



SmartGen APP  
众智科技APP

# SmartGen 众智

让控制更智能



SMARTGEN(ZHENGZHOU) TECHNOLOGY CO., LTD.

[www.smartgen.com.cn](http://www.smartgen.com.cn) [www.smartgen.cn](http://www.smartgen.cn)

# PRODUCT CATALOGUE

## 产品选型样册

## SmartGen 众智

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MAKING CONTROL SMARTER 2023

V 2.0





### About Us 关于我们

Founded in 1998, SmartGen, a listed company on Shenzhen Stock Exchange GEM (stock code 301361), is mainly engaged in the research and development, production, sales and service of automatic control systems for internal combustion generator sets, low-voltage distribution automatic control systems, new energy automatic control system and other related products. The company's products are widely used in military industry, mining oil exploitation, data center, ship, intelligent building, bank, hospital, factory, telecom, infrastructure and other fields, with business covering all over the world. The company is a national specialized, fine, special and innovative "small giant" enterprise, a "three high" enterprise with high gross margin, high growth and high technology, and a technology-intensive modern enterprise.

Since its establishment, the company has invested heavily in product development, standard testing room, digital factory every year to stay ahead in the domestic and international markets.

We have hundreds of patents and over 30% of the employees are dedicated to research and development. They are responsible for exploring new intelligent solutions to improve the overall performance of global industry equipment.

We will continue to innovate and self-transcend as always, continuously improve our core competitiveness, enhance the value of enterprises and employees, create a complete industrial ecological chain of high quality, safe, green, low-carbon and sustainable development, and return our customers, shareholders, employees and society with high quality performance.

众智科技始建于1998年，深交所创业板（股票代码301361）上市企业，主要从事内燃发电机组自动控制系统、低压配电自动控制系统、新能源自动控制系统等相关产品的研发、生产、销售和服务。公司产品广泛应用于军工、矿山石油开采、数据中心、船舶、智能大厦、银行、医院、工厂、电信、基建等领域，业务范围遍布全球。公司是国家专精特新“小巨人”企业，是高毛利率、高成长性、高新技术的“三高”企业，也是技术密集型现代化企业。

自成立以来，每年都会在产品研发、标准试验室、数字工厂方面投入大量资金，以保持公司在国内国际市场中的领先地位。

我们拥有数百项专利，有超过30%的员工致力于研发工作，负责探索全新的智能化方案来提升全球行业设备的整体性能。

我们将一如既往地不断创新与自我超越，持续提高核心竞争力，提升企业和员工价值，打造优质、安全、绿色、低碳等可持续发展的完整产业链，以优质的业绩回报客户、回报股东、回报员工、回报社会！



SmartGen Testing Room / 众智试验室



Prototype Testing Room / 发电机组真机试验室



Hybrid Energy Control Test System 混合能源控制试验系统

SmartGen Testing Room was established in 2010, covering an area of nearly 1,000 square metres. With gradual improvements for years, it has become one of the handful of top-ranking testing bases in the industry. In order to meet the highest quality standard of various products, SmartGen Testing Room successively purchased sets of advanced test equipment from domestic and foreign well-known enterprises. Test types mainly include EMC tests, environmental tests, prototype tests, failure analysis test, product safety testing, etc.

众智试验室筹建于2010年，占地面积近千平方米。历时多年的逐渐完善，目前已经成为了行业内屈指可数的一流试验基地。

众智试验室先后从国内外知名企业采购多套高精尖的测试设备，以确保各种产品符合最高品质标准。

主要测试类型包括：EMC电磁兼容性测试、环境类测试、真机类测试、失效分析类测试、产品安全测试等。

### Enterprise Honor 企业荣誉



ISO 9001 质量管理体系认证



ISO 14001 环境管理体系认证



ISO 45001 职业健康安全管理体系认证



CCS Certificate 中国船级社认证



Certificate of Invention Patent 发明专利证书



BV Certificate BV证书



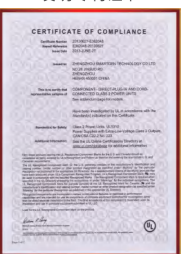
CE Certificate CE证书



CCC Certificate CCC证书



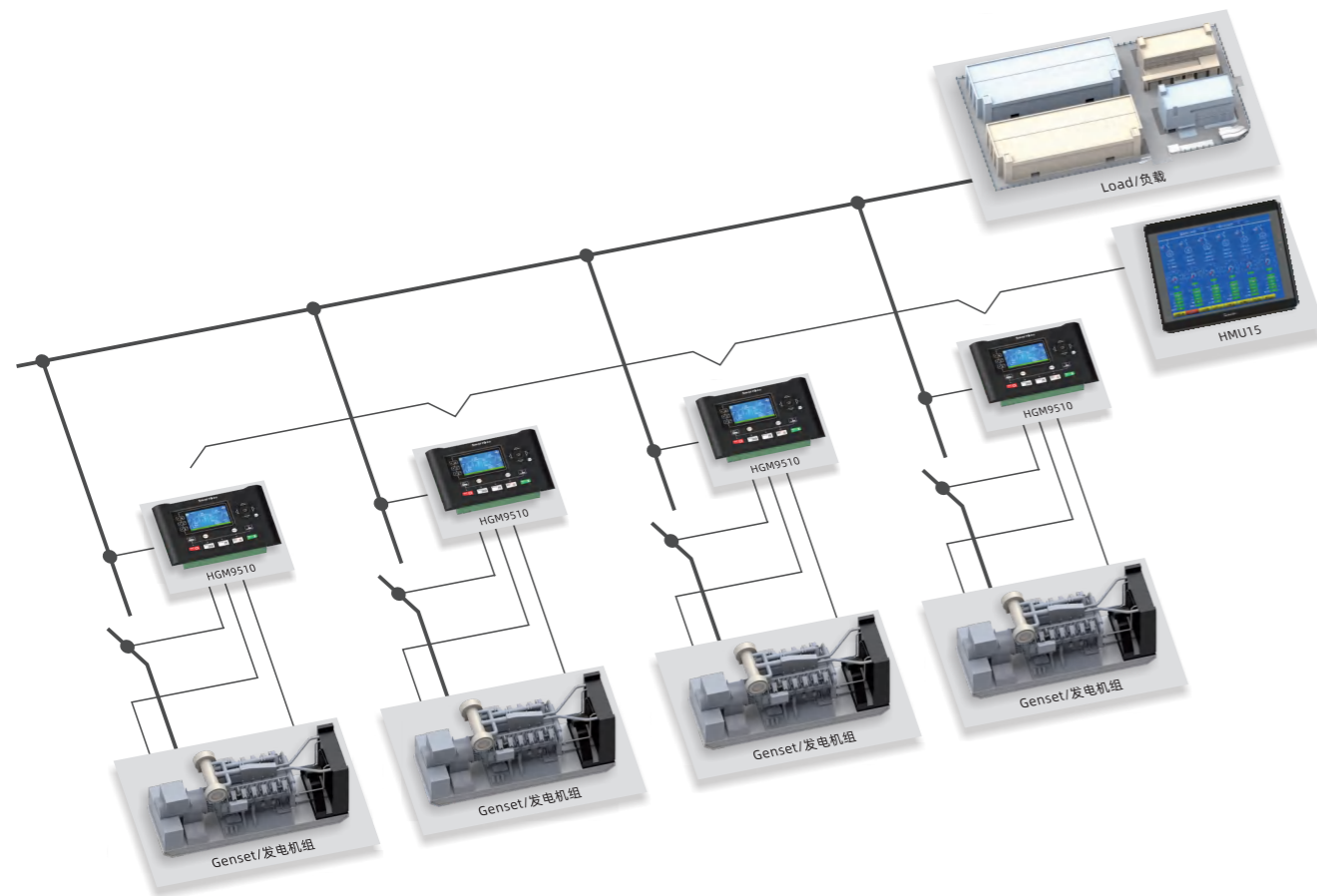
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## Multi-set Paralleling Solution 发电机组多机并联解决方案



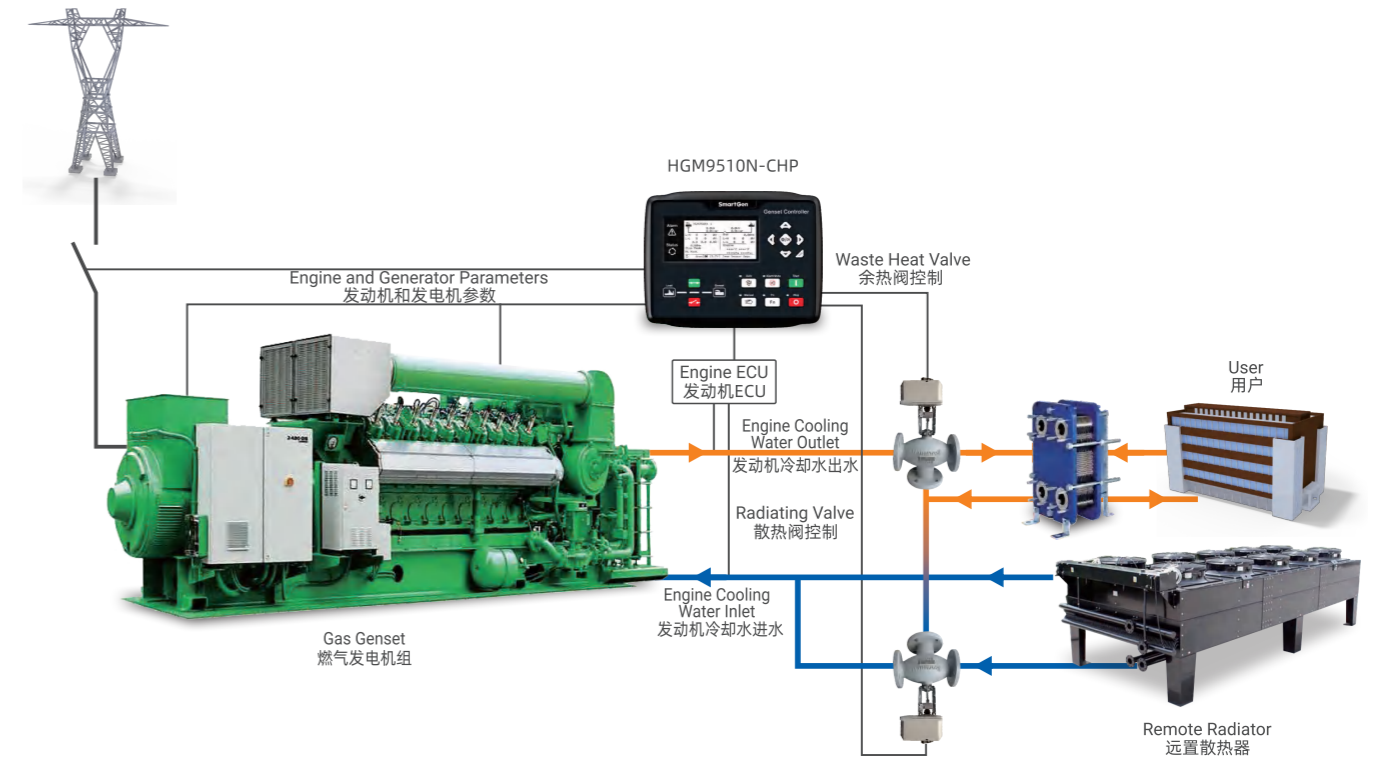
Help 32 gensets with same capacity /different capacity to realize automatic synchronization and load share.

HMU15 genset remote monitoring controller is suitable for remote monitoring single/multiple HGM9510 genset controller, fitting with LCD display, touch screen, so this controller is reliable and easy to use.

可满足多达32台同容量或不同容量的机组自动同步和负载均分。

HMU15发电机组远程监控控制器采用大屏幕液晶(LCD)人机界面显示, 适用于远程监控单台或多台HGM9510发电机组控制器, 触摸屏操作简单, 运行可靠。

## Gas Genset Controller (Combined Cooling, Heating and Power) 燃气发电机组控制器 (冷热电联供)



HGM9510N-CHP control system is specially developed for the combined heat and power application of gas gensets. It not only has the function of mains grid connection, but also can collect equipment parameters and control external equipment through various expansion modules, and can perform PID control for each valve.

When the engine inlet temperature exceeds the set temperature, the waste heat valve gradually opens to provide the user with waste hot water and stabilize the engine cooling water inlet temperature to the set value.

If the engine temperature continues to rise and the waste heat valve is fully open, open the cooling valve so that the engine circulating water can be cooled through the radiator.

HGM9510N-CHP控制系统是专为燃气发电机组热电联供应用开发, 不仅具有市电并网功能, 还可通过各种扩展模块来采集设备参数和控制外部设备, 并可以对每个阀进行PID控制。

发动机进机温度超过设定温度时, 余热阀逐渐打开, 给用户 提供余热热水, 并使发动机冷却水进机温度稳定到设定值。

如果发动机温度持续升高并且余热阀全开后, 打开散热阀, 使发动机循环水可以通过散热器进行冷却。



HGM9510 Multi-set Parallel Controller 多机并联控制器  
 HGM9560 Bus Tie Mains Parallel Controller 发电母排并市网并联控制器  
 HGM9530N Redundant System Parallel Controller 冗余并联控制器  
 HMB9700 Split Redundant Parallel Controller 分体式冗余并联控制模块

Model/型号	HGM9510	HGM9520	HGM9530	HGM9560	HGM9580	HGM9510N	HGM9530N	HMB9700
Main Functions 主要功能	With USB interface and LCD display; HGM9510/9510N controller is genset-genset parallel controller while HGM9520 is genset-mains parallel controller. HGM9530 controller is genset-genset parallel controller (analog inputs can be extended), HGM9560 is bus tie-mains parallel controller; HGM9580 is bus tie-bus tie parallel controller. 图形液晶显示带USB接口的并联控制器。HGM9510/9510N是发电-发电自动并联控制器；HGM9520是发电-市电自动并网控制器；HGM9530是发电-发电并联控制器(可扩展模拟量输入)；HGM9560是机组母排-市电自动并网控制器；HGM9580是机组母排-机组母排自动并联控制器。							
Display/显示器	4.3 inches TFT-LCD(480*272)/4.3吋彩屏				LCD(240*128)			
Operation Panel/操作面板	Silicon Rubber/硅胶							
Language/控制模块语言	Chinese & English & Others/中文 & 英文 & 其它							
Digital Input/开关量输入	7	8	7	8	7		10	
Relay Output/继电器输出	8			10				
Analog Input/模拟量输入	5		5					
AMF/市电检测		●		●				
AC System/交流制式	1P2W/2P3W/3P3W/3P4W							
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)							
Alternator Frequency 交流频率	50Hz/60Hz							
kW/Amp Detecting & Display 功率/电流检测及显示		●				●		
Monitor Interface/监控接口	RS485					RS485/ ETHERNET	RS485-1/RS485-2/ ETHERNET	
Programming Interface 编程接口	USB/RS485					USB/RS485/ ETHERNET	RS485-2/ETHERNET	
Module Redundant/模块冗余							●	
MSC Redundant/MSC冗余							●	
Can Expand Digital Input /Output Modules 可扩展开关量输入/输出模块		●					●	
Can Expand Analog Input Modules 可扩展模拟量输入模块			●				●	
CANBUS(J1939)		●					●	
GOV		●					●	
AVR		●					●	
RTC & Event Log 实时时钟及历史记录				●				
Scheduled Start Genset 定时试机		●					●	
Maintenance/保养功能		●					●	
PLC/用户可编辑逻辑		●					●	
DC Supply/直流工作电源范围	DC(8~35)V							
Case Dimensions 外形尺寸(mm)	266*182*45(L*W*H)				242*186*49(L*W*H)		248*158*49 (L*W*H)	
Panel Cutout/安装尺寸(mm)	214*160							
Operating Temp./工作温度	(-25~+70)°C							



HGM7210/7210CAN Single Auto-start Genset Controller 单机自启动发电机组控制器  
 HGM7220/7220CAN AMF Genset Controller AMF发电机组控制器  
 HGM7110N Cloud Monitoring Integrated Genset Controller 云监控一体式发电机组控制器  
 HGM7120N Genset Controller 发电机组控制器

Model/型号	HGM7210	HGM7210CAN	HGM7220	HGM7220CAN	HGM7110N	HGM7120N
Main Functions 主要功能	With auto start/AMF function and USB interface; HGM7200 controller has monitor interface and the SMS function; HGM7200CAN controller has SAE J1939 interface function. 具有自启动/AMF功能和USB接口。HGM7200具有监控接口和SMS功能，HGM7200CAN具有电喷接口功能。				HGM7100N controller has Ethernet port cloud monitoring function. HGM7100N具有以太网口云监控功能。	
Display/显示器	LCD(132*64)					
Operation Panel 操作面板	Silicon Rubber/硅胶					
Language/控制模块语言	Chinese & English & Others/中文 & 英文 & 其它					
Digital Input 开关量输入	7					
Relay Output 继电器输出	8					
Analog Input 模拟量输入	5					
AMF/市电检测			●			●
AC System/交流制式	1P2W/2P3W/3P3W/3P4W					
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)					
Alternator Frequency 交流频率	50/60Hz					
kW/Amp Detecting & Display 功率/电流检测及显示	●					
Monitor Interface 监控接口	RS485			RS485/ETHERNET		
Programming Interface 编程接口	USB/RS485			RS485/USB/ETHERNET		
Built-in Cloud Monitoring 内置云监控	ETHERNET					
CANBUS(J1939)		●		●		
RTC & Event Log 实时时钟及历史记录	●					
Scheduled Start Genset 定时试机	●					
Maintenance/保养功能	●					
DC Supply 直流工作电源范围	DC(8~35)V					
SMS/短信功能		●				
Panel Cutout 安装尺寸(mm)	186*141					
Case Dimensions 外形尺寸(mm)	197*152*47(L*W*H)			209*166*45(L*W*H)		
Operating Temp. 工作温度	(-25~+70)°C					





HGM6110N/CAN  
Single Auto-start Genset Controller  
单机自启动发电机组控制器



HGM6120N/CAN  
AMF Genset Controller  
AMF发电机组控制器



HGM6110N-4G/CAN-4G  
4G Integrated Single Auto-start  
Genset Controller  
4G一体式单机自启动发电机组控制器



HGM6120N-4G/CAN-4G  
AMF Genset Controller  
AMF发电机组控制器



HGMS61D  
Split Single Auto-start  
Genset Controller  
分体式单机自启动  
发电机组控制器



HGMS61M  
Split Single Auto-start  
Genset Control Module  
分体式单机自启动  
发电机组控制模块



HGMS62D  
Split AMF Genset Controller  
分体式AMF机组控制器



HGMS62M  
Split AMF Genset Control Module  
分体式AMF机组控制模块

Model/型号	HGM6110N	HGM6110CAN	HGM6120N	HGM6120CAN	HGM6110N-4G	HGM6110CAN-4G	HGM6120N-4G	HGM6120CAN-4G
Main Functions 主要功能	HGM6110N/6110CAN: With auto start function. HGM6110N is basic controller, HGM6110CAN is controller with ECU port. Based on HGM6110N/6110CAN, HGM6120N/6120CAN adds mains power monitoring and mains/generator automatic switching control (AMF), especially suitable for the automation system composed by mains and genset. HGM6110LT/6120LT can be applied to (-40°C~+70°C) temperature environment. HGM6110N/6110CAN: 具有自启动功能, HGM6110N为基本型控制器, HGM6110CAN为具有ECU接口的控制器。 HGM6120N/6120CAN在HGM6110N/6110CAN的基础上增加了市电电量监测和市电/发电自动切换功能(AMF), 特别适用于一市一机构成的单机自动化系统。HGM6110LT/6120LT可适用于(-40~+70°C)的温度环境。				HGM6110N-4G/6110CAN-4G: used for single unit automation, it controls genset auto start/stop by remote start signal.HGM6120N-4G/6120CAN-4G: based on HGM6110N-4G/6110CAN-4G, it adds mains power monitoring and mains/generator automatic switch control (AMF). It has 4G network communication module inside and the network communication module also has SMS function. HGM6110N-4G/6110CAN-4G: 用于单机自动化, 通过远端开机信号控制发电机组自动开机与停机; HGM6120N-4G/6120CAN-4G: 在HGM6110N-4G/6110CAN-4G基础上增加了市电电量监测和市电/发电自动切换控制功能(AMF); 内置4G网络通信模块, 网络通信模块也具有SMS短信功能。			
Display/显示器	LCD(132*64)							
Operation Panel/操作面板	Silicon Rubber/硅胶							
Language/控制模块语言	Chinese, English, Spanish, Russian, Portuguese, Turkish, Polish, French and etc 中文、英文、西班牙文、俄文、葡萄牙文、土耳其、波兰语、法语等							
Digital Input/开关量输入	5							
Relay Output/继电器输出	6							
Analog Input/模拟量输入	3							
AMF/市电检测			●				●	
AC System/交流制式	1P2W/2P3W/3P3W/3P4W							
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)							
Alternator Frequency 交流频率	50Hz/60Hz							
kW/Amp Detecting & Display 功率/电流检测及显示	●							
Monitor Interface 监控接口		●		●		●		●
Programming Interface 编程接口	USB	USB/RS485	USB	USB/RS485	USB	USB/RS485	USB	USB/RS485
CANBUS(J1939)		●		●		●		●
RTC & Event Log 实时时钟及历史记录	●							
Scheduled Start Genset 定时试机	●							
Maintenance/保养功能	●							
SMS/短信功能	●							
DC Supply/直流工作电源范围	DC(8~35)V							
Case Dimensions/外形尺寸(mm)	209*167*45(L*W*H)							
Panel Cutout/安装尺寸(mm)	186*141							
Operating Temp./工作温度	(-25~+70)°C							

Model/型号	HGMS61D	HGMS61M	HGMS62D	HGMS62M
Main Functions 主要功能	HGMS61/HGMS62 is the genset controller adopts split type structure with master control and display. The control system can be quickly set up to realize automatic start/stop, data measurement, alarm protection and "four remote" (remote control remote measurement, remote communication, remote adjusting) functions, HGMS62 has AMF function, DC+5V output (voltage type sensor supplies power). HGMS61/HGMS62是主控和显示采用分体式结构的发电机组控制器, 控制系统可快速成套, 实现发电机组的自动开机/停机、数据测量、报警保护及“四遥”功能, HGMS62具有AMF功能, DC+5V输出(电压型传感器供电)。			
Display/显示器	LCD(132*64)		LCD(132*64)	
Operation Panel/操作面板	Silicon Rubber/硅胶		Silicon Rubber/硅胶	
Language/控制模块语言	中文 & 英文 & 其他		中文 & 英文 & 其他	
Digital Input/开关量输入		4		4
Relay Output/继电器输出		6		6
Analog Input/模拟量输入		5		5 (其中2路可定义电压型、电阻型、电流型)
AC System/交流制式		1P2W/2P3W/3P3W/3P4W		1P2W/2P3W/3P3W/3P4W
Alternator Voltage 交流电压范围		AC(15~360)V(ph-N)		AC(15~360)V(ph-N)
Alternator Frequency 交流频率		50Hz/60Hz		50Hz/60Hz
kW/Amp Detecting & Display 功率/电流检测及显示	●		●	
Monitor Interface 监控接口		USB/RS485		USB/RS485
"Master control + Display" communication port 主控与显示通讯接口	RS232			
Programming Interface 编程接口	USB	USB/RS485	USB	USB/RS485
ETHERNET/以太网				
CANBUS(J1939)		HGMS61MCAN 有		HGMS62MCAN 有
RTC & Event Log 实时时钟及历史记录	●			
Maintenance/保养功能	●			
Scheduled Start Genset 定时试机	●			
DC Supply 直流工作电源范围	DC(8~35)V			
Panel Cutout 安装尺寸(mm)	186*141	孔距230.5*125.5	186*141	孔距230.5*125.5
Case Dimensions 外形尺寸(mm)	209*167*45(L*W*H)	243*158*65(L*W*H)	209*167*45(L*W*H)	243*158*65(L*W*H)
Operating Temp. 工作温度	(-25~+70)°C			



HGM8110V/HGM8110CAN  
Low-temperature Single Genset Controller  
低温单机发电机组控制器



HGM8120V/HGM8120CAN  
Low-temperature AMF Genset Controller  
低温AMF发电机组控制器



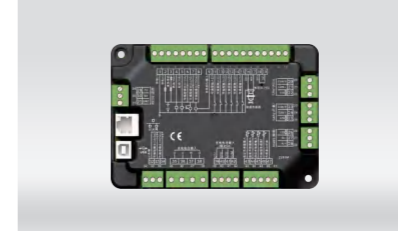
HGM8110LT  
Domestic Low-temperature Genset Controller  
纯国产化低温发电机组控制器



HGM8120LT  
Domestic Low-temperature Genset Controller  
纯国产化低温发电机组控制器



HGM8140ZD  
Domestic Low-temperature Split Genset Controller  
纯国产化低温分体式发电机组控制器



HGM8140ZM  
Domestic Low-temperature Split Genset Control Module  
纯国产化低温分体式发电机组控制模块



HGM7220N/S  
4G Integrated AMF Genset Controller  
4G一体式AMF发电机组控制器

Model/型号	HGM8110V	HGM8110CAN	HGM8120V	HGM8120CAN	HGM8110LT	HGM8120LT
Main Functions 主要功能	Can work in environment of (-40~+70)°C, has auto start and AMF function, can work in EMI environment. HGM8100V controller has RS485 monitoring interface, HGM8100CAN controller has CANBUS interface to control ECU engine. 可适应 (-40~+70) °C 的工作环境, 具有自启动和AMF功能, 可在强磁干扰下工作。HGM8100V是带RS485监控接口的控制器, HGM8100CAN具有CANBUS接口, 可控制电喷发动机的控制器。				HGM8100LT series genset controller is specially designed for extreme high/low temperature (-40~+70)°C, adopting heated LCD and electronic components resistant to extreme high and low temperature and anti-electromagnetic compatibility, which can work reliably under extreme temperature. HGM8100LT系列发电机组控制器是专为适应极低温/高温(-40°C~+70°C)环境而设计, 采用可加热液晶(LCD)及耐极端高温的电子元件和抗电磁兼容能力的设计, 能在极端温度条件下可靠工作。	
Display/显示器	VFD				LCD	
Operation Panel/操作面板	Silicon Rubber/硅胶					
Language/控制模块语言	Chinese & English & Others/中文 & 英文 & 其它				Chinese & English & Others/中文 & 英文 & 其它	
Digital Input/开关量输入	8					
Relay Output/继电器输出	8					
Analog Input/模拟量输入	5					
AMF/市电检测			●			●
AC System/交流制式	1P2W/2P3W/3P3W/3P4W					
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)					
Alternator Frequency 交流频率	50Hz/60Hz					
kW/Amp Detecting & Display 功率/电流检测及显示	●					
Monitor Interface 监控接口	RS485	RS485/ETHERNET	RS485		RS485/ETHERNET	
Programming Interface 编程接口	USB/RS485	USB/RS485/ETHERNET	USB/RS485		USB/RS485/ETHERNET	
Can Expand Digital Input/Output Modules 可扩展开关量输入/输出模块		●			●	
CANBUS(J1939)		●			●	
RTC & Event Log 实时时钟及历史记录				●		
Scheduled Start Genset 定时试机				●		
Maintenance/保养功能				●		
PLC/用户可编辑逻辑				●		
SMS/短信功能				●		
ETHERNET/以太网		●			●	
DC Supply/直流工作电源范围	DC(8~35)V					
Case Dimensions/外形尺寸(mm)	242*186*53(L*W*H)					
Panel Cutout/安装尺寸(mm)	214*160					
Operating Temp./工作温度	(-40~+70)°C					

Model/型号	HGM8140ZD	HGM8140ZM	HGM7220N	HGM7220S
Main Functions 主要功能	integrating digital, intelligent and network technology, adopts "Master Control and Display" split type mode. It is suitable for single unit automation and monitoring system to achieve automatic start/stop, data measurement, alarm protection as well as remote control, remote measurement and remote communication functions. 集成了数字化、智能化、网络化技术, 采用【主控和显示】分体式模式, 适用于单台发电机组自动化及监控系统, 实现发电机组的自动开机/停机、数据测量、报警保护及“三通”功能。		HGM7220N/HGM7220S has 4G cloud monitoring function and HGM7220S has mains synchronous switchover function. HGM7220N/HGM7220S具有4G云监控功能, HGM7220S具有市电同步切换功能。	
Display/显示器	LCD(132*64)		LCD(132*64)	
Operation Panel/操作面板	Silicon Rubber/硅胶		Silicon Rubber/硅胶	
Language/控制模块语言	中文 & 英文 & 西班牙		Chinese & English & Others/中文 & 英文 & 其它	
Digital Input/开关量输入		6		7
Relay Output/继电器输出		7		8
Analog Input/模拟量输入		4		5
AC System/交流制式	1P2W/2P3W/3P3W/3P4W			
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)			
Alternator Frequency 交流频率	50Hz/60Hz			
kW/Amp Detecting & Display 功率/电流检测及显示	●			●
Monitor Interface 监控接口			RS485	
"Master control + Display" communication port 主控与显示通讯接口	RS232/CANBUS			
Programming Interface 编程接口	USB		USB/RS485	
ETHERNET/以太网			●	
Cloud Monitoring/4G/SMS 云监控/4G/SMS				●
CANBUS(J1939)			●	
RTC & Event Log 实时时钟及历史记录			●	
Battery pack voltage sampling/电池组电压采样		DC input (0-75) V 直流输入 (0-75) V		
Maintenance/保养功能			●	
Scheduled Start Genset 定时试机			●	
DC Supply 直流工作电源范围	DC(8~35)V			
Panel Cutout 安装尺寸(mm)	122*94		186*141	
Case Dimensions 外形尺寸(mm)	136*110*41(L*W*H)	150*104*41(L*W*H)	209*166*45(L*W*H)	
Operating Temp. 工作温度	(-40~+70)°C		(-25~+70)°C	





HGM9310MPU/CAN  
Single Color Auto-start  
Genset Controller  
单机彩屏自启动发电机组控制器

HGM9320MPU/CAN  
Single Color AMF  
Genset Controller  
单机彩屏AMF发电机组控制器

HGM9420N/LT  
Enhanced Genset Controller  
增强型发电机组控制器

HGM4010(N/NC/CAN)  
Single Genset Controller  
单机发电机组控制器

HGM4020(N/NC/CAN)  
AMF Genset Controller  
AMF发电机组控制器

HGM4100LT  
Low-temperature Genset Controller  
低温发电机组控制器

Model/型号	HGM9310MPU	HGM9310CAN	HGM9320MPU	HGM9320CAN	HGM9420N
Main Functions 主要功能	With auto start/AMF function and USB interface; HGM9300MPU controller has monitor interface and SMS function; HGM9300CAN controller has ECU interface(SAEJ1939);HGM9420N/LT genset controller can realize automatic start/AMF/synchronous transfer/cloud monitoring of single unit. HGM9420LT can work in environment of (-40~+70)°C. 具有自启动/AMF功能和USB接口; HGM9300MPU带有监控接口和SMS功能; HGM9300CAN 带电喷接口功能; HGM9420N/LT发电机组控制器可实现单机自启动/AMF/同步切换/云监控功能, HGM9420LT可用于(-40~+70)°C的工作环境。				
Display/显示器	4.3 inches TFT-LCD(480*272)/4.3吋彩屏				LCD(240*128)
Operation Panel/操作面板	Silicon Rubber/硅胶				
Language/控制模块语言	Chinese & English & Others/中文 & 英文 & 其它				
Digital Input/开关量输入	8			10	
Relay Output/继电器输出	8			12	
Analog Input/模拟量输入	5			6 (电阻/电压/电流)	
AMF/市电检测				●	
AC System/交流制式	1P2W/2P3W/3P3W/3P4W				
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)				
Alternator Frequency 交流频率	50Hz/60Hz				
kW/Amp Detecting & Display 功率/电流检测及显示	●				
Monitor Interface 监控接口	RS485			RS485*2	
Programming Interface 编程接口	USB/RS485				
Can Expand Digital Input/Output Modules 可扩展开关量输入/输出模块	●		●		
CANBUS(J1939)	●		●		CANBUS*2
RTC & Event Log 实时时钟及历史记录	●				
Scheduled Start Genset 定时试机	●				
Maintenance/保养功能	●				
PLC/用户可编辑逻辑	●				
SMS/短信功能	●				
DC Supply 直流工作电源范围	DC(8~35)V				
Case Dimensions 外形尺寸(mm)	237*172*45(L*W*H)			242*186*49(L*W*H)	
Panel Cutout 安装尺寸(mm)	214*160				
Operating Temp. 工作温度	(-25~+70)°C				

Model/型号	HGM4010N	HGM4020N	HGM4010NC	HGM4020NC	HGM4010CAN	HGM4020CAN	HGM4100LT
Main Functions 主要功能	With auto start/AMF function; HGM4000N is the basic type. HGM4000NC is the controller with the monitor interface. HGM4000CAN is the controller with CANBUS interface. HGM4100LT controller is designed to adapt to environments in very low temperature/high temperature (-40~+70°C), with RS485 and CANBUS interfaces. 具有自启动/AMF功能, HGM4000N为基本型控制器, HGM4000NC为带监控接口的控制器, HGM4000CAN为具有CANBUS接口的控制器。HGM4100LT是专为适应极低温/高温(-40~+70°C)环境而设计, 同时具备RS485和CANBUS接口的控制器。						
Display/显示器	LCD(132*64)						
Operation Panel 操作面板	Silicon Rubber/硅胶						
Language 控制模块语言	Chinese, English, Spanish, Russian, Portuguese, Turkish, Polish, French and etc 中文、英文、西班牙文、俄文、葡萄牙文、土耳其、波兰语、法语等						
Digital Input 开关量输入	3+(2)						
Relay Output 继电器输出	6						
Analog Input 模拟量输入	2+(2)						
AMF/市电检测	●		●		●		●
AC System/交流制式	1P2W/2P3W/3P3W/3P4W						
Alternator Voltage 交流电压范围	AC(15~360)V(ph-N)						
Alternator Frequency 交流频率	50Hz/60Hz						
kW/Amp Detecting & Display 功率/电流检测及显示	●						
Monitor Interface 监控接口				RS485			
Programming Interface 编程接口	USB		USB/RS485				
CANBUS(J1939)						●	
RTC & Event Log 实时时钟及历史记录	●						
Scheduled Start Genset 定时试机	●						
Maintenance/保养功能	●						
DC Supply 直流工作电源范围	DC(8~35)V						
Case Dimensions 外形尺寸(mm)	135*110*46(L*W*H)						
Panel Cutout 安装尺寸(mm)	116*90						
Operating Temp. 工作温度	(-25~+70)°C						(-40~+70)°C



HGM1790N  
Mini Genset Controller  
迷你型发电机组控制器



HSC940  
Gas Genset Controller  
燃气机组控制器



HGM4020T  
Telecom Base Station  
Genset Controller  
通信基站发电机组控制器



ALC708/ALC704  
Lighting Tower Controller  
灯塔机组控制器



ALC404  
Lighting Tower Controller  
灯塔机组控制器

Model/型号	HGM1790N	HSC940	HGM4020T
Main Functions 主要功能	Suitable for single genset automation and monitoring (also works for pump unit). 适用于单机自动化及监控 (也可用于水泵机组)。	Used for gas genset automation and monitoring system of single unit to achieve speed regulation (adjust the throttle opening via the driving DC motor), automatic start/stop, data measuring, alarm protection and three remote functions. 用于单台燃气发电机组自动化及监控系统, 实现发动机速度调节(驱动直流电机调节节气门开度), 发电机组的自动开机/停机、数据测量、报警保护及“三遥”功能。	It is designed for generator sets of communications base station, can realize generator room temperature detection, battery voltage monitoring, have mains/load, mains/air conditioning ATS transfer automatically function. 针对通信基站开发的发电机组控制器, 可对机房温度、蓄电池组电压进行监控, 具有市电/负载、市电/空调双电源ATS自动切换功能。
Display/显示器	Graphical LCD (With Backlight) 图形LCD(带背光)	LCD(132*64)	
Operation Panel 操作面板	Silicon Rubber/硅胶	PET	Silicon Rubber/硅胶
Language 控制模块语言	English/英文	Chinese & English & Spanish & Russian 中文 & 英文 & 西班牙语 & 俄文	Chinese & English/中文 & 英文
Digital Input 开关量输入	4(One Programming Input) 4(1个可编程输入)	5	4+(2)+(1)
Relay Output 继电器输出	5(Three Programming Output) 5(3个可编程输出)	6	5+(1)
Analog Input 模拟量输入	2+1		2+(2)
AMF/市电检测			●
AC System/交流制式	1P2W	1P2W/2P3W/3P3W/3P4W	
Alternator Voltage 交流电压范围		AC(15~360)V(ph-N)	
Alternator Frequency 交流频率		50Hz/60Hz	
kW/Amp Detecting & Display 功率/电流检测及显示	●		●
Monitor Interface 监控接口			RS485
Programming Interface 编程接口	USB	LINK	RS485/USB
SMS/短信功能		●	
RTC & Event Log 实时时钟及历史记录			●
Scheduled Start Genset 定时试机			●
Maintenance/保养功能			●
DC Supply 直流工作电源范围		DC(8~35)V	
Case Dimensions 外形尺寸(mm)	95*86*47(L*W*H)	130*112*39(L*W*H)	135*110*44(L*W*H)
Panel Cutout 安装尺寸(mm)	78*66	110*90	116*90
Operating Temp. 工作温度		(-25~+70)°C	
Motor Specifications 电机规格		Mixed 2-phase; Drive Currents≤1A 2相混合式步进电机, 驱动电流≤1A	

Model/型号	ALC708	ALC704	ALC404
Main Functions 主要功能	Used for automatic control module of single lighting tower set, it can achieve lighting tower set scheduled start/stop, sunrise and sunset start/stop, SMS remote control start/stop, remote input start/stop, turn on and off the spotlights of the lighting tower in proper order. It is applicable to AC and DC lighting tower sets. 用于单台灯塔组自动化控制, 可实现灯塔组的定时开/停机、日出日落开/停机、SMS短信遥控开/停机以及通过远程输入开/停机, 还可实现灯塔照明灯的顺次开启及关闭, 不仅适用于交流灯塔组, 也可适用于直流灯塔组。		
Display/显示器	LCD(132*64)		
Operation Panel 操作面板	Silicon Rubber/硅胶		
Language 控制模块语言	Chinese & English/中文 & 英文		
Digital Input 开关量输入	12	8	5
Relay Output 继电器输出	14	10	8
The Number of Lights 灯数量	8	4	4
DC Lighting Tower Sets Control 直流灯塔控制		●	
AC Lighting Tower Sets Control 交流灯塔控制		●	
Scheduled Start/Stop 定时开关机		●	
SMS Start/Stop 短信开关机	●		
Sunrise and Sunset Start/Stop 日出日落开关机	●		●
Remote Start/Stop 远程开关机		●	
High-Precision Clock 高精度时钟		●	
CAN1939			●
Monitor Interface 监控接口	RS485		
Programming Interface 编程接口	USB/RS485		USB
DC Supply 直流工作电源范围	DC(8~35)V		
Case Dimensions 外形尺寸(mm)	197*152*47(L*W*H)		135*110*44(L*W*H)
Panel Cutout 安装尺寸(mm)	186*141		116*90
Operating Temp. 工作温度	(-25~+70)°C		





HGM501  
Small Genset Controller  
小型发电机组控制器



MGC100  
Small Genset Controller  
小型发电机组控制器

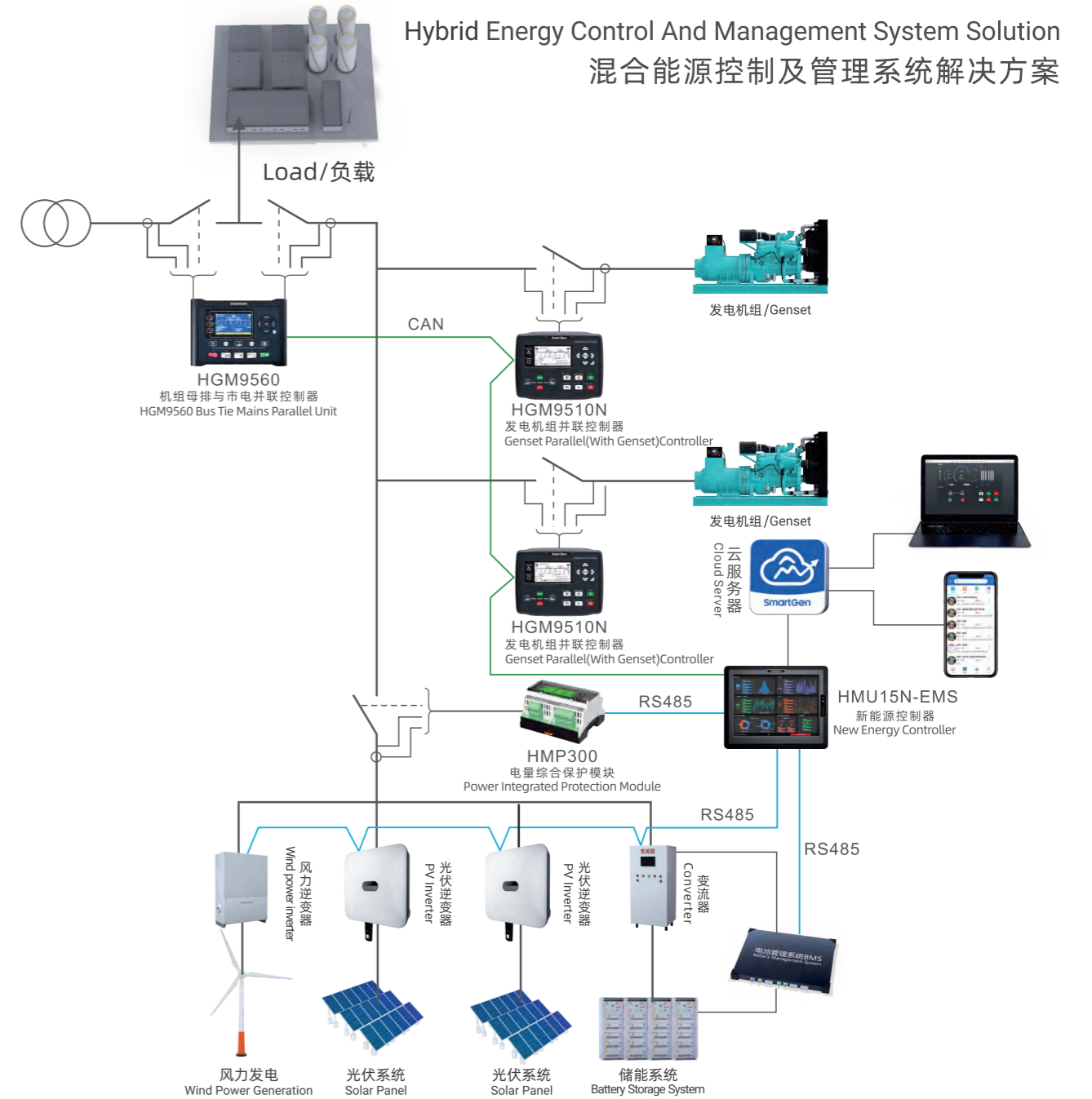


MGC120  
Small Genset Controller  
小型发电机组控制器



MGC320  
Small Genset Controller  
小型发电机组控制器

Model/型号	HGM501	MGC100	MGC120	MGC320
Main Functions 主要功能	LED Display; Suitable for single-phase small genset. 数码管显示; 适用于单相小型发电机组。	LED Display; Suitable for small genset. 数码管显示; 适用于小型发电机组。	LED Display; Suitable for single electric generator automation or ATS switching of small genset. 数码管显示; 适用于小型发电机组单机自动化或ATS切换。	It is used for automatic control of single electric generator, which can realize single-machine self-starting/AMF. 用于单台发电机组自动化控制, 可实现单机自启动/AMF。
Display/显示器		LED Nixie Tube LED数码管		LCD Graphic Display LCD图形显示器
Operation Panel 操作面板		PET	Silicon Rubber/硅胶	PET
Digital Input 开关量输入	1	4	2	3
Relay Output 继电器输出	2	2+1 Transistor Output 2+1个晶体管输出	3+2 Transistor Output 3+2个晶体管输出	4
Analog Input 模拟量输入	2		1	2
AMF/市电检测				●
AC System/交流制式	1P2W	1P2W/2P3W/3P3W/3P4W	1P2W	1P2W/2P3W/3P3W/3P4W
Alternator Voltage 交流电压范围		AC(30~360)V(ph-N)		AC(15~360)V(ph-N)
Alternator Frequency 交流频率		50/60Hz		
Amp Detecting & Display 电流检测及显示	●			●
Programming Interface 编程接口	LINK		LINK	RS485
DC Supply 直流工作电源范围		DC(9~18)V		DC(8~35)V
Case Dimensions 外形尺寸(mm)	118*128*36(L*W*H)	105.8*61*36.6(L*W*H)	95*86*46.5(L*W*H)	126*106*46.5(L*W*H)
Panel Cutout 安装尺寸(mm)	112*122	92*44	78*66	111*91
Operating Temp. 工作温度				(-25~+70)°C



Hybrid energy includes solar energy, stored energy, wind energy, mains, and genset. HES9510 is used for genset and energy system like solar energy, wind energy, energy storage battery with inverter as output, which can control start/stop of inverted power, output mode, output size and output breaker close/open, etc. It can also control genset start/stop according to the load condition, provide spinning reserve for inverted power, and control converter to charge and discharge the energy storage battery, thus realizing data measurement, alarm protection and "three remote" (remote control, remote measurement, remote communication) functions.

混合能源包括太阳能、储能、风能、市电、发电机组；HES9510用于柴油发电机组与太阳能，风能，储能电池等以逆变器做为输出的能源系统，可以控制逆变电源的启动停止，输出模式，输出大小以及输出断路器的合/分闸等，也可以根据负载情况，控制系统中的发电机组的起停，为逆变电源提供旋转备用，还可以控制变流器对储能电池进行充放电管理，实现数据测量、报警保护及“三遥”功能。



HES7120-PV  
PV Grid-connected/Generator and  
Hybrid Energy Controller  
光伏并网/发电混合能源控制器



HES9510  
Hybrid Energy Controller  
混合能源控制器



HMU15N-EMS  
Hybrid Energy Controller  
混合能源控制器



HBMU200  
Battery Management Module  
电池管理模块

Model/型号	HES7120-PV	HES9510	HMU15N-EMS
Main Functions 主要功能	It is used in energy control system for solar energy with inverter as output. It can control the close/open of output breaker, inverter start/stop, and output power level. 用于太阳能以逆变器做为输出的能源控制系统。可以控制输出断路器的合分闸及逆变器的开机停止、输出功率大小。	It is used in diesel gensets and energy control system for solar energy, wind energy, energy storage battery, etc with inverter as output. It can control inverter start/stop, output mode, output level and close/open of output breaker. 用于柴油发电机组与太阳能、风能、储能电池等以逆变器做为输出的能源系统，可以控制逆变电源的启动停止，输出模式，输出大小以及输出断路器的合分闸。	It is used for the hybrid energy system consisting of solar energy, wind energy, sotarge battery, mains and diesel genset. It can control power distribution between energies, start/stop of energy equipment, breaker close/open. 用于太阳能，风能，储能电池，市电和柴油发电机组组成的混合能源系统，控制各个能源之间的功率分配，能源设备的起停，断路器的合分闸。
Display/显示器	LCD(132*64)	LCD(240*128)	15-inch color touch screen/15吋彩色触屏
Operation Panel/操作面板	Silicon Rubber/硅胶		
Language/控制模块语言	Chinese & English & Others/中文 & 英文 & 其它		Chinese & English & Others/中文 & 英文
Digital Input/开关量输入	7	10	
Relay Output/继电器输出	8	10	
Analog Input/模拟量输入	5	5	
DC+5V Power Supply Output DC+5V供电输出 (-10~10)V Analog Output/ (-10~10)V模拟量输出	●	●	
MSC		2-way MSC port/2路MSC接口	
CANBUS(J1939)		●	
kW/Amp Detecting & Display 功率/电流检测及显示	●		
RS485	1-way RS485/1路RS485	2-way RS485/2路RS485	4-way RS485/4路RS485
ETHERNET/以太网		●	
Remote Monitoring Port 远程监控接口		ETHERNET/RS485	
USB		●	
Can Expand Digital Input /Output Modules 可扩展开关量输入/输出模块		DIN16A/DOUT16B/AIN8	
PLC/用户可编辑逻辑			●
Inverter Communication Port 逆变器通讯接口		RS485	
Solar Panel Parameter Display 太阳能板参数显示	4-way solar panel voltage, current, power display/4路太阳能板通道的电压、电流、功率显示		
RTC & Event Log 实时时钟及历史记录		●	
DC Supply/直流工作电源范围	DC(8~35)V		
Case Dimensions 外形尺寸(mm)	209*167*45(L*W*H)	242*186*49(L*W*H)	377*316*76(L*W*H)
Panel Cutout/安装尺寸(mm)	186*141	214*160	358.5*297.2
Operating Temp./工作温度	(-25~+70)°C		

HBMU200 (BMS slave control module), which is applied for storage energy BMS system, can realize single battery voltage, battery temperature, wire end temperature sensing, passive equalization and other functions. And can exchange information with HBCU100(BMS master control module) through CAN bus. It is the subsystem of whole intelligent micro-grid control system.

HBMU200(BMS从控模块)应用于储能BMS系统，实现对单体电池电压、电池温度采集、线端温度采集、被动均衡等功能，并通过CAN总线和HBCU100(BMS主控模块)进行信息交互，是整个智能微网控制系统的子系统。

- DC(8~35)V, whole power consumption is lower than 0.5W;  
直流供电 (8~35) V，整体功耗小于0.5W;
- With 16-way cell voltage sensing, range is (1~5)V, accuracy is 0.1%;  
具有16路电芯电压采集，范围 (0-5) VDC，精度±5mV%;
- With 16-way battery temperature sensing, 2-way wire end temperature Sensing, (-40~+120)°C, accuracy ±1°C;  
具有16路电池温度采集，2路线端温度采集；范围 (-40~120) °C，精度±1°C；
- With CAN communication port and supporting CAN communication online upgrade;  
具有CAN通讯接口，模块支持CAN通讯在线升级；
- Supports up to 64 slave controllers in cascade;  
最大支持64个从控级联；
- With 1-way relay output, can be used to control external devices such as fans ;  
具有1路继电器输出，可用于控制风扇等外部设备；
- With status indicator function;  
具有状态指示灯；
- With passive equalization function, max equalization current is 100mA;  
采用被动均衡，最大均衡电流100mA；
- IP20 protection level; /防护等级：IP20等级；
- With ABS+PC plastic enclosure, UL94V-0 anti-flaming level ; /外壳塑料ABS+PC，阻燃等级UL94V-0；
- Can set cell voltage Sensing and temperature Sensing numbers; /可设定电芯电压采样及温度采样个数；
- Wire harness protection function. When the HBMU200 is used externally, the protection cover on the housing can protect the wire harness;  
具有线束保护功能，当HBMU200外挂使用时，外壳配有线束保护盖以免损坏线束；
- Overall dimension: 125mm\*106mm\*21mm./产品外形尺寸:125mm\*106mm\*21mm。





HBCU100  
Master Control Module  
BMS主控模块



HBMU100  
Slave Control Module  
BMS从控模块

BMS (Battery Management System) can manage the battery system safely, reliably and efficiently, which consists of HBCU100 and HBMU100 modules. The system collects the battery module data, uploads it to the monitoring platform, and realizes the protection of over-voltage and under voltage, high/low temperature, charging and discharging overcurrent, etc. of the cell through the three-level fault protection system and the control of the external master circuit relay. BMS can realize protocol compatibility with energy storage converters (PCS) from multiple manufacturers to manage the charging and discharging of battery packs, which can be widely used in energy storage battery cabinet with various power levels.

BMS电池管理系统,可对电池系统进行安全、可靠、高效的管理。系统由HBCU100和HBMU100模块构成。系统通过采集电池模块数据,并上传至监控平台,通过三级故障保护系统以及对外置主回路继电器的控制,实现对电芯的过欠压、温度过高/过低、充放电过流等保护。BMS可与多个厂家的储能变流器(PCS)实现协议兼容,管理电池组的充放电。可广泛应用于各种功率等级的储能电池柜。

- HBCU100 is master control module, HBMU100 is slave control module; /HBCU100为主控模块, HBMU100为从控模块;
- Rated 12/24VDC voltage; /系统额定12/24VDC电压供电;
- HBCU and HBMU can view working status via indicators;/HBCU和HBMU模块可通过指示灯查看工作状态;
- Calculate SOC, SOH, cell min/max voltage, average voltage, cell min/max temperature, etc.;  
计算电池组SOC、SOH、电芯最低电压、电芯最高电压、平均电压、电芯最低温度、电芯最高温度等数据;
- Three-level fault alarm protection function;具有三级故障报警保护功能;
- Master positive relay control function and pre-charge circuit control function;/具有主正回路继电器控制功能, 以及预充回路控制功能;
- Support 15 BMU modules online simultaneously;/支持15个BMU模块同时在线;
- HBMU100-16 can collect 16 cells and 8 temperatures, HBMU100-32 can collect 32 cells and 16 temperatures;  
HBMU100-16可采集16个电芯与8个温度, HBMU100-32可采集32个电芯与16个温度;
- With passive equalization function, max equalization current is 100mA;/具有被动均衡功能, 最大均衡电流100mA;
- BCU can communicate with BMU via CAN, high anti-interference capability;/BCU与BMU通过CAN通信, 抗干扰能力强;
- RS485-1, RS485-2 communication ports that can be matched with energy storage converters (PCS) from multiple manufacturers at the same time;/RS485-1、RS485-2对外通信接口, 同时可与多个厂家的储能变流器(PCS)匹配使用;
- With insulation resistance detection function (via RS485-3 port);/具有绝缘电阻检测功能(通过RS485-3接口)
- BCU and BMU modules can fast upgrade firmware via CAN port without unpacking maintenance;  
BCU与BMU模块通过CAN接口快速升级固件, 免除拆箱维护;
- Through HMU8-BMS display module, real-time monitoring of the whole system, parameter configuration and firmware upgrade can be realized.  
通过HMU8-BMS显示模块可对整个系统的实时监控以及参数配置、固件升级。



HP16S200-20  
Lithium Battery Protection Board  
锂电池保护板

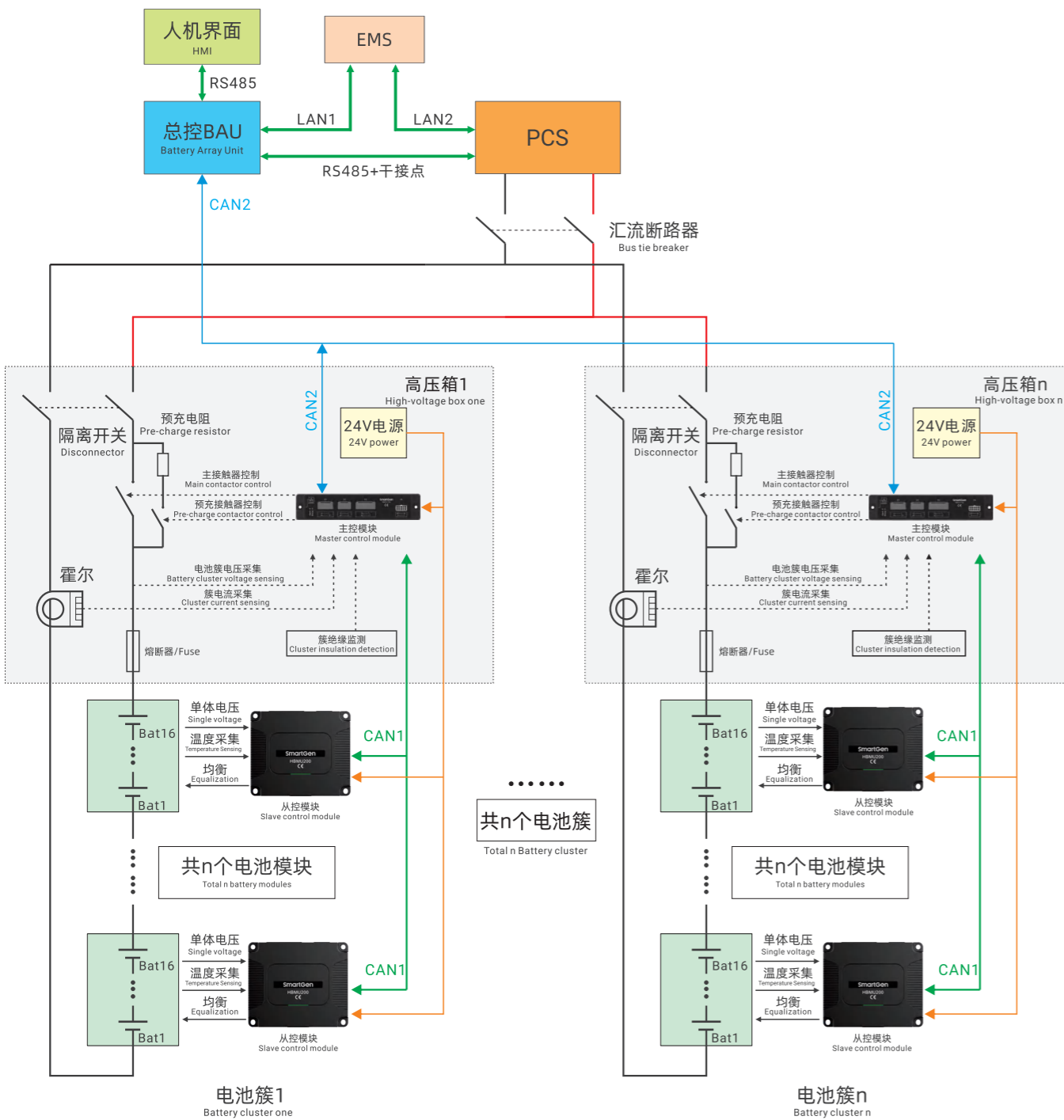
HP16S200-20 lithium protection board is an important part of 48V lithium battery pack, which is mainly used in systems such as base station communication power supply, backup power supply and household energy storage, etc. It can also be used in AGV, electric forklift, floor washing truck and sweeper, etc. It can monitor the working state of the battery (voltage, temperature, etc.), so as to alarm and protect the overcharge, over-discharge, over-current, over-temperature and short circuit, etc. It can also provide the balanced protection function of the cells to prolong the cell life, and can realize parameter configuration and data real-time communication through RS232/RS485/CAN interface.

HP16S200-20锂电池保护板是48V锂电池组的重要组成部分,主要用于基站通信电源、备用电源和户用储能等系统,也可用于AGV、电动叉车、洗地车和扫地车等。可监控电池的工作状态(电压、温度等),以便对过充、过放、过流、过温和短路等进行报警和保护,还可以提供电芯的均衡保护功能以延长电芯寿命,并可通过RS232/RS485/CAN口实现参数配置和数据实时通信。

- The mature AFE chip in the industry is used to detect the voltage of single battery and support the voltage detection of 15 or 16 strings of batteries;  
采用业内成熟的AFE芯片实现单体电池电压的检测,支持15或16串电池的电压检测;
- Support up to 6-way temperature detection (4-way cell, 1-way MOSFET, 1-way box temperature), the temperature sensor type is NTC 10K;  
最大支持6个通道的温度检测(4路电芯, 1路MOSFET, 1路箱内温度),温度传感器类型为NTC 10K;
- With overvoltage, undervoltage, overcurrent, over-temperature, reverse connection, short circuit and other fault protection;  
具有过压、欠压、过流、过温、反接和短路等多项故障保护;
- With charge and discharge management capacity, and carrying current capacity of 200A;  
具有充放电管理能力,承载电流能力200A;
- With shunt current acquisition function, acquisition range  $\pm 300A$ , accuracy 0.5% FS;  
具有分流器电流采集功能,采集范围 $\pm 300A$ ,精度0.5% FS;
- It has 1-way isolated CAN interface and 1-way isolated RS485 interface for communication with PCS or optical storage integrated machine;  
具有1路隔离CAN接口和1路隔离RS485接口,用于和PCS或光储一体机通信;
- With 1-way isolated parallel RS485 interface for parallel connection of multiple lithium battery packs, supporting up to 16 modules cascade communication;  
具有1路隔离并接RS485口,用于多个锂电池组并联,最大支持16个模块级联通信;
- With 1-way isolated RS232 interface for communication with PC to monitor battery status and set related parameters in real time;  
具有1路隔离RS232口,用于上位机通讯,实时监控电池组状态和设置相关参数;
- with current limiting function 20A (optional);/具有限流功能20A(可选);
- Support multiple types of sleep and wake-up;/支持多种类型的休眠与唤醒;
- Compatible with the mainstream inverter communication protocol on the market, which can be selected through PC;  
兼容市面主流逆变器通讯协议,可通过上位机选择;
- With passive equalization function, the maximum equalization current is 100mA;/具有被动均衡功能,最大均衡电流100mA;
- With local storage function of system data;/具有系统数据本地存储功能;
- With LED indicator function, including operation indication, fault indication and SOC indication./具有LED指示灯功能,包括运行指示、故障指示和SOC指示。

### Three-level Architecture Diagram Of Energy Storage System BMS

#### 储能系统BMS三级架构图



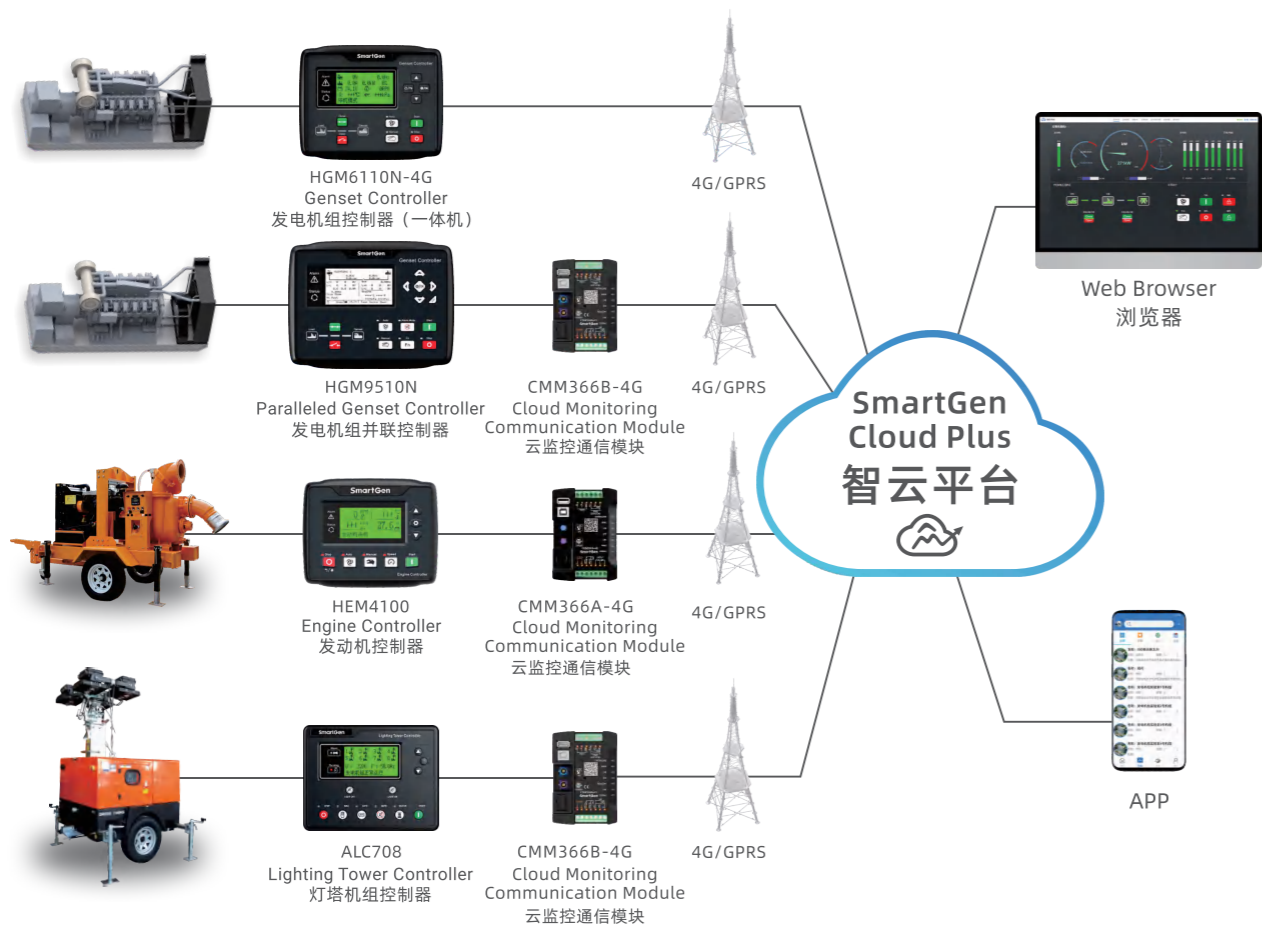
HMU15N  
Genset Remote Monitoring Controller  
发电机组远程监控控制器



HMU8-9570  
8-inch Touch Screen Hybrid  
Energy Controller  
8吋触屏混合能源控制器

Model/型号	HMU15N	HMU8-9570
Main Functions 主要功能	It is used for remote monitoring of single/multiple gensets, which can realize remote start/stop, auto/manual mode switch, close/open operation and data measurement, alarms display functions.	Adopt 8-inch color touch screen, communicate with main controller via RS485, realize data monitoring, parameter setting and other functions for the main controller.  用于单台或多台发电机组控制器的远程监控, 可实现远程开停机、自动手动模式切换、合分闸操作以及数据监测、报警显示功能。
Display/显示器	15-inch color touch screen/15吋彩色触屏	8-inches LCD/8吋LCD
Language/控制模块语言	Chinese & English & Others/中文 & 英文	Chinese & English/中文 & 英文
Brightness Adjustment/亮度调节	Adjustable/可调节	
Operation Permission/操作权限	Engineer, technician/工程师、技术员	Engineer, technician, operator/工程师、技术员、操作员
Unit Number/机组数量	10	4
Monitor Interface 监控接口	4-Way RS485、CANBUS/4路RS485接口、1个CANBUS接口	
Ethernet/以太网	1路	
DC Supply 直流工作电源范围	DC(8~35)V	DC(10~35)V
Case Dimensions 外形尺寸(mm)	377*316*76(L*W*H)	221*159*51(L*W*H)
Panel Cutout 安装尺寸(mm)	358.5*297.2	221*163*51
Operating Temp. 工作温度	(-25~+70)°C	
CANBUS	●	





SmartGen Cloud Plus is a high-concurrency, low-latency, high-customization on-line monitoring platform of genset.

Users can add, modify, and delete genset information independently, and other user's genset can be checked and monitored by subscribing and unsubscribing functions.

SmartGen Cloud Plus adopts Websocket to actively push the data of cloud monitoring module to shorten the real-time data display time of client and reduce the network traffic of users.

SmartGen Cloud Plus provides web version, mobile android version, computer version of three clients for users to choose.

With event log, fault push, alarm analysis, positioning, remote lock/unlock, flow check, cloud modem remote upgrade, electric fence, running track functions.

智云平台是一款高并发，低延时，高定制的机组在线监控平台。

用户可自主添加、修改、删除机组信息，可通过订阅和退订功能，实现其他用户机组的查看和监控。

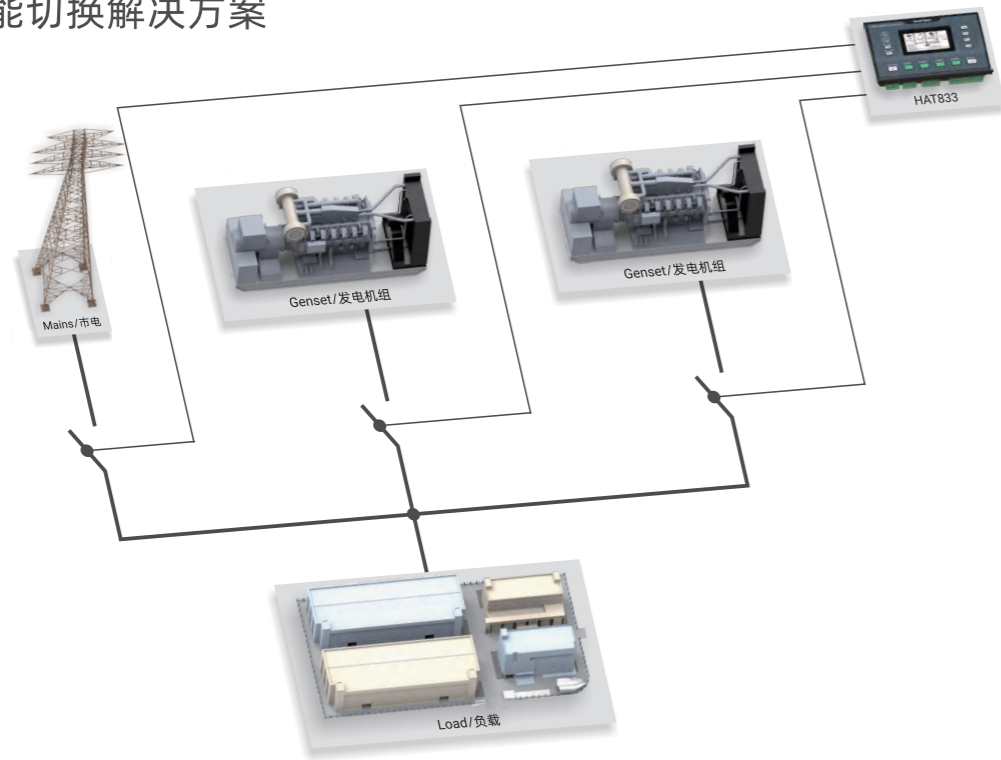
智云平台采用Websocket主动推送云监控模块数据，以缩短客户端实时数据显示时间，减少用户网络流量。

智云平台提供网页版、手机Android版、电脑版三种客户端供用户选择。

具有历史记录、故障推送、报警分析、定位、远程锁机/解锁、流量查询、远程升级云猫、电子围栏、运行轨迹等功能。

### Three Power ATSE Solution

### 三电源智能切换解决方案



Suitable for three-ways power supply three breakers control.

适用于三路电源三个断路器控制。

		
<p><b>HAT832</b> Three Power ATS Controller 三电源自动切换控制器</p> <p>Suitable for three power ATSE control system with two PC class ATS. 适用于两台PC级ATS开关组成的三电源智能切换控制系统。</p>	<p><b>HAT833</b> Three Power ATS Controller 三电源自动切换控制器</p> <p>Suitable for three power ATSE control system with three breakers. 适用于三台断路器组成的三电源智能切换控制系统。</p>	<p><b>HAT835</b> Three Power ATS Controller 三电源母联智能切换控制器</p> <p>It is suitable for three-incoming two-bustie or one-bustie switching system and can control up to 5 breakers. 适用于三进线两母联或一母联转换系统，最多可控制五台断路器。</p>



**HAT860**  
Medium Voltage ATS Controller  
中压双电源自动切换控制器

HAT860 medium voltage ATS controller is the module integrates programmable function, automatic measurement, PT break detection load stepwise switch, LCD display and digital communication.  
HAT860中压双电源自动切换控制器是具有可编程功能、自动化测量、PT断线检测、负载逐级投切、LCD显示、数字通讯为一体的中压双电源切换模块。



**HAT828**  
High Speed ATS Controller  
双电源快速切换控制器

HAT828 ATS controller is a dual power transfer module that can output switch transfer signals within 10ms in case of any power outage, and transfer in parallel when both power supplies are normal, it is suitable for PC two-stage switches.  
HAT828双电源快速切换控制器可在任一路电源断电的情况下实现10毫秒内输出开关切换信号，并且在两路电源均不断电时进行并联转换的双电源切换模块，适用于PC二段式切换开关。



**HAT820/820S**  
ATSE Synchronous Switching Controller  
ATSE同步切换控制器

It can control various PC dual power switch, CB dual power switch. The controller can be powered by line voltage (L-L), with load voltage detection, temperature detection in cabinet, (fire cut) source input and other functions, HAT820S increase the short-time parallel transfer function.  
可控制各种PC级双电源开关，CB级双电源开关。控制器可以线电压(L-L)供电、具有负载电压检测、柜内温度检测、(消防切非)有源输入等功能，HAT820S增加并联转换功能。



**HAT821/HAT821S/HAT821SI**  
BUS Tie Controller  
母联控制器

Suitable for ATSE control system with two incoming lines and one bustie(low voltage standby self-switchover), HAT821S has parallel transfer function while HAT821SI has closing loop function.  
适用于两进线一母联（低压备用自投）的电源切换控制系统，HAT821S具有并联转换功能，HAT821SI具有合环功能。



**HAT880/880S**  
Dual Power Bypass Automatic Switching Controller  
双电源旁路自动切换控制器

It can control various bypass switching, apply to single bypass, double bypass transfer switching, manual control or remote control (electrically operated) bypass switches; It has main/bypass switch button unlock and unlock status display function; It has main/bypass switch button manual control and automatic control switching function, and main/bypass switch status display. HAT880S has parallel transfer function.  
可控制多种旁路开关，适用于单旁路、双旁路转换开关，手动控制或远程控制(电动操作)旁路开关。具有主/旁路开关按钮解锁和解锁状态显示功能；具有主/旁路开关按钮手动控制和自动控制投切功能，以及主/旁路开关状态显示。880S具有并联转换功能。



**HAT700(I/B/BI/S)**  
Dual Power ATS Controller  
双电源自动切换控制器

It is designed for different types of dual power switch, HAT700 has DC power supply; HAT700I has the functions of DC power supply and current monitoring; HAT700B has AC and DC power supply; HAT700BI has the function of AC/DC power supply and current monitoring; HAT700S adds parallel transfer function on the basis of HAT700BI.  
适用于不同类型的双电源切换开关，HAT700直流供电；HAT700I直流供电且有电流监测功能；HAT700B交、直流供电；HAT700BI交、直流供电且有电流监测功能；HAT700S在HAT700BI基础上增加并联转换功能。





**HAT600N (NI/NB/NBI)**  
Dual Power ATS Controller  
双电源自动切换控制器

HAT600N is suitable for DC power supply; HAT600NI is suitable for DC power supply and the occasions of current detection demand; HAT600NB/HAT600NBI is suitable for AC/DC power supply.

HAT600N是直流供电; HAT600NI是直流供电, 适用于有电流检测需求的场合; HAT600NB/HAT600NBI可交流、直流供电。



**HAT600P (PB/PI/PBI/PS)**  
Dual Power ATS Controller  
双电源自动切换控制器

Dual power ATS controller suits for PC class, CB class, CC class switches and has USB, RS485 port and load voltage monitoring, NEL (Non-essential Load) trip functions. It can measure voltage, current THD (Total Harmonic Distortion) and 3-21 odd harmonic component percentage.

双电源自动切换控制器, 适用于PC、CB、CC级开关, 具有USB、RS485接口, 具有负载电压监测、非重要负载NEL跳闸功能, 可测量电压、电流波形畸变率和3-21奇数次谐波分量百分比。



**HAT553/HAT533LT**  
Dual Power ATS Controller  
双电源自动切换控制器

Suitable for electromagnetic drive three-stage ATS switch, one-to-one wiring, Chinese and English display, standard RS485 interface, HAT553LT can be used under -40°C.

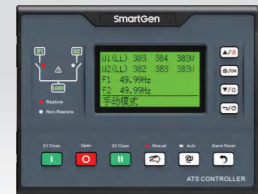
适用于电磁驱动型三段式ATS开关, 接线一对一, 中英文显示, 标配RS485接口, HAT533LT可在-40°C低温环境下使用。



**HATC60**  
Dual Power ATS Controller  
双电源自动切换控制器

With graphic LCD; monitors all AC system; suitable for controlling PC three-stage switch of SOCOMEC and other motor types.

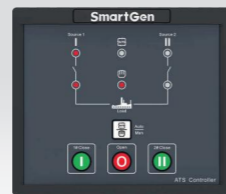
图形液晶显示模块; 各种交流制式采样; 适用于控制SOCOMEC等电机型PC三段式开关。



**HAT600R (RB/RI/RBI/RS)**  
Dual Power ATS Controller  
双电源自动切换控制器

HAT600R series ATS controller has in-phase transfer, fast transfer, synchronous parallel transfer functions and can be used for PC/CB/CC class transfer switch.

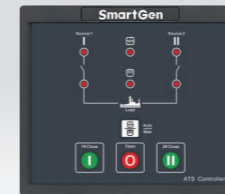
HAT600R系列双电源自动切换控制器, 具有同相位切换、快速切换、同步并联切换功能, 可用于PC级、CB级、CC级转换开关。



**HAT530P/PC**  
Dual Power ATS Controller  
双电源自动切换控制器

HAT530P/HAT530PC series ATS controller suits for two-stage/three-stage ATS control and has oil engine start signal output.

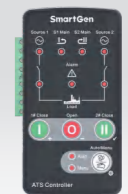
HAT530P/HAT530PC系列双电源自动切换控制器适用于控制二段式、三段式ATS开关, 具有油机启动信号输出。



**HAT530N/NC**  
Dual Power ATS Controller  
双电源自动切换控制器

This controller is suitable for NO Breaking ATS and ONE Breaking ATS, HAT530NC is equipped with RS485 interface.

适用于控制一个分断位或者无分断位ATS开关, HAT530NC标配RS485接口。



**HAT160**  
Dual Power ATS Controller  
双电源自动切换控制器

Monitors 1P2W/3P4W AC system, suitable for one motor operation CB switch.

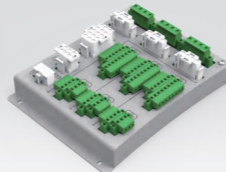
单相或三相采样, 适用于控制CB级单电操开关。



**TPS31**  
Three Power Supply Module  
三电源供电模块

Three selective AC power output, can accurately detect three phase voltage and judge for voltage abnormal situation and control power output.

三选一交流电源输出, 可精确地检测三路电压, 对出现的电压异常做出判断并控制电源输出。



**ATA833**  
Three Power Switch Adaptor  
三路电源开关适配器

The adaptor that suits for HAT833 three power ATS controller and intelligent breaker connection.

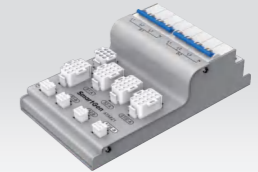
适用于HAT833三路电源自动切换控制器和智能断路器连接的适配器。



**HAT310**  
Dual Power ATS Controller  
双电源自动切换控制器

Generator single phase sampling, mains three-phase sampling, suitable for PC two-stage CC class ATS (continuous closed output).

发电单相、市电三相采样, 适用于控制PC级二段式CC级ATS转换开关(合闸信号为持续输出)。



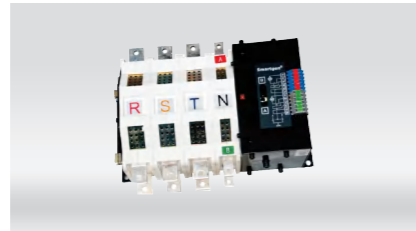
**ATA821**  
Bus Tie Dual Power Switch Adaptor  
母联型双电源开关适配器

It can connect the controller and the ACB secondary line through adapter, with simple and fast one-to-one wiring. It can realize the electrical interlock between the three switches, which is suitable for HAT821 bus tie controller.

通过适配器连接控制器和框架断路器(ACB)开关二次线, 一对一线简单快捷, 并实现了三台开关之间的电气互锁。适用于HAT821母联控制器。



N型/Type  
SGQ63A-125A/4P



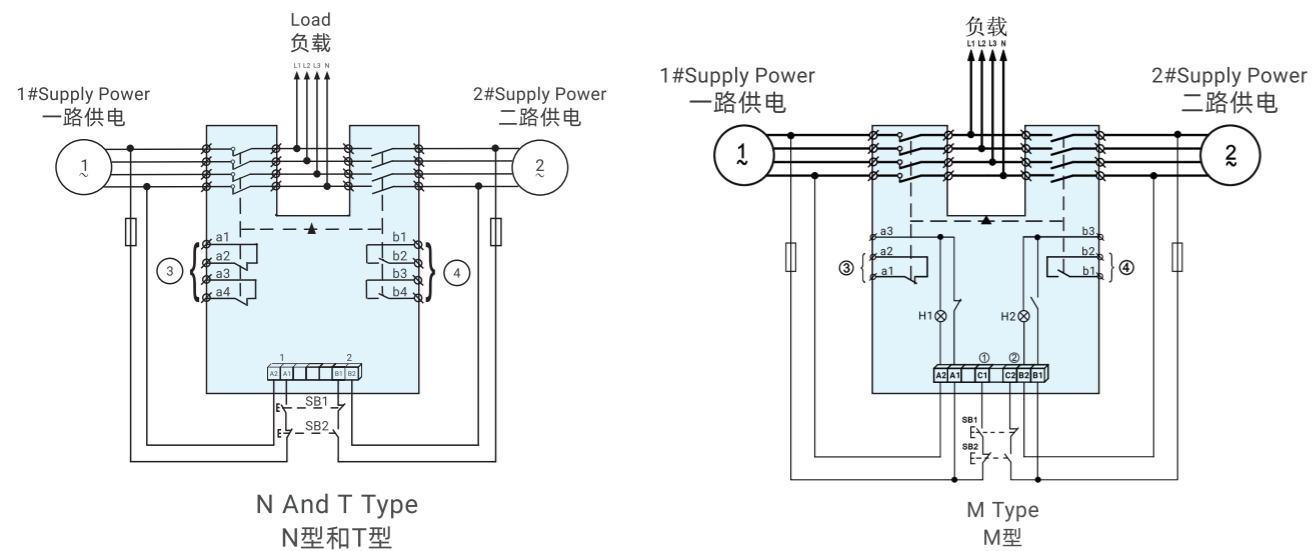
T型/Type  
SGQ250A-630A/4P



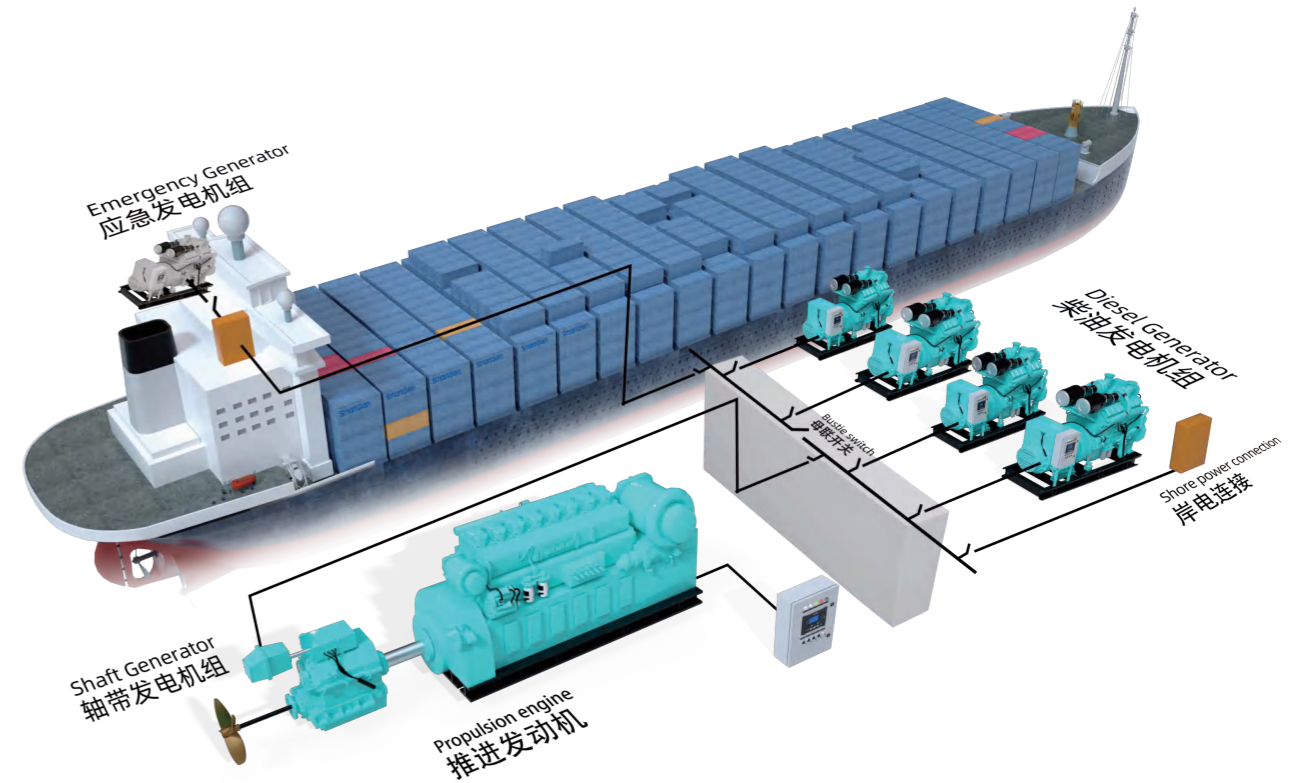
M型/Type  
SGQ630A-1250A/4P

Model/型号	SGQ63N	SGQ125N	SGQ160T	SGQ200T	SGQ250T	SGQ400T	SGQ630T	SGQ630M	SGQ800M	SGQ1000M	SGQ1250M													
Rated Voltage 额定电压(V)	AC220V(176~265)V																							
Rated Current 额定电流(A)	63	125	160	200	250	400	630	630	800	1000	1250													
Operating Current 操作电流(A)	3.5			7				16																
Rated Limited Short Circuit 额定限制短路(KA)	35						32																	
Poles/极数	2P	3P	4P	2P	3P	4P	3P	4P	3P	4P	3P	4P												
Operation Cycle (sec./times) 操作周期(秒/次)	15			10				15	20	25														
Operation Times 动作次数	Mechanical 机械		10000			8000			6000															
	Electrical 电气		4000			3000			3000															
Net Weight/重量(kg)	3.5	4	4.5	4	4.5	5.5	18	20	18	20	18	20	19	21	20	22	37	42.5	39	46	41	48	48	57
Case Dimensions 外形尺寸(mm)(4P)	228*186		265*186		375*292*146				405*292		427*310		600*280*345											
Mounting Hole Size (mm) 4P 安装孔尺寸(mm)4P	195*165		232*165		356*200				386*200		408*200		560*210											

Typical Application Diagram  
典型应用图



Marine Power And Power Management Solution  
船舶动力及功率管理解决方案



After nearly a decade of continuous technology development and product application in the field of marine diesel engine local control and automatic power station power management control, SmartGen has accumulated rich practical experience in the field of marine propulsion engine, marine auxiliary engine and marine genset control. SmartGen MGCP100 series marine diesel engine control box and HMC6/HPM6 series power management controller are equipped with advanced technology, complete functions and certificates. Its market share in the field of medium and high-end marine power and distribution control has increased year by year.

经过在船用柴油机机旁控制和船用自动电站功率管理控制领域近十年持续不断的技术研发和产品应用，众智科技在船用推进发动机、船用辅助发动机和船用发电机组控制领域积累了丰富的实践经验。众智科技提供的技术先进、功能完备和证书齐全的MGCP100系列船用柴油机控制箱和HMC6/HPM6系列功率管理控制器在中高端船用动力及配电控制领域的市场占有率逐年提升。





HMC9000S  
Diesel Engine Controller  
柴油发动机控制器



HMC9000A  
Diesel Engine Controller  
柴油发动机控制器



HRM3300  
Remote Controller  
远程监控控制器

Model/型号	HMC9000S	HMC9000A	HRM3300
Display/显示器	4.3 inches TFT-LCD(480*272) 4.3吋彩屏		
Operation Panel/操作面板	Silicon Rubber/硅胶		
Language/控制器语言	Chinese& English/中文 & 英文		
Digital Input/开关量输入	18		
K-type Thermocouple Input K型热电偶输入	2		
Relay Output/继电器输出	8		
Transistor Output/晶体管输出	8		
Current Sensor 电流型传感器个数	4		
Resistance Sensor 电阻型传感器个数	4		
HRM3300 Controller Expansion HRM3300控制器扩展		●	
RPU560A Module Expansion RPU560A模块扩展		●	
AIN16 Module Expansion AIN16模块扩展	●		
AIN16-PT/K Module Expansion AIN16-PT/K模块扩展	●		
AIN16-C Module Expansion AIN16-C模块扩展	●		
AIN16-M01 Module Expansion AIN16-M01模块扩展	●		
DIN16 Module Expansion DIN16模块扩展	●		
DOUT16A Module Expansion DOUT16A模块扩展		●	
AIN8 Module Expansion AIN8模块扩展			●
HMP300 Module Expansion HMP300模块扩展			●
COM.Interface/通讯接口	RS485/USB		
CANBUS Port Extension 扩展CANBUS接口		●	
Remote CANBUS Port 远程CANBUS接口			●
DC Supply/直流工作电源范围	DC(18~35)V		
Case Dimensions/外形尺寸(mm)	266*182*45(L*W*H)		
Panel Cutout/安装尺寸(mm)	214*160		
Operating Temp./工作温度	(-25~+70)°C		



HMC6000A  
Diesel Engine Controller  
柴油发动机控制器

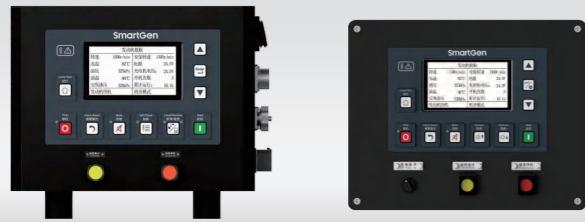


HMC4000CAN  
Diesel Engine Controller  
柴油发动机控制器



HMC9800RM  
Remote Control Module  
远程监控模块

Model/型号	HMC6000A	HMC4000CAN	HMC9800RM
Display/显示器	LCD(132*64)		8 inches Color Touchscreen 8吋触控彩屏 (800*600)
Language/控制器语言	Chinese & English/中文 & 英文		
Operation Panel/操作面板	Silicon Rubber/硅胶		
Power Acquisition and Display 电量采集及显示		Configurable/可配置	
HMC4000RM Remote Monitoring Expansion HMC4000RM远程监控扩展		●	
HMC9800RM Remote Monitoring Expansion HMC9800RM远程监控扩展		●	
DOUT16B Module Expansion DOUT16B模块扩展	●		
RPU560A Module Expansion RPU560A模块扩展	●		
HMC6000RM Controller Expansion HMC6000RM控制器扩展	●		
COM.Interface/通讯接口	RS485/LINK		RS485/USB
CANBUS (J1939) Port CANBUS (J1939) 接口		●	
CANBUS Port Expansion /Remote CANBUS Port 扩展CANBUS接口/远程CANBUS接口	● (Share One Port/共用一个接口)		●
Relay Output/继电器输出	3	6	
Transistor Output/晶体管输出	9		
Digital Input/开关量输入	10	3+(2)(Digital/Analogue Multiplexed /开关量/模拟量复用)	
Analogue Input/模拟量输入	2(Resistance-type)+4(Resistance-type /Current-type/Voltage-type Multiplexed) 2(电阻型)+4(电阻型/电流型/电压型复用)		2+(2)(Digital/Analogue Multiplexed /开关量/模拟量复用)
DC Supply/直流工作电源范围	DC(8~35)V		DC(18~35)V
Case Dimensions/外形尺寸(mm)	197*152*47(L*W*H)	135*110*44(L*W*H)	262*180*58(L*W*H)
Panel Cutout/安装尺寸(mm)	186*141	116*90	243*148
Operating Temp./工作温度	(-25~+70)°C		



MEM40

MEM40RM

## MEM40

## Engine Monitoring Controller/发动机监控仪

- It can be used for automatic control system of single electronic control engine, which can realize engine local start, stop, data measurement, display, alarm protection, and other functions; 可用于单台电控发动机自动化控制系统, 实现发动机的机旁开机、停机、发动机数据测量、显示、报警保护等功能;
- It is equipped with remote monitoring port that can connect remote monitoring controller to receive remote start / stop command; which can realize engine remote start, stop and other functions; 带有远程监控接口, 可接入远程监控控制器, 接收遥控开机、遥控停机指令; 实现发动机的远程开机、停机等功;
- With override mode, emergency stop button; 具有越控模式、紧急停机按钮;
- With local/remote, self-check, mute, alarm reset keys; 具有机旁/遥控、自检、消音、报警复位按钮;
- LCD displays speed, water temperature, oil temperature, oil pressure, power voltage, start times and accumulated running time; LCD显示转速、水温、油温、油压、电源电压、开机次数和累计运行时间;
- With alarm log and start/stop event log function; 具有报警记录和起停机事件记录功能;
- Working temperature: (-25~70)°C; 工作温度: (-25~70)°C;
- Overall dimensions (L\*W\*H)(mm): 282 x 160.5 x 230; 外形尺寸(长\*宽\*高)(mm): 282 x 160.5 x 230;
- Cutout size (L\*W)(mm): 160\*65, monitoring controller comes with 4 shock absorbers, 4 M8 screws are required for installation (come with or add flat washers). 安装尺寸: (长\*宽)(mm): 160\*65, 监控仪自带4个减震器, 安装需要4个M8的螺丝 (需自带或增加平垫)。

## MEM40RM

## Remote Monitoring Module/远传模块

- It is equipped with MEM40 engine monitoring control box, without setting any parameters, which can automatically synchronize MEM40 data and configuration information; 配套MEM40发动机监控仪控制箱, 无需设置任何参数, 自动同步MEM40数据和配置信息;
- With power switch, emergency stop, override mode button; 具有电源开关、紧急停机、越控模式按钮;
- Communicate with monitoring control box via CANBUS; 通过CANBUS总线与监控仪控制箱通讯;
- With alarm reset, mute, dimmer key; 具有报警复位、消音、亮度调节按钮;
- Under remote mode, it can remotely control engine start, stop, alarm reset, etc.; 在遥控模式下, 可远程控制发动机的启动、停止、报警复位等;
- LCD brightness can be adjusted; LCD亮度可调整;
- Cutout size (L\*W) (mm): 262\*205/开孔尺寸(长\*宽)(mm): 262\*205;
- Protection level: IP44/防护等级: IP44;
- Working voltage: DC(8~35)V./工作电压: DC(8~35)V。

Remark: The overall and installation dimensions can be adjusted according to demand, the dimensions listed in the brochure are for reference only. The functions listed in the brochure are modeled on HMC9000 series controller, which can be replaced with HMC4000 series and HMC6000 series controllers as needed for specific applications.

备注: 外形尺寸和安装尺寸可根据需要进行调整, 样册中所列尺寸仅供参考。样册所列功能以HMC9000系列控制器为蓝本, 具体应用时可根据需要替换成HMC4000系列和HMC6000系列控制器。



MGCP100B-3

HRM3300-3

## MGCP100B-3

## Diesel Engine Control Panel/柴油机控制屏

- With the functions of local start/stop, remote control start/stop, data measurement & display, alarm protection and etc. of the diesel engine; 具有柴油发动机机旁开机、停机、遥控开机、停机、数据测量、显示、报警保护等功能;
- With the remote monitoring interface to realize the remote start/stop functions of the engine by receiving the remote control start and automatic start instructions; 具有远程监控接口, 通过接收遥控开机、自动开机指令, 实现发动机的远程开机、停机等功;
- With override mode, local/remote mode, emergency stop and start, normal mode/emergency mode knob; 具有越控模式、机旁/遥控模式、紧急停机、紧急启动、正常模式/紧急模式旋钮;
- With self-check, alarm reset, mute, and lamp test button; 具有自检、报警复位、消音、试灯按钮;
- LCD can display the water temperature, oil temperature, oil pressure, speed, battery voltage, running time, start times, etc. of the engine; LCD显示发动机水温、油温、油压、转速、电池电压、运行时间、开机次数等;
- Real-time clock, alarm information display and event log, convenient for maintenance and troubleshooting; 具有实时时钟、报警信息显示和历史记录, 方便维护和故障查询;
- Operating voltage/工作电压: DC(18~35)V;
- Working Temperature: (-25~+70)°C; 工作温度: (-25~+70)°C;
- CCS certification, IP44 protection level, BV certification; 具有CCS认证, 防护等级IP44, BV认证;
- Typical overall dimension: length\*width\*height (mm): 400\*400\*200 (without shock absorber, dimension can be adjusted); 典型外形尺寸: 长\*宽\*高(mm): 400\*400\*200(不含减震器, 尺寸可根据需要调整);
- Typical installation dimension: length\*width (mm): 330\*330, 4 shock absorbers M10 screw hole. 典型安装尺寸: 长\*宽 (mm): 330\*330, 4个减震器M10螺孔。

## HRM3300-3

## Remote Control Panel/远程控制屏

- The remote control box with HMC9000A/S diesel engine controller, it can expand up to 16 HRM3300-3; 配套HMC9000A/S柴油发动机控制器的远程控制箱, 可最多扩展16个HRM3300-3;
- With emergency stop, power switch, override mode switch, and emergency stop, override mode light indication function; 具有紧急停机、电源开关、越控模式开关, 并具有紧急停机、越控模式灯指示功能;
- Communicate with diesel local control box via CANBUS; 通过CANBUS总线与机旁控制箱通讯; 具有自检、报警复位、消音、试灯按钮;
- In the remote monitoring mode, it has remote control start/stop, data measuring, alarm display functions, etc; 在远程监控模式, 可以远程控制开关机、数据测量、报警显示等功能;
- Adjustable LCD display brightness/LCD显示亮度可调;
- Cutout size: 332mm x 212mm/开孔尺寸: 332mm x 212mm;
- Protection level: IP44 /防护等级: IP44
- Operating voltage/工作电压: DC(18~35)V。



## MGCP100B-2

## Diesel Control Panel/柴油机控制屏

- Designed for control system of medium marine diesel engine; 适用于中型船舶柴油机控制系统;
- Controller can expand remote monitoring module(HMC6000RM) via CANBUS to achieve remote control of engine; 控制器可通过CANBUS扩展远程监控模块(HMC6000RM), 实现对发动机的远程监控;
- Controller can expand a 16-channel relay output module(DOUT16B) via CANBUS to realize alarms receiving and output controlling; 控制器可通过CANBUS扩展16路继电器输出模块(DOUT16B)实现多种报警和控制输出;
- Controller can expand security module(RPU560A) via CANBUS to achieve multiple protection of engine; 控制器可通过CANBUS扩展安保模块(RPU560A), 实现对发动机的多重保护;
- Maximum 6 sensor inputs can be connected to controller, four of them are available for the following types: (0~1)K resistance, (0~5)V voltage, (4~20)mA current; 控制器可接入最多6路传感器输入, 其中后4路可实现(0~1)K电阻型、(0~5)V电压型、(4~20)mA电流型的多种类型可选择;
- Dual-power transfer module (BTM300) can be fitted with controller to achieve uninterrupted switching of dual power supply and fault alarm; 控制器可配合双电源切换模块(BTM300), 实现两路电源的不间断切换和故障报警;
- Alarm threshold and protection delay of each sensor can be set by controller to protect every measuring point accurately; 控制器可对每一路传感器设置保护阈值和报警延时, 实现对每一个测量点的精准保护;
- All data can be set on control panel at the site, conveniently and efficiently; 参数均可现场通过面板进行设定, 方便快捷;
- Operating voltage/工作电压: DC(18~35)V;
- Working temperature: (-25~+70)°C; 工作温度: (-25~+70)°C;
- CCS certification, IP44 protection level, BV certification 具有CCS认证, 防护等级IP44; BV认证;
- Case dimensions (L\*W\*H)/外形尺寸(长\*宽\*高)(mm): 650\*480\*200;
- Panel cutout (L\*W)(mm): 580\*410, 4 shock absorbers (M10 screw). 安装尺寸(长\*宽)(mm): 580\*410, 4个减震器(M10螺孔)。

Remark: The overall and installation dimensions of MGCP100B-3/MGCP100B-2/MGCP100L-2 can be adjusted according to demand, the dimensions listed in the brochure are for reference only. The functions listed in the brochure are modeled on HMC9000 series controller, which can be replaced with HMC4000 series and HMC6000 series controllers as needed for specific applications.

备注: MGCP100B-3、MGCP100B-2、MGCP100L-2外形尺寸和安装尺寸可根据需要进行调整, 样册中所列尺寸仅供参考。样册所列功能以HMC9000系列控制器为蓝本, 具体应用时可根据需要替换成HMC4000系列和HMC6000系列控制器。



## MGCP100L-2

## Diesel Control Panel/柴油机控制屏

- Designed for control system of large marine diesel engine; 适用于大型船舶柴油机控制系统;
- 4.3 inches colour LCD with backlight, multilingual interface (including English, Chinese); 4.3吋彩屏带背光, 可选中/英文显示;
- Controller can expand 16 remote monitoring modules(HRM3300) at most via CANBUS to achieve remote monitoring of engine; 控制器可通过远程CANBUS扩展最多16块远程监控模块(HRM3300), 实现对发动机的远程监控;
- Controller can expand two 16-channel relay output modules(DOUT16B) at most via CANBUS to realize alarms receiving and output controlling; 控制器可通过扩展CANBUS扩展最多2块16路继电器输出模块(DOUT16B)实现多种报警和控制输出;
- Controller can expand two PT100 expansion modules(AIN16-PT) at most via CANBUS to realize PT100 analog data acquisition; 控制器可通过扩展CANBUS扩展最多2块PT100扩展模块(AIN16-PT), 实现多路PT100模拟量数据采集;
- Controller can expand two expansion modules(AIN16-C) at most via CANBUS to realize (4~20)mA signal acquisition; 控制器可通过扩展CANBUS扩展最多2块(4~20)mA扩展模块(AIN16-C), 实现多路(4~20)mA信号采集;
- Controller can expand two analog integrated modules(AIN16-M01) at most via CANBUS to realize temperature, pressure and speed acquisition as well as (4~20)mA signal outputting; 控制器可通过扩展CANBUS扩展最多2块模拟量综合模块(AIN16-M01), 实现多路温度、压力、转速数据采集, 同时可配置输出(4~20)mA信号;
- Controller can expand security module(RPU560A) via CANBUS to achieve multiple protection of engine; 控制器可通过扩展CANBUS扩展安保模块(RPU560A), 实现对发动机的多重保护;
- Controller can control and communicate with dozens of EFI engines with J1939 interface via CANBUS; 控制器可通过扩展CANBUS和具有J1939接口的数十种电控发动机进行控制及通信;
- Real-time clock, alarm information display and event log make it convenient for maintenance and troubleshooting; 具有实时时钟、报警信息显示和历史记录, 方便维护和故障查询;
- All data can be set on control panel at the site, conveniently and efficiently; 参数均可现场通过面板进行设定, 方便快捷;
- Operating voltage/工作电压: DC(18~35)V;
- working temperature: (-25~+70)°C; 工作温度: (-25~+70)°C;
- CCS certification, IP44 protection level, BV certification 具有CCS认证, 防护等级IP44; BV认证;
- Case dimensions (L\*W\*H)(mm): 650\*230\*1020; 外形尺寸(长\*宽\*高)(mm): 650\*230\*1020;
- Panel cutout (L\*W)(mm): 560\*132. 安装尺寸(长\*宽): 560\*132。





HMC6  
Power Management Controller  
功率管理控制器

Model/型号	HMC6
Main Functions 主要功能	It is a standard power management system for marine applications. It is the one where start priority and other power management-related functions are calculated. The system can handle up to 16 diesel gensets to make automatic synchronization and load sharing. It has heavy consumer control, NEL trip and light load functions. It is suitable for 3-phase 4-wire, 3-phase 3-wire, single phase 2-wire and 2-phase 3-wire systems with frequency 50/60Hz.  一套为船舶应用领域量身定制的功率管理系统。负责发电机启动优先级和其它相关功率管理功能的计算，能够实现16台发电机组的自动同步及负荷分配。具有重载问询、非重要负载脱扣、轻载有效等功能。适合于三相四线、三相三线、单相两线、两相三线、50/60Hz系统。
Display/显示器	4.3 inches TFT-LCD(480*272)/4.3吋彩屏
Operation Panel 操作面板	Silicon Rubber/硅胶
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他
Digital Input 开关量输入	7-way programmable input+3-way fixed input+2-way analog/digital multiplexed input. 7路可编程输入+3路固定输入+2路模拟量/开关量复用输入
Relay Output 继电器输出	9-way programmable output+6-way fixed output/9路可编程输出+6路固定输出
AC System/交流制式	1P2W/2P3W/3P3W/3P4W
Alternator Voltage/交流电压范围	AC(15~360)V(ph-N)
Alternator Frequency/交流频率	50/60Hz
kW/Amp Detecting & Display 功率/电流检测及显示	●
Monitor Interface/监控接口	RS485
Programming Interface 编程接口	USB/RS485
RTC & Event Log 实时时钟及历史记录	●
GOV/调速控制	(-10~10)V/(-20~20)mA
AVR/调压控制	(-10~10)V/(-20~20)mA
DIN16A Module Expansion DIN16A模块扩展	●
DOUT16B Module Expansion DOUT16B模块扩展	●
PLC Function/PLC功能	●
3-class Password Protection 3级密码保护	●
Safety Mode/安全模式	●
DC Supply 直流工作电源范围	DC(8~35)V
Case Dimensions 外形尺寸(mm)	266*182*45(L*W*H)
Panel Cutout 安装尺寸(mm)	214*160 (L*W)
Operating Temp. 工作温度	(-25~+70)°C



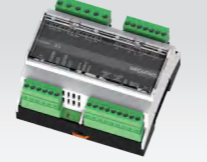









HPM6D Display Panel  
HPM6D 显示面板

HPM6 Master Control Panel  
HPM6 主控面板

Power Management Controller  
功率管理控制器

Model/型号	HPM6
Main Functions 主要功能	It is a standard power management system for marine applications. It is the one where start priority and other power management-related functions are calculated. The system can handle up to 20 diesel gensets to make automatic synchronization and load sharing. HPM6 power management controller adopts split-type design, which is composed of display module HPM6D and master control module HPM6.  HPM6是一套为船舶应用领域量身定制的功率管理系统。负责发电机组启动优先级和其它相关功率管理的计算，能够实现20台发电机组的自动开停机、同步及负荷分配。HPM6功率管理控制器采用分体式设计，由显示模块 HPM6D 和主控模块 HPM6 组成。
Display/显示器	4.3-inches TFT-LCD(480*272)/4.3 吋液晶显示
Operation Panel/操作面板	Silicon Rubber/硅胶
Language/控制模块语言	Chinese & English & Others/中文 & 英文 & 其他
Digital Input/开关量输入	20
Output/输出	7 relay outputs+13 transistor output ports/20 (7个继电器输出+13晶体管输出)
AC System/交流制式	1P2W/2P3W/3P3W/3P4W
Alternator Voltage/交流电压范围	AC(15 ~ 520)V(ph-N)
Alternator Frequency/交流频率	50/60Hz
kW/Amp Detecting & Display 功率/电流检测及显示	●
Monitor Interface/监控接口	USB/RS485/CAN/以太网
Event log/历史记录	最多500
Alarm record/报警记录	最多500
Programming Interface/编程接口	USB/以太网
RTC & Event Log/实时时钟及历史记录	●
USB HOST	●
GOV 调速控制	AVR 调压控制
Custom Protocol 自定义协议	Custom SLD 自定义单线图
Black Box Function 黑匣子功能	Harmonic Monitor 谐波监测
PLC Function PLC功能	Expand I/O 扩展
HC Inquiry 重载问询	Multilevel Protection 多级保护
DIN16A Module Expansion DIN16A模块扩展	●
DOUT16B Module Expansion DOUT16B模块扩展	●
3-class Password Protection 3级密码保护	Safety Mode 安全模式
DC Supply 直流工作电源范围	DC(8 ~ 35)V
Case Dimensions 外形尺寸(mm)	HPM6D: 220*130*52(L*W*H); HPM6M: 250*165*83(L*W*H)
Panel Cutout 安装尺寸(mm)	HPM6D: 201*111(L*W), embedded-in panel mounting HPM6M: hole distance237.5*152.5(L*W), aperture φ5.5*4, screw fixed installation HPM6D: 201*111(L*W), 嵌入式面板安装; HPM6:孔距237.5*152.5(L*W), 孔径:φ5.5*4,螺钉固定安装
Operating Temp. 工作温度	(-25~+70)°C

<p><b>HLS300A</b> HLS300A Power Share Module 功率均分模块 Active and reactive sharing function 具备有功、无功均分功能</p>  <p>Case Dimensions 外观尺寸(mm):161.6*92.94*60.7</p>	<p><b>HMP300</b> Power Integrated Protection Module 电量综合保护模块 Power integrated protection module with CANBUS interface 电量综合保护模块, 具有CANBUS接口。 Differential protection function 具备差动保护功能</p>  <p>Case Dimensions 外观尺寸(mm):107.6*93*60.7</p>
<p><b>HLS300</b> HLS300 Power Share Module 功率均分模块 Active sharing function 具备有功均分功能</p>  <p>Case Dimensions 外观尺寸(mm):161.6*89.7*60.7</p>	<p><b>HMT300</b> Multifunctional Transmitter 多功能变送器 High Sampling Accuracy (class 0.5) 高采样精度 (0.5级) 1-way Analog Output 1路模拟量输出 RS485接口/RS485 Interface</p>  <p>Case Dimensions 外观尺寸(mm):107.6*89.7*60.7</p>
<p><b>HSM300/HSM340</b> HSM300/HSM340 Synchronous Module 同步模块</p>  <p>Case Dimensions 外观尺寸(mm):71.6*89.7*60.7</p>	<p><b>HVD300</b> HVD300 Voltage Detection Relay Multifunctional Protection Module 电压检测多功能保护装置</p>  <p>Case Dimensions 外观尺寸(mm):89.7*71.6*60.7</p>
<p><b>HEP300</b> HEP300 Electronic Potentiometer 电子电位器</p>  <p>Case Dimensions 外观尺寸(mm):89.7*71.6*60.7</p>	<p><b>HFT300</b> Frequency Detection Relay Multifunctional Protection Module 频率检测继电器多功能保护装置</p>  <p>Case Dimensions 外观尺寸(mm):89.7*71.6*60.7</p>
<p><b>HMP300-2</b> Power Integrated Protection Module 电量综合保护模块 Power integrated protection module with RS485 interface 电量综合保护模块, 具有RS485接口。 4-way programmable output, 2-way programmable input 4路可编程输出, 2路可编程输入</p>  <p>Case Dimensions 外观尺寸(mm):107.6*89.7*60.7</p>	<p><b>HOC300</b> HOC300 Over Current Protection Relay Multifunctional Protection Module 过流保护继电器多功能保护装置</p>  <p>Case Dimensions 外观尺寸(mm):89.7*71.6*60.7</p>
<p><b>HPD300-S01</b> Multifunctional Comprehensive Protection Module 多功能综合保护装置 1-way overcurrent pre-alarm output 1路过流预警输出 1-way open output (undervoltage, overcurrent long/short delay) 1路分闸输出(欠压、过流长延时、过流短延时)</p>  <p>Case Dimensions 外观尺寸(mm):89.7*71.6*60.7</p>	<p><b>HPD300</b> HPD300 Reverse Power Protection Relay Multifunctional Protection Module 逆功率保护继电器多功能保护装置</p>  <p>Case Dimensions 外观尺寸(mm):89.7*71.6*60.7</p>

<p><b>DOUT16B/DOUT16B-2</b> Digital Output Module 开关量输出模块 An expansion module with 16 auxiliary digital output channels. 16路开关量输出模块</p>  <p>Case Dimensions 外观尺寸(mm): 161.6*89.7*60.7</p>	<p><b>KIO22</b> Analog Input/Output Module 模拟量输入输出模块 K-type thermocouple to 4-20mA K型热电偶转4-20mA</p>  <p>Case Dimensions 外观尺寸(mm):71.6*93.0*60.7</p>
<p><b>DIN16A/DIN16A-2</b> Digital Input Module. 开关量输入模块 An expansion module with 16 auxiliary digital input channels. 16路开关量输入模块</p>  <p>Case Dimensions 外观尺寸(mm): 107.6*89.7*60.7</p>	<p><b>AIN8</b> Analog Input Module 模拟量输入模块 An expansion module with 8 analog input channels, and input types can be set PT100, (4~20)mA, (0~5)V. 8路模拟量输入模块, 输入类型均可设置 PT100, (4~20)mA, (0~5)V。</p>  <p>Case Dimensions 外观尺寸(mm): 107.6*89.7*60.7</p>
<p><b>AIN16-C</b> Analog Input Module 模拟量输入模块 An expansion module with 16 analog input channels and 16(4~20)mA+3 speed acquisition 16路(4~20)mA+3路转速采集</p>  <p>Case Dimensions 外观尺寸(mm): 161.6*89.7*60.7</p>	<p><b>AIN24</b> Analog Input Module 模拟量输入模块 An expansion module with 14 K-form thermocouple, 5 PT100 channels, and 5 (4~20)mA input. 具有14路K型热电偶、5路PT100、5路(4~20)mA输入。</p>  <p>Case Dimensions 外观尺寸(mm): 161.6*89.7*60.7</p>
<p><b>AIN16-PT</b> Analog Input Module 模拟量输入模块 An expansion module with 16 analog acquisition channels for PT100. 16路PT100模拟量采样模块</p>  <p>Case Dimensions 外观尺寸(mm): 161.6*89.7*60.7</p>	<p><b>RPV560A/RPV560B</b> Redundant Protection Unit 安保模块 Genset security module 发电机安保模块</p>  <p>Case Dimensions 外观尺寸(mm): 107.6*89.7*60.7</p>



**SGPT110/SGPT110-0.4**  
Pressure Transmitter  
压力变送器

- ▶ Measuring Range/测量范围: (0~1)MPa/(0~0.4)MPa
- ▶ Signal Output/信号输出: (4~20)mA
- ▶ Screw Thread: G1/4 Standard Pipe Thread  
螺纹: G1/4标准管螺纹
- ▶ Measurement Accuracy Class: Class 0.25  
测量精度: 0.25级
- ▶ Protection Class/防护等级: IP65



**SGWS115**  
Temperature Sensor  
温度传感器

- ▶ Measuring Range/测温范围: (-20~+150)°C
- ▶ Output Mode: Three-wire System Resistance Output  
输出方式: 三线制电阻输出
- ▶ Screw Thread: G1/2 Standard Pipe Thread  
螺纹: G1/2标准管螺纹
- ▶ Measurement Accuracy Class: Class 0.25  
测量精度: 0.25级
- ▶ Protection Class/防护等级: IP65



Communication  
通讯模块

**SG485-3**  
Interface Expansion Module  
接口扩展模块

The expansion module of RS485 interface, can transfer 1-way RS485 interface to 2-way RS485 interface.  
将1路RS485接口转换成2路RS485接口。



**SG485-2CAN**  
Communication Interface  
Conversion Module  
通信接口转换模块

It is the communication interface conversion module that can be used for transferring 1-way RS485 interface to 2-way CANBUS interface and 1-way RS485 interface.  
用于将一路RS485转成两路CANBUS接口及一路RS485接口。



**SG72A**  
Communication Module  
通信模块

USB to LINK  
USB to RS232  
USB to RS485



**SGB100**  
Bluetooth Communication Module  
蓝牙通信模块

Can monitor and adjust configuration parameters of control modules via iGMPA6 mobile phone's APP; 配合iGMPA6手机APP对控制模块配置参数、监控等;  
With Bluetooth 4.1 and BLE low power consumption communication mode; 使用蓝牙4.1及BLE低功耗通信方式;  
USB Power Supply (<50mA).  
USB供电 (<50mA)。



**SGCAN300**  
CANBUS relay module  
CAN 总线中继模块

SGCAN300 CANBUS RELAY MODULE can realize the mutual conversion between MSC1 and opticalfiber, MSC1 and MSC2, RS485 and opticalfiber. Using the module can increase the communication distance of MSC or RS485.  
总线中继模块可实现MSC1信号与光纤信号的相互转换, MSC1信号与MSC2信号的相互转换, RS485信号与光纤信号的相互转换, 使用该模块可增加MSC或RS485通信距离。



**HTE05**  
Hand Throttle  
油门门

It adopts high-precision Hall non-contact sensor to adjust engine speed. It has dual redundant output, can simulate potentiometer output signal and output voltage range can be customized programming which can be suitable for various engines. With compact structure, ergonomic design and easy operation, it can be widely used in various engineering machinery equipment.  
采用高精度霍尔非接触式传感器, 实现发动机转速调节。双路冗余输出, 可模拟电位器输出信号, 输出电压范围可定制编程, 可适用于不同的发动机。其结构紧凑, 符合人体工学设计, 操作方便, 可广泛应用于各类型工程机械设备。



**HRC12**  
Bluetooth Module  
蓝牙通信模块

It is the conversion module for mobile and genset data communication and can obtain genset information and control genset start/stop via mobile APP.  
手机和发电机组数据通信的转换模块, 通过手机APP获取发电机组信息, 且控制发电机组开停机。



**HRC200**  
Industrial Remote Control  
工业遥控器

Used with engine controller, can realize remote start, stop, load, unload, emergency stop and other functions.  
配合发动机控制器使用, 可实现远程开机、停机、加载、卸载、急停等功能。



**SGUE485**  
Communication Interface  
Conversion Module  
通信接口转换模块

It can convert USB into isolated standard RS485 interface, which enables product to connect with RS485 network. The maximum chips network can connect 32.  
可将USB接口转换为隔离型标准RS485接口, 使产品具有连接RS485网络的功能, 网络最大可连接32个节点。



**PTM6940**  
Potential Transformer Module  
变压器模块

Input voltage 690VAC (rated) transfer to output 400VAC (rated) transformer module.  
输入电压690VAC(额定)转化为输出400VAC(额定)变压器模块。



HEM4000  
Engine Controller  
发动机控制器

HEM4100  
Engine Controller  
发动机控制器

HEM4300  
Engine Controller  
工程机械控制器

EP4300  
Engine Controller  
发动机控制器

Model/型号	HEM4000	HEM4100	HEM4300	EP4300
Main Functions 主要功能	It can be widely used in a number of engine control system not with J1939 interface, which including water pump, air compressor, engineering machinery and so on. 应用于水泵、空压机和工程机械类等电喷发动机控制系统。	It can be widely used in a number of engine control system with/not with J1939 interface, which including water pump, air compressor, engineering machinery and so on. 应用于水泵、空压机和工程机械类等电喷或非电喷发动机控制系统。	It is applicable for the automation system of various construction machinery as drilling car, tunnel tractor, hydraulic pump station, mining machinery and so on. It can control ECU engine start/stop, monitoring, speed control, maintenance reminder and others. It has a high protection level. 可用于钻车、隧道牵引车、液压泵站、矿山机械等各类工程机械的自动化系统; 具有控制电喷发动机的起停、监测、调速、保养提醒等功能; 防护等级高。	It is used for engine control and data display (CAN instrument) and can realize start/stop, speed control, data measurement, alarm display, etc. 用于发动机的控制和数据显示(CAN仪表), 实现发动机的开机/停机、转速控制、数据测量、报警显示等功能。
Display/显示器	LCD(132*64)		4.3-inch LCD/4.3吋彩屏	
Operation Panel 操作面板	Silicon Rubber/硅胶			
Language 控制模块语言	Chinese & English/中文 & 英文		Chinese & English&Other 中文&英文&其他	Chinese & English/中文 & 英文
Digital Input 开关量输入	6		8	3
Relay Output 继电器输出	7		8-way transistor active output 8路晶体管有源输出	3
Analog Input 模拟量输入		6		3
Speed Adjustment Function 调速功能			●	
RTC & Event Log 实时时钟及历史记录		●		
Scheduled Start/Stop 定时开关机		●		
Maintenance 保养功能		●		
Monitor Interface 监控接口	RS485			
Programming Interface 编程接口	USB/RS485			
CANBUS(J1939)			●	
DC Supply 直流工作电源范围	DC(8~35)V			
Case Dimensions 外形尺寸(mm)	135*110*44(L*W*H)		189*131*61(L*W*H)	127*115*86.2(L*W*H)
Panel Cutout 安装尺寸(mm)	116*90		171*119	115*103
Operating Temp. 工作温度	(-25~+70)°C			



HFC6100LT  
Fan Controller  
风机控制器

HEM8500  
Engine CAN Monitoring Controller  
发动机CAN监控仪

HEM8400  
Engine CAN Monitoring Controller  
发动机CAN监控仪

Model/型号	HFC6100LT	HEM8500	HEM8400
Main Functions 主要功能	Used for automatic control of 5 groups of fans, and can control its start/stop and PWM output function according to the selected temperature sensor. It has the function of balancing the running time of fan LCD display can work in the temperature range (-40°C~+70°C). 用于5组风机自动化控制,可根据选择的温度传感器控制风机起停和PWM输出功能。具有均衡风机运行时间功能。大屏幕液晶(LCD)可以工作在(-40°C~+70°C)温度范围。	It can be used to monitor the engine of engineering vehicles, can display various engine parameters, alarm information, event log, etc. The controller has high integration and powerful CAN gateway functions. 可用于工程车辆发动机的监控,可显示发动机各项参数、报警信息和历史记录等,控制器集成度高、CAN网关功能强。	It is developed for electronic controlled engine, with high integration and powerful CAN gateway function, is an ideal product for engineering vehicle CAN communication and electrical appliance control. 针对电控发动机而开发,集成度高、CAN网关功能强,是工程车辆CAN通信及电器控制的理想产品。
Display/显示器	LCD(132*64)	4.3-inch LCD/4.3吋LCD	
Operation Panel 操作面板	Silicon Rubber/硅胶		
Language 控制模块语言	Chinese & English/中文 & 英文	Chinese, English, Traditional Chinese 中文、英文、繁体中文	Chinese & English/中文 & 英文
Digital Input 开关量输入	18	11	
Relay Output 继电器输出	12	7	
Analog Input 模拟量输入	5		3
Analog Output Port 模拟量输出	4	1	
Speed Adjustment Function 调速功能		●	
RTC & Event Log 实时时钟及历史记录		●	
Transistor Output Port 晶体管输出	12		
Maintenance 保养功能		●	
Monitor Interface 监控接口		RS485	
Programming Interface 编程接口	USB/RS485	RS485	
CANBUS(J1939)		●	
DC Supply 直流工作电源范围	DC(8~35)V	DC(10~35)V	
Case Dimensions 外形尺寸(mm)	209*167*45(L*W*H)	247*191*71(L*W*H)	
Panel Cutout 安装尺寸(mm)	186*141	214*160	
Operating Temp. 工作温度	(-40~+70)°C		
PWM Output PWM输出	4		



APC715N  
Diesel Pump Controller  
柴泵机组控制器

APC615  
Pump Unit Controller  
水泵机组控制器

FPC915  
Fire Pump Controller  
消防水泵机组控制器

FPC615  
Fire Pump Controller  
消防水泵机组控制器

Model/型号	APC715N	APC615	FPC915	FPC615
Main Functions 主要功能	Applicable for high-pressure water pump unit, mud pump unit and drainage pump unit driven by ECU, with double speed, double battery sampling, starting power switch and manual/auto speed regulation functions. 适用于电喷发动机驱动的高压水泵机组、泥浆泵组、排涝泵组等,具有双转速、双电池采样、启动电源切换、手动调速等功能。	Suitable for diesel engine driven pump unit, the speed regulation can be achieved by relay output and CANBUS. 适用于柴油发动机驱动的水泵机组,可通过继电器输出、CAN总线实现调速功能。	Suitable for diesel engine driven fire pump unit, with 4.3-inch color LCD and dual starting logic control, battery charging status monitoring, remote communication and other functions. 适用于柴油发动机驱动的消防水泵机组,采用4.3吋彩色液晶显示屏,具有双起逻辑控制、蓄电池充电状态监测、远程通讯等功能。	Applicable for the fire pump unit control. With manual/auto mode switching function, which can monitor the voltage condition of two groups of battery and collect the sensor signal of unit, digital switching signal to monitor the operation of the unit. With the fault alarm function. 适用于控制消防水泵机组。具有手动模式切换功能,可以监控两组电池的电压状况同时采集机组传感器信号、数字开关量信号来监测机组的运行情况,具有故障报警功能。
Display/显示器	4.3-inch LCD (240*128)4.3吋液晶显示器	LCD(132*64)	4.3-inch TFT-LCD (480*272)4.3吋液晶显示器	LCD(132*64)
Operation Panel 操作面板	Silicon Rubber/硅胶			
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他			
Digital Input 开关量输入	10	6	18	3
Relay Output 继电器输出	10	8	12	8
Analog Input 模拟量输入	10	6	7	3
RTC & Event Log 实时时钟及历史记录		●		
Scheduled Start/Stop 定时开关机		●		
Monitor Interface 监控接口		RS485		LINK
Programming Interface 编程接口	USB/RS485	LINK/RS485	USB/RS485	LINK
CANBUS		●		
DC Supply 直流工作电源范围	DC(8~35)V			
Case Dimensions 外形尺寸(mm)	242*186*49(L*W*H)	197*152*47(L*W*H)	237*172*45(L*W*H)	197*152*47(L*W*H)
Panel Cutout 安装尺寸(mm)	214*160	186*141	214*160	186*141
Operating Temp. 工作温度	(-25~+70)°C			
IP Protection Level/IP IP防护等级/IP	IP65		IP55	IP65

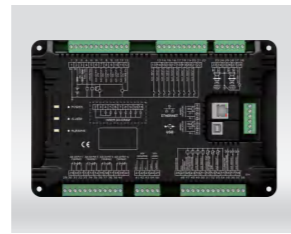




ACC4100  
Air Compressor Controller  
空压机控制器



ACC7200  
Diesel Air Compressor Controller  
柴驱空压机控制器



HEM750  
Fracturing Truck Master Control Module  
压裂车主控模块



HMU8-750  
Fracturing Truck Display Module  
压裂车显示模块

Model/型号	ACC4100	ACC7200	HEM750	HMU8-750
Main Functions 主要功能	Diesel driven air compressor control module with speed regulation function and CANBUS communication interface. 柴驱空压机控制模块，具有调速功能、CAN BUS通信接口。	It is used for air compressor with diesel-driven engine in order to realize functions of compressor start/stop, data measurement, maintenance, alarm protection and "three remotes". 可用于柴油发动机驱动的空压机，实现空压机的开机停机、数据测量、维护保养、报警保护及“三遥”功能。	It is used for single fracturing truck control, which can realize functions of manual start and stop, throttle control, gear position control, data measurement, alarm protection and "four remotes" (remote control, remote measuring, remote communication and remote adjusting). 用于单台压裂车的控制，实现了压裂车的手动开停机、油门控制、变速箱档位控制以及数据测量、报警保护、四遥功能。	It is used for HEM750 display, can display collected parameters, alarms, event log, etc. 用于HEM750显示，可显示HEM750采集到的各项参数、报警和历史记录等。
Display/显示器	LCD(132*64)	4.3-inch LCD/4.3吋彩屏		8-inches LCD/8吋LCD
Operation Panel 操作面板	Silicon Rubber/硅胶			Touch screen/触屏
Language 控制模块语言	Chinese & English 中文 & 英文	Chinese & English & Other 中文 & 英文及其他		Chinese & English 中文 & 英文
Digital Input 开关量输入	6	10	9	
Relay Output 继电器输出	7	9	12	
Analog Input 模拟量输入	6	8	10	
Speed Adjustment Function 调速功能		●		
RTC & Event Log 实时时钟及历史记录		●		
Maintenance 保养功能		●		
Monitor Interface 监控接口	RS485			
Programming Interface 编程接口	USB/RS485			USB
CANBUS(J1939)		●		
DC5V Output DC5V输出		●		
DPF Regenerate DPF再生		●		
DC Supply 直流工作电源范围	DC(8~35)V		DC(10~35)V	
Case Dimensions 外形尺寸(mm)	135*110*44(L*W*H)	209*166*49(L*W*H)	248*158*49(L*W*H)	221*163*51(L*W*H)
Panel Cutout 安装尺寸(mm)	116*90	186*141	35mm guide rail or screw installation 35mm导轨或螺钉安装	205*147
Operating Temp. 工作温度	(-25~+70)°C	(-30~+70)°C	(-25~+70)°C	



HWP40N  
Forced Circulation Heater  
强制循环水加热器



HWP40/HWP60/HWP90/HWP120  
Forced Circulation Heater  
强制循环水加热器

Model/型号	HWP40N	HWP40	HWP60	HWP90	HWP120
Main Functions 主要功能	Wide application on various engines coolant preheating. 适用于各种型号发动机的冷却液预加热。				
Rated Power 额定功率	4000W		6000W	9000W	12000W
Rated Voltage 额定电压	AC240V		AC420V		
Rated Current 额定电流	16.7A	16.7A	8.3A	12.5A	16.7A
Phase 相数	1P2W		3P3W		
Engine Displacement 适用发动机排量(L)	20~30	15~30	25~50	50~75	75~100
Thermostat Range 断开及复位温度	Off/断开点: (5~70)°C On/复位点: (0~65)°C		Off/断开点: (5~99)°C On/复位点: (0~94)°C		
Default Thermostat Range 出厂温度值	Off/断开点: (40±2)°C On/复位点: (25±2)°C				
Overheating Switch 过热开关动作温度	Off/断开点: (95±3)°C On/复位点: Manual-return/ 手动复位		Off/断开点: (95±3)°C On/复位点: (80±6)°C		
Insulating Resistance 绝缘电阻	≥50MΩ				
Electrical Strength 电气强度	AC 1.5kV 1min				
Inlet/Outlet Size 进出水口尺寸	G 3/4 internal thread(optional Φ19.5mm pagoda head or G 3/4 external thread) G 3/4 内螺纹(可选配Φ19.5mm宝塔头或G 3/4 外螺纹)		3/4"(Φ19.5mm)		
Max. Water Pressure 承受最大水压	0.5MPa				
Pump Flow Velocity 水泵流速	40L/min (1.5m of lift/扬程1.5米时)				
Protection Class 防护等级	IP44				
Vibration 抗振动能力	(5~8)Hz; Amplitude/振幅±7.5mm; Tri-axial/三轴 (8~500)Hz; a/加速度=2g; Tri-axial/三轴				
Shock 抗冲击能力	Half-sine Wave/半正弦波; a <sub>peak</sub> /峰值加速度=50g; Tri-axial/三轴				
Case Dimensions 外形尺寸(mm)	414*175*116(L*W*H)		444*270*380(L*W*H)		
Weight/重量(kg)	5.3		14		



HT10M/HT22M  
Self-circulation Engine  
Water Heater  
自循环水加热器



HT40MA  
Self-circulation Engine  
Water Heater  
自循环水加热器



HT40N  
Self-circulation  
Water Heater  
自循环水加热器



HT322  
Engine Water Heater  
水加热器



HTL04A  
Immersion Lube  
Oil Heater  
浸入式机油加热器

Model/型号	HT10M	HT22M	HT40MA	HT40N	HT322
Main Functions 主要功能	Wide application on various engines coolant preheating. 适用于各种型号发动机的冷却液预加热。				
Rated Power 额定功率	1190W	2200W	4000W		2200W
Rated Voltage 额定电压	AC240V				
Rated Current 额定电流	5A	9.2A	16.7A		9.2A
Engine Displacement 适用发动机排量(L)	2.5~7	7~13	13~25		7~13
Thermostat Set Point 恒温点	(40±3)°C				
Temperature Switch 温控开关动作温度	Off/断开: (40±3)°C Reset/复位: (25±6)°C (Customizable/可定制)		Off/断开: (40±3)°C Reset/复位: (25±5)°C (Customizable/可定制)		Off/断开: (40±3)°C Reset/复位: (25±6)°C
Overheating Switch 过热开关动作温度	Off/断开: (110±3)°C Reset/复位: Manual/手动复位≤95°C	Off/断开: (95±4)°C Auto Reset/ 自动复位 < 80°C	Off/断开: (95±3)°C Reset/复位: (80±5)°C		
Insulating Resistance 绝缘电阻	≥50MΩ				
Electrical Strength 电气强度	AC 1.5kV 1min, ≤2.5mA				
Inlet/Outlet Size 进出口尺寸	3/4"(Φ19mm)				
Max. Water Pressure 承受最大水压	0.5MPa				
Protection Class 防护等级	IP54			IP67	
Vibration 抗振动能力	(5~8)Hz; Amplitude/振幅±7.5mm; Tri-axial/三轴 (8~500)Hz; a/加速度=2g(HT322抗震动加速度为4g); Tri-axial/三轴				
Shock 抗冲击能力	Half-sine Wave/半正弦波; a <sub>peak</sub> /峰值加速度=50g; Tri-axial/三轴				
Overheat Reset 防干烧复位	Manual reset 手动复位		Auto reset 自动复位		
Manual Test 手动测试	●				
Case Dimensions 外形尺寸(mm)	203*150*177(L*W*H)	445*375*210 (L*W*H)	389*182*116 (L*W*H)	238*135*133 (L*W*H)	
Weight/重量(kg)	1.9	5.6	4.3	0.95	

Model/型号	HTL04A
Main Functions 主要功能	Wide application on various engines with (50~110)L lubricant oil volume. 适用于机油体积为(50~110)L的各种发动机。
Rated Power 额定功率	400W
Rated Voltage 额定电压	AC240V
Rated Current 额定电流	1.67A
Lubricant Oil Volume 适用机油容积(L)	50~110L
Thermostat Range 断开及复位温度	Off/断开点: 50°C Customized On/复位点: 35°C (可定制)
Insulating Resistance 绝缘电阻	≥50MΩ
Electrical Strength 电气强度	AC 1.5kV 1min 漏电流≤3mA
Pannel Cutout 安装尺寸(mm)	Thread outer diameter optional range Φ(22~33.5) 螺纹外径可选范围Φ(22~33.5)
Max. Water Pressure 承受最大水压	0.5MPa
Protection Class 防护等级	IP55
Vibration 抗振动能力	5~8Hz: 17mm 8~10Hz: 加速度4g 100~500Hz: 加速度2g IEC60068-2-6
Shock 抗冲击能力	550g, 11ms, half-sine, complete shock tests from three directions, with a total of 18 shocks per test. 50g, 11ms, 半正弦, 完成从三个方向的冲击测 试, 每个测试共有18个冲击IEC60068-2-27
Case Dimensions 外形尺寸(mm)	255*43*43(L*W*H)
Weight/重量(kg)	0.59



BAC06A



BAC1203



BAC1210



BAC2405



BAC2408



BAC4812  
DC Charger/直流充电器

Model/型号	BAC06A	BAC1203	BAC1210	BAC2405	BAC2408	BAC4812
Battery Voltage 电池电压	12V	24V	12V	12V	24V	24V
Max. Charging Current 最大充电电流	6A	3A	3A	10A	5A	8A
Rated Input Voltage 额定输入电压范围	AC(95~280)V		AC(100~240)V	AC(100~277)V	AC(100~240)V	
Max. Input Voltage Range 最大输入电压范围	AC(90~305)V		AC(90~280)V	AC(90~305)V	AC(90~280)V	
Max. Input Current 最大输入电流	2A		1A	3A	2.5A	3A
						1A



BACM1206  
(RS485)



BACM2406  
(RS485)



BACM2410  
(RS485)



BACM2420A  
(RS485)



BAC06P



PDC2420

Model/型号	BACM1206	BACM2406	BACM2410	BACM2420A	BAC06P
Battery Voltage 电池电压	12V	24V	24V	12V	24V
Max. Charging Current 最大充电电流	6A	6A	10A	20A	6A
Rated Input Voltage 额定输入电压范围	AC(100~240)V			AC(100~277)V	
Max. Input Voltage Range 最大输入电压范围	AC(90~280)V			AC(90~305)V	
Max. Input Current 最大输入电流	1.5A	3A	4A	4.2A	8.2A
					2A

Model/型号	PDC2420
Rated Voltage 额定输入电压	24V
Max Current 最大输入电流	34A
Max. Input Voltage Range 最大输入电压范围	DC(18~72)V
Voltage Range 输出电压调整范围	DC(22~28)V
Rated Current 额定输出电流	20A





BAC2410



BAC1205N



BAC2403N



BAC1203VE



BAC06CF12V



BAC06CF24V

Model/型号	BAC2410	BAC1205N	BAC2403N	BAC1203VE	BAC06CF12V	BAC06CF24V
Battery Voltage 电池电压	24V	12V	24V	12V	12V	24V
Max.Charging Current 最大充电电流	10A	5A	3A	3A	6A	3A
Rated Input Voltage 额定输入电压范围	AC(100~277)V					
Max.Input Voltage Range 最大输入电压范围	AC(90~305)V					
Max.Input Current 最大输入电流	4A	1.5A	1.7A	1A	2A	2A



BAC150CAN  
Battery Charger  
蓄电池充电器



BAC06S  
Solar Charger  
太阳能充电器



BAC06N  
Battery Charger  
蓄电池充电器



BCB20  
Portable Battery Charging Box  
手提式蓄电池充电箱



BCW20  
Wall-mounted Battery Charging Box  
壁挂式蓄电池充电箱

Model/型号	BAC150CAN		BAC06S		BAC06N		BCB20		BCW20	
Battery Voltage 电池电压	12V	24V	12V	24V	12V	24V	12V	24V	12V	24V
Max.Charging Current 最大充电电流	5A		10A		6A	3A	20A			
Rated Input Voltage 额定输入电压范围	AC(100~277)V		< DC48V		AC(100~277)V		AC(100~277)V			
Max.Input Voltage Range 最大输入电压范围	AC(90~305)V		≤ DC48V		AC(95~305)V		AC(90~305)V			
Max.Input Current 最大输入电流	1.8A	3.5A	10A		2A		3.5A	7A	3.5A	7A

Land Genset Control Panel  
陆用发电机组控制屏

GPP/9510/1000A  
GPP Series Genset Parallel Panel  
GPP系列自动并联控制屏



GCP6120N/250SG  
GCP Series Vertical Type  
GCP系列立柜式控制屏



GCP6120N  
GCP Series Wall-Mounted  
GCP系列壁挂式控制屏



GCP6110N  
GCP Series Backpack Type  
GCP系列背包式控制屏



GCPL6110N  
GCP Series Genset Control Panel  
GCP系列发电机组控制屏



BCW20  
Battery Charger Box  
蓄电池充电箱



ATS Series Automatic Transfer Panel  
ATS系列双电源自动切换控制屏

ATSE600N/250SG  
ATS Series Automatic Transfer Panel  
ATS系列双电源自动切换控制屏



ATS560NBC/125A  
ATS Dual Power Switch Panel/ATS  
ATS系列双电源开关屏



Engineering Machinery Control Panel  
工程机械控制屏

HPS/FPC915-S01  
Diesel Fire Pump Control Panel  
柴驱消防水泵机组控制屏



ECPC4300  
Diesel Engine Control Panel  
柴油机控制屏



ECPC4100  
Diesel Engine Control Panel  
柴油机控制屏



CCPC7100A-ZZ  
Diesel Air Compressor Control Panel  
柴驱空压机控制屏

