



川源(中国)机械有限公司
GSD (China) Co., Ltd.

A detailed, close-up photograph of a green printed circuit board (PCB) with intricate silver and gold traces, various electronic components, and a central integrated circuit. The lighting creates a dramatic, high-tech atmosphere.

PCS SERIES

电气控制柜

PCS SERIES electrical control cabinet

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概述

- PCS系列电气控制柜是我司专为水泵、风机、搅拌机/推流器、曝气机、脱水机等水处理设备配套开发设计的电气控制装置，广泛应用于工业、农业、市政工程、水利工程、船舶工程、化工能源、废水处理、空调循环、混合搅拌、环保节能、脱硫等水处理领域。
- 充分吸收国内外给排水控制经验，根据客户需求，开发有排污控制、普通生活给水控制、变频控制、消防控制、空调循环/补水控制、风机送风控制、搅拌推流控制、污泥脱水控制、曝气溶氧控制、污水处理厂中控等多种控制设备，同时也可根据客户工艺需求特殊设计。
- 精选国际国内知名品牌优质元件，经久耐用；同时公司拥有完善的管理和质量保证体系。
- 每台控制设备均全功能测试，确保出厂品质。全国各分支机构均设有专业技术服务人员，服务快捷高效，使用户无后顾之忧。

特点

- 选用知名品牌低压电器，保证产品质量；提供多种品牌电器元件，满足客户不同场合配套选择。
- 配套功能齐全，控制方式灵活，自动化程度高，运行安全、稳定。
- 设计简洁、布局合理、操作简单，安装、调试、维护方便。
- 保护功能完善：具备电机过载、短路、缺相等多种保护功能。潜水设备配置专用泄漏超温保护功能。
- 可根据不同工艺要求针对性设计，性能稳定、工艺流畅，灵活高效。
- 外形美观，结构紧凑，切换灵活，控制设备运行在最佳工况状态，节能环保。

Introduction

- PCS series electrical control cabinet is the electrical control device developed and designed by GSD for supporting the water treatment equipments such as pumps, blowers, mixers/propellers, aerators and water extractors, etc. It is widely used in industry, agriculture, municipal engineering, hydraulic engineering, ship engineering, chemical energy, wastewater treatment, air conditioning system, mixing, environmental protection and energy saving, desulfurization and other water treatment fields.
- As required by customers as well as R & D, we have fully absorbed the control experience for water supply and drainage both at home and abroad to develop various control devices for sewage discharge control, ordinary life feed water control, frequency conversion control, fire fighting control, cycle/water replenishing control for air conditioning, air supply control for blowers, mixing control, sludge dewatering control, aeration dissolved oxygen control and centralized control of sewage treatment plants, meanwhile, special control devices can be designed according to the process requirements of customers.
- We have choice and durable quality parts which are famous brands domestically and internationally. Meanwhile, the company has perfect management and quality assurance system, with each control device tested in full function to ensure the delivery quality.
- Professional technical service personnel are provided at all branches nationwide, with fast and efficient service to guarantee the customers free from worry.

Features

- Select well-known brand low-voltage electrical components to ensure product quality; provide a variety of brand electrical components to meet customer demand in different occasions.
- Complete supporting functions, flexible control mode, high degree of automation, and safe and stable operation.
- Concise design, reasonable layout and easy operation, convenient installation, commissioning and maintenance.
- Perfect protection function: with motor overload, short circuit, open-phase and other protection functions. We adopt a dedicated components for submersible devices to protect water leakage and ever temperature.
- Targeted design can be carried out according to different process requirements, stable performance, smooth process, flexible and efficient.
- Elegant appearance, compact structure, and flexible switching over to control the equipment to run at the optimum condition, energy saving and environmental protection.

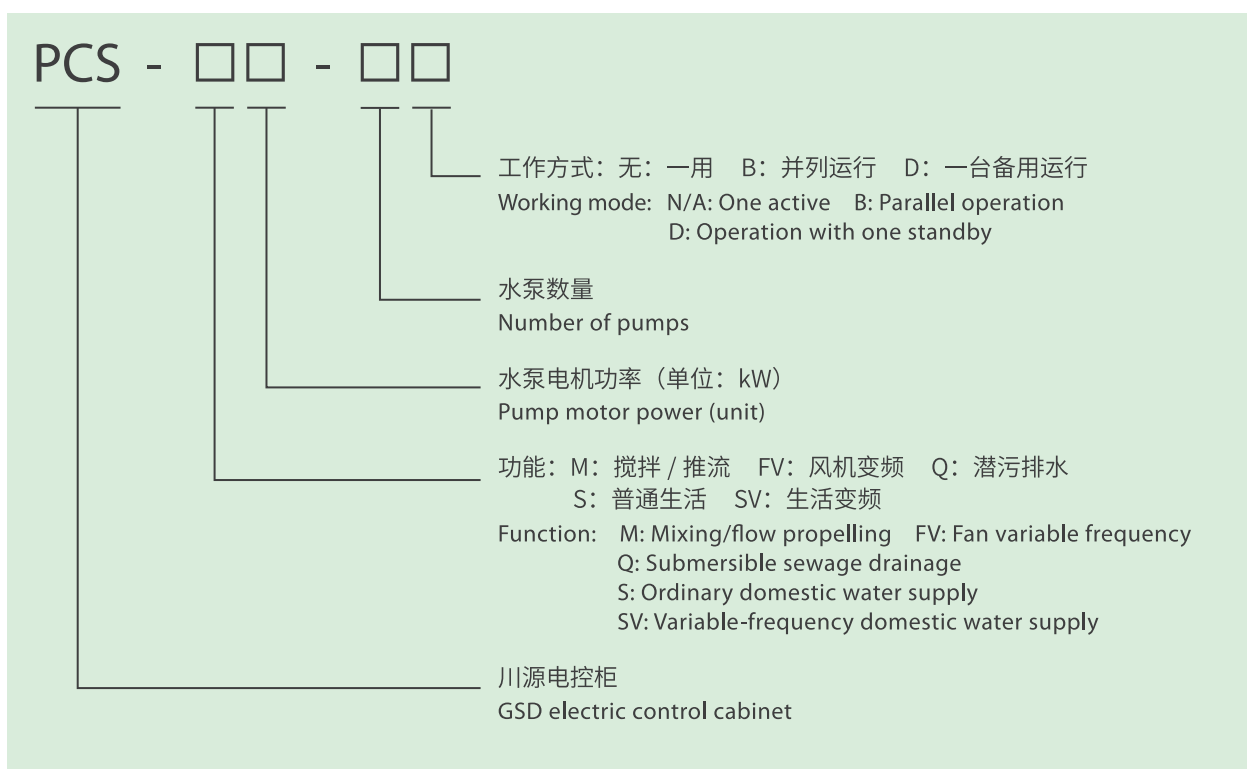
工作环境要求

- 电源电压波动: $\pm 10\%$
- 周围环境温度: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ (不冻结)
- 空气相对湿度: $20\% \sim 90\% \text{RH}$ (无凝露)
- 绝对海拔高度: $\leq 1000\text{m}$
- 振动: $< 5.9\text{m/s}^2 (0.6\text{G})$, 倾斜度: ≤ 5 度的场所
- 无导电尘埃、腐蚀性气体、易燃性气体的场所
- 无爆炸危险的场所
- 有防雨防震设备和无蒸汽场所

Work environment requirements

- Supply voltage fluctuation: $\pm 10\%$
- Ambient temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ (no freezing)
- Relative air humidity: $20\% \sim 90\% \text{RH}$ (no condensation)
- Absolute altitude: 1000m
- Vibration: $< 5.9\text{m/s}^2 (0.6\text{G})$, Gradient: places of ≤ 5 degrees
- Places without conductive dust, corrosive gas and flammable gas
- Places without explosion hazards
- Places with rain-proof and shock-proof equipments but without steam

型号说明 Type description



举例:

1. PCS-SV18.5-3D 代表生活变频 18.5kW 一控三, 工作方式两用一备。
2. PCS-SV18.5-3B 代表生活变频 18.5kW 一控三, 工作方式三用。

Example:

1. PCS-SV18.5-3D Represent variable-frequency domestic 18.5 one control three, working mode: two active one standby.
2. PCS-SV18.5-3B Represent variable-frequency domestic 18.5 one control three, working mode: three active.

产品类型

PCS-S系列普通生活给水控制柜

- 适用范围：主用于水箱、水塔、气压给水等设备；采集液位、压力、温度等信号做开关量控制，配套 GPS、LPS、GMP、SMV 等陆上给水泵。
- 应用说明：PCS-S 系列普通生活控制柜根据用户管网压力的大小、水位 / 温度的高低来控制水泵的起动、停止及投入数量。



Product type

PCS-S series ordinary control cabinet

- Scope of application: Mainly used for water tanks, cooling towers, pneumatic water supply equipments and so on; collecting level, pressure, temperature and other signals as switching value control, supported with GSD's GPS, LPS, GMP, SMV pumps and other on-land water supply pumps.
- Application instructions: PCS-S series ordinary life control cabinet controls the start, stop and input quantity according to the pressure, and water level/temperature of the pipe network of the customers.



PCS-SV系列变频生活给水控制柜

- 适用范围：适用于工业、农业、市政、空调、水厂等各种场合，无极变速、调节精确、环保节能、智能紧凑，配套 GPS、LPS、DH、SMV 等多种设备。
- 应用说明：PCS-SV 系列变频控制柜系统采用交流变频技术和微机控制技术，根据压力、液位、温度、流量等变化无极调速，适时监控电机运行频率、投入状态，同时具过载、过流、欠压、过压、堵转等多种保护功能，保证设备及系统运行在最佳工况，运行平稳、环保节能。



PCS-SV series frequency conversion control cabinet

- Scope of application: Suitable for industry, agriculture, municipal administration, air conditioning, water plant and other places, electrodeless variable-speed, accurate adjustment, environmental protection and energy saving, intelligent and compact, supported with GSD's GPS, LPS, DH, SMV pumps and other equipments.
- Application instructions: PCS-SV series frequency conversion control cabinet system adopts AC frequency inverter technology and microcomputer control technology, change the electrodeless speed governing according to pressure, level, temperature, flow, etc., timely monitoring the operating frequency of the motor and input state, at the same time with the overload, overcurrent, undervoltage, overvoltage, locked-rotor and other protection functions, to ensure that the equipment and system run at the optimum condition with smooth operation, environmental protection and energy saving.



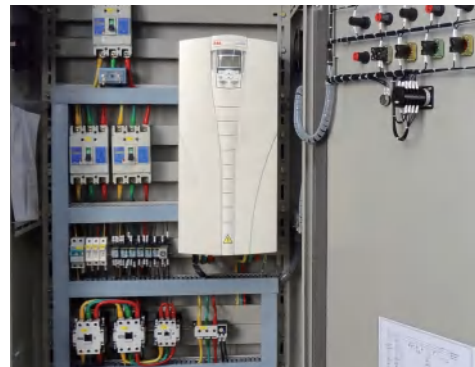
PCS-FV系列风机变频控制柜

- 适用范围：适用于污水处理、环保、矿山、石油、化工、水泥、铸造、食品、医药、造纸、气力输送、粉体输送、水产养殖等场合；配套GRB、RSW / TRS 等风机。
- 应用说明：PCS-FV 系列风机变频控制柜主用于罗茨风机风量调节，现场 / 远程无级调速，改变输出风量，既满足生产工艺变化的要求，又节省电能。常规以一台风机配一台变频器调节效果最佳。



PCS-FV series blowers frequency conversion control cabinet

- Scope of application: Applicable to places for sewage treatment, environmental protection, mines, petroleum, chemical industry, cement, foundry, food, medication, papermaking, pneumatic transmission, powder delivery, aquaculture and other places; supported with GSD's GRB, RSW / TRS blowers and other blowers.
- Application instructions: PCS-FV series blower frequency conversion control cabinet is mainly used for air regulation of Roots blower, site/remote stepless speed regulation, changes the output air volume, not only meeting the requirements of the production process changes, but also saving electric energy. Generally, the optimum regulation effect can be achieved by one blower supported with one inverter.



PCS-M系列搅拌/推流控制柜

- 适用范围：适用于工业污水过程中的混合、搅拌，养护设备等场合；配套 MA、LFP、MH、SRP、JA、AR 等搅拌机 / 推流器 / 曝气机设备。
- 应用说明：PCS-M 系列搅拌控制柜是配套搅拌 / 曝气专用的现场控制柜；配备现场直接控制及中控远程控制功能；室外现场安装，自带超温漏水综合保护功能，结构简单、操作灵活、维护简便。



PCS-M series mixing/flow propelling control cabinet

- Scope of application: Applicable to places for mixing, stirring, equipment maintenance during the process of industrial sewage, etc. ; supported with GSD's MA, LFP, MH, SRP, JA, AR and other mixer/propeller/aerator equipments.
- Application instructions: PCS-M Series Mixing Control Cabinet is the dedicated on-site control cabinet supported with agitation/aeration; it is equipped with the on-site direct control as well as centralized control and remote control functions; it is outdoor on-site installation, with integrated functions for protecting overtemperature and leakage, simple structure, flexible operation and easy maintenance.



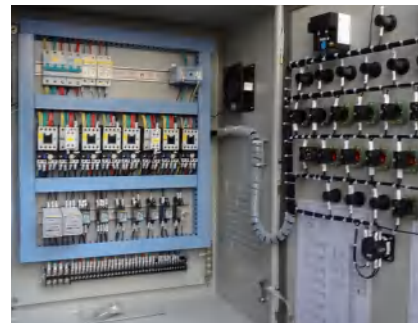
PCS-Q系列潜污泵控制柜

- 适用范围：适用于楼宇排水、污水排放、工业废水处理，通过液位控制水泵启停及切换，且对专用潜水电机具有漏水、超温保护；经济实用、安全可靠、维护简便；配套 ZDB、CP 等潜水泵。
- 应用说明：PCS-Q 系列潜污泵控制柜系统根据液位的高低来控制水泵的启动、停止及投入数量。



PCS-Q series sewage pumps control cabinet

- Scope of application: Suitable for building drainage, sewage disposal and industrial wastewater treatment, control start, stop and switch of the water pump through liquid level, and protect the dedicated submersible motor during water leakage or over-temperature; economical and practical, safe, reliable, easy to maintain; supported with GSD's ZDB, CP pumps and other submersible pumps.
- Application instructions: PCS-Q series sewage pumps control cabinet system controls the start, stop and quantities of inputs for the water pump according to the liquid level.



中央电脑监控系统

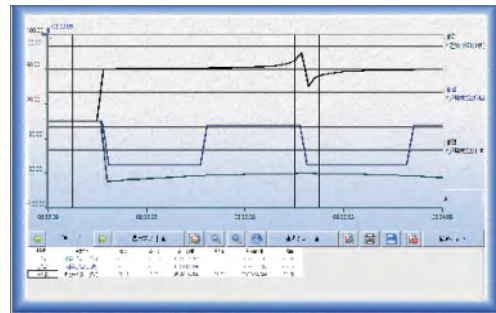
- 中央电脑监控系统是采用微型计算机技术实现泵站设备、机械设备自动控制、运行状态监测、工艺配方设定、系统管理的一种综合装置。
- 中央电脑监控系统适用于各种城市水处理厂、给排水综合自控系统等场合。对泵站机组、电气系统等进行监控和控制，可以实现真正意义上的无人值守，实现优化治理，达到优化控制、节能降耗的目的。

系统功能

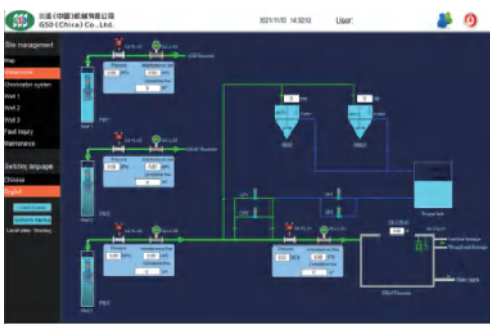
- 系统的采集和处理：对系统开关量和模拟量进行采集和处理。
- 设备的优化调度：泵组的起停操作；设备的自动、联动控制等。
- 数据报表记录与查询。
- 数据趋势图：系统各种模拟量实时趋势图、历史趋势图；历史趋势查询功能。
- PLC I/O 点组态。
- 报警处理和记录：实时报警显示功能；历史报警查询功能。



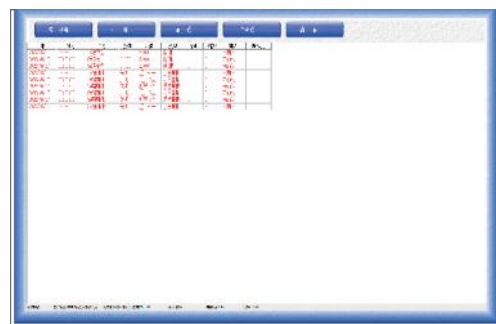
数据报表 Data report



数据趋势图 Data tendency chart



组态画面 Configuration screen



报警处理和记录 Alarm processing and recording

Central computer monitoring system

- The central computer monitoring system is a comprehensive device that uses microcomputer technology to implement automatic control of pumping station and mechanical equipment, operating status monitoring, process recipe setting, and system management.
- The central computer monitoring system is suitable for water treatment plants of various cities, water supply and drainage integrated automatic control system and other places. Monitor and control the pump station unit and electrical system to achieve real sense unattended operation and optimal treatment and realize optimal control and energy saving.

System function

- Acquisition and processing of the system: Carrying out acquisition and processing for the switching value and analog quantity of the system.
- Equipment optimized scheduling: Start-stop operation of the pump unit. Automatic and linkage control of the equipment.
- Record and query of data report.
- Data tendency chart: Real-time and historical tendency charts for various analog quantity of the system; Inquiry function for historical tendencies.
- PLC I/O point configuration.
- Alarm processing and recording: Display function for real-time alarm; Inquiry function for historical tendencies;

如蒙洽询请指示下列各项 For further details, please fulfill the chart below.

客户 Customer _____	承办人员 Undertaker _____
工程名称 Name of project _____	工程地点 Address of project _____
电话 Telephone _____	传真 Fax _____

*用途 Application	<input type="checkbox"/> 生活给水控制 Life feedwater control		<input type="checkbox"/> 潜水泵排水控制 Sewage control for submersible pump	
	<input type="checkbox"/> 罗茨风机送风控制 Air supply control for Roots blower		<input type="checkbox"/> 搅拌机、推流器控制 Mixer, Propeller control	
	<input type="checkbox"/> 其它特殊控制 Other special controls			
控制设备(水泵、风机等)型号规格 Model specifications for control equipments (pumps, blowers etc.)	*型号Model		*功率 kW Power	
	*数量Quantity		是否有备用 Whether there is a standby: <input type="checkbox"/> 有Yes <input type="checkbox"/> 无No	
辅助小泵、外围设备等Auxiliary small pumps and peripheral equipments:				
*使用条件 Use requirement	*工作电压Working voltage	<input type="checkbox"/> 380V <input type="checkbox"/> 220V	*工作频率Operating frequency	<input type="checkbox"/> 50Hz <input type="checkbox"/> 60Hz
*控制方式 Control mode	<input type="checkbox"/> 浮球液位控制 Floater level control		<input type="checkbox"/> 压力控制(<input type="checkbox"/> 常规高、低压差控制 <input type="checkbox"/> 变频恒压控制) Pressure control (<input type="checkbox"/> Conventional high and low voltage differential pressure control <input type="checkbox"/> Frequency conversion constant pressure control)	
	<input type="checkbox"/> 其它 Others			
*电机启动方式 Motor starting mode	<input type="checkbox"/> 全压直接启动 Full pressure direct starting		<input type="checkbox"/> 星-三角降压启动(常规15kW及以上自带此功能) Star-delta reduced voltage starting (with this function for conventional 15 kW and above)	
	<input type="checkbox"/> 软启动器启动(<input type="checkbox"/> 配1台 <input type="checkbox"/> 全配) Soft starter starting (<input type="checkbox"/> 1 set furnished <input type="checkbox"/> Fully furnished)		<input type="checkbox"/> 变频器启动(<input type="checkbox"/> 配1台 <input type="checkbox"/> 全配) Frequency converter starting (<input type="checkbox"/> 1 set furnished <input type="checkbox"/> Fully furnished)	
控制箱体材质 Case material for control box	<input type="checkbox"/> 碳钢Carbon steel <input type="checkbox"/> 不锈钢Stainless steel <input type="checkbox"/> 其它Others: _____			
控制箱安装方式 Installation method for control box	<input type="checkbox"/> 壁挂安装Wall mounting <input type="checkbox"/> 落地安装Floor installation			
控制箱安装地点 Installation site for control box	<input type="checkbox"/> 室内(单层门) Indoor (single storied gate) <input type="checkbox"/> 室外(双层门) Outdoor (two storied gate)			
主用电器元件品牌 Brand of the main electrical components	断路器/接触器/热继电器 Circuit breaker/Contactor/Thermal relay	<input type="checkbox"/> 施耐德 Schneider <input type="checkbox"/> 士林 Shihlin <input type="checkbox"/> 正泰 Chint <input type="checkbox"/> 其它品牌: _____		
	变频器 Frequency converter	<input type="checkbox"/> ABB ABB <input type="checkbox"/> 西门子 Siemens <input type="checkbox"/> 其它品牌: _____		
	PLC(可编程序控制器) PLC (Programmable logic controller)	<input type="checkbox"/> OMRON OMRON <input type="checkbox"/> 西门子 Siemens <input type="checkbox"/> 其它品牌: _____		
其它特殊要求 Other special requirements	定时切换、缺相保护、漏电保护、干接点、超温漏水保护、双电源、环境要求、工作液体介质等特殊要求 timing switching, open-phase protection, earth leakage protection, dry contact, water leakage and overtemperature protection, dual power, environmental requirements, work liquid media and other special requirements			
通信 Communication	<input type="checkbox"/> 无 No <input type="checkbox"/> RS-485 (ModBus - RTU协议) <input type="checkbox"/> 以太网 (ModBus - TCP协议) <input type="checkbox"/> 以太网 (ProfiNet协议) <input type="checkbox"/> 其它: _____ No RS-485 (Modbus- RTU Protocol) Ethernet (Modbus-TCP Protocol) Ethernet (ProfiNet Protocol) Others			

备注: 1.以上资料请尽可能完整填写。 Notes: 1. Please fill in the parameter lists as complete as possible.
2.项目前加注“*”者, 请务必填写。 2. The item with “*” must be filled.

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