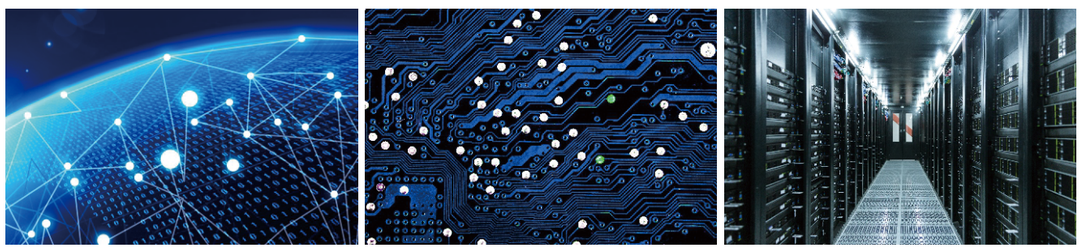
SmartGen APP
众智科技APP

SmartGen众智
让 控 制 更 智 能



ATSE CONTROLLER
智能切换控制器

SmartGen众智
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V 1.4

MAKING CONTROL SMARTER 2022

About Us 关于我们

In 1998, we started first genset controllers research and development and SmartGen was registered and established in 2003. SmartGen is a technological modernization enterprise, focusing on intelligent control system for engine, generator and dual power supply, as well as related products, and concentrating on design, research and development, manufacture, sale and services.Products are widely used in military industry, mining and oil exploration, data centers, ships, intelligent buildings, banks, hospitals, telecommunications, infrastructure and other fields.

We have 300+ employees and sell products all over the world. More than 30% employees are dedicated to R&D, striving for exploring new intelligent solutions to improve the overall performance of global industry equipment.

As the China's hidden champion of industry,we invest large amount funds in product's design, intelligent manufacturing and standard laboratory every year since established, to keep the leading position in international market.After years of unremitting efforts, it has obtained more than 400 patents and is also the main drafting unit of the national standard for generator set controllers.

We will continue to innovate and self-transcend as always, dedicating to meet our partners' demands on product diversification and high quality.

Enterprise mission: Making control smarter!

Enterprise spirit: Continuous improvement, teamwork creates value.

1998年开始第一代发电机组控制器的研发，2003年注册成立众智科技，持续专注于发动机、发电机和双电源智能控制系统及相关产品的设计、研发、制造、销售和服务，是一家科技型现代化企业。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、电信、基建等领域。

我们拥有300多名员工，业务范围遍布全球，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。

作为中国的行业隐形冠军，自成立以来，每年都会在产品研发、智能制造和标准试验室方面投入大量资金，以保持公司在国际市场中的领先地位。数年来不懈努力，累计取得专利400多项，也是发电机组控制器国家标准的主要起草单位。

我们将一如既往地不断创新与自我超越，为满足合作伙伴对产品多样化和高品质的追求而持续奋斗。

企业使命：让控制更智能！

企业精神：自强不息，众智成城。

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

Marine Certificate
of Type Approval
中国船级社认证

Certificate of
Invention Patent
发明专利证书

BV Certificate
BV证书

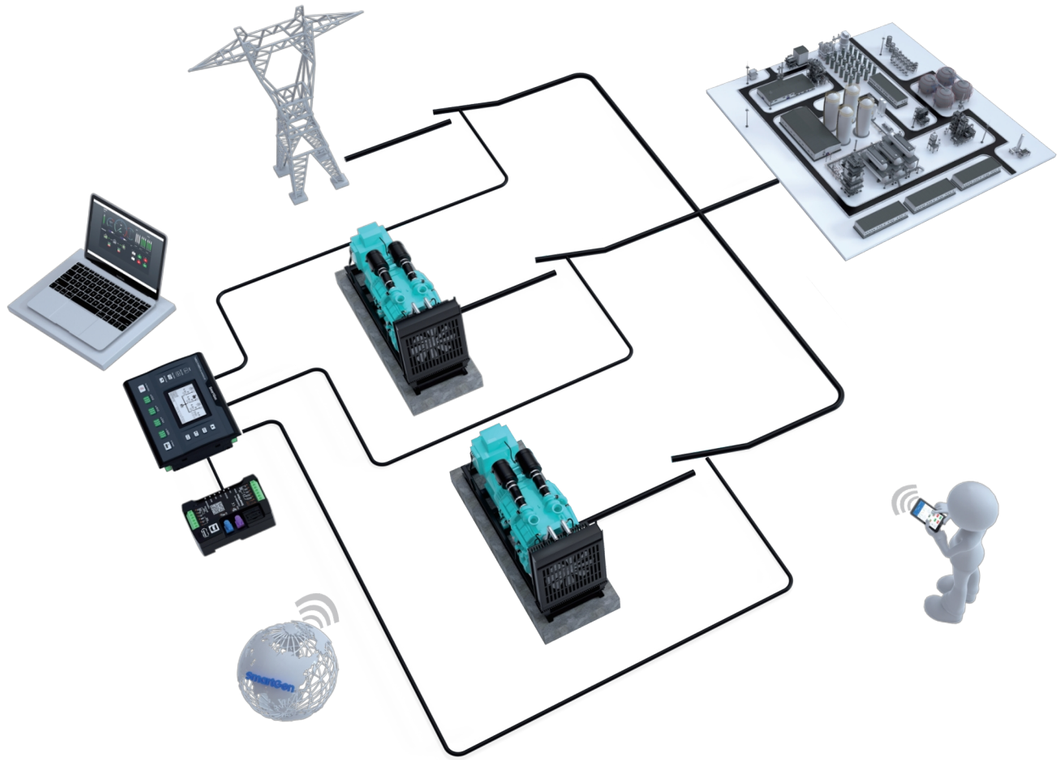
CE Certificate
CE证书

CCC Certificate
CCC证书

Software Copyright
软件著作权登记证书

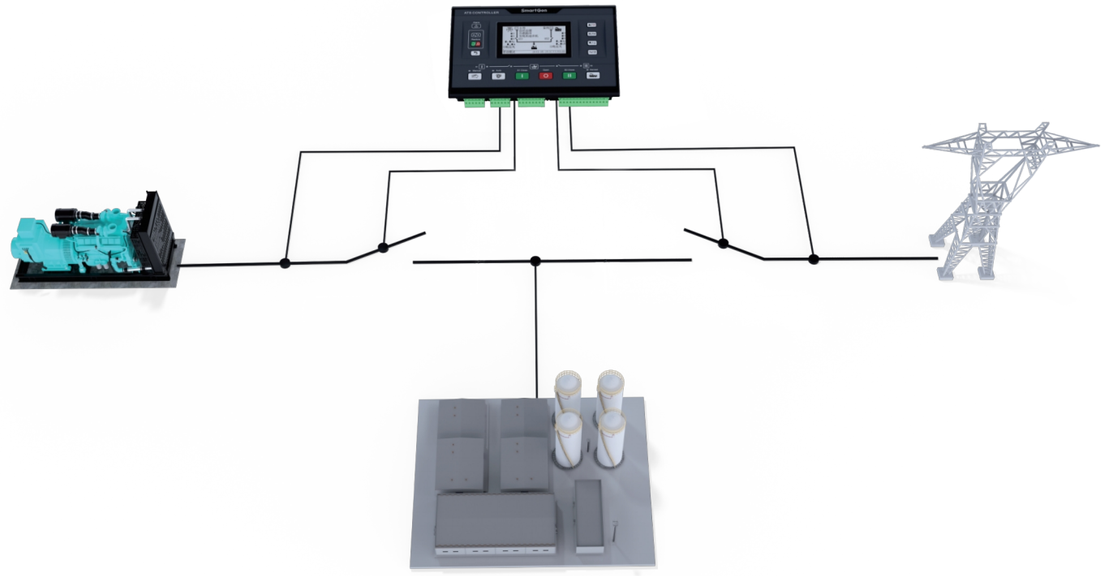
UL Certificate
UL证书

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。

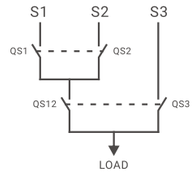
ATS Switching Solution
双电源智能切换解决方案



Suitable for dual power switch control.
适用于两路电源切换控制。

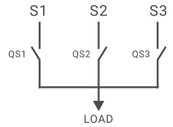
HAT832

Three Power Controller
三电源控制器



HAT833/S

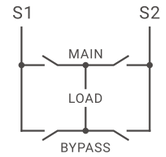
Three Power Controller
三电源控制器



Model/型号	HAT832	HAT833	HAT833S
Main Functions 主要功能	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。	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。	
Display 显示	LCD(240*128)px 4.3Inches/吋		
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他		
AC System 交流制式	1P2W/2P3W/3P3W(Special order required/需特殊订货)/3P4W		
Alternator Voltage 交流电压范围	AC(50~305)V(L-N)		
Alternator Frequency 交流频率	50/60Hz		
Current and Power Display 电流及功率显示	●		
Over Current Warn 过流警告	●		
Volt Freq Protection 电压频率保护	●		
Monitor Interface 监控接口	USB/RS485-1/RS485-2		
Programming Interface 编程接口	USB/RS485-1/RS485-2		
Real-time Clock and Event Log 实时时钟及历史记录	●		
Scheduled Start Genset 定时试机	●		
Circulate Start Genset 循环开机	●		
Main Standby Switching 主备用切换	●		
Working Voltage 工作电压	DC(8~35)V/AC(90~305)V		
Programmable Input 可编程输入口	8		
Programmable Output 可编程输出口	12		
Case Dimensions 外形尺寸(mm)	260*180*54 (L*W*H)		
Panel Cutout 开孔尺寸(mm)	242*161		
Operating Temp. 工作温度	(-25~+70)℃		

HAT880/880S

Dual Power Bypass Automatic Switching Controller
双电源旁路自动切换控制器



Model/型号	HAT880	HAT880S
Main Functions 主要功能	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. 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/旁路开关按键解锁和解锁状态显示功能；具有主/旁路开关按键手动控制和自动控制投切功能，以及主/旁路开关状态显示。	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. Synchronous parallel switching function, the controller can track two electrical synchronization signals, instantaneous parallel connection to achieve uninterrupted switching. 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/旁路开关按键解锁和解锁状态显示功能；具有主/旁路开关按键手动控制和自动控制投切功能，以及主/旁路开关状态显示；同步并联切换功能，控制器可以追踪两路电同步信号，瞬间并联实现不间断切换。
Display/显示	LCD(240*128)px 4.3Inches/吋	
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他	
AC System 交流制式	1P2W/2P3W/3P3W(Special order required/需特殊订货)/3P4W	
Alternator Voltage 交流电压范围	AC(50~305)V(L-N)	
Alternator Frequency 交流频率	50/60Hz	
Current and Power Display 电流及功率显示	●	
Over Current Warn 过流警告	●	
Volt Freq Protection 电压频率保护	●	
Monitor Interface 监控接口	USB/RS485-1/RS485-2	
Programming Interface 编程接口	USB/RS485-1/RS485-2	
Real-time Clock and Event Log 实时时钟及历史记录	●	
Scheduled Start Genset 定时试机	●	
Circulate Start Genset 循环开机	●	
Main Standby Switching 主备用切换	●	
Synchronous Switching 同步切换		●
Working Voltage 工作电压	DC(8~35)V/AC(90~305)V	
Programmable Input 可编程输入口	8	
Programmable Output 可编程输出口	12	
Cass Dimensions 外形尺寸(mm)	260*180*54 (L*W*H)	
Panel Cutout 开孔尺寸(mm)	242*161	
Operating Temp. 工作温度	(-25~+70)℃	

HAT860

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

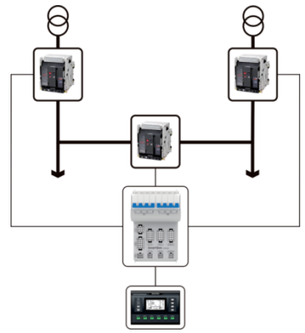
HAT881

Medium Voltage Dual Power Bypass ATS controller
中压双电源旁路自动切换控制器

Model/型号	HAT860	HAT881
Main Functions 主要功能	HAT860 Medium Voltage ATS Controller is a module that integrates programmable function, automatic measurement, PT break detection, load stepwise switch, LCD display and digital communication. It can precisely detect 2-way 3-phase incoming voltage, make accurate judgment for voltage abnormal situations and output passive control coil. It can be widely used in the electric automatic control system of electric power, telecom, petrochemical industry, mining, railways, municipal administration, data center, intelligent building and other industries. 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。控制器可精确地检测两路三相进线电压，对出现的电压异常做出准确的判断并输出无源控制开关量。可广泛应用于电力、电信、石化、矿山、轨道交通、市政、数据中心、智能大厦等行业的电气自动控制系统。	HAT881 Medium Voltage Bypass ATS Controller is a module that integrates programmable function, automatic measurement, PT break detection, load stepwise switch, LCD display and digital communication. It can precisely detect 2-way 3-phase voltage, make accurate judgment for voltage abnormal situations and output passive control coil. It can be directly used for single bypass, dual bypass switch, also for manual/remote control switch. HAT881控制器 是一种具有可编程功能、自动化测量、PT 断线检测、负载逐切、LCD 显示、数字通讯为一体的中压双电源旁路切换模块。控制器可精确地检测两路三相电源，对出现的电源异常做出准确的判断并输出无源控制开关量。可直接用于单旁路、双旁路转换开关，也可适用于手动控制或远程控制开关。
Display/显示	LCD(240*128)px 4.3Inches/吋	
Language 控制模块语言	Chinese＆English＆Others/中文＆英文＆其他	
AC System 交流制式	1P2W/2P3W/3P3W/3P4W	
Alternator Voltage 交流电压范围	AC(90~305)V(L-N)	
Alternator Frequency 交流频率	50/60Hz	
Current and Power Display 电流及功率显示	●	
Over Current Warn 过流警告	●	
Volt Freq Protection 电压频率保护	●	
Monitor Interface 监控接口	RS485-1/RS485-2	
Programming Interface 编程接口	RS485/USB	
Real-time Clock and Event Log 实时时钟及历史记录	●	
Scheduled Start Genset 定时试机	●	
Circulate Start Genset 循环开机	●	
Main Standby Switching 主备用切换	●	
Synchronous Switching 同步切换		
Working Voltage 工作电压	B+、B-端：DC12V/24V/48V PA、PN 端：AC(90~305)V 或 DC110V/DC220V	
Programmable Input 可编程输入口	12	
Programmable Output 可编程输出口	13	
Cass Dimensions 外形尺寸(mm)	260*180*54 (L*W*H)	
Panel Cutout 开孔尺寸(mm)	242*161	
Operating Temp. 工作温度	(-25~+70)℃	

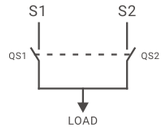
HAT821/821S

Bus Tie Controller
母联控制器



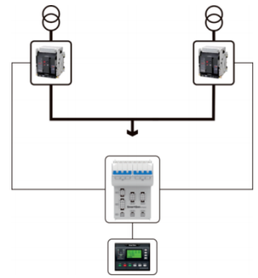
Model/型号	HAT821	HAT821S
Main Functions 主要功能	Suitable for ATSE control system with two incoming lines and one bus-tie(low voltage standby self-switchover). 适用于两进线一母联（低压备自投）的电源切换控制系统。	Adding parallel switching function on the basis of HAT821 function, which can realize uninterrupted switching closing and opening 在HAT821功能基础上增加了并联切换功能，可实现先合后分不间断切换。
Display/显示	LCD(240*128)px 4.3Inches/吋	
Language 控制模块语言	Chinese＆English＆Others/中文＆英文＆其他	
AC System 交流制式	1P2W/2P3W/3P3W(Special order required/需特殊订货)/3P4W	
Alternator Voltage 交流电压范围	AC(50~305)V(L-N)	
Alternator Frequency 交流频率	50/60Hz	
Volt Freq Protection 电压频率保护	●	
Monitor Interface 监控接口	USB/RS485-1/RS485-2	
Programming Interface 编程接口	USB/RS485-1/RS485-2	
Real-time Clock and Event Log 实时时钟及历史记录	●	
Main Standby Switching 主备用切换	●	
Working Voltage 工作电压	DC(8~35)V/AC(90~305)V	
Programmable Input 可编程输入口	8	
Programmable Output 可编程输出口	12	
Case Dimensions 外形尺寸(mm)	260*180*54 (L*W*H)	
Panel Cutout 开孔尺寸(mm)	242*161	
Operating Temp. 工作温度	(-25~+70)℃	

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

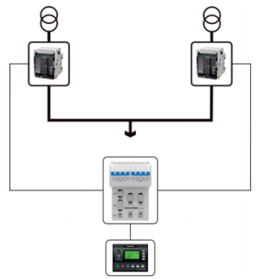


Model/型号	HAT820	HAT820S
Main Functions 主要功能	It can control various PC dual power switch, CB dual power switch. The controller can be powered by line voltage (L-L), with load voltage detection, temperature detection in cabinet, (fire cut) source input and other functions. 可控制各种PC级双电源开关，CB级双电源开关。控制器可以线电压(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。	Based on the HAT820 function, increase the short-time Synchronous switching function; The controller can track two electrical synchronization signals and instantaneously connect in parallel to achieve uninterrupted switching. 在HAT820功能基础上，增加短时同步切换功能；控制器可以追踪两路电同步信号，瞬间并联，实现不间断切换。
Display显示	LCD(240*128)px 4.3Inches/吋	
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他	
AC System 交流制式	1P2W/2P3W/3P3W/3P4W	
Alternator Voltage 交流电压范围	AC(50~360)V(L-N)	
Alternator Frequency 交流频率	50/60Hz	
Current and Power Display 电流及功率显示	●	
Over Current Warn 过流警告	●	
Volt Freq Protection 电压频率保护	●	
Monitor Interface 监控接口	USB/RS485-1/RS485-2	
Programming Interface 编程接口	USB/RS485-1/RS485-2	
Real-time Clock and Event Log 实时时钟及历史记录	●	
Scheduled Start Genset 定时试机	●	
Circulate Start Genset 循环开机	●	
Main Standby Switching 主备用切换	●	
Working Voltage 工作电压	DC(8~35)V/AC(90~576)V	
Programmable Input 可编程输入口	9	
Programmable Output 可编程输出口	12	
Case Dimensions 外形尺寸(mm)	260*180*54 (L*W*H)	
Panel Cutout 开孔尺寸(mm)	242*161	
Operating Temp. 工作温度	(-25~+70)℃	

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

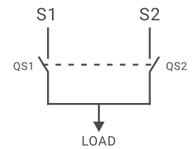


Model/型号	HAT600P	HAT600PI	HAT600PB	HAT600PBI	HAT600PS
Main Functions 主要功能	DC supply. With load voltage monitoring function; Standard RS485 and USB interface. 直流供电。具有负载电压监测功能；标配RS485和USB接口。	DC supply, has current detection. With load voltage monitoring function; Standard RS485 and USB interface. 直流供电，带电流检测。具有负载电压监测功能；标配RS485和USB接口。	AC/DC supply. With load voltage monitoring function; Standard RS485 and USB interface. 交/直流供电。具有负载电压监测功能；标配RS485 和USB接口。	AC/DC supply, has current detection. With load voltage monitoring function; standard RS485/USB ETHERNET interface. 交/直流供电，带电流检测。具有负载电压监测功能；标配RS485/USB和ETHERNET 接口。	AC/DC supply, has current detection. With load voltage monitoring function; standard RS485/USB ETHERNET interface. Have parallel switching function. 交/直流供电，带电流检测，具有负载电压监测功能；标配RS485/USB和ETHERNET接口。有并联切换功能。
Display/显示	LCD(132*64)px				
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他				
AC System 交流制式	1P2W/2P3W/3P3W/3P4W		1P2W/2P3W/3P4W		
Alternator Voltage 交流电压范围	AC(50~360)V(L-N)		AC(50~300)V(L-N)		
Alternator Frequency 交流频率	50/60Hz				
Current and Power Display 电流及功率显示		●		●	
Over Current Warn 过流警告		●		●	
Volt Freq Protection 电压频率保护			●		
Monitor Interface 监控接口	RS485			RS485/ETHERNET	
Programming Interface 编程接口	RS485/USB				
Real-time Clock and Event Log 实时时钟及历史记录	●				
Scheduled Start Genset 定时试机	●				
Circulate Start Genset 循环开机	●				
Main Standby Switching 主备用切换	●				
Synchronous Switching 同步切换					●
Applicable Switch Type 适合开关类型	CC,CB and PC Switch/CC级、CB级和PC级开关				
Working Voltage 工作电压	DC(8~35)V		DC(8~35)V/AC(90~300)V		
Programmable Input 可编程输入口	4				
Programmable Output 可编程输出口	6				
Case Dimensions 外形尺寸(mm)	198*155*54 (L*W*H)				
Panel Cutout 开孔尺寸(mm)	186*141				
Operating Temp. 工作温度	(-25~+70)℃				



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

Model/型号	HAT600R	HAT600RB	HAT600RI	HAT600RBI	HAT600RS
Main Functions 主要功能	DC supply. With load voltage monitoring, in-phase transfer, fast transfer function; Standard RS485 and USB interface. 直流供电。具有负载电压监测、同相位切换、快速切换功能；标配RS485和USB接口。	AC/DC supply. With load voltage monitoring, in-phase transfer, fast transfer function; Standard RS485 and USB interface. 交/直流供电。具有负载电压监测、同相位切换、快速切换功能；标配RS485 和USB接口。	DC supply, has current detection. With load voltage monitoring, in-phase transfer, fast transfer function; Standard RS485 and USB interface. 直流供电，带电流检测。具有负载电压监测、同相位切换、快速切换功能；标配RS485和USB接口。	AC/DC supply, has current detection. With load voltage monitoring, in-phase transfer, fast transfer function; standard RS485/USB ETHERNET interface. 交/直流供电，带电流检测。具有负载电压监测、同相位切换、快速切换功能；标配RS485/USB和EHTERNET接口。	AC/DC supply, has current detection. With load voltage monitoring, in-phase transfer, fast transfer function; standard RS485/USB ETHERNET interface. Have parallel switching function. 交/直流供电，带电流检测，具有负载电压监测、同相位切换、快速切换功能；标配RS485/USB和EHTERNET 接口。有并联切换功能。
Display/显示	LCD(132*64)px				
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他				
AC System 交流制式	1P2W/2P3W/3P3W/3P4W	1P2W/2P3W/3P4W	1P2W/2P3W/3P3W/3P4W	1P2W/2P3W/3P4W	1P2W/2P3W/3P3W/3P4W
Alternator Voltage 交流电压范围	AC(50~360)V(L-N)	AC(50~300)V(L-N)	AC(50~360)V(L-N)	AC(50~300)V(L-N)	
Alternator Frequency 交流频率	50/60Hz				
Current and Power Display 电流及功率显示	●				
Over Current Warn 过流警告	●				
Volt Freq Protection 电压频率保护	●				
Monitor Interface 监控接口	RS485			RS485/EHTERNET	
Programming Interface 编程接口	RS485/USB			RS485/USB/EHTERNET	
Real-time Clock and Event Log 实时时钟及历史记录	●				
Scheduled Start Genset 定时试机	●				
Circulate Start Genset 循环开机	●				
Main Standby Switching 主备用切换	●				
Synchronous Switching 同步切换					●
Applicable Switch Type 适合开关类型	CC,CB and PC Switch/CC级、CB级和PC级开关				
Working Voltage 工作电压	DC(8~35)V				
Programmable Input 可编程输入口	4				
Programmable Output 可编程输出口	6				
Case Dimensions 外形尺寸(mm)	198*154*54 (L*W*H)				
Panel Cutout 开孔尺寸(mm)	186*141				
Operating Temp. 工作温度	(-25~+70)℃				



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

Model/型号	HAT700	HAT700I	HAT700B	HAT700BI	HAT700S
Main Functions 主要功能	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 synchronous monitoring 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基础上增加同步监测功能。				
Display/显示	LCD(132*64)px				
Language 控制模块语言	Chinese & English & Others/中文 & 英文 & 其他				
AC System 交流制式	1P2W/2P3W/3P3W/3P4W		1P2W/2P3W/3P4W		1P2W/2P3W/3P3W/3P4W
Alternator Voltage 交流电压范围	AC(50~360)V(L-N)		AC(50~280)V(L-N)		
Alternator Frequency 交流频率	50/60Hz				
Current and Power Display 电流及功率显示		●		●	
Over Current Warn 过流警告		●		●	
Volt Freq Protection 电压频率保护	●				
Monitor Interface 监控接口	LINK/RS485				
Programming Interface 编程接口	LINK/RS485				
Main Standby Switching 主备用切换	●				
Applicable Switch Type 适合开关类型	CC,CB and PC Switch/CC级、CB级和PC级开关				
Real-time Clock and Event Log 实时时钟及历史记录	●				
Scheduled Start Genset 定时试机	●				
Circulate Start Genset 循环开机	●				
Synchronous Switching 同步切换					●
Working Voltage 工作电压	DC(8~35)V		DC(8~35)V/AC(90~280)V		
Programmable Input 可编程输入口	4				
Programmable Output 可编程输出口	6				
Cass Dimensions 外形尺寸(mm)	197*152*47 (L*W*H)				
Panel Cutout 开孔尺寸(mm)	186*141				
Operating Temp. 工作温度	(-25~+70)℃				

HAT560N(NC/NB/NBC)
Dual Power ATS Controller
双电源自动切换控制器

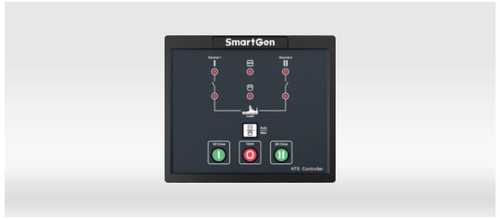
Model/型号	HAT560N	HAT560NC	HAT560NB	HAT560NBC
Main Functions 主要功能	With graphic LCD; monitors all AC system; suitable for PC, CB and CC switch. 图形液晶显示模块；各种交流制式采样；适用于控制PC级、CB级和CC级开关。			
Display/显示	LCD(132*64)px			
Language 控制模块语言	Chinese & English/中文 & 英文			
AC System/交流制式	1P2W/2P3W/3P3W/3P4W		1P2W/2P3W/3P4W	
Alternator Voltage 交流电压范围	AC(30~360)V(L-N)		AC(170~277)V(L-N)	
Alternator Frequency 交流频率	50/60Hz			
Volt Freq Protection 电压频率保护	●			
Monitor Interface 监控接口	LINK	LINK/RS485	LINK	LINK/RS485
Programming Interface 编程接口	LINK	LINK/RS485	LINK	LINK/RS485
RTC(Real Time Clock) 实时时钟	●			
Scheduled Start Genset 定时试机	●			
Circulate Start Genset 循环开机	●			
Main Standby Switching 主备用切换	●			
Applicable Switch Type 适合开关类型	CC,CB and PC Switch/CC级、CB级和PC级开关			
Working Voltage 工作电压	DC(8~35)V		DC(8~35)V/AC(170~277)V	
Programmable Input 可编程输入口	2			
Programmable Output 可编程输出口	4	3	4	3
Case Dimensions 外形尺寸(mm)	139*120*50 (L*W*H)			
Panel Cutout 开孔尺寸(mm)	130*111			
Operating Temp. 工作温度	(-25~+70)℃			

HAT552
Dual Power ATS Controller
双电源自动切换控制器

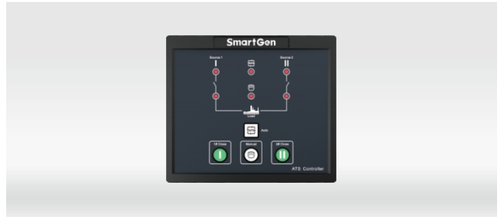
HAT553/HAT553LT
Dual Power ATS Controller
双电源自动切换控制器

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

Model/型号	HAT552	HAT553	HAT553LT	HATC60
Main Functions 主要功能	Suitable for electromagnetic drive two-stage ATS switch, one-to-one wiring, Chinese and English display, standard RS485 interface. 适用于电磁驱动型两段式ATS开关，接线一对一，中英文显示，标配RS485接口。	Suitable for electromagnetic drive three-stage ATS switch, one-to-one wiring, Chinese and English display, standard RS485 interface. 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。	Suitable for manual/auto control of PC class, CB class, CC class dual power transfer switches; with RS422, RS485, USB port; working temperature is: (-40~+70)°C 适用于PC、CB、CC级双电源转换开关的手/自动控制；具有RS422、RS485、USB接口；工作温度：（-40 ~+70)℃	With graphic LCD; monitors all AC system; suitable for SOCOMEC PC three-stage switch. 图形液晶显示模块；各种交流制式采样；适用于控制SOCOMEC型PC三段式开关。
Display/显示	LCD(132*64)px			
Language 控制模块语言	Chinese & English/中文 & 英文			
AC System/交流制式	1P2W/2P3W/3P4W			1P2W/2P3W/3P3W(Special order required/需特殊订货)/3P4W
Alternator Voltage 交流电压范围	AC(170~277)V(L-N)		AC(50-277)V(LN)	AC(50~305)V(L-N)
Alternator Frequency 交流频率	50/60Hz			
Volt Freq Protection 电压频率保护	●			
Monitor Interface 监控接口	RS485		RS422/RS485	RS485
Programming Interface 编程接口	RS485/USB		RS485/USB	RS485
RTC(Real Time Clock) 实时时钟	●			
Scheduled Start Genset 定时试机	●			
Circulate Start Genset 循环开机				●
Main Standby Switching 主备用切换	●			
Applicable Switch Type 适合开关类型	Two-stage (Hankwang/Phytend) 二段式(韩光/飞腾)	Three-stage Phytend 三段式飞腾型	PC/CB/CC型 二段式/三段式	SOCOMEC PC three-stage SOCOMEC型PC三段式
Working Voltage 工作电压	AC(170~277)V		DC(9-35)V	DC(12~48)V/AC(90~305)V
Programmable Input 可编程输入口	1			2
Programmable Output 可编程输出口	1			4
Case Dimensions 外形尺寸(mm)	139*120*50(L*W*H)			163*133*51(L*W*H)
Panel Cutout 开孔尺寸(mm)	130*111			152*122
Operating Temp. 工作温度	(-25~+70)℃		(-40~+70)℃	(-25~+70)℃

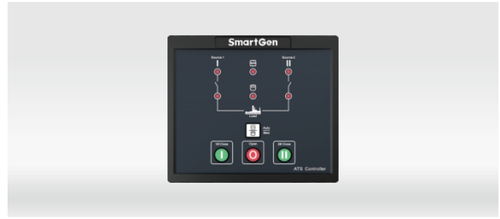


HAT530N/NC
Dual Power ATS Controller
双电源自动切换控制器



HAT520N/NC
Dual Power ATS Controller
双电源自动切换控制器

Model/型号	HAT520N	HAT520NC	HAT530N	HAT530NC
Main Functions 主要功能	Suitable for electromagnetic driven PC-level two stage ATS switch. 适用于电磁驱动型PC级两段式ATS开关。	Suitable for electromagnetic drive two-stage ATS switch, standard RS485 interface. 适用于电磁驱动型两段式ATS开关，标配RS485接口。	Suitable for PC three-stage and SOCOMEC switch. 适用于控制PC级三段式和SOCOMEC 型开关。	Suitable for SOCOMEC PC three-stage switch, standard RS485 interface. 适用于SOCOMEC型PC三段式开关，标配RS485接口。
Display/显示	LED			
AC System/交流制式	1P2W/2P3W/3P4W			
Alternator Voltage 交流电压范围	AC(170~277)V(L-N)			
Alternator Frequency 交流频率	50/60Hz			
Volt Freq Protection 电压频率保护	●			
Monitor Interface 监控接口	LINK	RS485	LINK	RS485
Programming Interface 编程接口	LINK	RS485	LINK	RS485
Main Standby Switching 主备用切换	●			
Applicable Switch Type 适合开关类型	PC Two-stage(Hankwang/Phytend) PC二段式(韩光/飞腾)		SOCOMEC PC three-stage SOCOMEC型PC三段式	
Working Voltage 工作电压	AC(170~277)V			
Programmable Input 可编程输入口				
Programmable Output 可编程输出口			2	
Case Dimensions 外形尺寸(mm)	139*120*50(L*W*H)			
Panel Cutout 开孔尺寸(mm)	130*111			
Operating Temp. 工作温度	(-25~+70)℃			



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

Model/型号	HAT530P	HAT530PC
Main Functions 主要功能	HAT530P/HAT530PC series dual power ATS controller can precisely detect 2-way 3-phase voltage, make accurate judgement on abnormal voltage and control ATS to transfer after the delay has expired. The controller is applicable for two-stage ATS and three-stage ATS with controlling the start of genset. "Four remotes" (remote control, remote measurement, remote communication and remote adjustment) functions can be realized via RS485 communication port. HAT530P/HAT530PC系列双电源自动切换控制器可精确检测两路三相电压、两路单相电压，对出现的电压异常做出准确的判断后控制ATS切换。适用于控制二段式、三段式ATS开关并具有控制发电机组起动的功能。通过RS485口通讯，可实现遥控、遥测、遥信、遥调 “四遥” 功能。	
Display/显示	LED	
AC System/交流制式	1P2W/2P3W/3P4W	
Alternator Voltage 交流电压范围	AC(170~277)V(L-N)	
Alternator Frequency 交流频率	50/60Hz	
Volt Freq Protection 电压频率保护	●	
Monitor Interface 监控接口	USB	RS485
Programming Interface 编程接口	USB	
Main Standby Switching 主备用切换	●	
Applicable Switch Type 适合开关类型	PC Two-stage(Hankwang/Phytend)/SOCOMEC PC three-stage PC二段式(韩光/飞腾)/SOCOMEC型PC三段式	
Working Voltage 工作电压	AC(170~277)V	
Case Dimensions 外形尺寸(mm)	139*120*50(L*W*H)	
Panel Cutout 开孔尺寸(mm)	130*111	
Operating Temp. 工作温度	(-25~+70)℃	

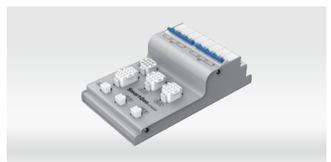
ATSE CONTROLLER / 智能切换控制器

HAT162
Dual Power ATS Controller
双电源自动切换控制器

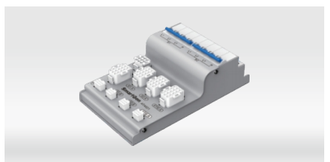
HAT163
Dual Power ATS Controller
双电源自动切换控制器

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

Model/型号	HAT160	HAT162	HAT163	HAT310
Main Functions 主要功能	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。	Monitors 1P2W/2P3W/3P4W AC system, suitable for two-stage switch. 单相、两相、三相采样，适用于两段式开关。	Monitors 1P2W/2P3W/3P4W AC system, suitable for SOCOMEC PC three-stage switch. 单相、两相、三相采样，适用于SOCOMEC型PC三段式开关。	Generator single phase sampling, mains three-phase sampling, suitable for PC two-stage switch. 发电单相、市电三相采样，适用于控制PC级两段式开关。
Display/显示	LED			
AC System/交流制式	1P2W/3P4W	1P2W/2P3W/3P3W(Special order required/需特殊订货)/3P4W		1P2W/3P4W
Alternator Voltage 交流电压范围	AC(170~277)V(L-N)			AC(160~280)V(L-N)
Alternator Frequency 交流频率	50/60Hz			
Monitor Interface 监控接口	LINK			
Programming Interface 编程接口	LINK			
Main Standby Switching 主备用切换	●			
Applicable Switch Type 适合开关类型	CB One Motor Operation CB级单电操	Two-stage/二段式	SOCOMEC PC three-stage SOCOMEC型PC三段式	PC Two-stage PC二段式
Working Voltage 工作电压	AC(170~277)V			AC(160~280)V
Case Dimensions 外形尺寸(mm)	86.9*158*119.5(L*W*H)			110*77.5*55(L*W*H)
Panel Cutout 开孔尺寸(mm)	73.5*144			65*65.1
Operating Temp. 工作温度	(-25~+70)℃			



ATA600
Dual Power Switch Adapter
双电源开关适配器

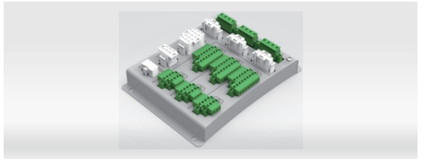


ATA821
Bus Tie Dual Power Switch Adapter
母联型双电源开关适配器

ATA821-MN
Bus Tie Dual Power Switch Adapter
母联型双电源开关适配器

Model/型号	ATA600	ATA821	ATA821-MN
Main Functions 主要功能	It can connect the controller and the ACB switch secondary line through adapter, one-to-one wiring is simple and fast, and realized the electrical interlock between the two switches. Suitable for HAT600N / P and HAT700 series. 通过适配器连接控制器和ACB开关二次线，一对一接线简单快捷，并实现了两开关之间的电气互锁。适用于HAT600N/P 和HAT700系列。	It can connect the controller and the ACB switch secondary line through adapter, one-to-one wiring is simple and fast, and realized the electrical interlock between the three switches. Suitable for HAT821 bus tie controller. 通过适配器连接控制器和ACB开关二次线，一对一接线简单快捷。并实现了三台开关之间的电气互锁。适用于HAT821 母联控制器。	Bus-tie dual-power switch adapter, suitable for HAT821 to realize no-voltage release and electric interlock of closing coil functions. It has simple wirings and easy installation. 母联型双电源开关适配器，适配HAT821可实现失压脱扣和合闸线圈电气互锁功能，接线简单、方便快捷。
Rated Operating Voltage 额定工作电压	AC400V		
Maximum Operating Current 最大工作电流	10A		
Case Dimensions 外形尺寸(mm)	144.4*252*75.3(L*W*H)		144.4*262*75.3(L*W*H)
Panel Cutout 开孔尺寸(mm)	125*240		125*250
Operating Temp. 工作温度	(-25~+70)℃		

ATSE CONTROLLER / 智能切换控制器



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

TPS31
Three Power Switch Adapter
三路电源开关适配器

Model/型号	ATA833	TPS31
Main Functions 主要功能	ATA833 is an adaptor for connecting HAT833 three power ATS controller and intelligent circuit breaker, which is suitable for 3P4W AC system with 3-way power incomings; it saves a lot of field wiring work for users, saves work and time, and is safe and reliable. ATA833是一款适用于HAT833三路电源自动切换控制器和智能断路器连接的适配器，适用于三路电源进线的三相四线的交流系统；为用户节省了大量的现场接线工作，省工省时且安全可靠。	TPS31 Three Power Supply Module is composed of microprocessor as the core with voltage monitoring function, providing three or two selective AC power output, which can be used for three power supplies or two power supplies.Its working mode can be set as mutual backup and supply as priority. TPS31三电源供电模块由微处理器为核心构成，可用于三路电源输入，也可用于两路电源输入，具有过压、欠压监测功能，用来提供三选一或二选一的交流电源输出。可设置为互为备用、按优先级供电两种工作模式。
Alternator Voltage 交流电压范围	AC(90~305)V	
Alternator Frequency 交流频率		50/60Hz
Maximum Operating Current 最大工作电流	10A	12A
Case Dimensions 外形尺寸(mm)	156.7*210*46(L*W*H)	115.5*102*72.5(L*W*H)
Operating Temp. 工作温度	(-25~+70)℃	(-40~+70)℃

HMP300/HMP300-2
Power Integrated Protection Module
电量综合保护模块
HMP300 has LINK communication interface and CAN interface, HMP300-2 has RS485 communication interface.
HMP300具有LINK通讯接口和CAN接口，HMP300-2具有RS485通讯接口。

Case Dimensions
外观尺寸(mm): 107.6*89.7*60.7

HSM300
Synchronous Module
同步模块

Case Dimensions
外观尺寸(mm): 71.6*89.7*60.7

DIN16A-2
Digital Input Module
开关量输入模块

Case Dimensions
外观尺寸(mm): 107.6*89.7*60.7

DOUT16B-2
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

Case Dimensions
外观尺寸(mm): 161.6*89.7*60.7

HVD300
Voltage Detection Relay
电压检测继电器

Case Dimensions
外观尺寸(mm): 89.7*71.6*60.7

HOC300
Over Current Protection Relay
过流保护继电器

Case Dimensions
外观尺寸(mm): 89.7*71.6*60.7

HFT300
Frequency Test Relay
频率检测继电器

Case Dimensions
外观尺寸(mm): 89.7*71.6*60.7

HPD300
Reverse Power Protection Relay
逆功率保护继电器

Case Dimensions
外观尺寸(mm): 89.7*71.6*60.7