	10	40	48	245-320	320-445	466*360*783	59			
	35	E 220V	1.4	6.2	10	35	24	215-280	280-390	240*350*295	21		45	D 380V	3.5	5.3	10	45	48	275-360	360-500	466*360*783	60			
	40	E 220V	1.5	7.0	10	40	24	245-320	320-445	240*350*295	24		50	D 380V	3.9	5.9	10	50	48	310-400	400-555	466*360*783	61			
	45	E 220V	1.7	7.9	16	45	24	275-360	360-500	240*350*295	24		60	D 380V	4.6	7.1	10	60	48	370-480	480-665	466*360*783	62			
	50	E 220V	1.9	8.8	16	50	24	310-400	400-555	240*350*295	25		70	D 380V	5.4	8.2	16	70	48	430-560	560-780	466*360*783	65			
	60	E 220V	2.3	10.6	16	60	24	370-480	480-665	240*350*295	28		80	D 380V	6.2	9.4	16	80	48	490-640	640-890	466*360*783	66			
	70	E 220V	2.7	12.3	20	70	24	430-560	560-780	466*360*783	28		90	D 380V	7.0	10.6	20	90	48	550-720	720-1000	526*360*883	83			
	80	D 380V	3.1	4.7	10	80	24	490-640	640-890	466*360*783	59		100	D 380V	7.7	11.8	20	100	48	615-800	800-1110	526*360*883	86			
	90	D 380V	3.5	5.3	10	90	24	550-720	720-1000	466*360*783	60		110	D 380V	8.5	12.9	20	110	48	675-880	880-1220	526*360*883	88			
48	100	D 380V	3.9	5.9	10	100	24	615-800	800-1110	466*360*783	61	120	D 380V	9.3	14.1	20	120	48	735-960	960-1335	526*360*883	89				
	150	D 380V	5.8	8.8	16	150	24	920-1200	1200-1670	466*360*783	65	130	D 380V	10.1	15.3	20	130	48	800-1040	1040-1445	526*360*883	91				
	25	E 220V	3.2	14.7	20	25	48	155-200	200-280	240*350*240	25	150	D 380V	11.6	17.6	25	150	48	920-1200	1200-1670	526*360*883	94				
	30	D 380V	3.9	5.9	10	30	80	185-240	240-335	466*360*783	59	25	E 220V	3.2	14.7	20	25	80	155-200	200-280	280*430*300	59				
	35	D 380V	4.5	6.9	10	35	80	215-280	280-390	466*360*783	62	30	D 380V	3.9	5.9	10	30	80	185-240	240-335	466*360*783	61				
	40	D 380V	5.2	7.8	16	40	80	245-320	320-445	466*360*783	64	35	D 380V	4.5	6.9	10	35	80	215-280	280-390	466*360*783	62				
80	45	D 380V	5.8	8.8	20	45	80	275-360	360-500	466*360*783	65	40	D 380V	5.2	7.8	16	40	80	245-320	320-445	466*360*783	64				
	50	D 380V	6.5	9.8	20	50	80	310-400	400-555	466*360*783	67	45	D 380V	5.8	8.8	20	45	80	275-360	360-500	466*360*783	65				
	60	D 380V	7.7	11.8	20	60	80	370-480	480-665	526*360*883	85	50	D 380V	6.5	9.8	20	50	80	310-400	400-555	466*360*783	67				
	70	D 380V	9.0	13.7	20	70	80	430-560	560-780	526*360*883	87	60	D 380V	7.7	11.8	20	60	80	370-480	480-665	526*360*883	85				
	80	D 380V	10.3	15.7	20	80	80	490-640	640-890	526*360*883	88	70	D 380V	9.0	13.7	20	70	80	430-560	560-780	526*360*883	87				
	90	D 380V	11.6	17.6	25	90	80	550-720	720-1000	526*360*883	92	80	D 380V	10.3	15.7	20	80	80	490-640	640-890	526*360*883	88				
	100	D 380V	12.9	19.6	25	100	80	615-800	800-1110	526*360*883	93	90	D 380V	11.6	17.6	25	90	80	550-720	720-1000	526*360*883	92				
													100	D 380V	12.9	19.6	25	100	80	615-800	800-1110	526*360*883	93			

充电机的常规规格已列入表内，未列入表内的充电机输入电参数可按照以下公式计算：
定义：输入功率Pin(W)；输入电流lin(A)；输入电压Uin(V)；输出额定电压Ue(V)；输出额定电流Ie(A)。
Pin=IeUe/0.62；(单相/两相) lin= Pin/Uin； (三相) lin= Pin/Uin；
例：D48V/80A, 三相380V 其中 Ie=80A, Ue=48V, Uin=380V； Pin=80×48÷0.62=6193W； lin=6193÷380≈16.3A；

Remark: The above only lists part of normal specifications, special specification can be customized according to customers' requirements.
Normal specifications are list in the table, other specifications can be calculated as below formula:
Definition: Input power Pin(W); input current lin(A); input voltage Uin(V); rated output voltage Ue(V); rated output voltage Pin=IeUe/0.62; (single phase/two phase) lin= Pin/Uin; (three phase) lin= Pin/Uin; example: D48V/80A, three phase380V, among the above Ie=80A, Ue=48V, Uin=380V; Pin=80×48÷0.62=6193W;

注：清单中列出了部分常规规格，根据客户要求，特殊规格，可以定制！
Remark: The above only lists part of normal specifications, special specification can be customized according to customers' requirements.

表中充电机规格与蓄电池容量配置条件是蓄电池温度在30℃、按5小时率放电、80%的放电深度条件下的有效值。
关于充电机输入电源电压说明：充电机在380V（+10%、-5%）范围内都能正常工作，上述标称参数是在额定电源380V，频率50Hz时数据。
在指定的配置范围内，充电时间与所配置蓄电池容量、蓄电池放电深度、电源电压等数值有关，偏离的条件，可能导致充电时间偏离规定的数值范围。
The configuration condition for charger specifications in the table and battery capacity is the effective value of the battery under 80% discharge depth condition in five hours at 30℃.
The explanation of the input power supply: The charger can work in the range of 380V(+10%, -5%, the above parameters is the data when the rated power is 380V,50HZ
In nominated configuration range, the charging time is related with the battery voltage, discharge depth and power supply voltage. The deviated condition may make charging time deviate the specified value range.

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