HPM6

分体式功率管理控制器

SPLIT-TYPE POWER MANAGEMENT CONTROLLER

简介

一套为船舶应用领域量身定制的功率管理系统。系统执行发电机组控制、 发电量的检测和发电机组保护功能， 是一个真正的多主站系统。能够实现最多 20 台发电机组的自动开停机、同步及负荷分配。由网络总线通信连接， 具备设备级环网冗余功能。HPM6 为主控单元，HPM6D 为显示单元。

Overview

The Power Management Controller is a special power management system for marine applications. The system carries out genset control, protection, and power detection functions, which is a true multi-master system. It can realize automatic start/stop, synchronization and load sharing for up to 20 gensets. The controller is connected via network bus, which has device-level ring redundancy function.HPM6 works as master control module, and HPM6D works as display module.

特点

- HPM6D显示单元4.3英寸液晶显示，中文、英文及其他多语言显示
- 适用于三相四线、三相三线、两相三线、单相的 50/60Hz 系统
- 3 级密码保护，符合UR E27网络安全标准
- PLC 编程功能，用户可根据需要自定义控制逻辑
- 自定义系统单线图功能
- 自定义协议内容功能和自定义总线数据功能
- 谐波分析及发电电压电流波形显示功能
- 调速调压控制可通过继电器输出控制、模拟电压控制和模拟电流控制
- 软加载、软卸载功能
- 三种控制模式：自动/半自动/手动模式
- 非重要负载分级优先脱扣和重载问询功能
- 多路岸电和多段母排处理
- 限制在网机组数量，保留功率功能

Features

- 4.3-inch LCD screen for HPM6D display module. Chinese, English and other languages display interface
- Suitable for 50Hz/60Hz AC systems of 3P4W, 3P3W, 2P3W and single phase
- 3-level password protection, which conforms to UR 27 Cyber Resilience of On-Board Systems and Equipment
- PLC function enables user to define control logic based on demand
- User-defined system SLD function
- User-defined protocol content and bus data function
- Harmonic analysis and generation voltage and current waveform display function
- Speed and voltage adjusting control can be realized via relay output, analog voltage , and analog current
- Soft loading/unloading function
- Three control modes: Auto/Semi-Auto/Manual mode
- Functions of NEL priority trip and heavy consumer inquiry
- Multiple ways of shore power and bus breaking handling
- Functions of on-grid genset limit and reserved power

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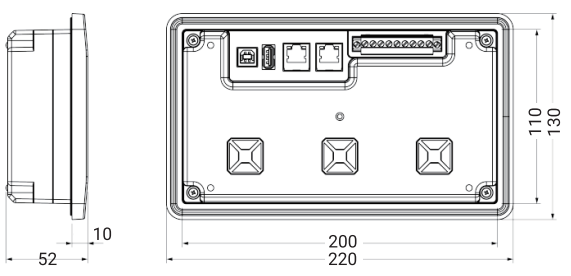
技术参数 Technical Parameters

SmartGen EST.1998

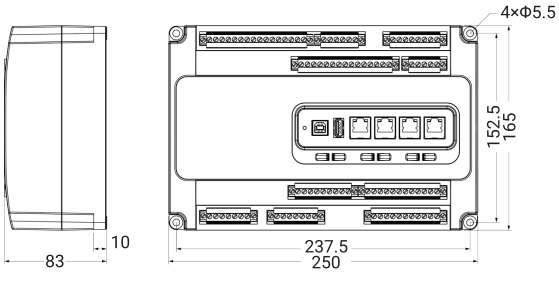
直流供电 DC Power	DC(8~35)V连续供电，直流反接保护	DC(8~35)Vcontinuous power supply, DC reverse connection protection
整机功耗 Power Consumption	HPM6D:<4W(待机：≤2.5W) HPM6:<8W(待机：≤5W)	HPM6D:<4W(Standby mode：≤2.5W) HPM6:<8W(Standby mode：≤5W)
交流电压 AC Voltage	范围：AC(15~520)V(ph-N) 分辨率：0.1V，精度：0.5% 范围：AC(30~900)V(ph-ph) 分辨率：0.1V，精度：0.5%	Range：AC(15~520)V(ph-N) Resolution：0.1V，Accuracy：0.5% Range：AC(30~900)V(ph-ph) Resolution：0.1V，Accuracy：0.5%
防护等级 IP Rating	HPM6D：前壳 IP65，后壳IP20 HPM6主控模块：IP20	HPM6D: front enclosure/IP65, back enclosure/IP20 HPM6 master control module: IP20
交流电流 AC Current	额定：5A，范围：(0~15)A 分辨率：0.1A，精度：0.5%	Rated: 5A，Range：(0~15)A Resolution：0.1A，Accuracy：0.5%
开孔尺寸 Panel Cutout	HPM6D：201 × 111mm，嵌入式面板安装 HPM6：孔径：ϕ5.5 × 4，孔距：237.5 × 152.5mm 螺钉固定安装	HPM6D: 201 × 111mm，embedded panel installation HPM6: hole diameter: ϕ5.5 × 4, hole spacing: 237.5 × 152.5mm screw fixed installation
环境 Environment	工作温度：(-25~+70)°C 工作湿度：相对湿度(20~93)%RH 贮存温度：(-30~+80)°C	Working Temperature: (-25~+70)°C Working Humidity: (20~93)%RH Storage Temperature: (-30~+80)°C
标准和认证 Standards & Certificates	GB/T 10250-2007 船舶电气与电子设备的电磁兼容性 GD 22-2015 电气电子产品型式认可试验指南 E-14-2015 发电机保护装置、电站自动控制装置 钢质海船入级规范 2015，第 4 分册，第 7 篇，自动化系统 钢质海船入级规范 2015，第 4 分册、第 4 篇、电气装置、第 2 章，第 5 节系统保护	GB/T 10250-2007 Electrical and electronic installations in ships – Electromagnetic compatibility GD 22-2015 Guidelines for type approval test of electric and electronic products E-14-2015 Generator protection gear, power station automatic control gear Rules for classification of sea-going steel ships 2015, Volume 4, Part 7: Automatic system Rules for classification of sea-going steel ships 2015, Volume 4, Part 4: Electric device, Chapter 2, Section 5 System protection

尺寸 Dimensions

单位(Unit)：mm



HPM6D



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端口 Ports

电源 Power	开关量输出(20) Digital Output (20)	CAN BUS	RS485	模拟量输出(4) Analog Output (4)	
可扩展模块： Expansion Modules: DIN16 DOUT16					ETHERNET (4) USB Device USB Host
开关量输入(20) Digital Input (20)	模拟量输入(2) Analog Input (2)	+10V 输出 Output	发电侧电压采样 Gen. Voltage Sample	母排侧电压采样 Bus Voltage Sampling	发电&接地电流采样 Gen. & Ground Current Sample