

POWER EVOLUTION

YAMABISHI

INDEX
索引

Frequency Changer /
DC·AC Inverter
频率变换器 /DC·AC变换器

Uninterruptible Power Supply
不间断电源装置

Charge & Discharge Device
充放电装置

DC Power Supply
直流电源装置

High Voltage Generating Device
高电压电源装置

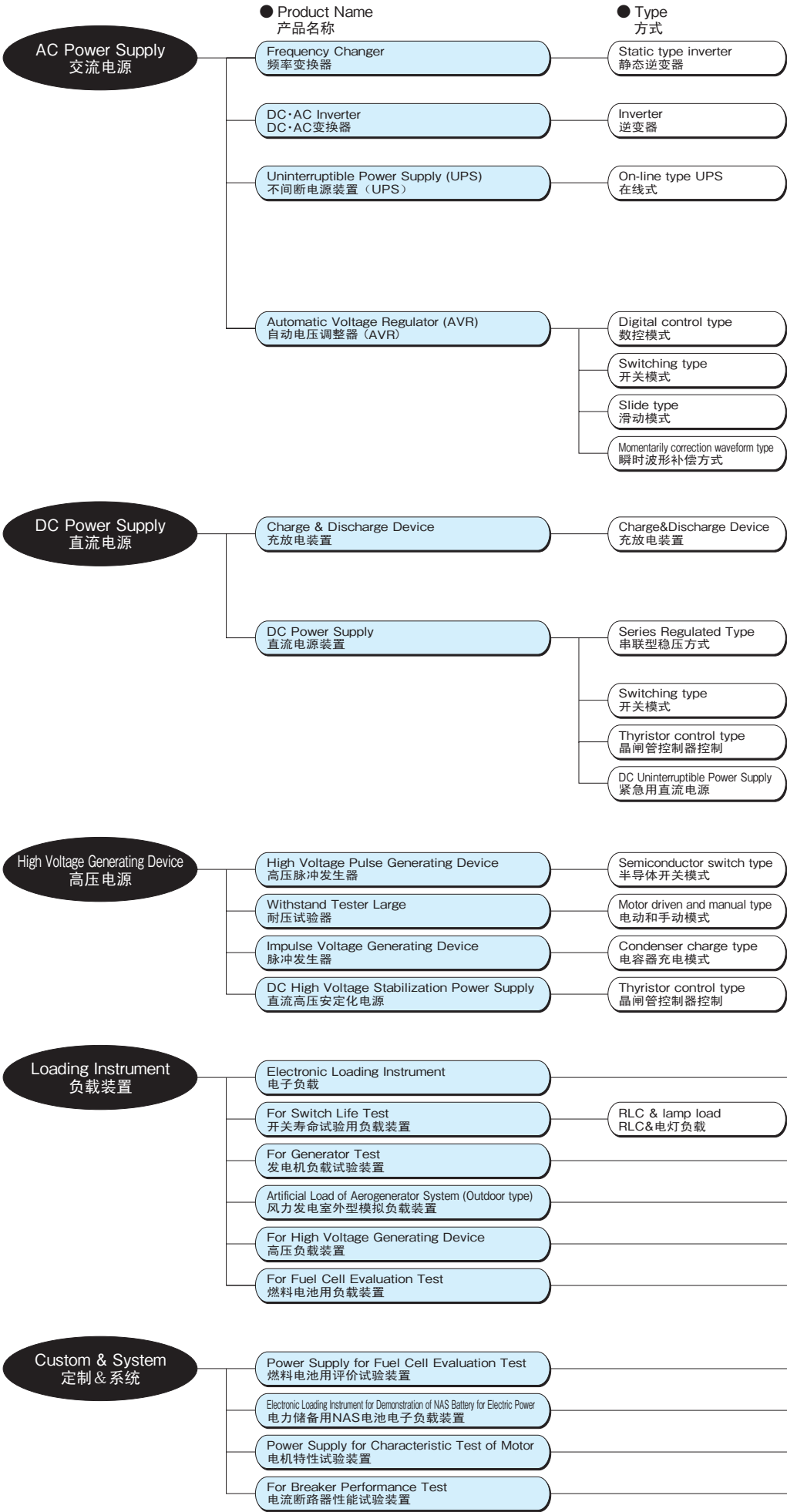
Automatic Voltage Regulator
自动电压调整器

Loading Instrument
负载装置

Custom & System
定制&系统

● Output Frequency 50/60Hz Type ● For Estimation of Motor ● Output Voltage Variable Type ● Output Frequency 400Hz Type ● DC·AC Inverter ● 50/60Hz输出型 ● 电动机试验用 ● 输出可调型 ● 输出400Hz型 ● DC·AC变换器	2
● Rack Mount Type ● Medium · Big Capacity Type ● Generator Corresponding Type ● 机柜型 ● 中 · 大容量型 ● 可接发电机型	16
● Battery Charge / Discharging Devices and Systems ● 电池充放电电源装置	30
● Series Regulated Type ● Switching System Large Capacity Type ● SCR System Type ● Emergency DC Power Supply ● 串联型稳压方式 ● 大容量开关电源 ● 晶闸管控制方式 ● 紧急用直流电源	38
● High Voltage Pulse Generating Device ● Destructive/Voltage Withstand Tester ● AC & DC Voltage Withstand Tester Large Capacity Type ● AC Voltage Withstand Tester Large Capacity Type ● Impulse Voltage Generating Device ● DC High Voltage Stabilization Power Supply ● DC High Voltage Generating Device ● 高压脉冲发生器 ● 破坏和耐压试验器 ● 交流直流耐压试验器（大型） ● 交流耐压试验器（大型） ● 脉冲电压发生装置 ● 直流高压稳定化电源 ● 直流电压发生装置	54
● Digital Control Type ● PWM Type ● Slide Type ● Momentarily Correction Waveform Type ● 数控型 ● 开关型 ● 滑动型 ● 瞬时波形补偿方式	70
● Electronic Loading Instrument ● For Switch Life Test ● AC Electric Contact Test Control System ● Integrated Switch Test System ● For Generator Test ● Water-cooling Resistance/Regenerative Loading Instrument for Engine Generator ● For Generator of Engine Test ● Artificial Load of Aerogenerator System (Outdoor type) ● Generator and Electric Motor Test Table ● For High Voltage Generating Device ● Electronic Loading Instrument for Fuel Cell Evaluation Test ● Electronic Loading Instrument for Battery Test ● 电子负载装置 ● 开关寿命试验用负载装置 ● 交流电触点试验用负载装置 ● 开关试验用综合设备系统 ● 发电机负载试验装置 ● 发电机 电动机试验台 / 再生负载装置 ● 发动机电动机负载装置 ● 风力发电室外型模拟负载 ● 发电机 发动机测试台 ● 高压负载装置 ● 燃料电池用电子负载装置 ● 蓄电池试验用电子负载装置	88
● Power Supply for Fuel Cell Evaluation Test ● Electronic Loading Instrument for Demonstration of NAS Battery for Electric Power Storage ● Power Regulator by Large-Capacity Thyristor ● Switching Supply for Accelerator ● Power Supply for Completed Air-conditioner Test ● Power Supply for Characteristic Test of Motor ● High Voltage Testing Device for IT Equipment and Safety Standard Test ● Power Supply for Breaker Performance Test ● Reactor Automatic Testing Device ● Space Station Equipment Evaluation System ● 燃料电池用评价试验装置 ● 电力储备用NAS电池实证试验用电子负载装置 ● 大容量晶闸管控制器电力调整器 ● 加速器用开关电源 ● 空调成品检查装置 ● 电机特性试验装置 ● 信息处理器安全标准试验用高电压试验装置 ● 电路断路器性能试验用装置 ● 电抗器自动试验装置 ● 宇宙空间站用机器评价试验系统	108

Selection Guide
选择指南



● Feature
特长

● Capacity/ Function
容量 / 机能

● model
型号

No noise and vibration, compact size and easy maintenance. 无噪音和振动，在节省占地空间和维修等方面具有明显优势。	Insolation 絶縁型	SYN	P2~11
Sine wave and supply to any load. 正弦波输出中不选择负载。	1,3 ϕ Middle · Large Capacity 1, 3 ϕ 中 · 大容量	YDA	P12~13
Absorb noise and surge, and output sine wave without any momentary interruption. 吸收杂音和电涌，不间断提供正弦波供电。	1 ϕ Small Capacity 1 ϕ 小容量	ALS	P16~19
	1,3 ϕ Middle · Large Capacity 1, 3 ϕ 中 · 大容量	SFT	P20~25
	Generator Corresponding type 发电机匹配型	SFT-D	P26~27
Quick response and maintenance free, Best for computers and precision equipment 响应速度迅速，免维修。最适用于计算机和精密机械	1,3 ϕ Middle · Large Capacity 1, 3 ϕ 中 · 大容量	TAC	P70~73
Quick response and high-precision universal type 响应速度快，精度高的通用型。	1,3 ϕ Small ~ Large Capacity 1, 3 ϕ 小 ~ 大容量	MTS	P74~77
Excellent cost performance 性价比优异。	1,3 ϕ Middle · Large Capacity 1, 3 ϕ 中 · 大容量	TAF	P78~83
Ultrafast response, high accuracy, low distortion rate and low noise perfect for test 超高速响应，高精度，低变形率，低噪音，最适用于试验。	1,3 ϕ Small · Middle Capacity 1, 3 ϕ 小 · 中容量	YHR	P84~85
Ultrahigh-speed and ultra-precision type 超高速和超高精度型	Small ~ Middle Capacity 小 ~ 中容量	TRD-T/AT	P30~33
High-efficiency regenerative function 带高效率再生功能。	Small ~ Large Capacity 小 ~ 大容量	YRD-I	P30~33
High accuracy and no noise 精度高，无噪声型。	Large Capacity 大容量	YTR	P38~43
High efficiency, compact, light, low-cost 因效率高，故小型，重量轻和价廉。配电板和模块与 OEM 匹配。	Small ~ Middle Capacity 小 ~ 中容量	ESP	P44
Stable and variable output voltage 可使输出电压稳定并使之可调。	Small ~ Large Capacity 小 ~ 大容量	YS-NRA/NR	P45~49
Built-in battery and fully automatic charging type 搭载蓄电池和全自动充电方式。	More than 10A ~ 400A 10A ~ 400A 以上	YNV	P50~51
High-speed rising time 高速启动。	Standard series Max 5kVA 标准系列 MAX5kVA	YHPG	P54~58
Many choices from AC/DC and special high voltage 交流和直流可升至特高压，范围非常宽。	Standard series Max 100kVA 标准系列 MAX100kVA	YHT/YHTD	P59~63
Easy polarity switching 极性切换容易。	Standard series Max 200kVA 标准系列 MAX200kVA	YHIG	P64
DC stabilization to 1-300KV 可使1 ~ 300KV范围的直流稳定。	1 ~ 300kVA	YHPS	P65~68
Dropper type with constant current and constant power mode 持有定电流和定功率模式的停经片型。	Middle ~ Large Capacity 中 ~ 大容量	DRO/YTR-KR	P88~89
Specification meeting Japanese domestic and foreign standards 国内外标准通用规格。	With Protection Function 带保护机能	RL	P90~95
Three-phase balance/imbalance test and 400Hz (optional) 除了三相平衡和不平衡测试外，还备有 400Hz 供用户选择。	Small ~ Large Capacity 小 ~ 大型用	3RL	P98~99
Designed to tolerate severe weather environmental condition 根据严峻的气象环境条件设计。	Small ~ Large Capacity 小 ~ 大容量	S3RZ	P102
Sudden load change and imbalance test can be operated remotely 可对负载突变和不平衡测试进行遥控。	With Protection Function 保护机能万全	YHHR	P104
Highly stable electronic load for evaluating industrial fuel cell 产业用燃料电池评价用高稳定电子负载。	Small ~ Large Capacity 小 ~ 大容量		P105
Evaluation test of high-power fuel cell is possible linearly 可进行线性高能燃料电池评价试验。			P108
Demonstration of NAS battery is by operates and saves with a PC 可用计算机对 NAS 电池验证试验进行操作和储存。			P109
Various test items are controlled with PC 可用电脑控制各种试验项目。			P110~111
Fast response, high accuracy and high efficiency 高速响应，高精度和高效率。			P115

FREQUENCY CHANGER/ DC · AC INVERTER

频率变换器 / DC · AC变换器

FREQUENCY CHANGER 频率变换器

- Output Frequency 50/60Hz Type2
50/60Hz 输出型
- For Estimation of Motor6
电动机试验用型
- Output Voltage Variable Type8
输出可调型
- Output Frequency 400Hz Type10
输出 400Hz 型

DC · AC INVERTER DC · AC变换器12

Output Frequency 50/60Hz Type

SYN series

SNY series is static type frequency converters.

It supplies AC power of highly stabilized constant voltage and constant frequency to the load.

IGBT (Insulated Gate Bipolar Transistor) and PWM high frequency switching which inverter part has do momentary waveform control so that it always outputs sine wave with so little distortion. It is a power-supply device for supporting a wide range of load such as electronic equipment, computers and rotating machines with increasing density.

SYN系列是静态型的频率变换器，可以向负载提供具有非常稳定的固定电压和定频率的交流功率。逆变器部分采用 IGBT (Insulated Gate Bipolar Transistor)，利用 PWM 高频开关，进行瞬时波形控制，从而保证输出电压波形一直保持为失真度小的正弦波。

本电源装置利用率非常高，其所具备的高性能，能够灵活地满足密度越来越高的电子器材以及计算机及旋转机等各种各样的负载的要求。



Control Method (AF type) 控制方法 (AF型)

PWM rectifier method utilizing the latest IGBT element is used in the input rectifier. PWM rectifier consisting of usual diode rectifier and switching element (IGBT) turns on and off the switching element with high frequency wave so that AC side current becomes sine wave with power factor 1.0.

PWM rectifier generates little harmonic and reactive current.

The inverter part is also high-frequency wave PWM utilizing the latest IGBT element and generates sine wave with extremely small filter.

In addition, it makes instantaneous voltage value to be sine wave by momentary wave control method.

So, output voltage becomes clean sine wave form, even if a load (nonlinear loading) contains a lot of distorted wave currents generated from PCs.

输入的整流器采用的是 PWM 整流方式，这种 PWM 整流方式使用了最新的 IGBT 元件。PWM 整流器对常用二极管整流器和开关元件 (IGBT) 进行组合，利用高频对开关元件进行开闭控制，以使交流端电流为功率因数 1.0 的正弦波。PWM 整流器具有高次谐波电流少，几乎没有无效功率的特点。逆变器部分也是同样使用了最新 IGBT 元件的高频 PWM，采用极小型的滤波器输出正弦波。而且输出电压的控制采用瞬时波形控制方式，从而可以使电压的瞬时值为正弦波。因此，即使像计算机那样含有很多谐波电流的负载 (非线性负载)，输出电压也能变成整齐的正弦波形。

Application 用途

- Examination, Inspection
检测, 监测
- Laboratory
研究室, 实验室电源
- Products line for quality control etc
生产线, 产品质量检测线 等

- Please tell us about a capacity selection for the load with large rush current (motor etc.).
对于起动电流较大的负载 (电机等)，其容量的选定请向我们咨询。

Note: External size/weight may be changed.
注) 外形尺寸和重量根据情况，会有所变更。

Feature 特长

- Output frequency selection mode 50Hz·60Hz(Constant)/45 ~ 65Hz (Variable)
输出频率选择模式 50Hz·60Hz (固定)/45 ~ 65Hz (可调)
- Momentary waveform control (to nonlinear loading sine wave)
瞬时波形控制 (对非线性负载正弦波)
- Insulation type
输入-输出之间绝缘
- Low noise, Power-saving
低噪音, 节能
- Small and lightweight type
小型轻量
- 100V/200V switchable (Input single phase 2 ~ 20KVA)
100V/200V 可调 (单相 2 ~ 20KVA)
- Voltage accuracy $\pm 3\%$ or less within 20% of the three-phase circuit output load imbalance rate (at the detection point) (Ex: U phase 100%, V phase 80%, W phase 90%)
三相输出型负载不平衡率在 20% 以内 (例如: U 相 100%, V 相 80%, W 相 90%) 时, 电压精度在 $\pm 3\%$ 以下 (在检测点)

Kind of main voltage 主要电压种类

Single phase 2 wire	单相二线式	100V	110V	115V	120V	220V	230V	240V
Single phase 3 wire	单相三线式	200/100V	210/105V	220/110V	230/115V	240/120V	400/200V	440/220V
Three phase 3 wire	三相三线式	200V	210V	220V	380V	400V	415V	440V
Three phase 4 wire	三相四线式	115/200V	120/208V	127/220V	220/380V	230/400V	240/415V	277/480V

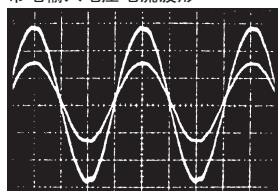
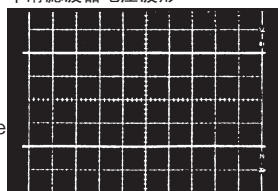
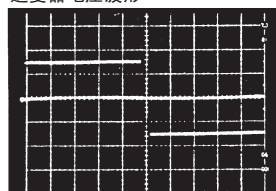
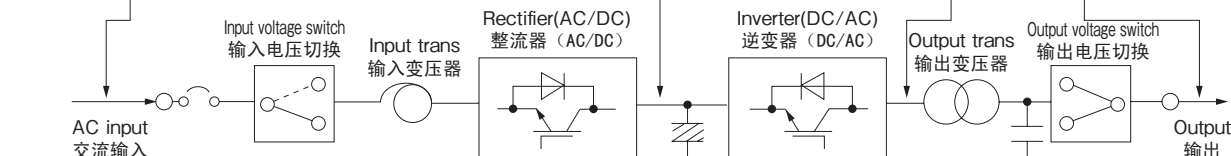
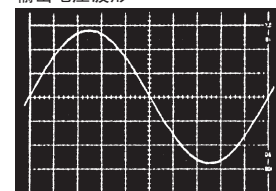
50/60Hz 输出型

SYN系列

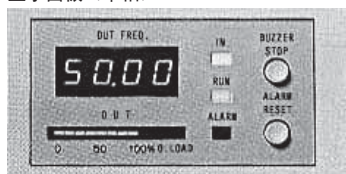


Block diagram of waveform (AF type) 电路结构波形 (AF型)

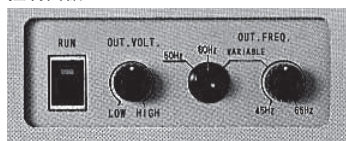
Circuitry 电路构成

Waveform of input voltage and input current
市电输入电压电流波形Input voltage
输入电压
Output voltage
输出电压Waveform of smooth filtered voltage
平滑滤波器电压波形Waveform of inverter voltage
逆变器电压波形Waveform of output voltage
输出电压波形

※ Only AF type has input and output voltage selector.
输入电压切换和输出电压切换只装备 AF 类型 (单相 2 ~ 20KVA)。

Indication panel (Single phase)
显示面板 (单相)

- | | |
|------------------------------------|--|
| Output frequency meter
输出频率表 | Displays output frequency in four digits.
输出频率用四位数字表示。 |
| Overload indicator light
超载显示灯 | Lights up on output overcurrent, and the device transfers to constant current operation.
输出过电流时, 灯点亮, 设备以恒定电流工作。 |
| Input indicator light
输入显示灯 | Lights up when the device switch is ON.
装置的输入开关开启 [ON] 时输入显示灯点亮。 |
| Operation indicator light
运行显示灯 | Lights up when the inverter is in operation.
逆变器运行时, 灯点亮。 |
| Warning light
告警显示灯 | Lights up when failure (and output overcurrent) occurs.
装置异常时, 告警显示灯点亮 (输出过电流时灯也点亮)。 |
| Buzzer stop switch
告警器停止开关 | Stops buzzer when failure occurs.
它是装置异常时发出告报的开关。 |
| Reset switch
复位开关 | Inverter may stop operating temporarily, when the device malfunctions or the load current is abnormal.
In that case, press the reset button after the problem is resolved to restart the operation.
装置异常时或者负载电流异常时, 逆变器有时会暂停运行。
这时, 异常排除后, 按下复位按钮的话, 则可以重启运行。 |

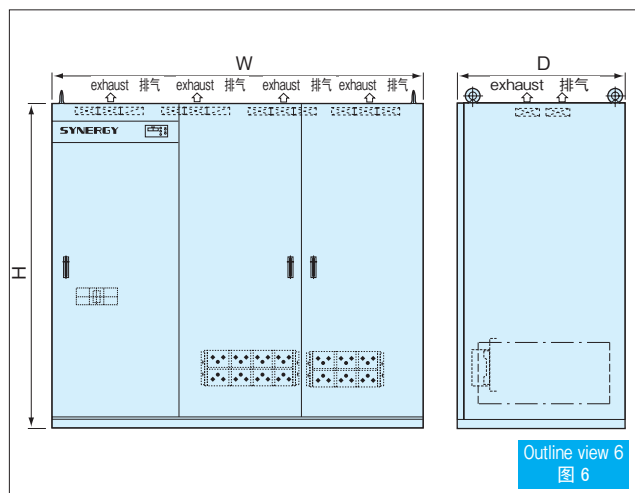
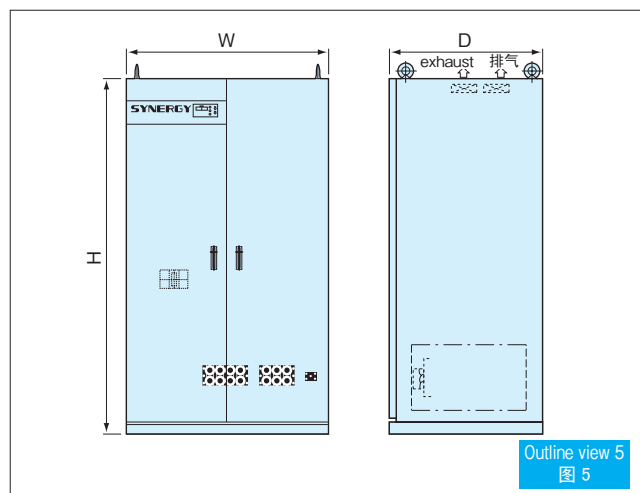
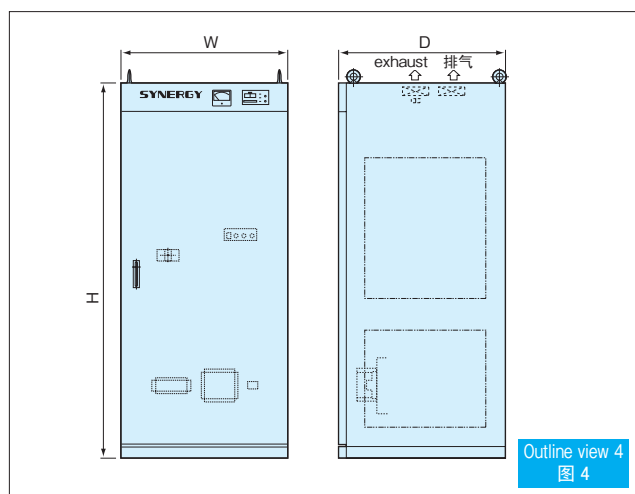
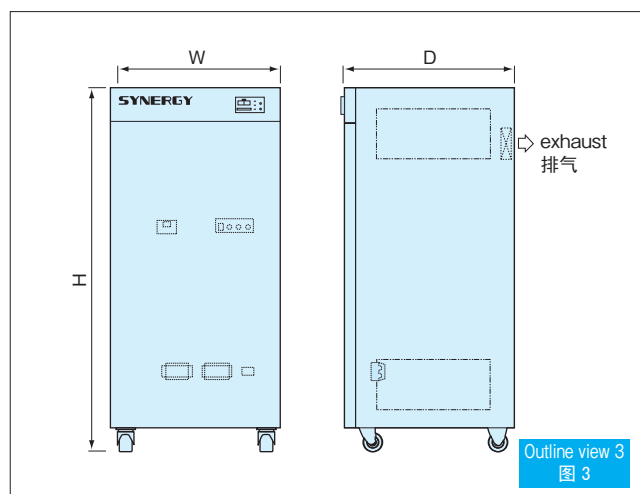
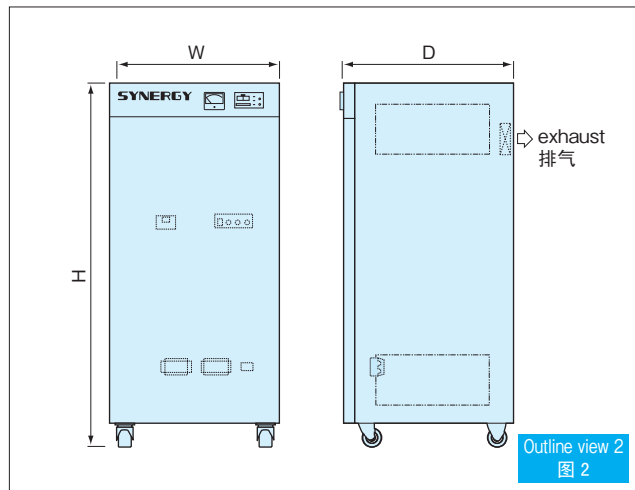
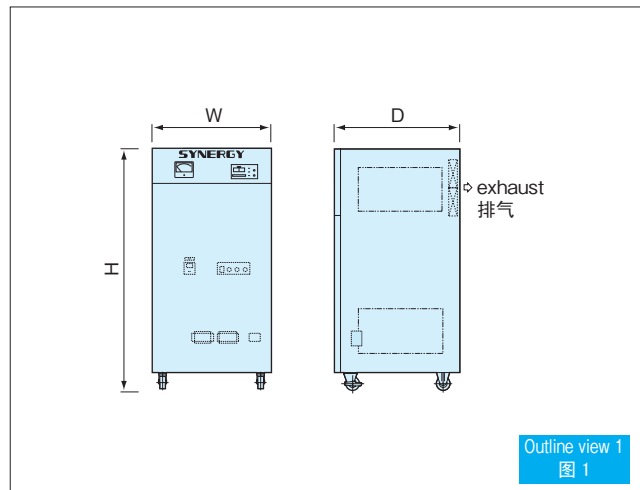
Operation panel
控制面板

- | | |
|---|--|
| Inverter operation switch
逆变器运行开关 | Turns on and off the inverter.
逆变器的运行和停止开关。 |
| Output voltage regulator
输出电压调节器 | Adjusts output voltage of the device in the range of $\pm 5\%$.
(Constant output voltage type/input rating)
可以在 $\pm 5\%$ 的范围内调节设备的输出电压。
(输出电压固定型 / 输入额定型) |
| Output frequency selector switch
输出频率切换器 | Output frequency selector switch of power supply. Select fixed or variable range.
它是装置的输出频率切换器。请选择固定波段或者可调波段。 |
| Output frequency regulator
输出频率调节器 | Changes frequency when the output frequency switcher is within variable range (45-65Hz).
输出频率切换器设置为可调波段 (45 ~ 65Hz) 时, 可以用该调节器改变频率。 |

Output Frequency 50/60Hz Type

SYN series

Outline view 外观图



Note: Three-phase type comes with a voltmeter/ampere meter as standard equipment (Installed inside the door).

Single-phase output type has a voltmeter as standard equipment (Installed on panel side).

注) 三相输出型标准配置电压表和电流表 (安装在门内)。单相输出型标准配置电压表 (安装在面板上)

50/60Hz 输出型

SYN系列

Specifications 规格

Insulation Type 绝缘型

Model 型号		SYN													
		2AFX	3AFX	5AFX	7.5AFX	10AFX	15AFX	20AFX	5KHX	7.5KHX	10KHX	15KHX	20KHX	30KHX	50KHX
Output 输出	Capacity(KVA) 容量(KVA)	2	3	5	7.5	10	15	20	5	7.5	10	15	20	30	50
	Phase 相位	Single Phase 2 Wire 单相二线													
	Voltage 电压	100/200V or 110/220V or 115/230 or 120/240V or another 100V/200 V或110/220V或115/230V或120/240V或其它													
	Voltage Accuracy 电压精度	less than ± 1.0% 小于± 1.0%													
	Transient Response 瞬态响应	less than ± 5.0% 小于± 5.0%													
	Response Time 响应时间	less than 1mSec. 小于1毫秒													
	Adjust Range 调整范围	± 5.0%													
	Frequency 频率	50/60 / 45 ~ 65Hz													
	Frequency Accuracy 频率精度	less than ± 0.01Hz/ ± 0.1Hz 低于± 0.01Hz/ ± 0.1Hz													
	Wave Distortion 波形失真	less than 2%(leneral load) 5%(Rectifier load) 低于2%（线性负载）5%（整流器负载）													
	Over Current Protection 过电流保护	droop over 110% 降低超过110%													
	Crest Factor 峰值因数	300%													
	Power Factor 功率因数	1 ~ 0.7													
Input 输入	Capacity(KVA) 容量(KVA)	2.2	3.3	5.5	8.3	11	16.5	22	5.5	8.3	11	16.5	22	33	55
	Phase 相位	Single Phase 2 Wire 单相二线							Three Phase 3 Wire 三相三线						
	Voltage 电压	100/200V or 110/220V or 115/230 or 120/240V or another 100/200 V或110/220V或115/230V或120/240V或其它							200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它						
	Voltage Range 电压范围	± 10%													
	Frequency 频率	47 ~ 63Hz													

Model 型号	SYN													
	5SHX	7.5SHX	10SHX	15SHX	20SHX	30SHX	50SHX	75SHX	100SHX	150SHX	200SHX	250SHX	300SHX	500SHX
Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	50	75	100	150	200	250	300	500
Phase 相位	Three Phase 3 Wire 三相三线													
Voltage 电压	200 or 380 or 400 or 415V or another 200 V或380V或400V或415V或其它													
Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 小于 $\pm 1.0\%$													
Transient Response 瞬态响应	less than $\pm 5.0\%$ 小于 $\pm 5.0\%$													
Response Time 响应时间	less than 1mSec. 小于1毫秒													
Adjust Range 调整范围	$\pm 5.0\%$													
Frequency 频率	50/60 / 45 ~ 65Hz													
Frequency Accuracy 频率精度	less than $\pm 0.01\text{Hz}$ / $\pm 0.1\text{Hz}$ 低于 $\pm 0.01\text{Hz}$ / $\pm 0.1\text{Hz}$													
Wave Distortion 波形失真	less than 2%(linear load) 5%(Rectifier load) 低于2% (线性负载) 5% (整流器负载)													
Over Current Protection 过电流保护	droop over 110% 降低超过110%													
Crest Factor 峰值因数	300%													
Power Factor 功率因数	1 ~ 0.7													
Capacity(KVA) 容量(KVA)	5.5	8.3	11	16.5	22	33	55	83	110	165	220	275	330	550
Phase 相位	Three Phase 3 Wire 三相三线													
Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它													
Voltage Range 电压范围	$\pm 10\%$													
Frequency 频率	47 ~ 63Hz													

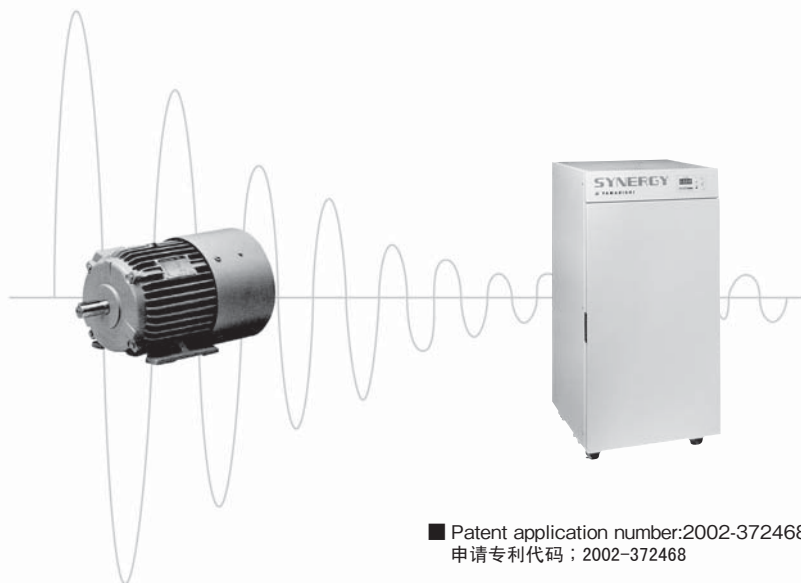
For Estimation of Motor

SYN/M series

SYN/M-Series is a power supply, which can startup a motor as same rated capacity. The device conducts examinations in the same condition as commercial power because it generates genuine sine wave and has no V/F control function.

SNY/M系列能为启动电动机提供额定容量的电源。

波形是标准的正弦波，由于不具有V/F控制功能，所以可以在与商用电源相同的条件下进行试验。



Application 用途

- Motor drive test
电动机驱动试验
- For devices that generate rush current
产生冲击电流的装置用

Feature 特长

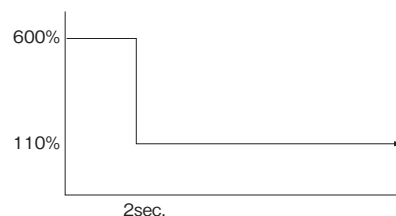
- Drives a motor by a model with the same capacity as the motor's rated capacity.
可以驱动与电动机额定容量相同容量型号的电机。
- Conducts examination in the same condition as commercial power.
可以在与商用电源相同条件下进行试验
- Sine wave
正弦波

Function 机能

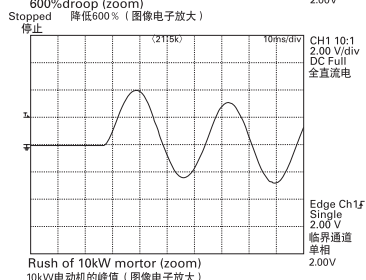
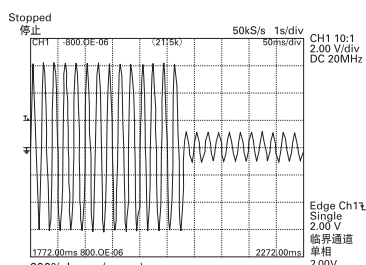
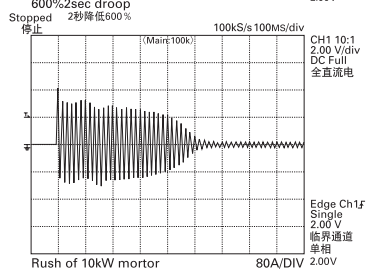
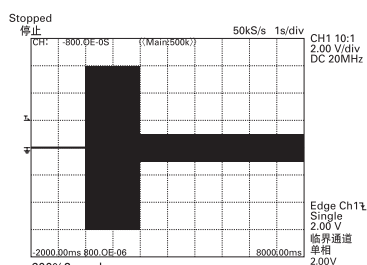
- It has 600% capacity to rating capacity (2 seconds). If 600% overcurrent continues for 2 seconds or more, it is restricted to 110% of rated capacity. Also, it has a protection function corresponding to random over current.

对额定容量具有 600% 容量 (2sec)。600% 的过电流持续 2sec 以上时，则限制为额定的 110%。此外，还具有对随机过电流的保护功能。

Load factor
负载率



Rush-current wave form 峰值波形



电动机试验用频率变换器

SYN/M系列

Specifications 规格

For estimation of motor 电动机试验用

Model 型号	SYN					
	2KH/MX	3KH/MX	5KH/MX	7.5KH/MX	10KH/MX	15KH/MX
Capacity(KVA) 容量 (KVA)	2	3	5	7.5	10	15
Phase 相位	Single Phase 2 Wire 单相二线					
Voltage 电压	100/200V or 110/220V or 115/230V or 120/240V or another 100/200V 或 110/220V 或 115/230V 或 120/240V 或其它					
Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 小于 $\pm 1.0\%$					
Transient Response 瞬态响应	less than $\pm 5.0\%$ 小于 $\pm 5.0\%$					
Response Time 响应速度	less than 1msec. 小于 1 毫秒					
Adjust Range 调整范围	$\pm 5.0\%$					
Frequency 频率	50/60/45 ~ 65Hz					
Frequency Accuracy 频率精度	less than $\pm 0.01 / \pm 0.1\text{Hz}$ 低于 $\pm 0.01 / \pm 0.1\text{Hz}$					
Wave Distortion 波形失真	less than 2% (linear load) 5% (Rectifier load) 低于 2% (线性负载) 5% (整流负载)					
Over Current Protector 过电流保护	droop over 600% within 2sec. after 2sec droop over 110% 降低超过 600%, 2 秒之后降低超过 110%					
Crest Factor 峰值因数	300%					
Power Factor 功率因数	1 ~ 0.7					
Capacity(KVA) 容量 (KVA)	2.2	3.3	5.5	8.25	11	16.5
Phase 相位	Three Phase 3 wire 三相三线					
Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它					
Voltage Range 电压范围	$\pm 10\%$					
Frequency 频率	47 ~ 63Hz					

Model 型号	SYN						
	5SH/MX	7.5SH/MX	10SH/MX	15SH/MX	20SH/MX	25SH/MX	30SH/MX
Capacity(KVA) 容量 (KVA)	5	7.5	10	15	20	25	30
Phase 相位	Three Phase 3 wire 三相三线						
Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它						
Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 小于 $\pm 1.0\%$						
Transient Response 瞬态响应	less than $\pm 5.0\%$ 小于 $\pm 5.0\%$						
Response Time 响应速度	less than 1msec. 小于 1 毫秒						
Adjust Range 调整范围	$\pm 5.0\%$						
Frequency 频率	50/60/45 ~ 65Hz						
Frequency Accuracy 频率精度	less than $\pm 0.01 / \pm 0.1\text{Hz}$ 低于 $\pm 0.01 / \pm 0.1\text{Hz}$						
Wave Distortion 波形失真	less than 2% (linear load) 5% (Rectifier load) 低于 2% (线性负载) 5% (整流负载)						
Over Current Protector 过电流保护	droop over 600% within 2sec. after 2sec droop over 110% 降低超过 600%, 2 秒之后降低超过 110%						
Crest Factor 峰值因数	300%						
Power Factor 功率因数	1 ~ 0.7						
Capacity(KVA) 容量 (KVA)	5.5	8.25	11	16.7	22	27.5	33
Phase 相位	Three Phase 3 wire 三相三线						
Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它						
Voltage Range 电压范围	$\pm 10\%$						
Frequency 频率	47 ~ 63Hz						

Output Voltage Variable Type

SYN/R series

SYN/R series are very useful and cost-effective for power for examinations, because output voltage can be changed in a wide range with output voltage unchanged and they have variable frequency function.

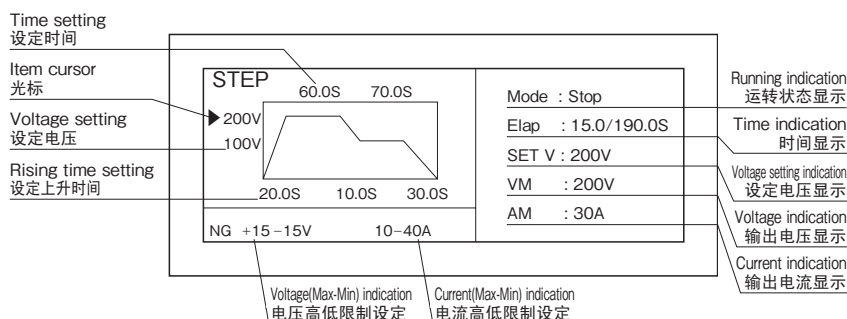
SYN / R系列由于在定电压下可以在比较宽泛的范围内改变输出电压，所以除了利用频率可调功能外，作为试验用电源使用也非常方便，性价比非常高。



Liquid crystal display panel (Option) 液晶显示板(选项)

- Various controls can be set and information can be displayed on the liquid crystal screen of the panel.
可以设定各种控制，盘面液晶板可以显示该信息。

Liquid crystal display panel 液晶显示板

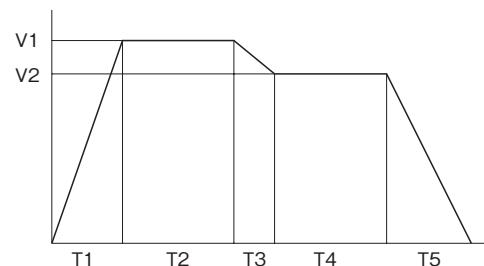


Specifications (ex.)

Voltage(0 ~ 240V) / Time(0 ~ 99.9sec) / 5P can be set with the microcomputer keyboard of the panel.(Possible to increase the number of points and seconds)

规格(例如)

可以利用盘面的微机钥匙配电板, 设定电压 (0 ~ 240V) 2P, T (0 ~ 99.9sec) 5P。(可增加 Point 数和 Sec)



Option 选项

- Built-in GP-IB or RS-232C adaptor (voltage variable)
内置 GP-IB 适配器 (电压可调)
- Voltage changed by external signal (DC4 ~ 20mA etc.)
可通过外部信号 (DC4 ~ 20mA 等) 改变电压

输出可调型频率变换器

SYN/R系列

Specifications 规格

Variable Type 输出可调型

Model 型号		SYN													
		2AFRX	3AFRX	5AFRX	7.5AFRX	10AFRX	15AFRX	20AFRX	5KHRX	7.5KHRX	10KHRX	15KHRX	20KHRX	30KHRX	50KHRX
Output 输出	Capacity(KVA) 容量(KVA)	2	3	5	7.5	10	15	20	5	7.5	10	15	20	30	50
	Phase 相位	Single Phase 2 Wire 单相二线													
	Voltage 电压	10 ~ 120/20 ~ 240V or 11 ~ 132/22 ~ 264V or 12 ~ 138/23 ~ 276 or 12 ~ 144/24 ~ 288V or another 10~120/20~240 V或11~132/22~264V或12~138/23~276V或12~144/24~288V或其它													
	Voltage Accuracy 电压精度	less than ± 1.0% 小于± 1.0%													
	Transient Response 瞬态响应	less than ± 5.0% 小于± 5.0%													
	Response Time 响应时间	less than 1mSec. 小于1毫秒													
	Adjust Range 调整范围	± 5.0%													
	Frequency 频率	50/60 / 45 ~ 65Hz													
	Frequency Accuracy 频率精度	less than ± 0.01 / ± 0.1Hz 低于± 0.01Hz/± 0.1Hz													
	Wave Distortion 波形失真	less than 2%(linear load) 5%(Rectifier load) 低于2 %（线性负载）5 %（整流器负载）													
	Over Current Protection 过电流保护	droop over 110% 降低超过110%													
	Crest Factor 峰值因数	300%													
Power Factor 功率因数	1 ~ 0.7														
Input 输入	Capacity(KVA) 容量(KVA)	2.2	3.3	5.5	8.3	11	16.5	22	5.5	8.3	11	16.5	22	33	55
	Phase 相位	Single Phase 2 Wire 单相二线							Three Phase 3 Wire 三相三线						
	Voltage 电压	100/200V or 110/220V or 115/230 or 120/240V or another 100/200 V或110/220V或115/230V或120/240V或其它							200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它						
	Voltage Range 电压范围	± 10%													
	Frequency 频率	47 ~ 63Hz													

Model 型号	SYN													
	5SHRX	7.5SHRX	10SHRX	15SHRX	20SHRX	30SHRX	50SHRX	75SHRX	100SHRX	150SHRX	200SHRX	250SHRX	300SHRX	500SHRX
Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	50	75	100	150	200	250	300	500
Phase 相位	Three Phase 3 Wire 三相三线													
Voltage 电压	20 ~ 240 or 38 ~ 456 or 40 ~ 480 or 42 ~ 498V or another 20~240或38~456或40~480或42~498V或其它													
Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 小于 $\pm 1.0\%$													
Transient Response 瞬态响应	less than $\pm 5.0\%$ 小于 $\pm 5.0\%$													
Response Time 响应时间	less than 1mSec. 小于1毫秒													
Adjust Range 调整范围	$\pm 5.0\%$													
Frequency 频率	50/60 / 45 ~ 65Hz													
Frequency Accuracy 频率精度	less than $\pm 0.01 / \pm 0.1\text{Hz}$ 低于 $\pm 0.01\text{Hz} / \pm 0.1\text{Hz}$													
Wave Distortion 波形失真	less than 2%(linear load) 5%(Rectifier load) 低于2% (线性负载) 5% (整流器负载)													
Over Current Protection 过电流保护	droop over 110% 降低超过110%													
Crest Factor 峰值因数	300%													
Power Factor 功率因数	1 ~ 0.7													
Capacity(KVA) 容量(KVA)	5.5	8.3	11	16.5	22	33	55	83	110	165	220	275	330	550
Phase 相位	Three Phase 3 Wire 三相三线													
Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它													
Voltage Range 电压范围	$\pm 10\%$													
Frequency 频率	47 ~ 63Hz													

Output Frequency 400Hz Type

SYN/HF series

The SYN/400Hz series are used mainly for power supply of testing airplanes and vessels equipment.

It is a power supply essential for suppliers who do a test and a development of various types of equipments and parts.

In addition, its long usage history and reliability are highly evaluated especially in the maintenance areas of the aircraft industry and has been adopted widely by government agencies and private companies.

SYN / 400Hz系列主要作为航空和船舶机器的试验用电源使用，

它是各种机器和零部件制造厂家在开发和试验中不可缺少的电源。

此外，该电源在飞机维修领域经历长期的考验，其可靠性得到很高的评价，无论是官方还是民间企业都广泛采用。



Kind of main voltage 主要电压种类

Single phase 2 wire 单相二线模式 100V 110V 115V 120V 220V 230V 240V

Three phase 3 wire 三相三线模式 200V 210V 220V 380V 400V 415V 440V

Three phase 4 wire 三相四线模式 115/200V 120/208V 127/220V 220/380V 230/400V 240/415V 277/480V

※ 1 The voltage in the specification column describes one of examples. Please select a necessary input voltage and voltage.
规格栏的电压只是一例。请选择必要的输入电压和输出电压。

※ 2 As an option, the frequency variable of 360 to 440Hz is available (accuracy $\pm 0.1\text{Hz}$).
频率可在 360 ~ 440Hz 范围内选择 (精度 $\pm 0.1\text{Hz}$)。

※ 3 We manufacture input 400 Hz as an option (7.5kVA or less for single phase and 20kVA or less for three-phase circuit).
根据需要我们还可提供输入频率为 400Hz 的产品 (单相在 7.5kVA 以下，三相在 20kVA 以下)。

● Manufacture is possible as motor load.(3 phase 5 ~ 15KVA)
还可制作电机负载用的产品。(3 ϕ 5 ~ 15kVA)



输出400Hz型频率变换器

SYN/HF系列

Specifications 规格

400Hz Type 400Hz 型

Model 型号		SYN													
		2AF/HFX	3AF/HFX	5AF/HFX	7.5AF/HFX	10AF/HFX	15AF/HFX	20AF/HFX	5KH/HFX	7.5KH/HFX	10KH/HFX	15KH/HFX	20KH/HFX	30KH/HFX	50KH/HFX
Output 输出	Capacity(KVA) 容量(KVA)	2	3	5	7.5	10	15	20	5	7.5	10	15	20	30	50
	Phase 相位	Single Phase 2 Wire 单相二线													
	Voltage 电压	100/200V or 110/220V or 115/230 or 120/240V or another 100V/200 V或110/220V或115/230V或120/240V或其它													
	Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 小于 $\pm 1.0\%$													
	Transient Response 瞬态响应	less than $\pm 5.0\%$ 小于 $\pm 5.0\%$													
	Response Time 响应时间	less than 1mSec. 小于1毫秒													
	Adjust Range 调整范围	$\pm 5.0\%$													
	Frequency 频率	400Hz													
	Frequency Accuracy 频率精度	less than $\pm 0.01 / \pm 0.1\text{Hz}$ 低于 $\pm 0.01\text{Hz} / \pm 0.1\text{Hz}$													
	Wave Distortion 波形失真	less than 2%(linear load) 5%(Rectifier load) 低于2%（线性负载）5%（整流器负载）													
	Over Current Protection 过电流保护	droop over 110% 降低超过110%													
	Crest Factor 峰值因数	300%													
Power Factor 功率因数	1 ~ 0.7														
Input 输入	Capacity(KVA) 容量(KVA)	2.2	3.3	5.5	8.3	11	16.5	22	5.5	8.3	11	16.5	22	33	55
	Phase 相位	Single Phase 2 Wire 单相二线							Three Phase 3 Wire 三相三线						
	Voltage 电压	100/200V or 110/220V or 115/230 or 120/240V or another 100/200 V或110/220V或115/230V或120/240V或其它							200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它						
	Voltage Range 电压范围	$\pm 10\%$													
	Frequency 频率	47 ~ 63Hz													

Model 型号		SYN													
		5SH/HFX	7.5SH/HFX	10SH/HFX	15SH/HFX	20SH/HFX	30SH/HFX	50SH/HFX	75SH/HFX	100SH/HFX	150SH/HFX	200SH/HFX	250SH/HFX	300SH/HFX	500SH/HFX
O u t p u t 输 出	Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	50	75	100	150	200	250	300	500
	Phase 相位	Three Phase 3 Wire 三相三线													
	Voltage 电压	200 or 380 or 400 or 415V or another 200 V或380V或400V或415V或其它													
	Voltage Accuracy 电压精度	less than ± 1.0% 小于± 1.0%													
	Transient Response 瞬态响应	less than ± 5.0% 小于± 5.0%													
	Response Time 响应时间	less than 1mSec. 小于1毫秒													
	Adjust Range 调整范围	± 5.0%													
	Frequency 频率	400Hz													
	Frequency Accuracy 频率精度	less than ± 0.01 / ± 0.1Hz 低于± 0.01Hz/± 0.1Hz													
	Wave Distortion 波形失真	less than 2%(lenear load) 5%(Rectifier load) 低于2 %（线性负载）5 %（整流器负载）													
	Over Current Protection 过电流保护	droop over 110% 降低超过110%													
	Crest Factor 峰值因数	300%													
Power Factor 功率因数	1 ~ 0.7														
I n p u t 输 入	Capacity(KVA) 容量(KVA)	5.5	8.3	11	16.5	22	33	55	83	110	165	220	275	330	550
	Phase 相位	Three Phase 3 Wire 三相三线													
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它													
	Voltage Range 电压范围	± 10%													
	Frequency 频率	47 ~ 63Hz													

DC·AC INVERTER

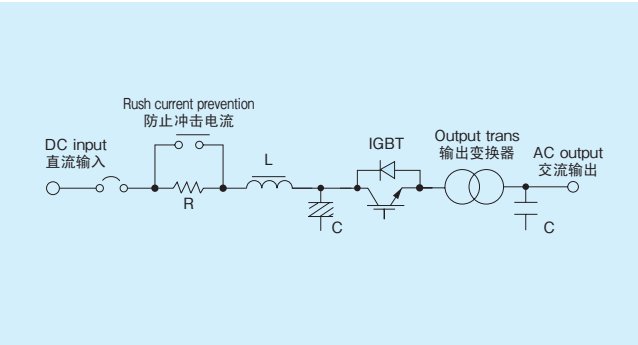
YDA series

YDA series has extremely fast response speed and supplies AC power of highly stabilized constant voltage and constant frequency to the load.
Output voltage becomes clean sine wave form, even if nonlinear loading.

利用PWM整流方式输出质量很高的额定电压，额定频率，保持很快的响应速度。
即使接非线性负载，也保持为失真小的正弦波。



Block diagram 结构图



Specifications 规格

Output Single Phase 100V system 输出 单相 100V 系统

Model 型号		YDA											
		1-2KX	1-3KX	1-5KX	2-2KX	2-3KX	2-5KX	2-7.5KX	2-10K	2-15KX	2-20KX	2-30KX	2-50KX
O u t p u t 输出	Capacity(KVA) 容量 (KVA)	2	3	5	2	3	5	7.5	10	15	20	30	50
	Phase 相位	Single Phase 2 Wire 单相二线											
	Voltage 电压	100V or 110V or 115V or 120V or another 100V 或 110V 或 115V 或 120V 或其它											
	Voltage Accuracy 电压精度	less than ± 1.0% 小于 ±1.0%											
	Response Tlme 响应速度	less than 5msec. 小于 5 毫秒											
	Frequency 频率	50 · 60/45 ~ 65Hz											
	Frequency Accuracy 频率精度	less than ± 0.01/ ± 0.1Hz 低于 ±0. 01/±0. 1Hz											
	Wave Distortion 波形失真	less than 2% (lenear load) 5% (Rectifier load) 低于 2% (线性负载) 5% (整流负载)											
D C i n p u t 直流输入	Voltage 电压	DC100V			DC200V								
	Voltage Range 电压范围	90 ~ 140%											

DC·AC变换器

YDA系列

Specifications 规格

Output Single Phase 200V system 输出 单相 200V 系统

Model 型号		YDA											
		1-2KHX	1-3KHX	1-5KHX	2-2KHX	2-3KHX	2-5KHX	2-7.5KHX	2-10KHX	2-15KHX	2-20KHX	2-30KHX	2-50KHX
O u t p u t 输 出	Capacity(KVA) 容量 (KVA)	2	3	5	2	3	5	7.5	10	15	20	30	50
	Phase 相位	Single Phase 2 Wire 单相二线											
	Voltage 电压	200V or 220V or 230V or 240V or another 200V 或 220V 或 230V 或 240V 或其它											
	Voltage Accuracy 电压精度	less than ± 1.0% 小于 ±1. 0%											
	Response Time 响应速度	less than 5msec. 小于 5 毫秒											
	Frequency 频率	50 · 60/45 ~ 65Hz											
	Frequency Accuracy 频率精度	less than ± 0.01/ ± 0.1Hz 低于 ±0. 01/±0. 1Hz											
	Wave Distortion 波形失真	less than 2% (linear load) 5% (Rectifier load) 低于 2% (线性负载) 5% (整流负载)											
D C i n p u t 直 流 输 入	Voltage 电压	DC100V			DC200V								
	Voltage Range 电压范围	90 ~ 140%											

Output Three Phase system 输出 三相

Model 型号		YDA								
		5SHX	7.5SHX	10SHX	15SHX	20SHX	30SHX	50SHX	75SHX	100SHX
Output 输出	Capacity(KVA) 容量 (KVA)	5	7.5	10	15	20	30	50	75	100
	Phase 相位	Three Phase 3 wire 三相三线								
	Voltage 电压	200 or 380V or 400V or 451V or another 200V 或 380V 或 400V 或 451V 或其它								
	Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 小于 $\pm 1.0\%$								
	Response Time 响应速度	less than 5msec. 小于 5 毫秒								
	Frequency 频率	50 · 60/45 ~ 65Hz								
	Frequency Accuracy 频率精度	less than $\pm 0.01 / \pm 0.1\text{Hz}$ 低于 $\pm 0.01 / \pm 0.1\text{Hz}$								
	Wave Distortion 波形失真	less than 2% (linear load) 5% (Rectifier load) 低于 2% (线性负载) 5% (整流负载)								
DC Input 直流输入	Voltage 电压	DC200V								
	Voltage Range 电压范围	90 ~ 140%								

UNINTERRUPTIBLE POWER SUPPLY

不间断电源装置

- Rack Mount Type16
机柜型
- Medium · Big Capacity Type20
中 · 大容量型
- Generator Corresponding Type26
可接发电机型

Rack Mount Type On-line mini UPS

ALS-RM series

A switch that can select the output voltage is set up in the front panel.

The best output voltage corresponding to an environment and usage can be selected by a button operation.

可直接使用前面板的按键来选择与设定适用于现场环境的输出电压。

■ KRM Type KRM模式 100/110/115/120V

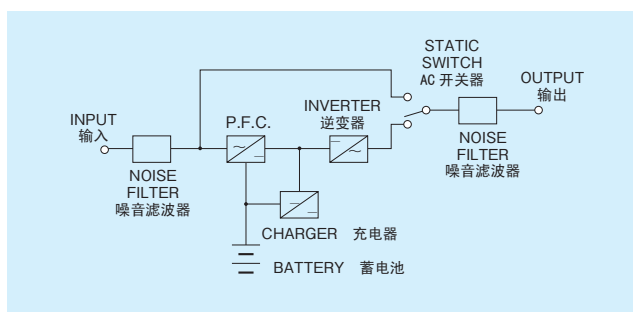
■ KHRM Type KHRM模式 200/220/230/240V



Feature 特长

- It uses the constant inverter feeding power method so that input is switched to a battery without interruption when power supply trouble happens. As a result, steady electric power can be always supplied.
在供电系统发生故障时，UPS 采用在线的方式，马上切换成电池供电，持续供应稳定及高品质的电源。
- A built-in high-efficiency converter eliminates noises such as harmonic and provides clean electric power.
内建高效率变流器，可过滤谐波与噪音并提供更高品质的电力。
- Green mode is adopted; therefore, it is switched to constant commercial feeding power upon low load condition. Low cost performance is achieved in this method.
(※ This function can be canceled from the front panel.)
在低载时，UPS 会自动切换成省电模式来降低电力消耗，可更有效节省电费。
(可在前面板取消此功能设定)
- The cooling fan is a quiet type adjusting the speed according to the feeding method. It is a low noise design easy for environment.
采用低噪音设计的静音型散热风扇，并可依据不同的供电量来调整风扇的转速。
- Exchange of batteries can be conducted more easily from the front side by the hot-swap method and it can be done while operating.
电池组采用热插拔设计，可以在机器运转时直接拔除并进行更换。
- Self-diagnosis function to inform residual battery level. Battery level can be confirmed beforehand.
内建电池自我诊断功能，可事先确定蓄电池的可供电量。
- Information can be exchanged with the interface card (optional).
可使用选配的通讯界面卡做资料传输。

Block Diagram 结构图



The ALS-RM series always outputs from the inverter even in normal condition and stabilizes the voltage and the frequency through a constant inverter feeding power method. The PFC is installed on the input side to defend the power supply environment.

ALS-RM 系列采用在线方式，即使在市电正常时也可一直从逆变器进行输出，并使电压和频率稳定。输入端搭载了 PFC，提供高品质的电源。

机柜型在线式不间断电源装置

ALS-RM系列

Specifications 规格

Model 型号		ALS						
		1.5KRM	1.5KHRM	2KRM	2KHRM	3KRM	3KHRM	5KHRM
Output 输出	UPS Type 供电方式	On-line Uninterruptible Power Supply 在线式供电方式						
	Capacity (KVA) 容量 (kVA)	1.5 (1050W)		2 (1400W)		3 (2100W)		5 (3500W)
	Phase 相位	Single Phase 2 wire 单相二线						
	Voltage 电压	100V	200V	100V	200V	100V	200V	200V
		110V	220V	110V	220V	110V	220V	220V
		115V	230V	115V	230V	115V	230V	230V
		120V	240V	120V	240V	120V	240V	240V
	Voltage Accuracy 电压精度	less than $\pm 3.0\%$ 小于 $\pm 3\%$						
	Transient Response 瞬态响应	less than $\pm 8.0\%$ 小于 $\pm 8\%$						
	Frequency 频率	50/60Hz auto tracking 50/60Hz 自动切换						
	Frequency Accuracy 频率精度	less than $\pm 0.3\%$ 小于 $\pm 0.3\%$						
	Wave form 波形	pure sine wave 正弦波						
	Wave Distortion 波形失真	less than 3.5% (lener load) 小于 3.5% (在线性负载下额定运行时)						
Over Current Protection 过电流保护	turn to bypass automatically 自动转移到旁路							
Transfer Time 转换时间	Zero for Line or Reverse / 4mSec. Transfer to Bypass or Reverse 0 (逆变器供电⇌蓄电池供电) / 小于 4mSec. (逆变器⇌旁路)							
Crest Factor 峰值因数	300%							
Power Factor 功率因数	0.7							
Backup Time 备用时间	6min 6 分钟		8min 8 分钟		6min 6 分钟		12min 12 分钟	
Input 输入	Phase 相位	Single Phase 2 wire 单相二线						
	Voltage 电压	85 ~ 135V	170 ~ 265V	85 ~ 135V	170 ~ 265V	85 ~ 135V	170 ~ 265V	170 ~ 265V
	Equipment efficiency 整机效率	more than 87% 87% 以上		more than 90% 90% 以上			more than 88% 88% 以上	
Mechanical 机器	Frequency 频率	50 / 60Hz						
	Dimension W 尺寸 宽 (mm)	426						
	D 深 (mm)	500						
	H 高 (mm)	88 (2U)		176 (4U) Inverter Unit(2U) + Battery Module(2U) 逆变器单元 (2U) + 蓄电池模块 (2U)			352 (8U) Inverter Unit (4U) +Battery Module (2U) × 2 逆变器单元 (2U) + 蓄电池模块 (2U) × 2	
	Weight (kg) 重量 (kg)	23.2		44.4		44.6		90

Expected battery life: 5 years 蓄电池预期寿命五年

In the by-pass transmission mode, the input voltage is output. 在旁路模式时, 输入电源将不经过 UPS 直接输出。

* Power failure amends time may change by the expected value.

停电补偿时间为预期值, 有时会发生变动。

Attention!
注意!

The ALS-RM series is not suitable for backup power supply of the following loads.
Please do not use it for the purpose, since it can cause damages.

● Inductive load ● Equipment with large inrush current ● Equipment that generates noise and harmonics
Example: Motors, transformers, plants, laser printers, and heaters, etc.

ALS-RM 系列不适用于以下负载的供电。如果使用的话, 会引起故障。请不要使用。

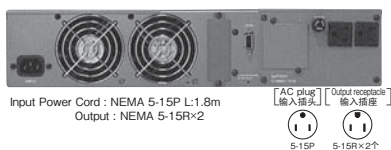
● 感应负载 ● 冲击电流较大的机器 ● 产生噪音和高次谐波的机器 例如: 电机类, 变压器, 成套设备, 激光打印机, 加热器等



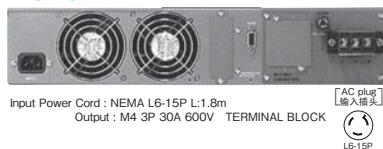
ALS-1.5KRM
ALS-2KRM
ALS-3KRM

External connection terminal 外部连接端子台

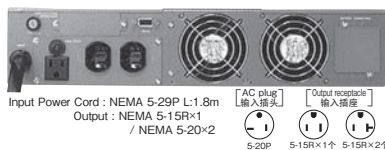
ALS-1.5KRM



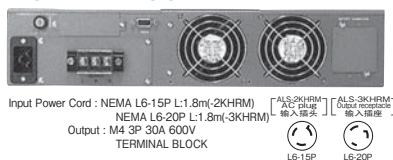
ALS-1.5KHRM



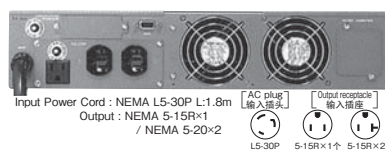
ALS-2KRM



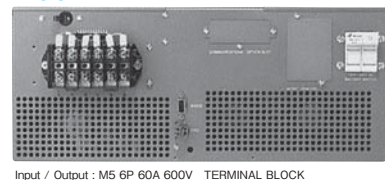
ALS-2KHRM/ALS-3KHRM



ALS-3KRM



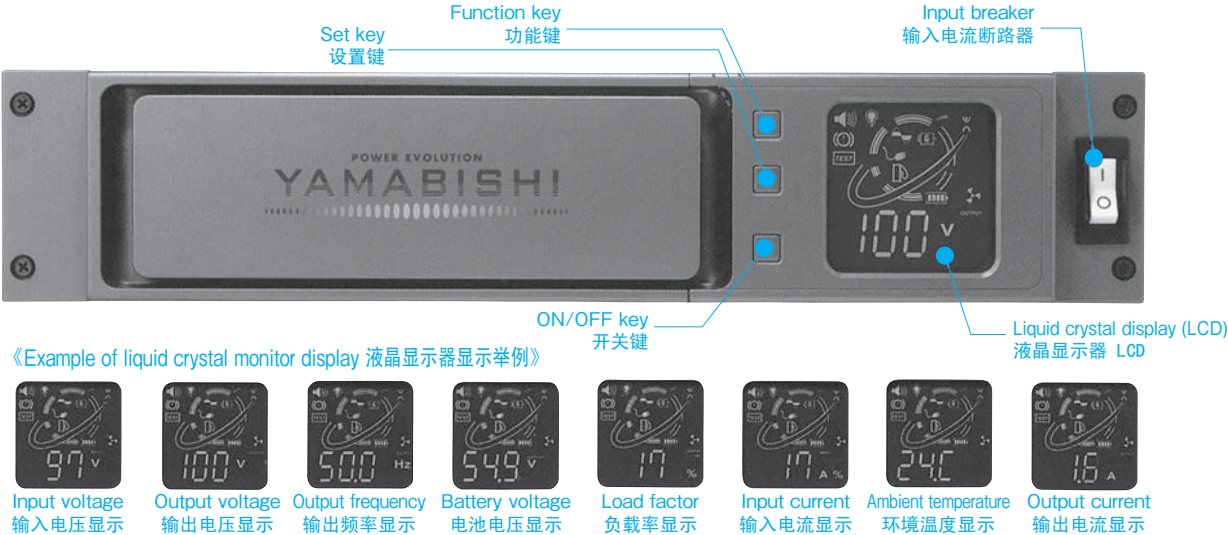
ALS-5KHRM



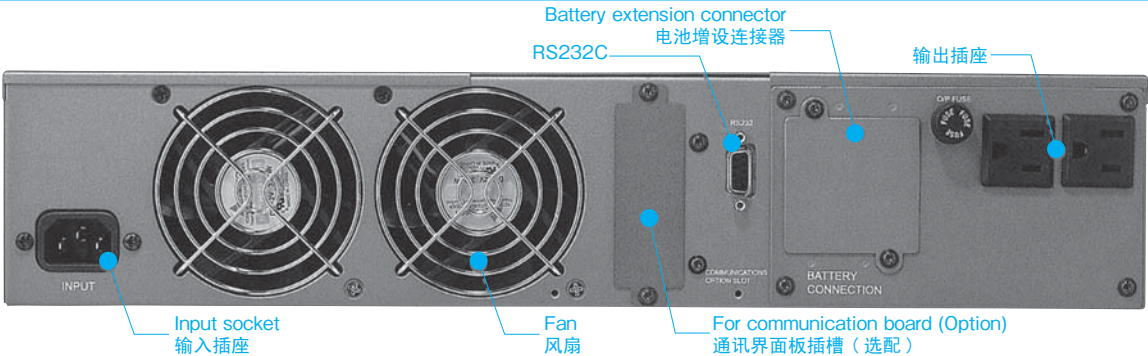
Rack Mount Type On-line mini UPS

ALS-RM series

Front panel 前面板



Output outlet 输出面板



A load factor / average backup time change list 负载率 / 平均可供电时间

	ALS-1.5KRM / ALS-1.5KHRM			ALS-2KRM / ALS-2KHRM			ALS-3KRM / ALS-3KHRM			ALS-5KHRM		
	normal	+1BM	+2BM	normal	+1BM	+2BM	normal	+1BM	+2BM	normal	+1BM	+2BM
100VA(70W)	135min	480min	930min	225min	538min	902min	240min	539min	903min	540min	830min	1154min
200VA(140W)	70min	252min	504min	120min	358min	538min	180min	359min	539min	360min	555min	929min
300VA(210W)	45min	195min	365min	90min	250min	410min	120min	252min	411min	280min	444min	704min
500VA(350W)	30min	115min	214min	50min	156min	250min	75min	158min	252min	180min	295min	467min
1kVA(700W)	10min	53min	104min	20min	77min	119min	30min	78min	120min	90min	158min	240min
1.5kVA(1050W)	6min	29min	58min	10min	47min	82min	20min	48min	83min	60min	106min	167min
2kVA(1400W)				8min	29min	54min	15min	34min	54min	45min	78min	120min
2.5kVA(1750W)							10min	26min	45min	30min	56min	101min
3kVA(2100W)							6min	20min	35min	25min	47min	82min
4kVA(2800W)										18min	39min	55min
5kVA(3500W)										12min	29min	42min

Note: Battery life expectancy may be shortened due to battery deterioration or use environment.
注) 随着使用环境及蓄电池的损耗, 时间将缩短。

机柜型在线式不间断电源装置

ALS-RM系列

Option 选项

● Power management software
电源管理软件

ALS series has shutdown software "UPSilon2000" and "USHA PRO" for the network (optional). This software is used to confirm the voltage and operating the ALS series UPS with the computer in front. It also protects HDD and data through its shutdown function by automatic shutdown of the computer when the power failure continues for a long time.

针对 ALS 系列, 可选择搭配 UPSilon2000 或 USHA PRO 等电源管理软件使用。(选配)

此两套电源管理软件除了可以藉由计算机确认 ALS 系列 UPS 的电压与操作状态外, 还可以设定自动关机的功能。在长时间处于停电状态时, 可对计算机设定自动关机保护数据与硬碟。

● Power management software UPSilon (Option) 电源管理软件 UPSilon (选配)

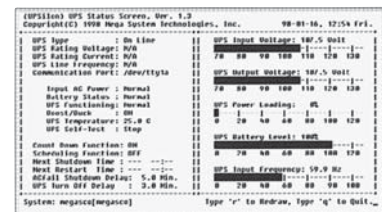
UPS is connected via RS232C. Automatic shutdown and monitoring of the UPS state can be setup. 可藉由 RS232 通讯界面与 UPS 连接并对 UPS 进行监控与关机设定。

Corresponding OS 相容的 OS 表	WINDOWS XP / 2000
	Redhat 7.0
	Redhat 9.0
	Mandrake 9.2
	Turbo Linux 8 Server
	FreeBSD2.2.7
	Suse10

* Corresponding OS will be updated on our website.
关于 OS, 可以在网站上进行更新。



■ WINDOWS WINDOWS 版



■ UNIX UNIX 版

● Power management software USHA PRO (Option) 电源管理软件 USHA PRO (选配)

Through Ethernet, automatic shutdown and monitoring of one or more UPS's state can be setup. 此套管理软件可以透过网络监控一台或多台的 UPS 操作状态, 并可做自动开机功能设定。

Corresponding OS 相容的 OS 表	WINDOWS XP / 2000
	Redhat 9.0
	Redhat ES
	Turbo Linux 8 Server
	Suse10

* Corresponding OS will be updated on our website.
关于 OS, 可以在网站上进行更新。



● Parts 配件

Metal fittings for rack installation

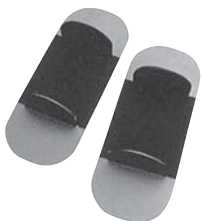
[accessory: screws] (Standard equipment)

They are used to install UPS itself and battery module on 19-inch rack.

They correspond for both JIS and EIA standard.

机架固定片【附螺丝组】(标准配件)

此组件的主要功能是将 UPS 本体与电池模组固定在 19 英寸机柜的滑轨上。适用的机柜规格包含 JIS 与 EIA。



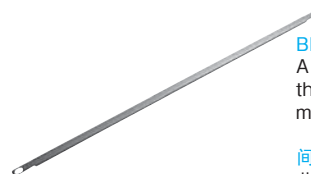
A stand for parallel leaf

(Standard equipment)

A stand to put the main body of UPS and battery module in parallel leaf.

直立式支撑架 (标准配件)

搭配此支撑架, UPS 与电池模组可以直立置放。

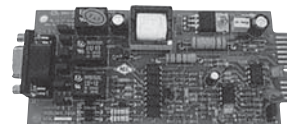


Blank panel (Standard equipment)

A panel that fills a gap made when the main body of UPS and battery module are installed in the rack.

间隔板 (标准配件)

此隔板的功能主要是安装在 UPS 与电池模组间, 来避免组装间隙外露。

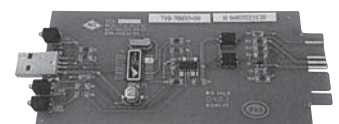


AC card (Option)

Warning point of contact card that sends signals of power failure, decrease of battery capacity and breakdown, etc. (D-sub 9 pins) UPS can be shutdown remotely.

AC 控制卡 (选配)

可以透过此控制卡 (DB9 Relay) 来传送停电, 电池低电压和各种故障讯息。并可使用远端控制来对 UPS 进行关机。



USB card (Option)

Interface card that communicates with UPS management software, Upsilon via USB.

USB 界面控制卡 (选配)

此卡可以透过 USB 界面与 UPS 管理软件 UPSilon 进行通讯。

Medium · Big Capacity On-line UPS

SFT series

Normally, the power source (AC) is rectified and supplies the AC power (sine wave) again with inverter.
At power outage, the inverter input is switched to a battery and provides no instantaneous interruption method feeding power. The SFT-series support a wide range of plants, information and communication systems from medium (5KVA) to large-scale (200KVA).

在通常是对在市电（交流）进行整流，然后通过逆变器提供交流电力（正弦波），
停电时把逆变器的输入切换为由蓄电池供电的不间断供电方式。高度安全系列产品从中型（5KVA）到大型（200KVA），
容量齐全，支援各种设备及通信系统。

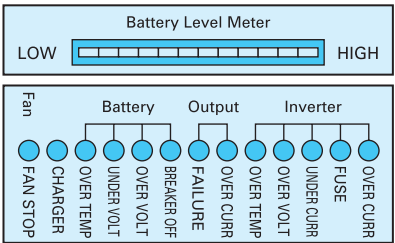


Application 用途

- Client / server-network
客户 / 服务器网络
- Office computer system, computer
办公室电脑系统 / 个人电脑
- Back up power source for computer system room
电脑系统室全体的供电
- Various of Plant facility, etc.
各种生产车间 等

Feature 特长

- When the power source is interrupted or recovered, supplying the load with the power without any momentary interruption.
当市电供电中断或者恢复时，向负载提供电源，而不造成任何瞬间断电。
 - If the equipment is faulty or the load current is abnormal, power is automatic to the power source soon by the static AC switch.
如果设备出错，或者过载时，还可以迅速地自动切换到旁路。
 - Noise level is low and it keeps a clean and quiet environment.
低噪音设计可保持清洁和清静的环境。
-
- Alarm monitor
The level meter in the front panel shows battery state and in case of emergency, the monitor at inner panel notifies following 12 items.
 - 告警监控器
前面板的电平表将显示电池状态，同时意外发生时，内面板的监控器将通过 12 个灯号显示告警。



Signal terminal
Attached with power failure contact points terminal/
warning contact points terminal

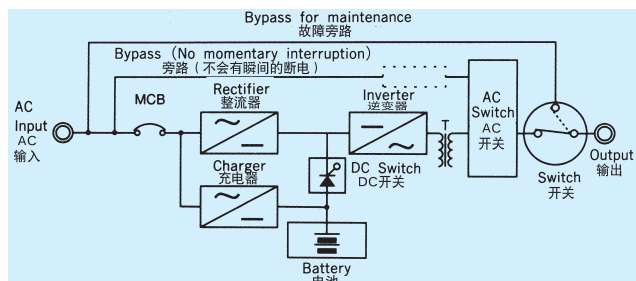
信号端子台
电源故障连接端子 / 告警连接端子

中·大容量在线式不间断电源装置

SFT系列

Block Diagram 结构图

5kVA ~ 200kVA

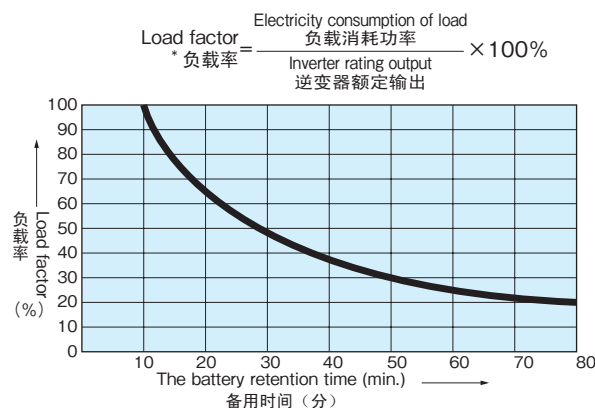


Backup time 备用时间

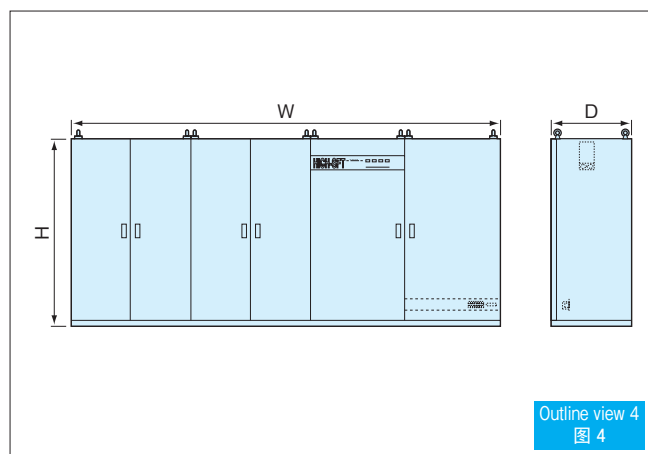
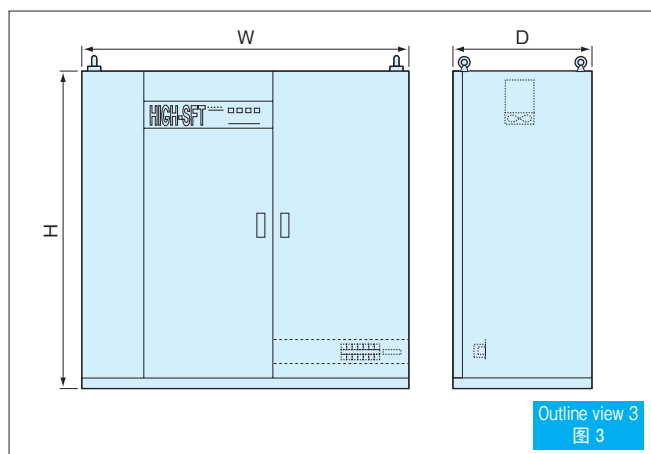
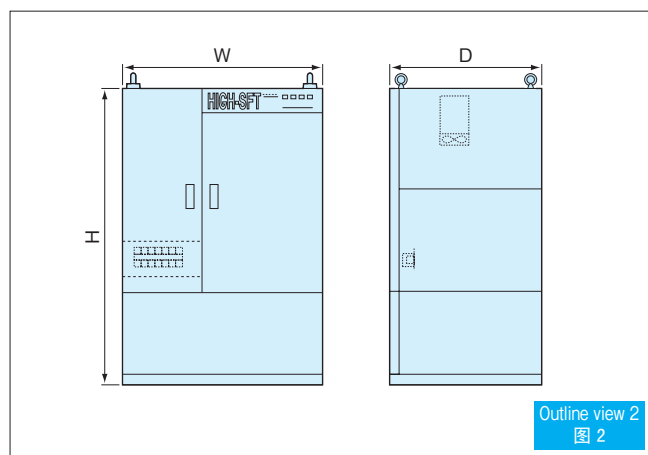
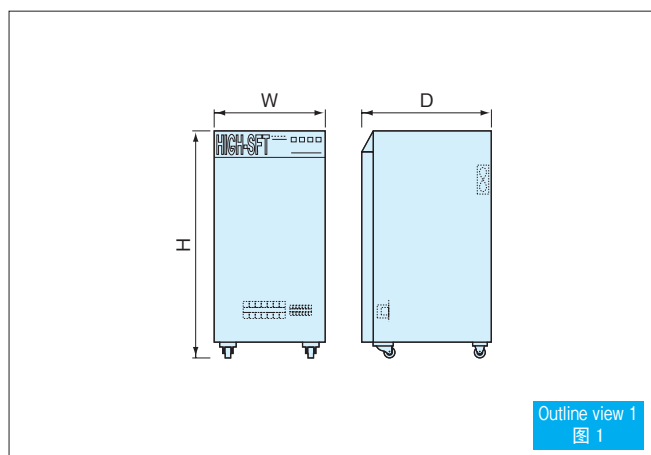
When is power failure, backup time is 10 minutes in case of the rated load, and 30 minutes in case of 1/2 load.

Refer to the figure below for the battery retention time when load factor changes. (Surrounding temperature: 25°C)

停电时间对负载供电：满载 10 分钟，1/2 载 30 分钟。负载率 * 发生变化时，蓄电池保持时间请参照下图（环境温度：25℃时）。



Outline view 外观图



Medium・Big Capacity On-line UPS

SFT series

Request for use

- Replacing consumable goods (battery and fan)
Longevity of the battery is influenced by environment the device uses (ambient temperature and backup frequency etc.).Please change the battery after 3 to 5 years.When a battery is kept using over years, it may cause electrolyte leakage or more significant secondary damage like smoke generation etc.
Also, the cooling fan must be replaced periodically.
- ※ YAMABISHI would check/replace battery and cooling fan. Please contact us if you hope change of consumable goods.
- Delivery and installation
In principle, the power supply is only delivery in Japan.Please execute after delivery by the customer. (Installation and other setups, etc.)
- ※ YAMABISHI makes a separately estimate about the work of carry-in and install and wiring construction. Please let us know when ordering.

Option

- Backup time extension (30 minutes, 60 minutes, and 120 minutes)
- For different voltage
- Insulation type between input and output of by-pass
- Remote monitor panel
- Connection with non-utility generation of device (for without interruption for a long time)
- ※ Power supply wiring work.

Battery and cooling-fan for longer life (Option)

- Installation of longer life type battery
Life expectation (When Ambient temperature is 25 degrees Celsius.)
7.5 years type
7 ~ 9 years type (MSE)
15 years type (Super-longer life)
- Longer-life type cooling-fan 10 years type

注意事项

- 关于易耗品（蓄电池以及风扇）的更换
蓄电池的寿命受使用环境（环境温度，供电次数等）影响。请按照约 3 ~ 5 年的标准进行更换。过了寿命的蓄电池继续使用的话，会引起电解液泄露，严重时会引起冒烟等重大二次损害。
此外，冷却用风扇也请定期进行更换。
- ※ 本公司将为用户提供蓄电池和冷却风扇的检查和更换服务。有需要的用户请向我们咨询。
- 运输及安装
商品交货原则：在日本国内客户搬运车上交货。搬运和安装施工要另行报价。
- ※ 如果需要由本公司承担运输，安装和布线等作业的话，则另需报价。因此在订货时请对此特别加以注明。

选项

- 长延时功能（30 分，60 分，120 分）
- 不同的电压规格要求
- 输入 - 输出间的绝缘旁路功效
- 遥控监视器
- 与自用发电装置的连接（为了保证长时间不间断运行）
- ※ 本公司还承担电源布线作业。

长寿命蓄电池 & 冷却风扇 (选项)

- 搭载使用长寿命蓄电池预期寿命
(环境 25℃)
7.5 年类型
7 ~ 9 年 (MSE)
15 年 (超长寿命)
- 长寿命型冷却风扇 10 年类型

中 · 大容量在线式不间断电源装置

SFT系列

Specifications 规格

OUTPUT : Single Phase 2 Wire

输出：单相二线

Model 型号		SFT							
		5KHX	7.5KHX	10KHX	15KHX	20KHX	30KHX	40KHX	50KHX
O u t p u t 输 出	Capacity (KVA) 容量 (kVA)	5	7.5	10	15	20	30	40	50
	Phase 相位	Single Phase 2 wire ※ 1 单相二线							
	Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another ※ 1 100, 110, 115, 120, 200, 220, 230, 240V 或其他							
	Voltage Accuracy 电压精度	less than ± 2.0% 小于 ±2.0%							
	Transient Response 瞬态响应	less than ± 5.0% 小于 ±5.0%							
	Response Time 响应时间	less than 3.3msec. 3.3mSec 以内							
	Frequency 频率	50/60Hz (Switch) 50/60Hz (转换)							
	Frequency Accuracy 频率精度	less than ± 0.5Hz 小于 ±0.5Hz							
	Wave form 波形	pure sine wave 正弦波							
	Wave Distortion 波形失真	less than 3% (lener load) 5% (rectifier load) ※ 2 低于 3% (线型负载) 低于 5% (整流器负载)							
	Over Current Protection 过电流保护	turn to bypass automatically ※ 3 自动转移到旁路							
	Power Factor 功率因数	1.0 ~ 0.8							
Backup Time 备用时间	10min.(power factor 0.8 , 25℃) 10 分钟 (功率因数 0.8, 25℃ 时)								
I n p u t 输 入	Capacity (KVA) 容量 (kVA)	7.6	11.5	15	17.5	23	34	45	56
		6	8.6	11.5					
	Phase 相位	Single Phase/Three Phase 单相 或者 三相				Three Phase 三相			
	Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240 or 380 or 400 or 415V or another 100, 110, 115, 120, 200, 220, 230, 240, 380, 400, 415V 或其他							
	Voltage Range 电压范围	± 10%							
	Frequency 频率	50/60Hz ± 3Hz							
Outline View 外观图	1				3				

※ 1 Kind of main voltage 主要电压种类
Single phase 2 wire 单相二线式
100V 110V 115V 120V 220V 230V 240V
Single phase 3 wire 单相三线式
200/100V 210/105V 220/110V 230/115V 240/120V 400/200V 440/220V

※ 2 Crest Factor 3
峰值因数 3

※ 3 By-pass circuit overload tolerance amount, MAX 500%
旁路时过载容量 MAX500%。

※ 4 The heating capacity is calculated from Power Factor 0.8.
发热量由负载功率因数 0.8 计算。

※ 5 Input capacity is max capacity in case of recovery of battery charging. (Case: Power factor 0.8)
But, in case of transmission from bypass is not included.
蓄电池回复充电时的最大容量 (负载功率因数 0.8)
但是, 不包从旁路切换回来的时候。

● There is a case to change dimensions and mass.
外形尺寸和重量根据情况, 会有所变更。

● There are reference outline views on Page 24.
请参考 24 页的外观图片。

Medium · Big Capacity On-line UPS

SFT series

Specifications 规格

OUTPUT : Single Phase 3 Wire
输出：单相三线

Model 型号		SFT							
		5KHWX	7.5KHWX	10KHWX	15KHWX	20KHWX	30KHWX	40KHWX	50KHWX
O u t p u t 输出	Capacity (KVA) 容量 (kVA)	5	7.5	10	15	20	30	40	50
	Phase 相位	Single Phase 3 wire ※ 1 单相三线							
	Voltage 电压	200/100 or 220/110 or 230/115 or 240/120 or 400/200 or 440/220V or another ※ 1 200/100, 220/110, 230/115, 240/120, 400/200, 440/220V 或其他							
	Voltage Accuracy 电压精度	less than ± 2.0% 小于 ±2.0%							
	Transient Response 瞬态响应	less than ± 5.0% 小于 ±5.0%							
	Response Time 响应时间	less than 3.3msec. 3.3mSec 以内							
	Frequency 频率	50/60Hz (Switch) 50/60Hz (切换)							
	Frequency Accuracy 频率精度	less than ± 0.5Hz 小于 ±0.5Hz							
	Wave form 波形	pure sine wave 正弦波							
	Wave Distortion 波形失真	less than 3% (lener load) 5% (rectifier load) ※ 2 低于 3% (线型负载) 低于 5% (整流器负载)							
	Over Current Protection 过电流保护	turn to bypass automatically ※ 3 自动转移到旁路							
	Power Factor 功率因数	1.0 ~ 0.8							
	Backup Time 备用时间	10min.(power factor 0.8 , 25℃) 10 分钟 (功率因数 0.8, 25℃ 时)							
I n p u t 输入	Capacity (KVA) 容量 (kVA)	7.6	11.5	15	17.5	23	34	45	56
		6	8.6	11.5					
	Phase 相位	Single Phase/Three Phase 单相 或者 三相				Three Phase 三相			
	Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240 or 380 or 400 or 415V or another 100, 110, 115, 120, 200, 220, 230, 240, 380, 400, 415V 或其他							
	Voltage Range 电压范围	± 10%							
	Frequency 频率	50/60Hz ± 3Hz							
Outline View 外观图	1					3			

- ※ 1 Crest Factor 3
峰值因数 3

※ 2 By-pass circuit overload tolerance amount, MAX 500%
旁路模式时过载容量 MAX500%。

※ 3 The heating capacity is calculated from Power Factor 0.8.
发热量由负载功率因数 0.8 计算。

※ 4 Input capacity is max capacity in case of recovery of battery charging. (Case: Power factor 0.8)
But, in case of transmission from bypass is not included.
蓄电池回复充电时的最大容量 (负载功率因数 0.8)
但是, 不包从旁路切换回来的时候。
- There is a case to change dimensions and mass.
外形尺寸和重量根据情况, 会有所变更。

● There are reference outline views on Page 24.
请参考 24 页的外观图片。

中 · 大容量在线式不间断电源装置

SFT系列

Specifications 规格

OUTPUT : Single Phase 3 Wire

输出：三相三线

Model 型号	SFT										
	7.5SHX	10SHX	15SHX	20SHX	30SHX	40SHX	50SHX	75SHX	100SHX	150SHX	200SHX
Capacity (KVA) 容量 (kVA)	7.5	10	15	20	30	40	50	75	100	150	200
Phase 相位	Three Phase 3 wire ※ 1 单相三线										
Voltage 电压	200 or 220 or 230 or 240 or 380 or 400 or 415V or another ※ 1 200, 220, 230, 240, 380, 400, 415V 或其他										
Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 小于 $\pm 2.0\%$										
Transient Response 瞬态响应	less than $\pm 5.0\%$ 小于 $\pm 5.0\%$										
Response Time 响应时间	less than 3.3msec. 3.3mSec 以内										
Frequency 频率	50/60Hz (Switch) 50/60Hz (转换)										
Frequency Accuracy 频率精度	less than $\pm 0.5\text{Hz}$ 小于 $\pm 0.5\text{Hz}$										
Wave form 波形	pure sine wave 正弦波										
Wave Distortion 波形失真	less than 3% (lineer load) 5% (rectifier load) ※ 2 低于 3% (线型负载) 低于 5% (整流器负载)										
Over Current Protection 过电流保护	turn to bypass automatically ※ 3 自动转移到旁路										
Power Factor 功率因数	1.0 ~ 0.8										
Backup Time 备用时间	10min.(power factor 0.8, 25°C) 10 分钟 (功率因数 0.8, 25°C 时)										
Capacity (KVA) 容量 (kVA)	8.6	11.5	17.5	23	34	45	56	83	110	165	220
Phase 相位	Three Phase 三相										
Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240 or 380 or 400 or 415V or another 100, 110, 115, 120, 200, 220, 230, 240, 380, 400, 415V 或其他										
Voltage Range 电压范围	$\pm 10\%$										
Frequency 频率	50/60Hz $\pm 3\text{Hz}$										
Outline View 外观图	1			2			3			4	

※ 1 Kind of main voltage 主要电压种类

Three phase 3 wire 三相三线式

200V 210V 220V 380V 400V 415V 440V

Three phase 4 wire 三相四线式

115/200V 120/208V 127/220V 220/380V 230/400V 240/415V 277/480V

※ 2 Crest Factor 3

峰值因数 3

※ 3 By-pass circuit overload tolerance amount, MAX 500%

旁路模式时过载容量 MAX500%。

※ 4 The heating capacity is calculated from Power Factor 0.8.

发热量由负载功率因数 0.8 计算。

※ 5 Input capacity is max capacity in case of recovery of battery charging. (Case: Power factor 0.8)

But, in case of transmission from bypass is not included.

蓄电池回复充电时的最大容量 (负载功率因数 0.8)

但是, 不包从旁路切换回来的时候。

● There is a case to change dimensions and mass.

外形尺寸和重量根据情况, 会有所变更。

● There are reference outline views on Page 24.

请参考 24 页的外观图片。

Generator Corresponding Type

SFT-D series

Normally, power source (AC) is rectified and supplies the AC power (sine wave) again with inverter.

At power outage, the inverter input is switched to a battery and provides no instantaneous interruption method feeding power. It is a method to start the generator automatically in preparation for long time power failure and to switch the input of UPS from the battery to the generator. It is a highly safe backup system to supply a constant-voltage constant-frequency for the ultra long time without any momentary interruption.

通常是对市电供电（交流）进行整流，然后通过逆变器提供交流电力（正弦波）。
为了防备以后长时间停电而自动启动发电机，停电时采用把逆变器的输入切换为由蓄电池供电的不间断供电方式。这是不间断的可确保超长时间定电压和定频率电源的极其安全的断电保护系统。



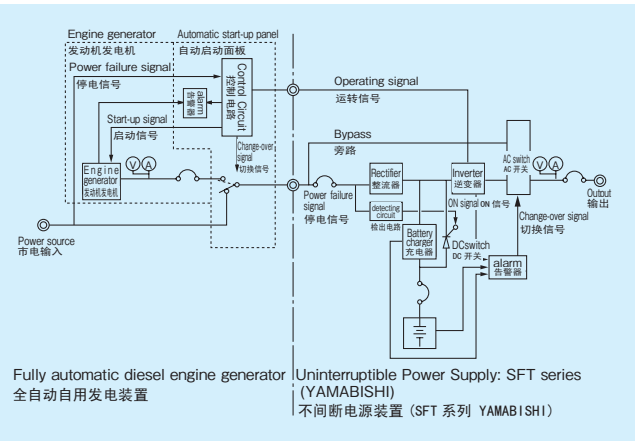
Application 用途

- System cannot be turned off even during prolonged power failure.
即使长时间停电，也可以持续供应电源的系统。

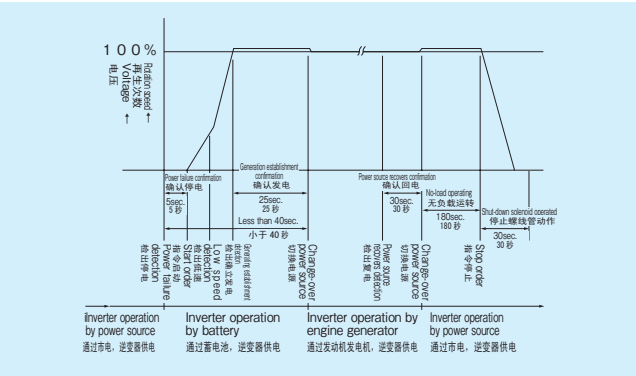
Feature 特长

- At power failure, the switching time at power restoration has no instantaneous interruption that does not influence the load at all.
当市电供电中断或者恢复时，向负载提供电源，而不造成任何瞬间断电。
- It has a function to switch automatically to by-pass with no instantaneous interruption, if the device malfunctions by any chance, which makes this system reliable and safe.
如果设备出错，或者过载时，可以迅速地自动切换到旁路。
- The diesel oil is used for the generator's fuel to actualize low running cost.
发电机的燃料使用成本比较低的轻油。
- Low noise makes minimum influence to surrounding environment.
采用低噪音设计，所以对现场环境的影响非常小。

Block Diagram 结构图



Time schedule of engine generator (40 seconds start-up)
发动机发电机的时间表（40 秒启动时）



可接发电机型不间断电源装置

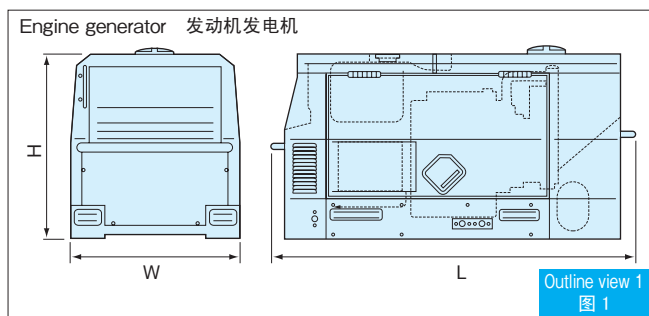
SFT-D系列

Specifications 规格

SFT								
Model 型号	5KHDX	7.5KHDX	10KHDX	15KHDX	20KHDX	30KHDX	40KHDX	50KHDX
	-	7.5SHDX	10SHDX	15SHDX	20SHDX	30SHDX	40SHDX	50SHDX
Capacity (KVA) 容量 (kVA)	5	7.5	10	15	20	30	40	50
Phase 相位	KHDX type : Single Phase , SHDX type : Three Phase KHDX 型: 单相 SHDX 型: 三相							
Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another 100, 110, 115, 120, 200, 220, 230, 240V 或其他							
Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 小于 $\pm 2.0\%$							
Frequency 频率	50/60Hz (Switch) 50/60Hz (转换)							
Frequency Accuracy 频率精度	less than $\pm 0.1\text{Hz}$ 小于 $\pm 0.1\text{Hz}$							
Wave form 波形	pure sine wave 正弦波							
Wave Distortion 波形失真	less than 3% (linear load) 5% (rectifier load) 低于 3% (线性负载) 低于 5% (整流器负载)							
Over Current Protection 过电流保护	turn to bypass automatically 自动转移到旁路							
Phase 相位	Three Phase 三相							
Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240 or 380 or 400 or 415V or another 100, 110, 115, 120, 200, 220, 230, 240, 380, 400, 415V 或其他							
Voltage Range 电压范围	$\pm 10\%$							
Frequency 频率	50/60Hz $\pm 3\text{Hz}$							
Capacity (KVA) 容量 (kVA)	6.5	10	13	20	26	39	50	65
Backup Time 蓄电池保持时间	10min. (power factor 0.8 , 25°C) 10 分钟 (功率因数 0.8 在 25°C 时)							
Battery 蓄电池种类	Small-size lead battery 小型密封铅蓄电池							
Generator MODEL 柴油发动机型号	DCA-13ESKT	DCA-20ESKT	DCA-25ESKT	DCA-45ESIT	DCA-45ESIT	DCA-60ESIT	DCA-100ESIT	DCA-125ESMT
Frequency (Hz) 频率	50	50	50	50	50	50	50	50
Capacity (KVA) 容量 (kVA)	10.5	17	20	37	37	50	80	100
Voltage 电压	200	200	200	200	200	200	200	200
Power Factor 功率因数	0.8							
Phase 相位	Three Phase 4 Wire 三相四线							
Total engine displacement (L) 总排气量	1.393	2.197	2.179	4.009	4.009	6.494	7.961	7.540
Fuel 燃料	Diesel oil 轻油							
Fuel tank capacity (L) 燃料箱容量	62	62	62	100	100	155	200	210

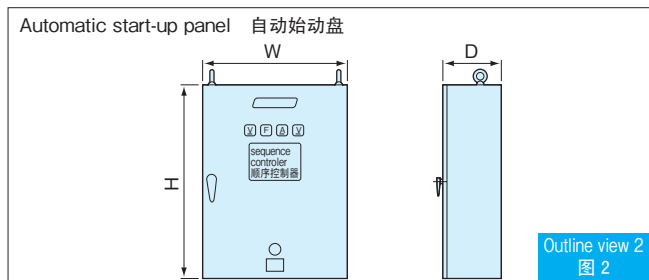
● Above-mentioned generator is DCA series of made in Denyo Co., Ltd. It can produce the specifications of the voltage of various countries in the world.

Outline view 外观图



Output Three Phase 三相输出型 发动机发电机

Model 型号	Dimension 尺寸			Weight 重量 (kg)
	W (mm) 宽	L (mm) 深	H (mm) 高	
DCA-13ESKT	650	1480	900	490
DCA-20ESKT	680	1630	900	579
DCA-25ESKT	7680	1540	980	564
DCA-45ESIT	880	1900	1250	1150
DCA-60ESIT	880	2420	1250	1540
DCA-100ESIT	1100	2750	1400	1860
DCA-125ESMT	1080	3000	1500	2560



Automatic start-up panel 自动始动盘

Model 型号	Dimension 尺寸			Weight 重量 (kg)
	W (mm) 宽	D (mm) 深	H (mm) 高	
ACP-60E	550	280	650	60
ACP-60D,150D	750	300	1000	90
ACP-200D,250D	800	350	1100	125

● About the outline view of the UPS, please refer to the outline view of the SFT series.
不间断电源外观图请参照 SFT 系列的外观图。

CHARGE & DISCHARGE DEVICE

充放电装置

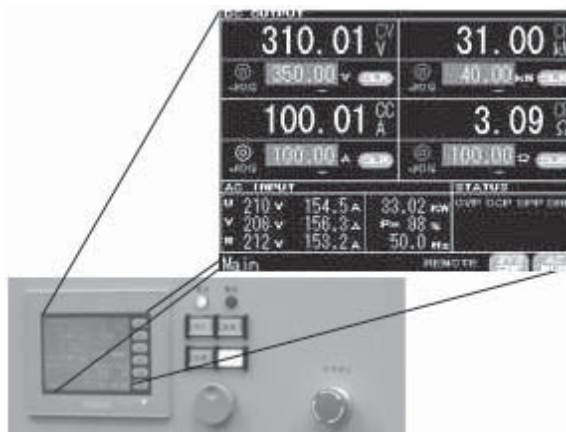
● BATTERY CHARGE & DISCHARGE DEVICE	
.....	30
蓄电池充放电装置	

Battery Charge/Discharge Device and Systems

YRD series

Today, we use a range of both big and small batteries, from lithium-ion batteries in cell phones and notebook computers, to the batteries used in hybrid cars. In the development of battery-powered devices, obtaining basic data such as battery durability is essential for verifying the reliability of products. It used to be the case that in order to build such a system, it was necessary to provide a battery charge/recharge device (since there were no high-capacity products available, the power supply and load had to be furnished separately), a data logger, and accompanying software for controlling this equipment. From a time and cost perspective, this was impractical. In response to this, YAMABISHI developed a new battery charge/discharge device designed specifically for charging and discharging equipped with a dedicated data logger and software. This product is ideal for reducing the time required for developing battery-powered products.

现今，从手机，笔记本电脑使用的锂离子电池到混合动力车所使用的电池，大大小小的所有电池都在被广泛利用。在开发这些电池应用机器时，为了检验应用产品的可靠性，必须获得内置电池的耐久性能等基础数据。但是，以前在构建这样一个系统时，需要准备充放电装置（因为没有大容量的产品，所以要准备各种电源，负载），数据记录器及管理这些设备的软件，所以从时间，成本方面来说比较困难。这次，YAMABISHI 新开发出了特别适用于电池充放电的充放电装置，同时还准备了专用的数据记录器及软件。请一定利用此产品，缩短电池应用产品的开发时间。



Touch panel 触感控制面板



Software 软件

电池充放电电源装置

YRD系列

Battery charge and discharge device (series regulator) YRD-ATX/TX series 电池充放电装置（串联型稳压方式）YRD-ATX/TX系列

Feature 特长

- High precision and high speed
Uses a dropper system for high-precision, high-speed load changing. Also maintains low voltage and current ripples.
高精度，高速度响应。
采用串联型稳压方式，对于负荷变动能作出高精度，高速响应。并且，能将电压，电流波动控制到很小。
- Low Noise
Switching is unnecessary, so no emission noise is generated.
低噪音。
因为不进行整流，所以不会发出辐射噪音。
- Charge/Discharge devices of different capacities can be combined.
Setting Charge device of small capacity can be lowering in cost.
充电与放电可设定为不同容量。充电端设定小容量降低成本。
- Interface (Ethernet/CAN)
An Ethernet communication interface has been implemented, and can be automatically operated from an external PC. By mounting a CAN (Control Area Network) interface, the auto industry standard, internal data can be collected and logged in blocks from the battery controlling the CAN interface.
界面（以太网，CAN）。
作为通信界面，装备有以太网接口，可以在外部的 PC 控制下自动运行。并且，装备有汽车业界标准的 CAN (Control Area Network) 界面，还可以所管理的 CAN 界面电池中收集内部信息，并进行统一同步。
- Local operation (touch panel/jog dial)
Mounted with Yamabishi's common touch panel and job dial for charge/discharge devices. Using these, low-capacity bench use charge/discharge tests can be performed without a PC. Moreover, screens can be added for controls that are required as part of user test systems using the customization options (such as conductor ON/OFF)
本机操作（触感控制面板，滚轴功能键）。
装备有 YAMABISHI 充放电装置通用的触感控制面板与混轴功能键。可以将其作为小容量的座充，用来进行无 PC 的充放电试验。并且，用户可通过自定义添加窗口，来控制试验系统所必需的机器（例如：接触器的打开（ON）/（OFF））。



Battery charge/discharge device (regenerative inverter system) YRD-IX series 充放电装置（电力再生变换器方式）YRD-IX系列

Feature 特长

- Compact, highly efficient
By implementing an inverter system, we were able to achieve a charge/discharge device that is not only compact, but also highly efficient (with a charge time of 85%). The regeneration of electrical power during loading creates an environmentally friendly system that uses energy efficiently.
小型，高效。
利用变换器方式实现了小型，高效（充电时 85%）。并且，通过加有负载时再生电力，实现了节能源，环保的系统。
- A diverse range of control modes
The charge/discharge device supports constant current charge/discharge, constant voltage charge/discharge, constant power charge/discharge, constant resistance, discharge and pulse modes.
多姿多彩的控制模式。
可进行固定电流 充电 / 放电，固定电压 充电 / 放电，固定电力 充电 / 放电，固定电阻，放电，脉冲模式。
- High-speed responsiveness
Using an optimized control circuit, we achieved high-speed responsiveness for our regenerative inverter system (10 msec charge/discharge; 10 msec transient response). (Even higher-speed responsiveness is possible.)
实现了高速响应。
通过控制电路的最佳化，作为电力再生变换器方式，实现了高速响应（充电 - 放电 3msec / 充放电过量响应 5msec）。（还可制造具有更高响应速度的充放电装置）
- Interface (Ethernet/CAN)
An Ethernet communication interface has been implemented, and can be automatically operated using an external PC. By mounting a CAN (Control Area Network) interface, the auto industry standard, internal data can be collected and logged in blocks from the battery controlling the CAN interface.
界面（以太网，CAN）
作为通信界面，装备有以太网接口，可以在外部的 PC 控制下自动运行。并且，装备有汽车业界标准的 CAN (Control Area Network) 界面，还可以从所管理的 CAN 界面电池中收集内部信息，并进行统一同步。
- Local operation (touch panel/jog dial)
Mounted with Yamabishi's common touch panel and job dial for charge/discharge devices. Using these, low-capacity bench use charge/discharge tests can be performed without a PC. Moreover, screens can be added for control that are required as part of user test systems using the customization options (such as conductor ON/OFF).
本机操作（触感控制面板，滚轴功能键）。
装备有 YAMABISHI 充放电装置通用的触感控制面板与混轴功能键。可以将其作为小容量的座充，用来进行无 PC 的充放电试验。并且，用户可通过自定义添加窗口，来控制试验系统所必需的机器（例如：接触器的打开（ON）/（OFF））。
- Customized products
Standard
还可制造用户定制品。
除了标准产品以外，还可以制造根据客户制定的容量制造产品。



Battery Charge/Discharge Device and Systems

YRD series

Specifications 规格

Battery Charge · Discharge System / Transistor Type & Pre-Regulator Type
电池充放电装置, 全晶体管式 前置调节器式

model 型号			YRD-								
			100-5ATX	100-10ATX	200-10ATX	300-10ATX	250-20TX	250-40TX	400-50TX	500-60TX	600-100TX
method 方式			All Transistor Type 全晶体管式				Pre-Regulator Type 前置调节器式				
Max Capacity 容量			500W	1kW	2kW	3kW	5kW	10kW	20kW	30kW	60kW
Operation Mode 操作样式		Charge 充电	CV CC CP 固定电压, 固定电流, 固定电力								
		Discharge 放电	CC CP 固定电流, 固定电力								
Voltage Setting Range 电压制定范围		Charge 充电	0-100V	0-100V	0-200V	0-300V	0-250V	0-250V	0-400V	0-500V	0-600V
Constant Voltage Range 固定电压范围			10-100V	10-100V	20-200V	30-300V	25-250V	25-250V	40-400V	50-500V	60-600V
Voltage Accuracy 电压精度	Charge 充电	Input Fluctuation 输入波动	0.1%+30mV								
		Load Fluctuation 负载波动	0.1%+30mV								
Ripple 纹波噪音			0.1%rms								
Transient Response 过量响应			less than 1msec. 小于1毫秒				Charge300msec. Discharge1msec. 充电300毫秒 放电1毫秒				
Charge/Discharge Switching Time 充放电响应时间			less than 1msec. 小于1毫秒				Charge300msec. Discharge1msec. 充电300毫秒 放电1毫秒				
Current Setting Range 电流制定范围		Charge 充电	0-5A	0-10A	0-10A	0-10A	0-20A	0-40A	0-50A	0-60A	0-100A
Constant Current Range 固定电流范围			0.5-5A	0-10A	0-10A	0-10A	0-20A	0-40A	0-50A	0-60A	0-100A
Current Setting Range 电流制定范围		Discharge 放电	0-5A	0-10A	0-10A	0-10A	0-20A	0-40A	0-50A	0-60A	0-100A
Constant Current Range 固定电流范围			0-5A	0-10A	0-10A	0-10A	0-20A	0-40A	0-50A	0-60A	0-100A
Current Accuracy 电流精度	Charge 充电	Input Fluctuation 输入波动	0.1 ± 10mA								
		Load Fluctuation 负载波动	0.1 ± 10mA								
	Discharge 放电	Input Fluctuation 输入波动	0.1 ± 10mA								
		Load Fluctuation 负载波动	0.1 ± 10mA								
Interface 界面			Ethernet/CAN/(GP-IB/RS-232C Option) 以太网/CAN/(GP-IB/RS-232C 可选项)								

电池充放电电源装置

YRD系列

Battery Charge / Discharging System -Re-Generatng Type 电池充放电装置, 电力再生变换器方式

model 型号			YRD-				
			50KIX	75KIX	100KIX	200KIX	300KIX
method 方式			Switching Type(Re-Generating function) 整流式（电力再生功能）				
Max Capacity 容量			50kW	75kW	100kW	200kW	300kW
Operation Mode 操作样式		Charge 充电	CV CC CP 固定电压, 固定电流, 固定电力				
		Discharge 放电	CV CC CP 固定电压, 固定电流, 固定电力				
Efficiency 效率		Charge 充电	over 85% 超过 85%				
		Discharge 放电	over 85% 超过 85%				
Power Factor 功率因数		Charge 充电	over 95% 超过 95%				
		Discharge 放电	over 95% 超过 95%				
Voltage Setting Range 电压制定范围		Charge 充电	0-50V or 0-100V or 0-200V or 0-300V or 0-400V or 0-500V or 0-600V*1 0-50V, 0-100V, 0-200V, 0-300V, 0-400V, 0-500V 或 0-600V*1				
		Discharge 放电	0-50V or 0-100V or 0-200V or 0-300V or 0-400V or 0-500V or 0-600V*1 0-50V, 0-100V, 0-200V, 0-300V, 0-400V, 0-500V 或 0-600V*1				
Voltage Accuracy 电压精度	Charge 充电	Input Fluctuation 输入波动	± 0.5%				
		Load Fluctuation 负载波动	± 0.5%				
	Discharge 放电	Input Fluctuation 输入波动	± 0.5%				
		Load Fluctuation 负载波动	± 0.5%				
Voltage Ripple 电压纹波噪音			0.2%rms(at FS)				
Transient Response 过量响应			under 10msec. 少于 0.01秒				
Charge/Discharge Switching Time 充放电响应时间			under 10msec.*2 少于 0.01秒				
Current Setting Range 电流制定范围		Charge 充电	0-600A*3				
		Discharge 放电	0-600A*3				
Current Accuracy 电流精度	Charge 充电	Input Fluctuation 输入波动	± 0.5%				
		Load Fluctuation 负载波动	± 0.5%				
	Discharge 放电	Input Fluctuation 输入波动	± 0.5%				
		Load Fluctuation 负载波动	± 0.5%				
Current Ripple 电流纹波噪音			1%rms(at FS)				
Interface 界面			Ethernet/CAN/(GP-IB/RS-232C Option) 以太网/CAN/(GP-IB/RS-232C 可选项)				

*1 Over 600V Option
600V 以上 (选项)

*2 Faster Switching Time Option
高速度切换 (选项)

*3 Over 600A Option
600A 以上 (选项)

Charge/Discharge Software

Feature 特长

- Simple operation
Dedicated software for performing battery characteristic tests. Even without any knowledge of programming, users can get started with just a few settings.
使用简单。
为进行电池特性试验而设计的专用软件。即使用户不具备编程知识，也只需设定几处便可开始使用。
- Scheduled operation
Can be operated automatically using pre-programmed schedules and triggers.
任务计划运行。
可利用预先编制好的任务计划与触发器进行自动运行。
- Multi-channel operation
Data logging for multiple charge and discharge devices connected via Ethernet can be controlled individually.
Different schedules can be run on individual charge/discharge devices, and the same schedule can be run on multiple devices, such as for production equipment.
Charge/discharge devices of different capacities and different types can be combined, and additional channels can be set up easily.
多通道运行。
可分别控制通过以太网连接在一起的多个充放电装置，数据记录器。
可利用各充放电装置执行不同的任务计划，并且还可以推测生产设备等，利用多个充放电装置执行同一个任务计划。
可很方便地增设通道，从而可以将不同容量，不同方式的充放电装置搭配在一起使用。

Software specifications 软件规格

- Manual charge/discharge control
You can select from the following operation modes;
Constant current charge/discharge
Constant power charge/discharge
Constant voltage charge/discharge
Controls output (on/off).
Warning indications
Displays warnings, including warnings for excess voltage, current surges, excess power, and excess heat.
Schedule operation controls
Control of schedule operations, including start, stop, and discontinuation, and displays elapsed time.
Reading and saving charge/discharge files
Saves channel allocation and schedule/trigger programmes to a disc.

手动充放电管理

可选择以下工作模式。
固定电流 充电 / 放电
固定电力 充电 / 放电
固定电压 充电 / 放电
进行输出的打开关闭管理。

警报显示

显示过电压，过电流，过电力，过热等警报。

任务计划运行管理

进行开始，停止，暂停等任务计划的管理与显示经过时间。

充放电配置文件的读入，保存

将通道分配表，任务计划 / 触发程序保存至磁盘。

- Logical channel settings
Unit no., module no. and channel no. combinations are labeled (logical channel name) and entered. Management of channels is simple using trigger settings.

Module settings

Sets the module inserted in the data logger.

Unit settings

Sets IP address of the unit when collecting data simultaneously from multiple data loggers.

逻辑通道设定

登记单元编号，模块编号，通道编号的组合，并赋予其权限（逻辑通道名称）。

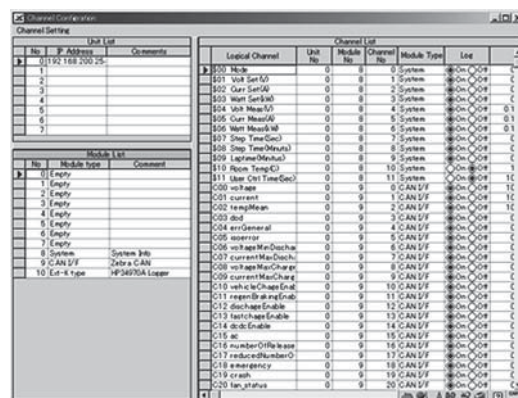
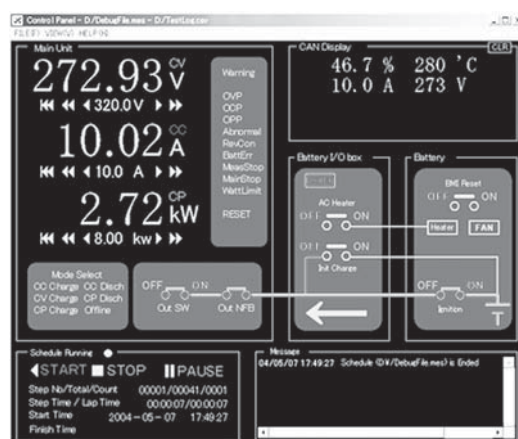
可通过设定触发器等很方便地管理通道。

模块设定

设定插入了数据记录器的模块。

单元设定

从多个数据记录器同时收集数据时，设定单元的 IP 地址。



充放电软件

Schedule settings

Performs charging and discharging following pre-set programs (steps). In addition to charge/discharge directions, control directions, such as jump and loop, may be used. Data for scheduled operations is saved as a log file.

Trigger settings

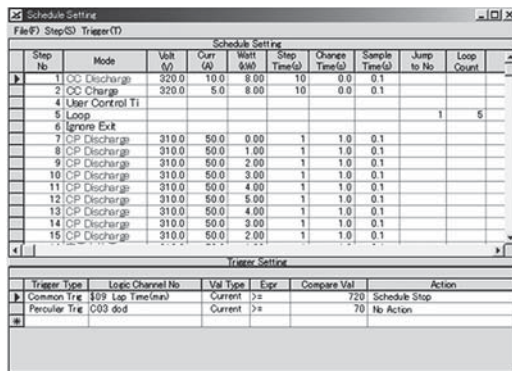
If logical channel values specified during scheduled charging and recharging deviate from the tolerance values, defined operations (next step/suspension of operation) are run. In addition to instantaneous values, variations within a specified period of time can also be selected. For example, you can control the way the device switches over to discharge to prevent a rise in temperature during full charges.

任务计划设定

根据预先设定好的程序（步骤）进行充放电。除充放电命令外，还可使用跳过、循环等控制命令。任务计划运行过程中的数据保存作日志文件。

触发器设定

如在按任务计划充放电时指定的逻辑通道值与判定值不符，则执行预先定义好的动作（跳至下一步 / 停止运行）。逻辑通道的值除了瞬间值外，还可选择指定时间内的变化量。比如说，可进行各种控制，比如发现充满电时电池温度有所上升后切换到放电。



Main panel

Specifies the unit (charge/discharge device) connected to the network.

Specifies IP address and predetermined schedules.

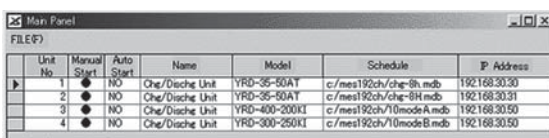
Enables mixed control of charge/discharge devices with different capacities and different systems.

主控制面板

指定连接到网络上的单元（充放电装置）。

指定 IP 地址，已设定好的任务计划。

可将不同容量，不同方式的充放电装置搭配到一起，加以管理。

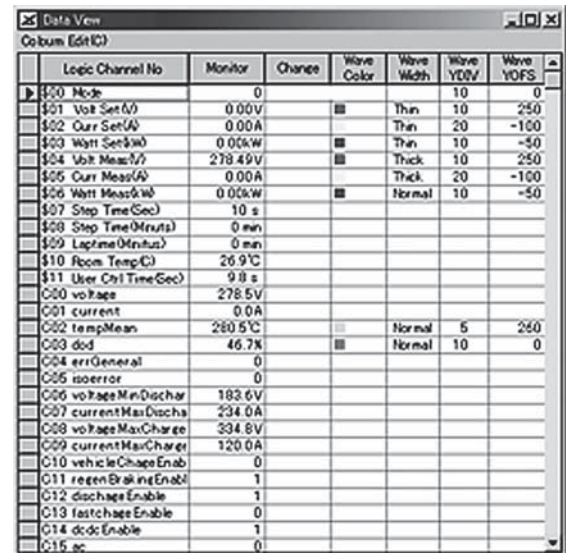


Data view

Logical channels can be monitored as numerical values. When viewing wave patterns in the Web view, wave pattern color and line width can be specified.

数据查看器

可利用数值监测逻辑通道。并且如波形查看器上显示波形，可指定波形颜色，线宽。

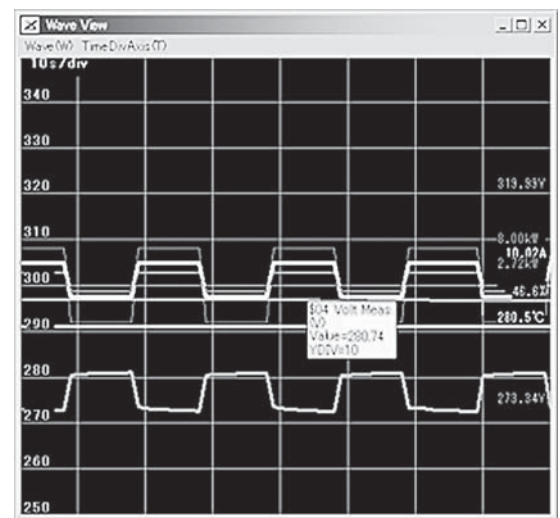


Wave view

Logical channel values are displayed as oscilloscope-like wave patterns. Wave color and line width can be specified for the data view. Time lines can be selected from 10/20/30/60 seconds. Also equipped with a function that displays detailed wave data when specific screen areas are selected.

波形查看器

以示波器那样的波形显示逻辑通道的值。可利用数据查看器指定波形颜色，线宽。并且，可从 10/20/30/60 秒中选择一个时间作为时间轴。其还具备在窗口上某处单击一下，显示该处详细波形信息的功能。



Charge/Discharge Software 充放电软件

Data logger MES-192CH 数据记录器 MES-192CH

● **Highly expandable**
Up to 8 modules, which can accommodate 24 channels each, can be stored in the data logger.
Moreover, by linking multiple data loggers using a LAN cable, you can measure the voltage and temperature for up to 1,536 channels.

扩展性强
数据记录器中内置了 8 个模块，每个模块可输入 24 个通道。并且，通过用 LAN 线缆将数据记录器互相连接起来，最多可测量 1536 个通道的电压，温度。

● **High-speed sampling**
With an AD converter built into the module, the impact on sampling time due to an increase in the number of channels is minimized. The minimum sampling time of 100 ms does not change even if the number of channels is increased.

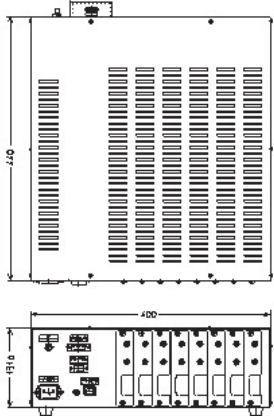
高速取样
因为模块内内置有 AD 变频器，所以可通过增加通道数减轻对取样时间的影响。最小取样时间 100ms 即使通道数增加，也不会改变。

● **Long-life**
A semiconductor (high-compression PhotoMOS relay) is used for the multiplexer, so there is no need to worry about the duration of contact as with other logger products that use relay. In addition, DC200V is supplied between channels to eliminate channel-to-channel compression problems associated with other semiconductor multiplexer loggers, allowing the cell voltage of batteries connected serially to be measured without any problems.

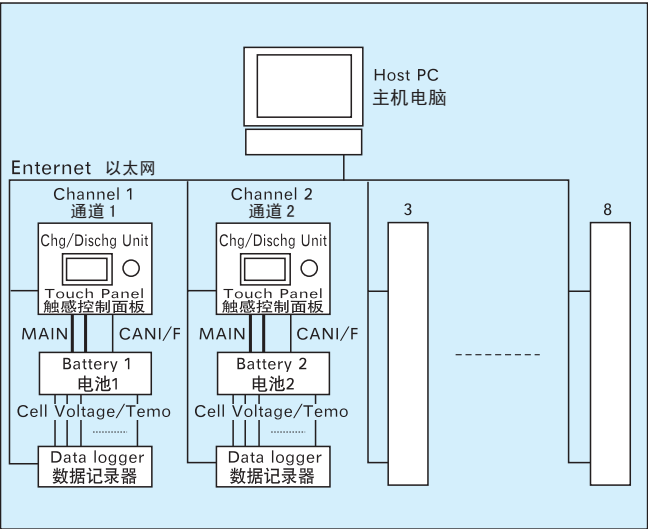
使用寿命长
因为多路器中使用了半导体（发光继电器—高耐压品），所以不需要象其他使用继电器的记录器产品那样，注意接点的寿命，并且它还能确保通道间耐压为 DC200V，而这也是其他半导体多路器的记录器所存在的问题，它可以毫无问题地测量串联着的电池组的电池电压。

Data Logger 数据记录器

Input Signal	DC0-20V(1mV Resolution) Thermo Couple T,K 型 (0.1℃ Resolution)	输入信号	DC0 ~ 20V (1mV 分辨) 热电偶 T, K 型 (0.1℃ 分辨)
Input Channel	Max 1536 Channel 24Channel (1Module) 8Module (1Unit) 8Unit (1System)	输入通道	最多 1536 个通道 24 个通道 (1 个模块) 8 个模块 (1 个组合) 8 个组合 (1 个系统)
Sampling Time	0.1s-60s (All Channel at once)	取样时间	0.1 ~ 60 秒 (全通道同时进行取样)
Withstand Voltage	between channel DC200V between module DC500V	耐电压	通道之间 DC200V 模块之间 DC500V
Interface	to Host ; PC Ethernet (TCP/IP) to Charge&Discharge ; Original Serial Communication	界面	以太网 (TCP/IP)
CPU	32bitRISC made by YAMABISHI	CPU	内置 YAMABISHI 制造的 32bit RISC 微型计算机
Dimensions (mm) Weight (kg)	W400 D440 H130 10kg	尺寸 (mm) 重量 (kg)	W400×D440×H130 10kg



System Block Diagram 系统结构图



DC POWER SUPPLY

直流电源装置

- Series Regulated Type38
串联型稳压方式
- Big Capacity Switching Type44
大容量开关方式
- SCR System Type45
晶闸管控制方式
- Emergency DC Power Supply50
紧急用直流电源

Series Regulated DC Power Supply

YTR series

The YTR series is using a pre-regulator for SCR and conducting series regulation with the power transistor at the end steps. Therefore, inefficiency of the past series regulator was improved and it outputs high-quality DC.

YTR系列在预调整中使用SCR，终段由于使用大功率三极管进行串行控制，所以可以改善现有的系列调节器的效率，输出高品质的直流。



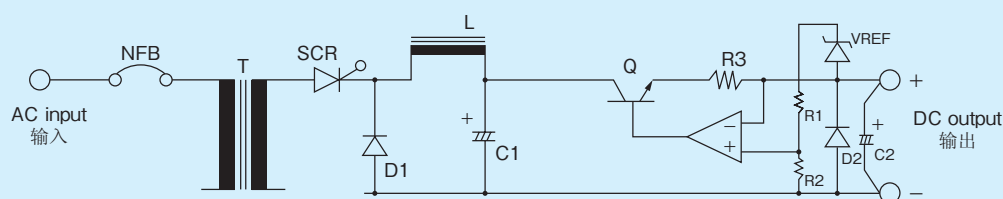
Application 用途

- Plating electrolyze
电镀电解槽
- Parts aging
时效部件
- Inspection
检验
- Metal-surface treatment
金属表面处理
- For magnetization
磁化用
- Substituted for battery, etc.
替代电池

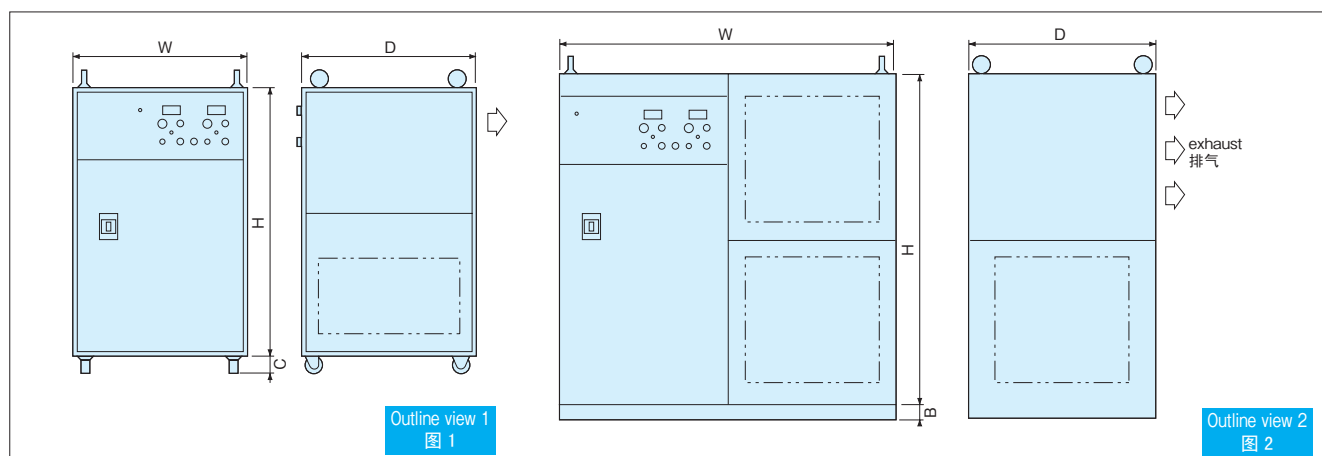
Feature 特长

- High stability $\pm (0.005\% + 3\text{mV})$, $\pm (0.05\% + 10\text{mA})$
良好的稳定性保证强输电电流的应用。 $\pm (0.005\% + 3\text{mV})$, $\pm (0.05\% + 10\text{mA})$
- Low ripple (1-5mVrms)
纹波极小 (1 ~ 5mVrms)
- Protection circuits of over voltage, over current, overheat.
过电压过电流过热保护电路。
- Crossover method (shift CV and CC operation automatically) protects the load from excessive electric power.
通过交叉方式 (定电压动作和定电流动作自动转换) 保护负载不受过大功率损害。

Block diagram 结构图



Outline view 外观图



串联型稳压直流电源

YTR系列

Specifications 规格

0 ~ 8V Output 输出 0 ~ 8V

Model 型号		YTR					
		8-100NX	8-200NX	8-300NX	8-500NX	8-750NX	8-1000NX
Output 输出	Capacity(KW) 容量(KW)	0.8	1.6	2.4	4	6	8
	Voltage(VDC) 电压(VDC)	0 ~ 8					
	Voltage Accuracy (Input Fluctuation) 电压精度 (输入波动)	under +/- (0.005%+3mV) 小于 ± (0.005%+3mV)					
	(Load Fluctuation) (负载波动)	under +/- (0.005%+3mV) 小于 ± (0.005%+3mV)					
	Ripple Noise 纹波噪音	1mVrms	3mVrms	5mVrms	5mVrms	5mVrms	5mVrms
	Current(ADC) 电流 (ADC)	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500	0 ~ 750	0 ~ 1000
	Current Accuracy (Input Fluctuation) 电流精度 (输入波动)	under +/- (0.05%+10mA) 小于 ± (0.05%+10mA)					
	(Load Fluctuation) (负载波动)	under +/- (0.05%+10mA) 小于 ± (0.05%+10mA)					
Input 输入	Phase 相位	SinglePhase 单相	ThreePhase 三相				
	Voltage 电压	Single Phase 200 or 220 or 230 or 240V / Three Phase 200 or 380 or 400 or 415V or another 单相200或220或230或240V/三相200或380或400或415V或其它					
	Voltage Range 电压范围	+/-10%					
	Frequency 效率	50/60Hz					
	Capacity(KVA) 容量(KVA)	2	4	5.5	9	16	22

0 ~ 24V Output 输出 0 ~ 24V

Model 型号		YTR					
		24-100NX	24-200NX	24-300NX	24-500NX	24-750NX	24-1000NX
Output 输出	Capacity(KW) 容量(KW)	2.4	4.8	7.2	12	18	24
	Voltage(VDC) 电压(VDC)	0 ~ 24					
	Voltage Accuracy (Input Fluctuation) 电压精度（输入波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）					
	(Load Fluctuation) （负载波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）					
	Ripple Noise 纹波噪音	1mVrms	3mVrms	5mVrms	5mVrms	5mVrms	5mVrms
	Current(ADC) 电流（ADC）	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500	0 ~ 750	0 ~ 1000
	Current Accuracy (Input Fluctuation) 电流精度（输入波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）					
	(Load Fluctuation) （负载波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）					
Input 输入	Phase 相位	SinglePhase 单相	ThreePhase 三相				
	Voltage 电压	Single Phase 200 or 220 or 230 or 240V / Three Phase 200 or 380 or 400 or 415V or another 单相200或220或230或240V / 三相200或380或400或415V或其它					
	Voltage Range 电压范围	+/-10%					
	Frequency 效率	50/60Hz					
	Capacity(KVA) 容量(KVA)	5.3	9	13	22	35	47

Series Regulated DC Power Supply

Specifications 规格

0 ~ 35V Output 输出 0 ~ 35V

Model 型号		YTR					
		35-100NX	35-200NX	35-300NX	35-500NX	35-750NX	35-1000NX
Output 输出	Capacity(KW) 容量(KW)	3.5	7	10.5	17.5	26.25	35
	Voltage(VDC) 电压(VDC)	0 ~ 35					
	Voltage Accuracy (Input Fluctuation) 电压精度（输入波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）					
	(Load Fluctuation) （负载波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）					
	Ripple Noise 纹波噪音	1mVrms	3mVrms	5mVrms	5mVrms	5mVrms	5mVrms
	Current(ADC) 电流（ADC）	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500	0 ~ 750	0 ~ 1000
	Current Accuracy (Input Fluctuation) 电流精度（输入波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）					
	(Load Fluctuation) （负载波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）					
Input 输入	Phase 相位	SinglePhase 单相	ThreePhase 三相				
	Voltage 电压	Single Phase 200 or 220 or 230 or 240V / Three Phase 200 or 380 or 400 or 415V or another 单相200或220或230或240V / 三相200或380或400或415V或其它					
	Voltage Range 电压范围	+/-10%					
	Frequency 效率	50/60Hz					
	Capacity(KVA) 容量(KVA)	7.4	12	18	30	48	65

0 ~ 55V Output 输出 0 ~ 55V

Model 型号	YTR					
	55-50NX	55-100NX	55-200NX	55-300NX	55-500NX	55-1000NX
Capacity(KW) 容量(KW)	2.75	5.5	11	16.5	27.5	55
Voltage(VDC) 电压(VDC)	0 ~ 55					
Voltage Accuracy (Input Fluctuation) 电压精度 (输入波动)	under +/- (0.005%+3mV) 小于 ± (0.005%+3mV)					
(Load Fluctuation) (负载波动)	under +/- (0.005%+3mV) 小于 ± (0.005%+3mV)					
Ripple Noise 纹波噪音	1mVrms	3mVrms	5mVrms	5mVrms	5mVrms	5mVrms
Current(ADC) 电流 (ADC)	0 ~ 50	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500	0 ~ 1000
Current Accuracy (Input Fluctuation) 电流精度 (输入波动)	under +/- (0.05%+10mA) 小于 ± (0.05%+10mA)					
(Load Fluctuation) (负载波动)	under +/- (0.05%+10mA) 小于 ± (0.05%+10mA)					
Phase 相位	ThreePhase 三相					
Voltage 电压	Three Phase 200 or 380 or 400 or 415V or another 三相200或380或400或415V或其它					
Voltage Range 电压范围	+/-10%					
Frequency 效率	50/60Hz					
Capacity(KVA) 容量(KVA)	5.5	12	20	28	47	95

串联型稳压直流电源

Specifications 规格

0 ~ 110/150V Output 输出 0 ~ 110/150V

Model 型号		YTR									
		110-30NX	110-50NX	110-100NX	110-200NX	110-300NX	110-500NX	150-100NX	150-200NX	150-300NX	150-500NX
O u t p u t 输 出	Capacity(KW) 容量(KW)	3.3	5.5	11	22	33	55	15	30	45	75
	Voltage(VDC) 电压(VDC)	0 ~ 110						0 ~ 150			
	Voltage Accuracy (Input Fluctuation) 电压精度（输入波动）	under +/- (0.005%+3mV) 小于 ±（0.005%+3mV）									
	(Load Fluctuation) （负载波动）	under +/- (0.005%+3mV) 小于 ±（0.005%+3mV）									
	Ripple Noise 纹波噪音	3mVrms	3mVrms	5mVrms	5mVrms	5mVrms	10mVrms	5mVrms	10mVrms	10mVrms	10mVrms
	Current(ADC) 电流（ADC）	0 ~ 30	0 ~ 50	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500
	Current Accuracy (Input Fluctuation) 电流精度（输入波动）	under +/- (0.05%+10mA) 小于 ±（0.05%+10mA）									
	(Load Fluctuation) （负载波动）	under +/- (0.05%+10mA) 小于 ±（0.05%+10mA）									
I n p u t 输 入	Phase 相位	SinglePhase 单相		ThreePhase 三相							
	Voltage 电压	Single Phase 200 or 220 or 230 or 240V / Three Phase 200 or 380 or 400 or 415V or another 单相200或220或230或240V/三相200或380或400或415V或其它									
	Voltage Range 电压范围	+/-10%									
	Frequency 效率	50/60Hz									
	Capacity(KVA) 容量(KVA)	6.6	11	19	37	58	95	27	55	80	135

0 ~ 200/250V Output 输出 0 ~ 200/250V

Model 型号		YTR								
		200-100NX	200-200NX	200-300NX	200-500NX	250-50NX	250-100NX	250-200NX	250-300NX	250-400NX
O u t p u t 输 出	Capacity(KW) 容量(KW)	20	40	60	100	12.5	25	50	75	100
	Voltage(VDC) 电压(VDC)	0 ~ 200				0 ~ 250				
	Voltage Accuracy (Input Fluctuation) 电压精度（输入波动）					under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）				
	(Load Fluctuation) （负载波动）					under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）				
	Ripple Noise 纹波噪音	10mVrms	10mVrms	15mVrms	15mVrms	10mVrms	15mVrms	15mVrms	15mVrms	15mVrms
	Current(ADC) 电流（ADC）	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500	0 ~ 50	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 400
	Current Accuracy (Input Fluctuation) 电流精度（输入波动）					under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）				
	(Load Fluctuation) （负载波动）					under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）				
I n p u t 输 入	Phase 相位	ThreePhase 三相								
	Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它								
	Voltage Range 电压范围	+/-10%								
	Frequency 效率	50/60Hz								
	Capacity(KVA) 容量(KVA)	35	70	110	175	22	45	88	130	175

Series Regulated DC Power Supply

YTR series

Specifications 规格

0 ~ 300/400V Output 输出 0 ~ 300/400V

Model 型号		YTR						
		300-50NX	300-100NX	300-200NX	300-300NX	400-30NX	400-50NX	400-100NX
Output 输出	Capacity(KW) 容量(KW)	15	30	60	90	12	20	40
	Voltage(VDC) 电压(VDC)	0 ~ 300				0 ~ 400		
	Voltage Accuracy (Input Fluctuation) 电压精度（输入波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）						
	(Load Fluctuation) （负载波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）						
	Ripple Noise 纹波噪音	15mVrms	15mVrms	15mVrms	15mVrms	20mVrms	20mVrms	20mVrms
	Current(ADC) 电流（ADC）	0 ~ 50	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 30	0 ~ 50	0 ~ 100
	Current Accuracy (Input Fluctuation) 电流精度（输入波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）						
	(Load Fluctuation) （负载波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）						
Input 输入	Phase 相位	ThreePhase 三相						
	Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它						
	Voltage Range 电压范围	+/-10%						
	Frequency 效率	50/60Hz						
	Capacity(KVA) 容量(KVA)	26	52	105	160	21	35	70

0 ~ 500/600V Output 输出 0 ~ 500/600V

Model 型号		YTR							
		500-20NX	500-30NX	500-50NX	500-100NX	600-20NX	600-30NX	600-50NX	600-100NX
Output 输出	Capacity(KW) 容量(KW)	10	15	25	50	12	18	30	60
	Voltage(VDC) 电压(VDC)	0 ~ 500				0 ~ 600			
	Voltage Accuracy (Input Fluctuation) 电压精度（输入波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）							
	(Load Fluctuation) （负载波动）	under +/- (0.005%+3mV) 小于 ± （0.005%+3mV）							
	Ripple Noise 纹波噪音	30mVrms	30mVrms	30mVrms	30mVrms	40mVrms	40mVrms	40mVrms	50mVrms
	Current(ADC) 电流（ADC）	0~20	0~30	0~50	0~100	0~20	0~30	0~50	0~100
	Current Accuracy (Input Fluctuation) 电流精度（输入波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）							
	(Load Fluctuation) （负载波动）	under +/- (0.05%+10mA) 小于 ± （0.05%+10mA）							
Input 输入	Phase 相位	ThreePhase 三相							
	Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它							
	Voltage Range 电压范围	+/-10%							
	Frequency 效率	50/60Hz							
	Capacity(KVA) 容量(KVA)	17	27	45	90	22	32	55	110

串联型稳压直流电源

YTR系列

YTR-series function 关于YTR系列的功能

● Panel operation and Indicator 操作面板和指示器

- Output voltage (CV) Output current setting (CC)
CV, CC 10 turn potentiation meter adjustable 1/1000.
 - Setting for over voltage and over current
 - Pre-set function
CV, CC, OVP, OCP can be pre-set by switches.
 - Output switch on/off
 - Output voltage meter/Output current meter
Voltage and current meter is 3digit number or 31/2digit number 4digit number or 41/2digit number is option.
 - Remote/local switch
CV/CC can be sets by panel switch to individual operate remote or local.
 - Lamp Indicator
Lamp Indicator use for light-emitting diode.
- 输出电压 (CV) 输出电流设定 (CC)
CV, CC 10 转电位器可调 1/1000。
 - 过压和过流设定
 - 预设功能
能通过开关预设 CV, CC, OVP, OCP。
 - 输出交换开 / 关
 - 输出电压仪表 / 输出电流仪表
电压和电流仪表为 3 位数或 31/2 位数 4 位数或 41/2 位数的也可供选择。
 - 远程 / 本地开关
通过仪表盘开关可以把 CV/CC 设定成单独的远程或本地操作。
 - 指示灯
发光二极管指示灯

● Remote operation 遥控操作

- CV and the CC can be set by potentiometer (10 K Ω) or by DC0-10V signal. (Remote Setup)
 - Output can be turned ON and OFF by non-voltage contact (output ON when closing).
 - Interlock (remote emergency stop)
The input breaker can be tripped at non-voltage contact (input intercept by close).
 - Remote sensing
Because the remote sensing terminal is prepared, voltage sensing in the load terminal is possible.
- 可以用电位差计 (10K Ω) 或者 DC0 ~ 10V 信号进行 CV 以及 CC 设置 (遥控设置)。
 - 可以用无电压触点 (闭合时输出 ON) 进行输出 ON/OFF 控制。
 - 联锁装置 (通过遥控紧急停止)
可以利用无电压触点 (通过闭合截止输入) 使输入电流断路器断路。
 - 远程遥测
利用本公司提供的遥感端子, 可以测定负载端的电压。

● Monitor output 监视器输出

- Output voltage and current monitor output
The output voltage and current value are output on DC0-10V full scale. (However, please be cautious since the monitor output is not insulated with power supply's output line. Plus sensing terminal is common).
 - Setup value monitor output
Each setup value of CV, CC, OVP and OCP is output on DC0-10V full scale. (However, please be careful since the monitor output is not insulated with power supply's output line. Plus sensing terminal is common).
- 输出电压和电流监视器输出
可以在 DC0 ~ 10V 全量程范围内对输出电压和电流值进行输出 (但是, 请注意监视器输出与电源输出线未进行绝缘。正极读取接线柱是共用的)。
 - 设定值监视器输出
可以在 DC0 ~ 10V 全量程范围内对 CV, CC, OVP, OCP 的各设定值进行输出 (但是, 请注意监视器输出与电源输出线未进行绝缘。正极感应端子是共用的)。

● Display output 显示输出

Following five display items are output at a non-voltage contact.

- Input breaker ON display
- Output ON display
- CV operation display
- CV remote setup display
- CC remote setup display

下述五点显示项目由无电压触点输出。

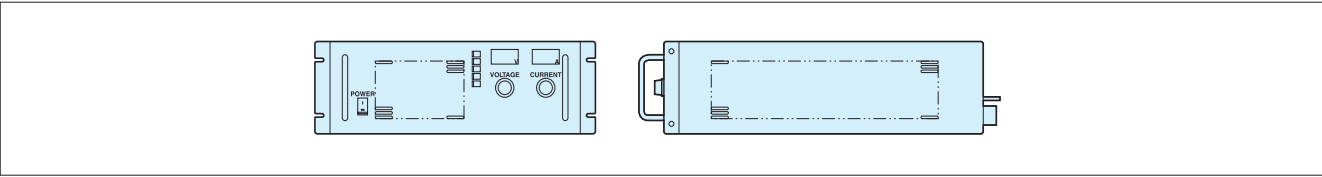
- 输入电流断路器 ON 显示
- 输出 ON 显示
- CV 动作显示
- CV 遥控设置显示
- CC 遥控设置显示

● Protection function 保护功能

- Since it is CV-CC operation automatic shift type, it becomes mutual limiter preventing excessive voltage and over current.
 - Input power supply switch uses a breaker.
 - During operating, the device is in the preset operation mode for excessive voltage (OVP) and over current (OCP). It trips the input breaker for protection.
 - When the power semiconductor etc. overheats, the input breaker is tripped for protection.
- 由于是 CV-CC 动作自动转换型, 故限制器可以相互动作, 以防止过电压和过电流。
 - 输入电源开关使用的是电流断路器。
 - 过电压 (OVP) 以及过电流 (OCP) 为预设操作, 工作时将使输入电流断路器断路以进行保护。
 - 功率半导体等过热时, 输入电流断路器将断开电路, 以进行保护。

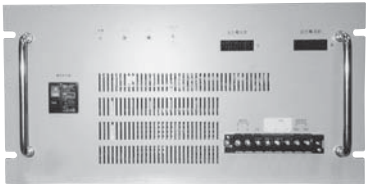
Big Capacity Switching DC Power Supply 大容量开关直流电源装置

ESP series ESP系列



Model 型号		ESP		
		5K-25X	5K-50X	5K-100X
Capacity (KVA) 容量 (kVA)		5kVA		
Output voltage variable range 输出电压可变范围		0 ~ 25V	0 ~ 50V	0 ~ 100V
Output current variable rang 输出电流可变范围		0 ~ 200A	0 ~ 100A	0 ~ 50A
Constant voltage feature 额定电压特性	Ripple noise 纹波噪声	1% VRMS+100mV (20 ~ 1MHz)		
		1VP-P (20 ~ 20MHz)		
	Output voltage accuracy 输出电压精度	Input fluctuation: Less than $\pm 0.5\% + 500\text{mV}$ (for input voltage 180-264V) 输入变动; 输入电压 180 ~ 264V 时在 $\pm 0.5\% + 500\text{mV}$ 以内		
		Load fluctuation: Less than $\pm 0.5\% + 500\text{mV}$ (for output current 0-100%) 负载变动; 输出电流 0 ~ 100% 时在 $\pm 0.5\% + 500\text{mV}$ 以内		
Constant current feature 额定电流特性	Output current accuracy 输出电流精度	Input fluctuation: Less than $\pm 0.5\% + 500\text{mA}$ (for input voltage $\pm 10\%$) 输入变动; 输入电压 $\pm 10\%$ 时在 $\pm 0.5\% + 500\text{mA}$ 以内		
		Load fluctuation: Less than $\pm 0.5\% + 500\text{mA}$ (for output current 0-100%) 负载变动; 输出电流 0 ~ 100% 时在 $\pm 0.5\% + 500\text{mA}$ 以内		
Protection function 保护功能	Over voltage 过电压	Voluntarily setting 可以任意设定		Input breaker is tripped 输入断路器会断开
	Over current 过电流	Voluntarily setting 可以任意设定		
	Overheat 加热	100℃		
Input 输入		Three phase 180 ~ 264VAC 50/60Hz AC 三相 180 ~ 264V 50/60Hz		

YDD series YDD系列 (DC-DC转换器)

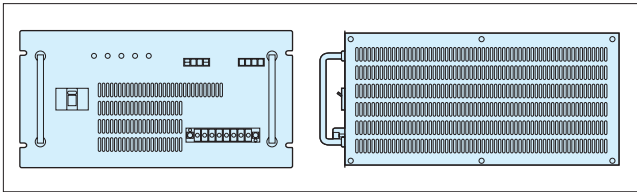


YDD-250-20

Specifications 规格

Input	DC100V 200V 300V	输入	DC100V 200V 300V
Output	To about DC300V	输出	小于 DC300V 左右 300A 左右
Capacity	To about 10kW	容量	小于 10kW 左右

Outline view 外观图



SCR System Type 晶闸管控制方式

YS-NRA/YS-NR series YS-NRA/YS-NR系列

Demand for the DC circuit is spreading as power source for battery such as test of communication devices, electronic fields, computers, mobile devices and electric vehicles. This series is SCR type DC stabilized power source. Based on Yamabishi's rich experiences, we provide custom made specification to meet the needs besides standard products.

直流电路日益普及，不仅在所有的电子领域以及计算机领域，而且在移动机器及电动汽车的蓄电池及通信机器的试验和电源领域，对直流电源装置的需求越来越大。

本系列产品是SCR式直流稳定电源，除了有本公司集丰富经验及卓越技术开发制造的标准品外，还可根据用户的特殊需要提供定制规格产品。



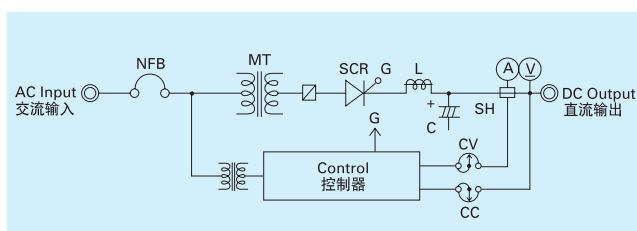
Application 用途

- For charge
充电用
- For electrolysis
电解用
- For physic chemistry
理化学用
- Aging of electronic parts
时效电子部件
- Telecommunication
电话交换器，通讯器用电源
- Instead of Battery, etc.
替代电池 等

Feature 特长

- Output voltage 0-110% variable
输出电压在 0 ~ 110% 之间可变
- Output voltage accuracy less than $\pm 5\%$ (In more than rating voltage 25%)
输出电压精度 $\pm 0.5\%$ (在额定电压 25% 以上的情况下)
- High-speed response 0.5Sec. (50-100% load)
高速响应 0.5 秒 (50 ~ 100% 负载时)
- The method of controlling conduction angle of a thyristor by replacing rectifier cell of rectification circuit is adopted. It makes a fast response and there is no movable part, making the product reliable and have longer operating life requiring little maintenance.
由于采用的是把整流电路的整流元件替换为晶闸管控制器以对晶闸管控制器的导通角进行控制的方式，所以响应快，不存在可动部分，因此保养简单，寿命长，可靠性高。

Block diagram (YS-NRA series) 结构图(YS-NR系列)



Option 选项

- Constant current (NR series)
恒定电流 (NR 系列)
- Soft start
软启动
- Remote control (voltage and current)
远程控制 (电压，电流)
- Parallel run (NR series)
并联运行机能 (NR 系列)
- Insulation function of current detection
电流检测的绝缘功能

SCR System Type

YS-NR series

Specifications 规格

Constant Voltage, Constant Current 0 ~ 110V Output / Single Phase Input
额定电压, 额定电流输出可调型 / 输出 0 ~ 110V / 输入 单相

Model 型号		YS-1110-10NRAX	YS-1110-15NRAX	YS-1110-20NRAX	YS-1110-30NRAX	YS-1110-40NRAX	YS-1110-50NRAX
Output 输出	Capacity(KW) 容量(KW)	1.1	1.65	2.2	3.3	4.4	5.5
	Voltage(VDC) 电压(VDC)	DC0~110V					
	Voltage Accuracy 电压精度	±0.5% at 27.5~110V 在27.5~110V情况下小于±0.5%					
	Ripple Noise 脉动噪音	2.0%Vrms at 82.5~110V 在82.5~110V情况下为2.0%Vrms					
	Current(ADC) 电流 (ADC)	10A	15A	20A	30A	40A	50A
Input 输入	Response Time 响应时间	0.5Sec at 50~100% load 50~100%负载需要0.5秒					
	Phase 相位	Single phase 单相					
	Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another 100或110或115或120或200或220或230或240V或其它					
	Voltage range 电压范围	±10%					
	Frequency 频率	50/60Hz					

Constant Voltage, Constant Current / 0 ~ 220V Output / Single Phase Input
额定电压, 额定电流输出可调型 / 输出 0 ~ 220V / 输入 单相

Model 型号		YS-1220-5NRAX	YS-1220-7.5NRAX	YS-1220-10NRAX	YS-1220-15NRAX	YS-1220-20NRAX	YS-1220-25NRAX
Output 输出	Capacity(KW) 容量(KW)	1.1	1.65	2.2	3.3	4.4	5.5
	Voltage(VDC) 电压(VDC)	DC0~220V					
	Voltage Accuracy 电压精度	±0.5% at 55~220V 在55~220V情况下小于±0.5%					
	Ripple Noise 脉动噪音	2.0%Vrms at 165~220V 在165~220V情况下为2.0%Vrms					
	Current(ADC) 电流 (ADC)	5A	7.5A	10A	15A	20A	25A
Input 输入	Response Time 响应时间	0.5Sec at 50~100% load 50~100%负载需要0.5秒					
	Phase 相位	Single phase 单相					
	Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another 100或110或115或120或200或220或230或240V或其它					
	Voltage range 电压范围	±10%					
	Frequency 频率	50/60Hz					

Constant Voltage, Constant Current / 0 ~ 330V Output / Single Phase Input
额定电压, 额定电流输出可调型 / 输出 0 ~ 330V / 输入 单相

Model 型号		YS-1330-5NRX	YS-1330-7.5NRX	YS-1330-10NRX	YS-1330-15NRX	YS-1330-20NRX
Output 输出	Capacity(KW) 容量(KW)	1.65	2.475	3.3	4.95	6.6
	Voltage(VDC) 电压(VDC)	DC0~330V				
	Voltage Accuracy 电压精度	±0.5% at 82.5~330V 在82.5~330V情况下小于±0.5%				
	Ripple Noise 脉动噪音	2.0%Vrms at 247.5~330V 在247.5~330V情况下为2.0%Vrms				
	Current(ADC) 电流 (ADC)	5A	7.5A	10A	15A	20A
Input 输入	Response Time 响应时间	0.5Sec at 50~100% load 50~100%负载需要0.5秒				
	Phase 相位	Single phase 单相				
	Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another 100或110或115或120或200或220或230或240V或其它				
	Voltage range 电压范围	±10%				
	Frequency 频率	50/60Hz				

晶闸管控制方式

YS-NRA/YS-NR系列

Specifications 规格

Constant Voltage, Constant Current / 0 ~ 550V Output / Single Phase Input

额定电压, 额定电流输出可调型 / 输出 0 ~ 550V / 输入 单相

Model 型号	YS-1550-5NRX	YS-1550-7.5NRX	YS-1550-10NRX	YS-1550-15NRX	YS-1550-20NRX
Capacity(KW) 容量(KW)	2.75	4.125	5.5	8.25	11
Voltage(VDC) 电压(VDC)	DC0~550V				
Voltage Accuracy 电压精度	±0.5% at 137.5~550V 在137.5~550V情况下小于±0.5%				
Ripple Noise 脉动噪音	2.0%Vrms at 412.5~550V 在412.5~550V情况下为2.0%Vrms				
Current(ADC) 电流 (ADC)	5A	7.5A	10A	15A	20A
Response Time 响应时间	0.5Sec at 50~100% load 50~100%负载需要0.5秒				
Phase 相位	Single phase 单相				
Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another 100或110或115或120或200或220或230或240V或其它				
Voltage range 电压范围	±10%				
Frequency 频率	50/60Hz				

Constant Voltage, Constant Current / 0 ~ 660V Output / Single Phase Input

额定电压, 额定电流输出可调型 / 输出 0 ~ 660V / 输入 单相

Model 型号	YS-1660-5NRX	YS-1660-7.5NRX	YS-1660-10NRX	YS-1660-15NRX	YS-1660-20NRX
Capacity(KW) 容量(KW)	3.3	4.95	6.6	9.9	13.2
Voltage(VDC) 电压(VDC)	DC0~660V				
Voltage Accuracy 电压精度	±0.5% at 165~660V 在165~660V情况下小于±0.5%				
Ripple Noise 脉动噪音	2.0%Vrms at 495~660V 在495~660V情况下为2.0%Vrms				
Current(ADC) 电流 (ADC)	5A	7.5A	10A	15A	20A
Response Time 响应时间	0.5Sec at 50~100% load 50~100%负载需要0.5秒				
Phase 相位	Single phase 单相				
Voltage 电压	100 or 110 or 115 or 120 or 200 or 220 or 230 or 240V or another 100或110或115或120或200或220或230或240V或其它				
Voltage range 电压范围	±10%				
Frequency 频率	50/60Hz				

SCR System Type

YS-NR series

Specifications 规格

Constant Voltage, Constant Current / 0 ~ 110V Output / Three Phase Input
额定电压，额定电流输出可调型 / 输出 0 ~ 110V / 输入 三相

Model 型号		YS-3110-60NRX	YS-3110-100NRX	YS-3110-150NRX	YS-3110-200NRX	YS-3110-300NRX	YS-3110-500NRX	YS-3110-1000NRX	YS-3110-1500NRX
O u t p u t 输出	Capacity(KW) 容量(KW)	6.6	11	16.5	22	33	55	110	165
	Voltage(VDC) 电压(VDC)	0 ~ 110							
	Voltage Accuracy 电压精度	less than ± 0.5% at 27.5 ~ 110V 在27.5~110V情况下小于± 0.5%							
	Ripple Noise 脉动噪音	0.5%Vrms at 82.5 ~ 110V 在82.5~110V情况下为0.5%Vrms							
	Current(ADC) 电流 (ADC)	60	100	150	200	300	500	1000	1500
I n p u t 输入	Response Time 响应时间	0.5Sec at 50 ~ 100% load 50~100%负载需要0.5秒							
	Phase 相位	Three Phase 三相							
	Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它							
	Voltage Range 电压范围	± 10%							
	Frequency 频率	50/60Hz							

Constant Voltage, Constant Current / 0 ~ 220V Output / Three Phase Input
额定电压，额定电流输出可调型 / 输出 0 ~ 220V / 输入 三相

Model 型号		YS-3220-20NRX	YS-3220-30NRX	YS-3220-60NRX	YS-3220-100NRX	YS-3220-150NRX	YS-3220-200NRX	YS-3220-300NRX	YS-3220-500NRX
O u t p u t 输出	Capacity(KW) 容量(KW)	4.4	6.6	13.2	22	33	44	66	110
	Voltage(VDC) 电压(VDC)	0 ~ 220							
	Voltage Accuracy 电压精度	less than ± 0.5% at 55 ~ 220V 在55~220V情况下小于± 0.5%							
	Ripple Noise 脉动噪音	0.5%Vrms at 165 ~ 220V 在165~220V情况下为0.5%Vrms							
	Current(ADC) 电流 (ADC)	20	30	60	100	150	200	300	500
I n p u t 输入	Response Time 响应时间	0.5Sec at 50 ~ 100% load 50~100%负载需要0.5秒							
	Phase 相位	Three Phase 三相							
	Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它							
	Voltage Range 电压范围	± 10%							
	Frequency 频率	50/60Hz							

Constant Voltage, Constant Current / 0 ~ 330V Output / Three Phase Input
额定电压，额定电流输出可调型 / 输出 0 ~ 330V / 输入 三相

Model 型号		YS-3330-10NRX	YS-3330-20NRX	YS-3330-30NRX	YS-3330-60NRX	YS-3330-100NRX	YS-3330-150NRX	YS-3330-200NRX	YS-3330-300NRX	YS-3330-500NRX	YS-3330-750NRX
O u t p u t 输出	Capacity(KW) 容量(KW)	3.3	6.6	9.9	19.8	33	49.5	66	99	165	247.5
	Voltage(VDC) 电压(VDC)	DC0 ~ 330V									
	Voltage Accuracy 电压精度	±0.5% at 82.5~330V 在82.5~330V情况下小于± 0.5%									
	Ripple Noise 脉动噪音	0.5%Vrms at 247.5~330V 在247.5~330V情况下为0.5%Vrms									
	Current(ADC) 电流 (ADC)	10A	20A	30A	60A	100A	150A	200A	300A	500A	750A
I n p u t 输入	Response Time 响应时间	0.5Sec at 50 ~ 100% load 50~100%负载需要0.5秒									
	Phase 相位	Three phase 三相									
	Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它									
	Voltage range 电压范围	±10%									
	Frequency 频率	50/60Hz									

晶闸管控制方式

YS-NR系列

Specifications 规格

Constant Voltage, Constant Current / 0 ~ 550V Output / Three Phase Input

额定电压, 额定电流输出可调型 / 输出 0 ~ 550V / 输入 三相

Model 型号	YS-3550-10NRX	YS-3550-20NRX	YS-3550-30NRX	YS-3550-60NRX	YS-3550-100NRX	YS-3550-150NRX	YS-3550-200NRX	YS-3550-300NRX	YS-3550-400NRX
Capacity(KW) 容量(KW)	5.5	11	16.5	33	55	82.5	110	165	220
Voltage(VDC) 电压(VDC)	DC0~550V								
Voltage Accuracy 电压精度	±0.5% at 137.5~550V 在137.5~550V情况下小于±0.5%								
Ripple Noise 脉动噪声	0.5%Vrms at 412.5~550V 在412.5~550V情况下为0.5%Vrms								
Current(ADC) 电流 (ADC)	10A	20A	30A	60A	100A	150A	200A	300A	400A
Response Time 响应时间	0.5Sec 0.5秒								
Phase 相位	Three phase 三相								
Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它								
Voltage range 电压范围	±10%								
Frequency 频率	50/60Hz								

Constant Voltage, Constant Current / 0 ~ 660V Output / Three Phase Input

额定电压, 额定电流输出可调型 / 输出 0 ~ 660V / 输入 三相

Model 型号	YS-3660-10NRX	YS-3660-20NRX	YS-3660-30NRX	YS-3660-60NRX	YS-3660-100NRX	YS-3660-150NRX	YS-3660-200NRX	YS-3660-300NRX	YS-3660-400NRX
Capacity(KW) 容量(KW)	6.6	13.2	19.8	39.6	66	99	132	198	264
Voltage(VDC) 电压(VDC)	DC0~660V								
Voltage Accuracy 电压精度	±0.5% at 165~660V 在165~660V情况下小于±0.5%								
Ripple Noise 脉动噪声	0.5%Vrms at 495~660V 在495~660V情况下为0.5%Vrms								
Current(ADC) 电流 (ADC)	10A	20A	30A	60A	100A	150A	200A	300A	400A
Response Time 响应时间	0.5Sec 0.5秒								
Phase 相位	Three phase 三相								
Voltage 电压	200 or 380 or 400 or 415V or another 200或380或400或415V或其它								
Voltage range 电压范围	±10%								
Frequency 频率	50/60Hz								

Constant Voltage, Constant Current /
0 ~ 770V, 0 ~ 880V Output / Three Phase Input

额定电压, 额定电流输出可调型 / 输出 0 ~ 770V, 0 ~ 880V / 输入 三相

Model 型号	YS-3770			YS-3880		
	10NRX	20NRX	30NRX	10NRX	20NRX	30NRX
Capacity (KVA) 容量 (kVA)	7.7	15.4	23.1	8.8	17.6	26.4
Voltage 电压	DC0 ~ 770V			DC0 ~ 880V		
Voltage Accuracy 电压精度	± 0.5% at 192.5 ~ 770V 在 192.5 ~ 770V 时小于 ± 0.5%			± 0.5% at 220 ~ 880V 在 220 ~ 880V 时小于 ± 0.5%		
Ripple Noise 纹波噪声	± 0.5% at 577.5 ~ 770V 577.5 ~ 770V 时 0.5%Vrms			± 0.5% at 660 ~ 880V 660 ~ 880V 时 0.5%Vrms		
Current (ADC) 电流 (ADC)	10A	20A	30A	10A	20A	30A
Response Time 响应时间	0.5Sec 0.5 秒					
Phase 相位	Three Phase 三相					
Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它					
Voltage Range 电压范围	± 10%					
Frequency 频率	50/60Hz					

Constant Voltage, Constant Current /
0 ~ 1100V, 0 ~ 1200V Output / Three Phase Input

额定电压, 额定电流输出可调型 / 输出 0 ~ 1100V, 0 ~ 1200V / 输入 三相

Model 型号	YS-31100			YS-31200		
	5NRX	10NRX	20NRX	5NRX	10NRX	20NRX
Capacity (KVA) 容量 (kVA)	5.5	11	22	6	12	24
Voltage 电压	DC0 ~ 1100V			DC0 ~ 1200V		
Voltage Accuracy 电压精度	± 0.5% at 275 ~ 1100V 在 275 ~ 1100V 时小于 ± 0.5%			± 0.5% at 300 ~ 1200V 在 300 ~ 1200V 时小于 ± 0.5%		
Ripple Noise 纹波噪声	± 0.5% at 825 ~ 1100V 825 ~ 1100V 时 0.5%Vrms			± 0.5% at 900 ~ 1200V 900 ~ 1200V 时 0.5%Vrms		
Current (ADC) 电流 (ADC)	5A	10A	20A	5A	10A	20A
Response Time 响应时间	0.5Sec 0.5 秒					
Phase 相位	Three Phase 三相					
Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它					
Voltage Range 电压范围	± 10%					
Frequency 频率	50/60Hz					

Emergency DC Power Supply

YNV series

This device is DC uninterruptible power equipment mainly for a plant backup.
Yamabishi will produce a design according to user's needs.

本机器为主要用于成套设备断电保护的直流不间断电源装置。
是本公司根据用户的用途设计制造的。



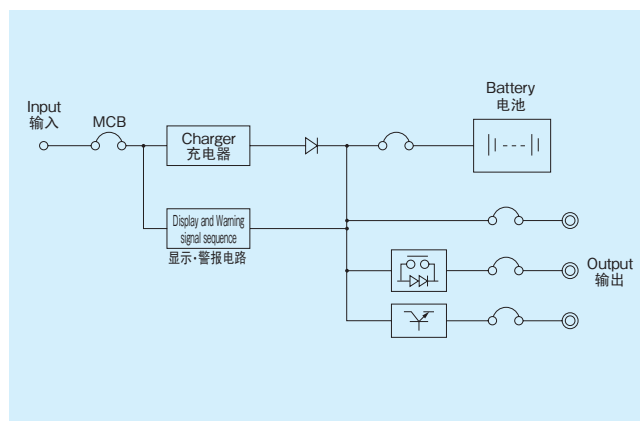
Application 用途

- Plant backup
成套设备断电保护
- Communication machine, PBX backup
通讯器, PBX 断电保护
- For broadcasting equipment, illumination, etc.
广播设备, 照明用 等

Feature 特长

- Full automatic charge method allows easy routine maintenance.
由于采用全自动充电方式, 保养非常简单。
- Equalizing charge is possible just at one touch of a button.
只要按下按钮就可以进行均匀充电。
- Constant voltage and constant-current system prevent overcharge and overcurrent.
可以利用定电压和定电流方式防止过充电和过电流。

Block diagram 结构图



Specifications 规格

Please specify for each item.

Output voltage	DC 24V 48V 100V 200V
Capacity of current	10A 20 30A 40A 50A 75A 100A 150A 200A 250A 300A 400A and more
Backup time	10 min 30 min 1 hour 2 hours and more
Kind of battery	Alkali Lead Lead seal (Entering liquid) Maintenance free
Output branch	1 circuit 2 circuit 4 circuit 8 circuit and more

请对各项进行确定。

输出电压	DC 24V 48V 100V 200V
电流容量	10A 20 30A 40A 50A 75A 100A 150A 200A 250A 300A 400A 以上
保护断电时间	10 分钟 30 分钟 1 个小时 2 个小时 以上
蓄电池种类	铅 铅密封 免维修
输出分支	一条电路 两条电路 三条电路 四条电路 八条电路 以上 (用户任意设定)

紧急用直流电源装置

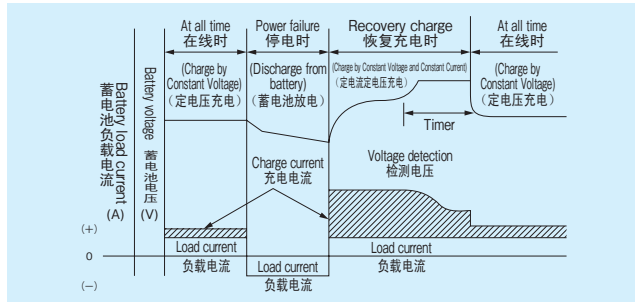
YNV系列

● Full automatic charge feature

Because the fully automatic charge method was designed aiming at fully automated DC power device, daily maintenance is simple. Regardless of the length of power failure, the most optimized charge is constantly done automatically and user can practice periodical checkup of equalizing charge one-touch method with a button.

●全自动充电的特性

全自动充电方式由于是以直流电源装置无人化为目标设计的，所以日常维护保养非常简单。不论停电时间长短，都可以自动进行最适当的充电，定期检查时可通过一键式操作进行均匀充电。



● Constant voltage and constant-current feature

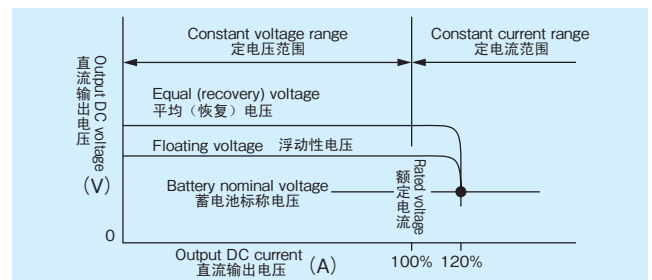
When the output of rectifier is within rated current, the fixed voltage characteristic is kept. When charging or load current increases over the rated value, the output voltage is lowered by drooping characteristics and the fixed voltage characteristic is lost. It becomes a fixed current characteristic. It is a necessary function to prevent overcurrent of rectifier and overcharging of storage battery.

The fixed voltage accuracy is input voltage $\pm 10\%$, and for variability of output current 0 to 100%, $\pm 1.5\%$ at drift condition, and $\pm 2.0\%$ at evenness.

●额定电压，额定电流的特性

整流器需要具有以下的功能，即整流器输出在额定电流内保持定电压特性，停电后的充电及负载电流增大并超过额定值时，输出电压因下降特性而降低，失去定电压特性，变成定电流特性，防止蓄电池的过充电以及整流器的过电流。

相对输入电压的精度为 $\pm 10\%$ ，输出电流的精度为 0 ~ 100%，定电压的精度在浮动时为 $\pm 1.5\%$ ，均匀时为 $\pm 2.0\%$ 。



HIGH VOLTAGE GENERATING DEVICE

高电压电源装置

- High Voltage Pulse Generating Device54
高压脉冲发生器
- Destructive/ Voltage Withstand Tester59
破坏和耐压试验器
- AC&DC Voltage Withstand Tester Large Capacity Type
.....60
交流直流耐压试验器（大型）
- AC Voltage Withstand Tester Large Capacity Type
.....62
交流耐压试验器（大型）
- Impulse Voltage Generating Device64
脉冲电压发生装置
- DC High Voltage Stabilization Power Supply ..65
直流高压稳定化电源
- DC High Voltage Generating Device67
直流电压发生装置

High Voltage Pulse Generating Device

YHPG series

There are two types of pulse (refer to all waves except sine wave). One is the same wave at a regular interval and the other is random. YHPG series is a high-voltage pulse generation device that creates the same waveform at a regular interval that is appropriate for analysis and experiment.

脉冲（Pulse：表示非正弦波的所有波）包括以一定时间出现相同波形的周期性脉冲和随机脉冲，YHPG系列属于适用于分析和实验的，以一定周期产生相同波形的高压脉冲发生装置。



YHPG-6K-4ATR

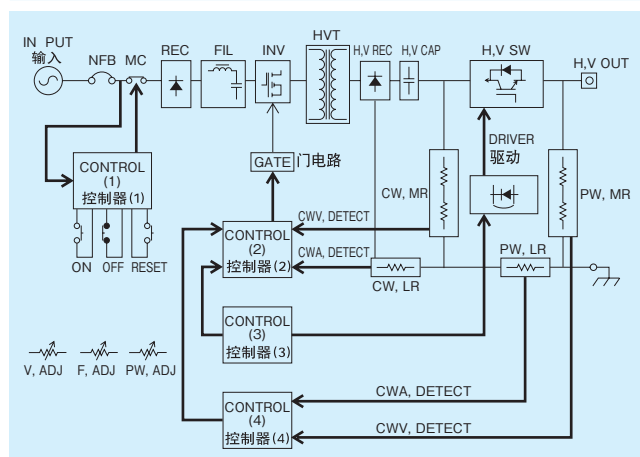
Application 用途

- Improved for material surface
改善材料表面
- Sewerage disposal
污水处理
- Physics and chemistry test
理化学实验

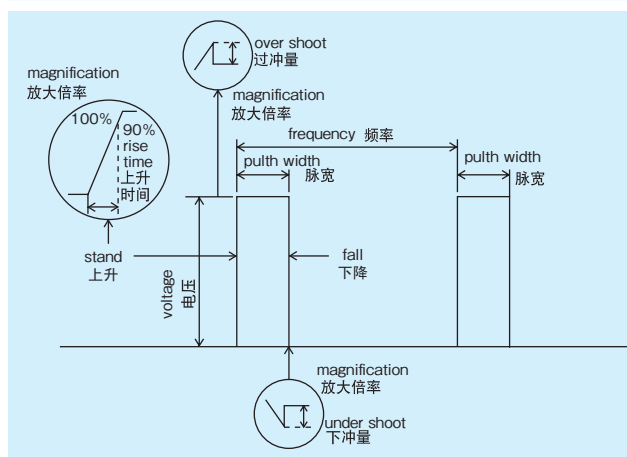
Feature 特长

- Quick rise time
上升时间快。
- High-voltage semiconductor switch is operated by optical fiber
利用光纤驱动高压半导体开关。
- Variable voltage, Variable frequency, Variable pulse width
电压可调，频率可调，脉宽可调简单。

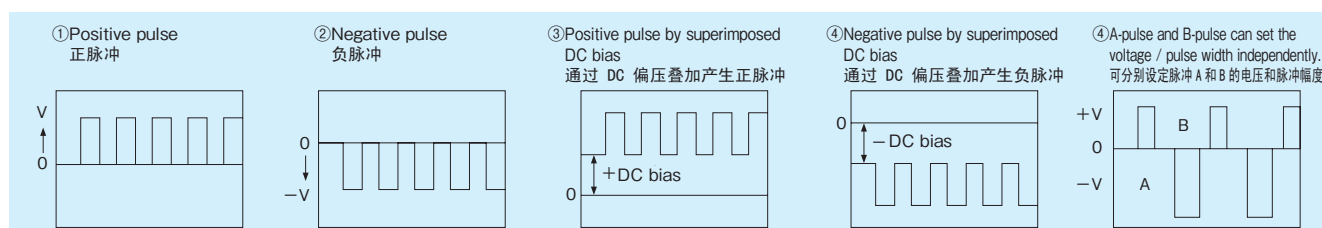
Block diagram 结构图



Wave form diagram 波形样图



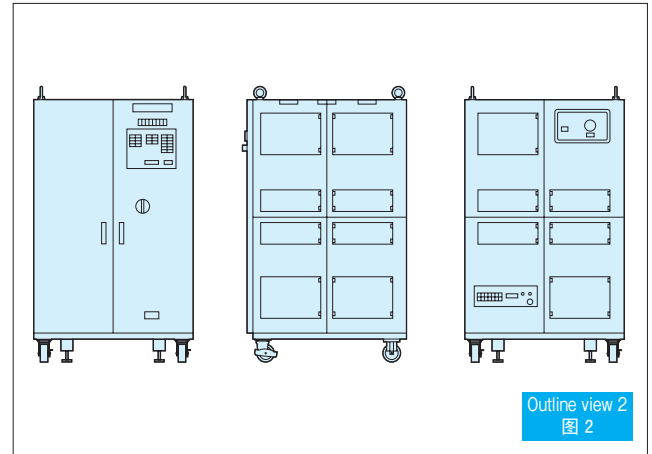
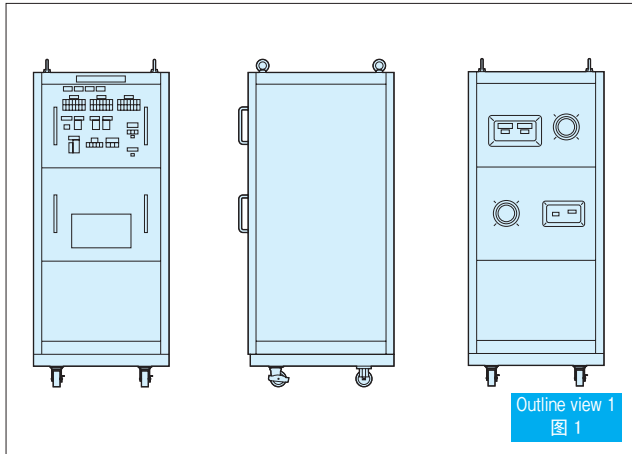
Generated pulse wave of block diagram 脉冲发生波形图



高压脉冲发生装置

YHPG系列

Outline view 外观图



Specifications 规格

Model 型号		YHPG					
		1K-5ATRX	3K-5ATRX	5K-5ATRX	10K-5ATRX	15K-15ATRX	20K-10ATRX
Output 输出	Voltage 电压	0-1KVp	0-3KVp	0-5KVp	0-10KVp	0-15KVp	0-20KVp
	Current 电流	5Ap				15Ap	10Ap
Input 输入	Number of phase 相位	Single phase 单相				Three phase 三相	
	Voltage 电压	200V, 220V, 230V, 240V or others 200V, 220V, 230V, 240V 或其他				200V or 380V or 400V or 415V 200V, 380V, 400V 或 415V	
	Frequency 频率	50/60Hz					

Common Specifications 规格

Method

- High voltage pulse generated circuit Semiconductor electronic, switch
- Cooling system Forced air

方式

- 高压脉冲发生电路 半导体开关
- 冷却系统 干式冷风

Output Rated

- Wave form pulse (square)
- Frequency 100-1000Hz
- Width of pulse 0.01mSec. (1kHz) - 0.1mSec (100Hz)
- Duty cycle Within 1% (with) limiter
- Rise time Within 0.002mSec. (0-90%)
- Fall time Depending on load Impedance
- Over shoot Within 5%
- Under shoot Within 5%
- Sag Within 10%

额定输出

- 波形 脉冲 (方形)
- 重复频率 100-1000Hz
- 脉宽 0.01 毫秒 (1kHz) - 0.1 毫秒 (100Hz)
- 负载循环 1% 之内 (使用限制器)
- 上升时间 0.002 毫秒之内 (0-90%)
- 下降时间 取决于负载阻抗
- 过冲量 小于 5%
- 下冲量 小于 5%
- 垂度 小于 10%

Operation method

- Variable output voltage Setup by manual type 10-rotation potentiometer
- Variable frequency Setup by manual type 10-rotation potentiometer
- Variable pulse width Setup by manual type 10-rotation potentiometer

操作方式

- 输出电压可变 由手动式 10 圈电位差计进行设定
- 频率可变 由手动式 10 圈电位差计进行设定
- 脉宽可变 由手动式 10 圈电位差计进行设定

Used device

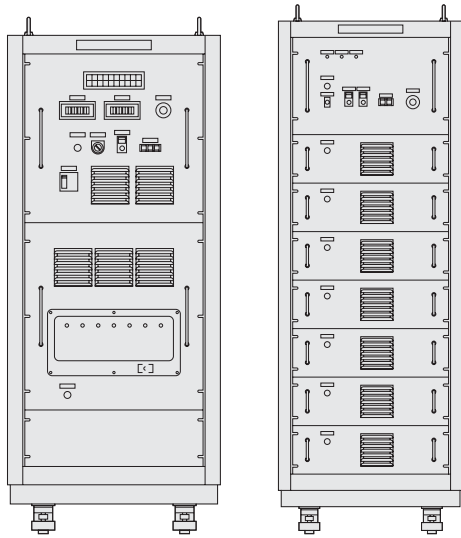
- Frequency meter Digital panel meter F.S is 1999z
- High-pressure charge voltmeter Digital panel meter F.S is rating output voltage
- High-voltage pulse voltmeter Digital panel meter F.S is rating output voltage
- High-voltage pulse current meter Digital panel meter F.S is rating output voltage
- * Option Output voltage monitor, Output current monitor and frequency band great up, Duty cycle great up, One-shot function

使用仪表

- 频率表 数字镶嵌式仪表 F. S1999Hz
- 高压充电电压表 数字镶嵌式仪表 F. S 额定输出电压
- 高压脉冲电压表 数字镶嵌式仪表 F. S 额定输出电压
- 高压脉冲电流表 数字镶嵌式仪表 F. S 额定输出电流
- * 选项 输出电压监视器, 输出电流监视器以及频率范围负载循环 UP, 功能

High Voltage Pulse Generating Device

YHPG-3K-1ATR-7WX



Feature 特长

- Quick rise time
上升时间快。
- High-speed switch with semiconductor
半导体高速开关。
- Easy to setup output voltage, frequency and pulse width
输出电压，频率和脉冲幅度设定简便。
- Low noise and high-voltage tolerance because of the high-voltage semiconductor switch is operated by light signal.
由于可以利用光信号驱动高压半导体开关，所以耐压性能强，噪音低。
- Maximum 7kHz is possible depending on connection to the load, because there are seven similar circuits.
由于有七条相同的电路，所以与负载连接后，最多可以追加 7kHz。
- Seven or more pulse outputs are available as required.
脉冲输出需要七个以上电路时，可以追加。

Specifications 规格

Input

- Three phase $\sqrt{3}$ V $\pm$ 10% 50/60Hz

Output

- Pulse output voltage 3kVp
- Pulse output current 1Ap
- Frequency 100 ~ 1kHz
- Pulse width 50 μ sec ~ 143msec
- Duty 14.3%
- Rise time At the time of 100Hz 500 μ sec ~ 1.43msec
- Control item At the time of 1kHz 50 μ sec ~ 143msec
- Less than 2 μ sec (90%) Results about 1 μ sec
- Voltage variable, Frequency variable, Pulse width variable

※ Rating Voltage

Input

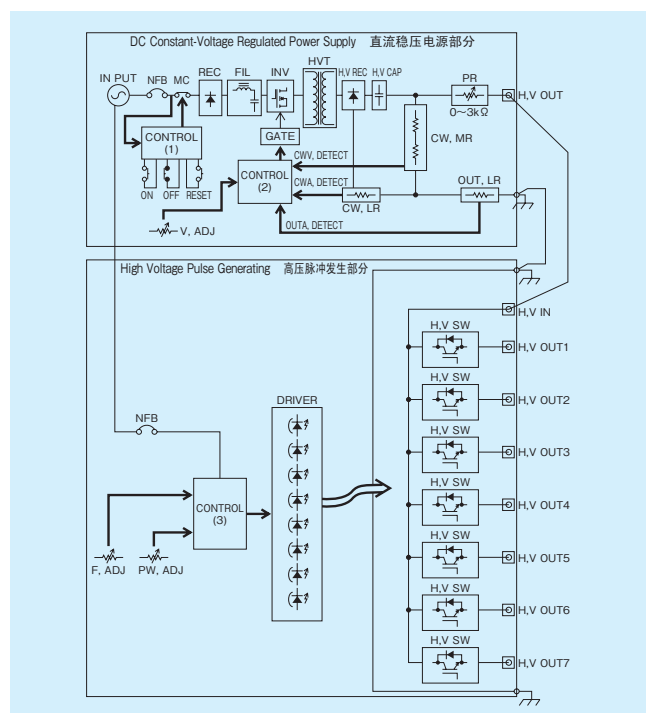
- 三相 $\sqrt{3}$ V $\pm$ 10% 50/60Hz

Output

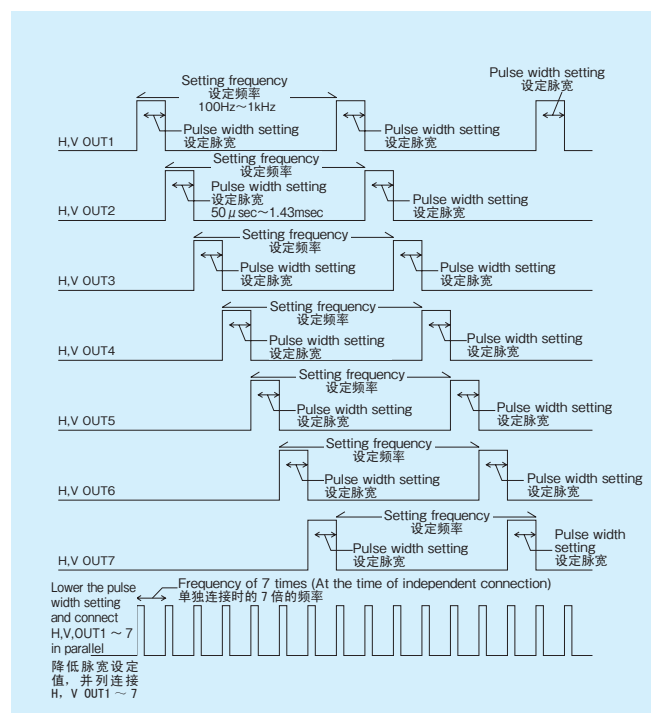
- 脉冲输出电压 3kVp
- 脉冲输出电流 1Ap
- 重复频率 100 ~ 1kHz
- 脉宽 50 μ sec ~ 143msec.
- 占空系数 14.3%
- 100Hz 时 500 μ sec. ~ 1.43msec.
- 1kHz 时 50 μ sec. ~ 143msec.
- 上升 2 μ sec. 以下 at 90% 实绩大约 1 μ sec.
- 控制项目 电压可调，频率可调，脉宽可调

※ 额定电压

Block diagram 结构图



Output generation timing 输出发生时序图



高压脉冲发生装置

Power supply for sewage disposal and surface modification 污水处理・表面改质用电源

The pulse shape that this device produces is used for sewage disposal process and surface modification. Various pulse shapes demanded at research steps can be generated.

本装置产生的脉冲波形用于污水处理及表面改质。
可以产生研究中所需的各种脉冲波形。



YHPG-10K-20ATR

Application 用途

- Sewage disposal
污水处理
- Chrome plating substitution
表面改质（替代镀铬）
- Physics and chemistry test
理化学实验

Range of production 制作范围

~ 40kVP (At the time of 30A) (30A 时)
~ 100AP (At the time of 1kV) (1kV 时)
~ 100kHz
Duty ratio 100%~ 1%
※ Please specify the followings upon selection.
Pulse voltage, Output current, Frequency, Duty ratio
占空系数 100%~ 1%
※ 选定时, 请指定以下的指标。
脉冲电压, 输出电压, 重复频率, 占空系数

Feature 特长

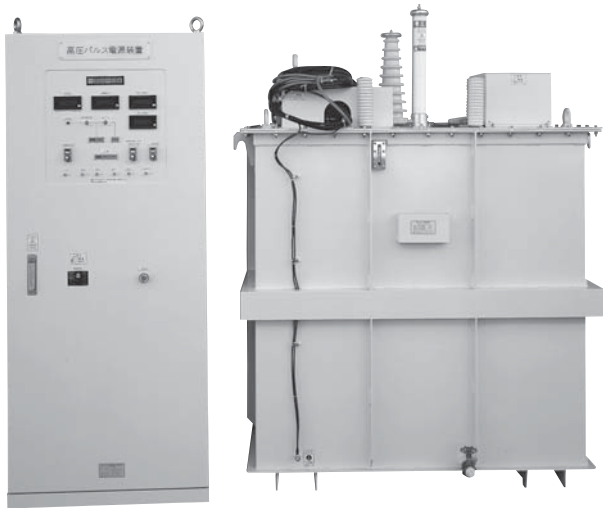
- Superimposing is possible to a DC high- voltage power supply.
直流高压电源可叠加。
- Both positive and negative poles can be output.
可正负两极输出。

Specifications 规格

- | | |
|---|---|
| ● Input
输入 | Single phase 200V
单相 200V |
| ● Output
输出 | 0 ~ - 10kV
Max 20AP
1kHz ~ 10kHz
0 ~ - 10kV
最大 20AP
1kHz ~ 10kHz |
| ● Duty ratio
占空系数 | Less than 20%
小于 20% |
| ● Rise time
上升时间 | Less than 1 μ sec
小于 1 μ sec. |
| ● Sag
垂度 | Less than 5%
小于 5% |
| ● DC bias superimposing is possible on the pulse LOW side.
脉冲 LOW 端可叠加 DC 偏压 | |

High Voltage Pulse Generating Device 高压脉冲发生装置

Power supply for sewage disposal and surface modification 污水处理・表面改质用电源



YHPG-40K-20ATR

Specifications 规格

Input • 3 ϕ 200V $\pm$ 10%		输入 • 3 ϕ 200V $\pm$ 10%	
Output • Pulse output voltage • Pulse output current • Frequency • Pulse width • Rise time • Fall time • Pulse Output • Output voltage adjustment • Control item		输出 • 脉冲输出电压 • 脉冲输出电流 • 重复频率 • 脉宽 • 上升 • 下降 • 脉冲输出 • 输出电压调节 • 控制项目	
Configuration • Operation panel • High voltage generation		构成 • 操作盘 • 高压发生器	
Dimension • Operation panel • High voltage generation		尺寸, 重量 • 操作盘 • 高压发生部分	
50/60Hz		50/60Hz	
3kVp (Continuation) 40kVp(MAX) 20Ap (MAX) 10pps $\sim$ 1000pps MAX2000pps 10 μ sec $\sim$ 1 msec But duty max 1% with limiter Less than 2 μ sec (90%) Results about 1 μ sec By load impedance By high pressure semiconductor switch Changeable in TAD-25MR Voltage variable, Frequency variable, Pulse width variable, Over-charge voltage setup variable, Pulse over current setup variable		30kVp (连续) 40kVp (MAX) 20Ap (MAX) 10pps $\sim$ 1000pps MAX2000pps 10 μ sec $\sim$ 1msec 但占空系数 MAX1% 带限制器 2 μ sec 以下 at 90% 利用负载电阻 利用高压半导体开关 可用 TAD-25MR 改变 电压可调, 频率可调, 脉宽可调, 充电过电压设定可调, 脉冲过电流设定可调	
Built-in TAD-25MR Built-in oil tank type and high voltage charge part and pulse generation part		内置 TAD-25MR 油箱型, 内置高压充电器脉冲发生器	
W700 $\times$ D1300 $\times$ H1650 (mm) 600kg W140 $\times$ D1400 $\times$ H1950 (mm) 2700kg		W700 $\times$ D1300 $\times$ H1650 (mm) 大约 600kg W140 $\times$ D1400 $\times$ H1950 (mm) 大约 2700kg	

Destructive/Voltage Withstand Tester 破坏・耐电压试验器

This tester is used for automatic dielectric destructive test and voltage proof test by operational part liquid crystal panel or GP-IB.

For a dielectric destructive test, it is possible to select between a linear rise and progressive rise.

本试验装置可以利用操作部分液晶板或者GP-IB全自动地进行绝缘破坏试验和耐电压试验。绝缘破坏试验可以选择线性上升和阶段上升。



Note: The photograph shows the DC output model (DC0 ~ 10kV/100mA)

注) 照片为直流输出规格 (DC0 ~ 10kV/100mA)

Model 型号 YHPS-10K-0.1ATRX

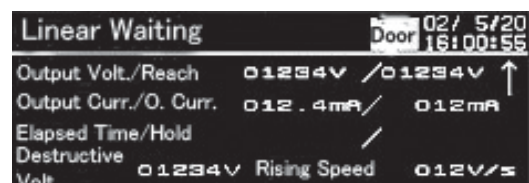
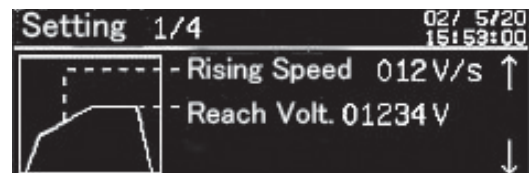
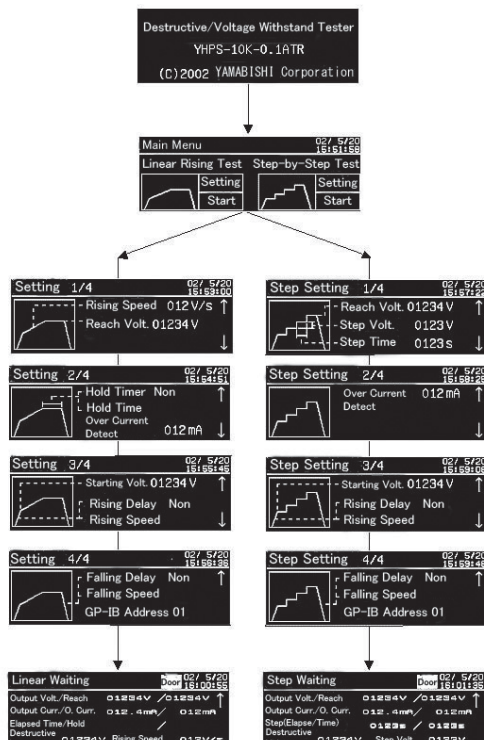
Specifications 规格

Model 型号 YHT-100K-5KMRX

- Input voltage 输入电压
 - Single phase 单相 V 50/60Hz
- Output voltage 输出电压
 - AC0 ~ 100kV
- Output current 输出电流
 - MAX50mA
- Output capacity 输出容量
 - 5kVA
- Insulating Destructive Tester 绝缘破坏试验
 - Linear Rise 线性上升
 - Voltage 0 ~ 100kV 电压 0 ~ 100kV
 - Rise speed 0.1 ~ 5kV/sec. 上升速度 0.1 ~ 5kV/sec.
 - Stepping Rise 阶段上升
 - Voltage 0 ~ 100kV 电压 0 ~ 100kV
 - Setting range T=10 ~ 999sec V = 0.3 ~ 5.9kV 设定范围 T=10 ~ 999 秒 V = 0.3 ~ 5.9kV
- Voltage Withstand Tester 耐电压试验
 - Voltage 0 ~ 100kV 电压 0 ~ 100kV
 - Rise speed 0.1 ~ 5kV/sec. 上升速度 0.1 ~ 5kV/sec.
 - Applied voltage time 0.1min. ~ 10hour 附加电压通电时间 0.1min. ~ 10hour
 - Automatic / manual switch 手动切换
- Option 选项
 - GP-IB · RS-232C Interface GP-IB · RS-232C 界面
- Safety measure 安全对策
 - Key switch type 钥匙开关式
 - When the power supply is turned on, a red light rotates 接通电源时, 红色旋转灯工作
 - ϕ 40 red mushroom type and emergency stop switch ϕ 40 红色蘑菇型, 紧急停止开关
 - High voltage is intercepted by excessive voltage (110kV) 可在过电压 (110kV) 时断开高压

※ Rating Voltage 额定电压

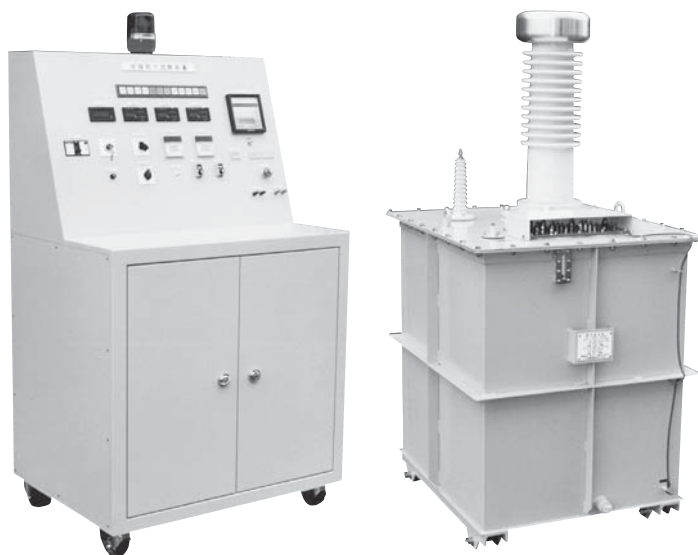
Custom models are also available
本公司还提供上述以外的规格。



AC & DC Voltage Withstand Tester Large Capacity Type

YHTD is used for a high voltage withstand test of AC and DC.
Operation panel allows easy output switch of AC/DC.

YHTD可用于交流及直流耐压试验。
可以简单地利用操作盘开关进行AC/DC输出切换。



Specifications 规格

- Voltage holding system at poor withstand voltage
耐压不良时电压同步式
- Transformer system
升压方式
- Operation system
操作方式
- Interrupting current
截止电流
- OK/NG display
OK/NG 显示
- Output impression method
输出附加方式
- Safety measures
安全对策
- Digital 3 digits 1/2
和数字 3 位 1/2
- Motor variable speed slider method (MR)
电动加变速滑块方式 (MR)
- Manual slider method (DR)
手动滑块方式 (DR)
- AC/DC output switch
交流 / 直流输出切换
Able to select from the switch on the operation panel front
利用操作盘的切换开关选择
- Manual operation/automatic pressure switch
手动 / 自动升压切换
Able to select from the switch on the operation panel front
利用操作盘的切换开关选择
Manual operation: If the rise or the descent button is pushed without pushing the voltage variable button, the voltage rests potential (MR)
Automatic operation: When the operation button is pushed, it rises to the setting voltage value with a steady speed. When it reaches the setup voltage, the timer operates (MR)
手动: 按上升或下降按钮, 不按电压可变按钮的话, 则电压静止 (MR)
自动: 按运行按钮的话, 则以均速上升至设定电压值, 到达设定电压后, 时钟工作 (MR)
- Output voltage can be set from 10% to 100%
输出电流在 10% ~ 100% 范围任意设定
- OK/NG with lamp
带 OK/NG 灯
- 0 interlock type (operation possible only when the slider is at 0 value).
零联锁式 (只有在滑块处于零位时才可行运行)
- Easy to figure output current
输出电流 直接读取式
- With emergency stop push-button
带紧急停止按钮
- Patlite
警示灯
- With external interlock terminal
带外部联锁装置端子
- Built-in capacitor residual charge electrical discharge switch of DC voltage circuit
内置直流电压电路电容器剩余电荷放电开关

交直流耐压试验器（大型）

AC & DC Voltage Withstand Tester Large Capacity Type MR (Electric slider voltage up metho)
交直流耐压试验器 MR（电动滑块升压方式）

Model 型号			YHTD-			
			20/30K-5KMRX	40/50K-5KMRX	50/70K-5KMRX	75/100K-5KMRX
Output 输出	交流 (AC)	Capacity (KVA) 容量 (kVA)	5	5	5	5
		Voltage 电压	0-20kV	0-40kV	0-50kV	0-75kV
		Current (ADC) 电流 (ADC)	250mA	125mA	100mA	67mA
	直流 (DC)	Voltage 电压	0-30kV	0-50kV	0-70kV	0-100kV
		Current (ADC) 电流 (ADC)	50mA	20mA	20mA	10mA
Input 输入	Phase 相位		Single Phase 2 wire 单相二线			
	Voltage 电压		200V or 220V or 230V or 240V or another 200V 或 220V 或 230V 或 240V 或其它			
	Frequency 频率		50/60Hz			
Dimension 尺寸	Low voltage part 低压部	W mm 宽 (mm)	900	900	900	900
		D mm 深 (mm)	600	600	600	600
		H mm 高 (mm)	1400	1400	1400	1400
	High voltage part 高压部	W mm 宽 (mm)	600	700	800	850
		D mm 深 (mm)	750	850	850	1150
		H mm 高 (mm)	1100	1300	1400	1900

※ The dimensions may be changed 外形尺寸和重量根据情况, 会有所变更。

AC & DC Voltage Withstand Tester Large Capacity Type DR (Hand-operated slider voltage up method)
交直流耐压试验器 DR（手动滑块升压方式）

Model 型号			YHTD-			
			20/30K-5KDRX	40/50K-5KDRX	50/70K-5KDRX	75/100K-5KDRX
Output 输出	交流 (AC)	Capacity (KVA) 容量 (kVA)	5	5	5	5
		Voltage 电压	0-20kV	0-40kV	0-50kV	0-75kV
		Current (ADC) 电流 (ADC)	250mA	125mA	100mA	67mA
	直流 (DC)	Voltage 电压	0-30kV	0-50kV	0-70kV	0-100kV
		Current (ADC) 电流 (ADC)	50mA	20mA	20mA	10mA
Input 输入	Phase 相位		Single Phase 2 wire 单相二线			
	Voltage 电压		200V or 220V or 230V or 240V or another 200V 或 220V 或 230V 或 240V 或其它			
	Frequency 频率		50/60Hz			
Dimension 尺寸	Low voltage part 低压部	W mm 宽 (mm)	800	800	800	800
		D mm 深 (mm)	600	600	600	600
		H mm 高 (mm)	1350	1350	1350	1350
	High voltage part 高压部	W mm 宽 (mm)	600	700	800	850
		D mm 深 (mm)	750	850	850	1150
		H mm 高 (mm)	1100	1300	1400	1900

※ The dimensions may be changed 外形尺寸和重量根据情况, 会有所变更。

AC Voltage Withstand Tester Large Capacity Type

YHT series is the large capacity and high voltage type of our withstand tester. It is became series up to 100KV of high voltage and up to 50KVA of capacity. It is also capable to manufactured larger capacity and higher voltage.

YHT属于耐压试验器中耐高压和容量大的类型，最大电压为100kV，最大容量为50kVA，并且产品形成了系列化。此外，本公司还可根据顾客需要，设计制作更大电压和容量的产品。



Common Specifications 共同规格

Voltage holding system at poor withstand voltage

- Digital 3 digits 1/2

Transformer system

- Motor variable speed slider method (MR)
- Manual slider method (DR)

Turn on electricity timer

- For high voltage applied time setup
- It utilizes multi-timer
- ON/OFF with timer switch

Operation system

- Manual operation/automatic pressure switch
Able to select from the switch on the operation panel front
Manual operation : If the rise or the descent button is pushed without pushing the voltage variable button, the voltage rests potential (MR)
Automatic operation: When the operation button is pushed, it rises to the setting voltage value with a steady speed. When it reaches the setup voltage, the timer operates (MR)

Interrupting current

- Output voltage can be set from 10% to 100%

OK/NG display

- OK/NG with lamp

Output impression method

- 0 interlock type (operation possible only when the slider is at 0 value).

Output voltage, current measurement terminal

- Output: cubic voltage, Maximum output(kV)/100V

Safety measures

- Easy to figure output current
- With emergency stop push-button
- Patlite
- With door switch and external interlock terminal

耐压不良时电压同步式

- 数字 3 位 1/2

升压方式

- 电动加变速滑块方式 (MR)
- 手动滑块方式 (DR)

通电定时器

- 高压附加时间设定用
- 使用正反数定时器

操作方式

- 手动 / 自动 电压上升切换 (MR)
利用操作盘的切换开关选择
切换利用操作盘的切换开关选择
手动: 按上升或下降按钮, 不按电压可变按钮的话, 则电压静止手动 / 自动升压
自动: 按运行按钮的话, 则以均速上升至设定电压值, 到达设定电压后, 时钟工作 (MR)

截止电流

- 输出电流在 10% ~ 100% 范围任意设定

OK/NG 显示

- 带 OK/NG 灯

输出电压附加方式

- 零联锁式 (只有在滑块处于零位时才可运行)

输出电压, 测试电流接口

- 输出电压:

安全对策

- 输出电流 直接读取式
- 带紧急停止按钮
- 警示灯
- 带外部联锁装置端子

交流耐压试验器（大型）

Specifications 规格

Voltage withstand tester (Electric slider method) 耐压试验器（电动滑块方式）

Model 型号			YHT							
			5K-20KMRX	10K-10KMRX	15K-15KMRX	30K-30KMRX	50K-50KMRX		80K-20KMRX	100K-10KMRX
Output 输出	Capacity (KVA) 容量 (kVA)		20	10	15	30	50		20	10
	Voltage 电压		0-5kV	0-10kV	0-15kV	0-30kV	0-50kV		0-80kV	0-100kV
	Current (ADC) 电流 (ADC)		4A	1A					0.25A	0.1A
Input 输入	Phase 相位		Single Phase 2 wire 单相二 线							
	Voltage 电压		200V or 220V or 230V or 240V or another 200V 或 220V 或 230V 或 240V 或其它							
	Frequency 频率		50/60Hz							
Low voltage part 抵压部	Dimension 尺寸	W mm 宽 (mm)	800	600	800	800	800	550	800	950
		D mm 深 (mm)	750	500	750	750	600	800	750	700
		H mm 高 (mm)	1500	950	1300	1600	1180	1650	1500	1600
High voltage part 高压部	Dimension 尺寸	W mm 宽 (mm)	500	500	500	750	900		900	750
		D mm 深 (mm)	600	470	500	750	750		800	850
		H mm 高 (mm)	700	860	1000	1500	1450		2000	1700

※ The dimensions may be changed 外形尺寸和重量根据情况，会有所变更。
 ※ Distinction puts a slider about YHT-50-50KMR YHT-50-50KMR 滑块另行设置

Voltage withstand tester (Hand-operated slider method, 5kVA) 耐压试验器（手动滑块升压方式，5kVA）

Model 型号			YHT						
			20K-5KDRX	30K-5KDRX	40K-5KDRX	50K-5KDRX	60K-5KDRX	80K-5KDRX	100K-5KDRX
Output 输出	Capacity (KVA) 容量 (kVA)		5						
	Voltage 电压		0-20kV	0-30kV	0-40kV	0-50kV	0-60kV	0-80kV	0-100kV
	Current (ADC) 电流 (ADC)		250mA	166mA	125mA	100mA	83mA	62mA	50mA
Input 输入	Phase 相位		Single Phase 2 wire 单相二 线						
	Voltage 电压		200V or 220V or 230V or 240V or another 200V 或 220V 或 230V 或 240V 或其它						
	Frequency 频率		50/60Hz						
Low voltage part 低压部	Dimension 尺寸	W mm 宽 (mm)	600	600	600	600	600	600	600
		D mm 深 (mm)	600	600	600	600	600	600	600
		H mm 高 (mm)	1350	1350	1350	1350	1350	1350	1350
High voltage part 高压部	Dimension 尺寸	W mm 宽 (mm)	450	450	550	550	650	650	700
		D mm 深 (mm)	580	580	650	650	850	850	900
		H mm 高 (mm)	1100	1100	1400	1400	1750	1750	1900

※ The dimensions may be changed 外形尺寸和重量根据情况，会有所变更。

Voltage withstand tester (Hand-operated slider method, 50kVA) 耐压试验器（手动滑块升压方式，50kVA）

Model 型号			YHT					
			50K-3KDRX	50K-5KDRX	50K-10KDRX	50K-15KDRX	50K-30KDRX	50K-50KDRX
Output 输出	Capacity (KVA) 容量 (kVA)		3	5	10	15	30	50
	Voltage 电压		0-50kV					
	Current (ADC) 电流 (ADC)		60mA	100mA	200mA	300mA	600mA	1A
Input 输入	Phase 相位		Single Phase 2 wire 单相二 线					
	Voltage 电压		200V or 220V or 230V or 240V or another 200V 或 220V 或 230V 或 240V 或其它					
	Frequency 频率		50/60Hz					
Low voltage part 低压部	Dimension 尺寸	W mm 宽 (mm)	600	600	750	700	700	800
		D mm 深 (mm)	600	600	650	600	600	600
		H mm 高 (mm)	1350	1350	1500	1670	1670	1180
High voltage part 高压部	Dimension 尺寸	W mm 宽 (mm)	460	550	600	600	680	750
		D mm 深 (mm)	580	650	700	700	700	900
		H mm 高 (mm)	1350	1400	1450	1450	1450	1600

※ The dimensions may be changed 外形尺寸和重量根据情况，会有所变更。
 ※ Distinction puts a slider about YHT-50-50KMR YHT-50-50KMR 滑块另行设置

Impulse Voltage Generating Device 脉冲电压发生装置

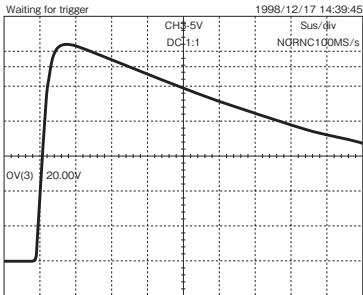
YHIG series YHIG系列

Impulse voltage refers to voltage that appears transiently for a fraction of time and rapidly rises to the highest value and then descends gradually. Thunder impulse voltage refers to voltage that takes only several microseconds to reach to the highest value. The impulse voltage generator device produces this type of voltage.

所谓脉冲电压是指过渡性短时间出现的，快速地上升至最高值，并缓慢下降的电压，达到最高值所需时间为几微秒左右的电压称为雷脉冲电压。所谓脉冲电压发生装置是指产生该电压的装置。



- Output wave form of generator device
发生装置的输出波形
- Charge voltage 42.3kV
充电电压
- Impulse voltage 155.5kV
脉冲电压
- 25kV/div
5 μ S./div



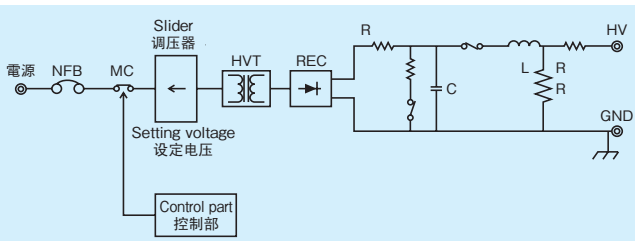
Application 用途

- Voltage withstand test of electric appliance, electronic equipment, static induction equipment etc.
电气，电子机器，
- For school education
用于教育

Feature 特长

- It is easy to change polarity
易于置换电极
- The output voltage is put out to the monitor terminal and it is possible to confirm it with an oscilloscope etc.
输出电压在监视器接头输出，可用示波器等确认。
- Safety measures are steady (Please refer to the item of safety measures)
十分考虑安全性制造（请参考安全对策）

Block diagram 结构图



Safety measures 安全对策

1. It comes with external interlock terminal. It takes out test sample side door etc. with the interlock to intercept power supply by the opening door. Then the high voltage circuit is discharged.
利用附带的外部联锁装置端子可以与被测试体一端的门等联锁，门开时电源断路，高压电路被放电。
2. The power supply is intercepted when the panel is opened to switch polarity change and the high voltage circuit is discharged. 为切换极性而打开面板时，电源遮断，高压电路被放电。
3. The patrol light rotates during operation to warn the danger to surroundings.
运行工作中，内部信号灯旋转，向周围发出危险警告。
4. As for the high-voltage charge circuit, it is designed to operate only when the voltage setup knob is 0.
高压充电电路在电压设置旋钮未处于零位时，不能运行。
5. The operating sequence is three stages: main circuit power supply ON, high- voltage charge circuit operational switch ON, and impulse start switch ON.
运行顺序是主电路电源开启，高压充电电路运行开关开启，脉冲开始开关开启这三个阶段操作。

Specifications 规格

Model 型号	YHIG									
	1.5KX	2KX	5KX	15KX	20KX	30KX	40KX	60KX	100KX	200KX
Nominal Voltage 标称电压	1.5KV	2 KV	5 KV	15 KV	20 KV	30 KV	40 KV	60 KV	100 KV	200 KV
Charging Voltage 充电电压	2.5 KV	3 KV	6 KV	15 KV	25 KV	20 KV	25 KV	20 KV	±5 KV	±50 KV
Charging Energy 充电电量	4.5J	440J	62.5J	42.25J	400J	225J	200J	225J	625J	600J
Total electrostatic capacity 静电总容量	4 μ F	220 μ F	5 μ F	0.5 μ F	2 μ F	0.25 μ F	0.25 μ F	0.125 μ F	0.125 μ F	0.03 μ F
Output Polarity 输出电极	Positive/Negative polarity 正电极/负电极									
Generated Waveform 生成波形	1.2/50 μ S. or 1/40 μ S 1.2/50 μ S或1/40 μ S									
Input 输入	1 ϕ									

※Please select your desire voltage
请选择您所需的电压。

DC High Voltage Stabilization Power Supply 直流高压安定化电源

Thyristor control type 晶闸管控制型

Application 用途

- For large-scale ion acceleration
大型离子加速用
- For large-scale physicochemistry experiment
大型理化实验用
- For large-scale particle acceleration
大型粒子加速用
- For other large-scale DC high-voltage power supplies
其他大型直流高压电源用



YHPS-1K-2AS

Output voltage 0 ~ 1kV
输出电压
Output current 0 ~ 2A
输出电流
Ripple 5% p-p
纹波
Input Three phase 50/60Hz
输入电源
※ V ± 10%
三相 50/60Hz
※ V ± 10%



YHPS-1K-10AS

Output voltage 0 ~ 1kV
输出电压
Output current 0 ~ 10A
输出电流
Ripple 10% p-p
纹波
Input Three phase 50/60Hz
输入电源
※ V ± 10%
三相 50/60Hz
※ V ± 10%
Dimension W600 × D700 × H1300 mm
尺寸

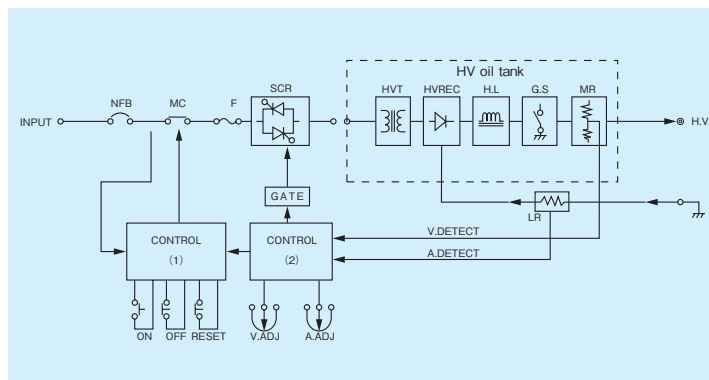


YHPS-10K-1.6ASR

Output voltage 0 ~ 10kV
输出电压
Output current 0 ~ 1.6A
输出电流
Stable accuracy Less than ± 0.5% (For voltage variation ± 10%)
Less than ± 0.5% (For load variation 30 ~ 100%)
对电压变动 ± 10%, 小于 ± 0.5%
对负载变动 30 ~ 100%, 小于 ± 0.5%
100Vp-p
稳定精度
Ripple
纹波
Input Three phase 50/60Hz ※ V ± 10%
输入电源 三相 50/60Hz ※ V ± 10%
Dimension W700 × D800 × H1600 mm
尺寸

※ Rating Voltage 额定电压

Block diagram 结构图



YHPS-15K-2ASRP

Output voltage 0 ~ 15kV
输出电压
Stable accuracy ± 0.5% (For voltage variation ± 10%)
0.5% (For load variation ± 10%)
对电压变动 ± 10%, 小于 ± 0.5%
对负载变动 ± 10%, 0.5%
稳定精度
Ripple
纹波 75Vp-p 以下 / 15kV2A 时
Output current 0 ~ 2A
输出电流
Input Three phase 50/60Hz ※ V ± 10%
输入电源 三相 50/60Hz ※ V ± 10%
Dimension W800 × D750 × H1000 mm
尺寸

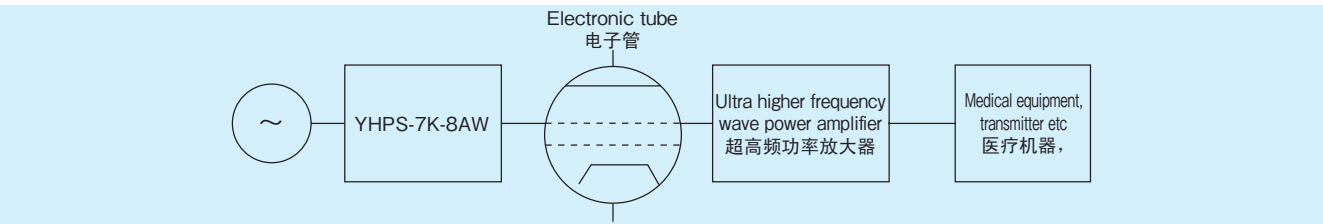
DC High Voltage Stabilization Power Supply 直流高压安定化电源

Radio tube power supply for ultra higher frequency wave power amplifier
超高频功率放大器用电子管电源



- YHPS-7K-8AW**
- Plate power supply part
屏极电源部
Input 3 φ ※ V
Input 输入
Output DC + 5kV, + 6kV, + 7kV(swth) 8A
Output 输出 DC + 5kV, + 6kV, + 7kV(切换) 8A
Load ripple Less than 0.4% (Vms)
负载纹波 小于 0.4% (Vrms)
 - Screen grid power supply part
屏栅电源部
Input 3 φ ※ V
Input 输入
Output DC + 0 ~ 1kV 0.7A (Built-in 0.4A dummy current at 750V)
Output 输出 DC + 0 ~ 1kV 0.7A (750V 时有 0.4A 虚电流)
Load ripple Less than 0.2% (Vms)
负载纹波 小于 0.2% (Vrms)
 - Control grid supply part
控制栅电源部
Input 1 φ ※ V(MTS-1H)
Input 输入
Output DC - 0 ~ 250V 10mA (Built-in 0.1A dummy current)
Output 输出 DC - 0 ~ 250V 10mA (时有 0.1A 虚电流)
Load ripple Less than 0.2% (Vms)
负载纹波 小于 0.2% (Vrms)
 - Filament power supply part
丝电源部
Input 3 φ ※ V(MTS-5S)
Input 输入
Output DC14.5 ~ 16.5V 215A(With soft-start)
Output 输出 DC14.5 ~ 16.5V 215A (带软启动)
Load ripple Less than 100m(Vms) (At 16V and 215A)
负载纹波 小于 100m(Vrms) (16V 215A 时)
 - Dimension W2500 × D1500 × H2200 (mm)
尺寸
- ※ Rating Voltage 额定电压

Configuration diagram 结构图



Model 型号	Application and Feature	用途和特长
YHLE-18K-180MTR	Power supply for CO ₂ gas laser (for one light) • 18kV, 180mA Constant current • Higher frequency generation • A pulse movement and continuous operation are both possible.	CO ₂ 气体激光用电源 (单灯用) • 18kV, 180mA 额定电流 • 高频化 • 脉冲运动, 连续运行都可行
YHBS-100K-60MTRW	Power supply for electron beam • Inverter and a high-voltage transformer are made to create higher frequency in order to make them low-price, small and light. • Built-in bias filament circuit also for higher frequency creation (Output voltage 100kV, Output current 60mA)	电子束用电源 • 为了降低价格, 实现小型化和轻量化, 使变换器以及高压变压器高频化 • 内置同样高频化的偏压灯丝电路 (输出电压 100kV, 输出电流 60mA)
YHPS-2K-6ASR	Power supply for products line and plasma processing machine (pulse processing) • Dry method, low-price (Output voltage 2kV, Output current 6A)	生产线・适合于等离子加工机 (脉冲加工) 用电源 • 干式, 低廉 (输出电压 2kV, 输出电流 6A)
YHPS-20K-50MTR	A dry method is used for electronic acceleration power supply (for large-scale analysis), higher frequency generation and high voltage part to make the device lighter. (Output voltage 20kV, Output current 50mA)	电子加速电源 (大型分析用) 高频化和高压部为干式, 进行了轻量化设计 (输出电压 20kV, 输出电流 50mA)
YHLE-1K-10KJ2W	For products line and a laser welding device (pulse laser) • Capacity 10kW Shift to larger capacity of two circuits • Higher frequency • Repetitive frequency, pulse width and digital setup method like setting a delay time etc	生产线, 激光焊接机用 (脉冲激光) • 容量 10kW 双电路的大容量化 • 高频率化 • 重复频率, 脉冲宽度, 延迟时间设定等数字设置方式
YHEP-50K-0.4ASR	Simple type electric collection machine • With spark detection, short-circuit protection and automatic restoration functions (Output voltage 50kV, Output current 0.4A)	简易型电动吸尘器 • 带电火花检测, 短路保护和自动复位功能 (输出电压 50kV, 输出电流 0.4A)
YHT-120K-4K YHFT-26-0.8K YHBT-125-0.8	Used for ultra high voltage laser power supply High-voltage transformer • Voltage withstand 200kV • Transformer for bias 250V/5A High insulation high voltage withstand transformer • Transformer for filament high-voltage transformer 26V3A High insulation high voltage withstand transformer Above-mentioned transformers are insulated by the SF6 gas insulation	用于超高压激光电源。 高压变压器 • 高压变压器 200kV (耐压 280kV) • 偏压用变压器 250V/5A 高绝缘耐压变压器 (耐压 280kV) • 灯丝用变压器 26V3A 高绝缘耐压变压器 (耐压 280kV) 利用 SF6 气体的绝缘性能, 对上述变压器进行绝缘

DC High Voltage Generating Device 直流电压发生装置

Power supply for plasma 等离子电源



YHPS-1.5K-50ASRX

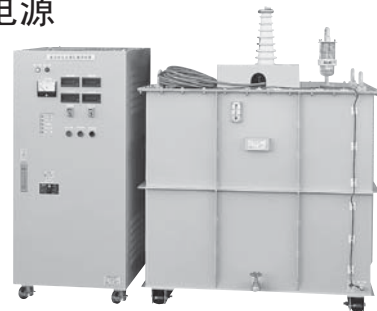
Output voltage 输出电压	0 ~ 1.5kV
Output current 输出电流	0 ~ 50A
Stable accuracy 稳定精度	Less than 2×10^{-2} (For voltage variation $\pm 10\%$) Less than 2×10^{-2} (For load variation 0 ~ 100%) 对电压变动 $\pm 10\%$, 小于 2×10^{-2} 对负载变动 0 ~ 100%, 小于 2×10^{-2}
Ripple 纹波	15Vp-p
Polarity 极性	Positive / negative change type 正 / 负切换方式
Input 输入电源	Three phase 50/60Hz ※V $\pm 10\%$ 三相 50/60Hz ※V $\pm 10\%$
Dimension 尺寸	W1300 × D1000 × H1800 mm

Power supply for dust extractor 吸尘器电源



YHPS-50K-0.4ASRX

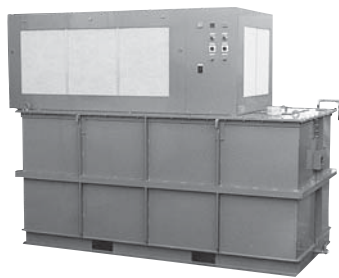
Output voltage 输出电压	0 ~ 50kV
Stable accuracy 稳定精度	Less than $\pm 0.5\%$ (For voltage variation $\pm 10\%$) Less than $\pm 0.5\%$ (For load variation 0 ~ 100%) 对电压变动 $\pm 10\%$, 小于 $\pm 0.5\%$ 对负载变动 0 ~ 100%, 小于 $\pm 0.5\%$
Output current 输出电流	0 ~ 400mA
Input 输入电源	Single phase 50/60Hz ※V $\pm 10\%$ 单相 50/60Hz ※V $\pm 10\%$



YHPS-30K-1ASRX

Output voltage 输出电压	0 ~ 30kV
Stable accuracy 稳定精度	Less than $\pm 1\%$ (For voltage variation $\pm 10\%$) Less than $\pm 1\%$ (For load variation 30 ~ 100%) 对电压变动 $\pm 10\%$, 小于 $\pm 1\%$ 对负载变动 30 ~ 100%, 小于 $\pm 1\%$
Ripple 纹波	150Vp-p (At 30kV and 1A) 150Vp-p (30kV 1A 时)
Input 输入电源	Three phase 50/60Hz ※V $\pm 10\%$ 三相 50/60Hz ※V $\pm 10\%$

Accelerator related power supply 加速器相关电源



YHPS-150K-0.2ATRX

Output voltage 输出电压	0 ~ 150kV
Stable accuracy 稳定精度	Less than $\pm 1 \times 10^{-2}$ (For voltage variation $\pm 10\%$) Less than 1×10^{-2} (For load variation 0 ~ 100%) 对电压变动 $\pm 10\%$, 小于 1×10^{-2} 对负载变动 0 ~ 100%, 小于 1×10^{-2}
Ripple 纹波	Less than 1% p-p 小于 1%p-p
Output current 输出电流	0 ~ 0.2A
Input 输入电源	Three phase 50/60Hz ※V $\pm 10\%$ 三相 50/60Hz ※V $\pm 10\%$
Dimension 尺寸	W2650 × D1300 × H2000 mm



YHPS-100K-60MSRX

Output voltage 输出电压	0 ~ 100kV
Stable accuracy 稳定精度	Less than $\pm 1\%$ (For voltage variation $\pm 10\%$) Less than $\pm 1\%$ (For load variation 0 ~ 100%) 对电压变动 $\pm 10\%$, 小于 $\pm 1\%$ 对负载变动 0 ~ 100%, 小于 $\pm 1\%$
Ripple 纹波	Less than 1% rms 小于 1%rms
Output current 输出电流	60mA
Input 输入电源	Single phase 50/60Hz ※V $\pm 10\%$ 单相 50/60Hz ※V $\pm 10\%$
Dimension 尺寸	W1050 × D1230 × H2400 mm

※ Rating Voltage 额定电压

DC High Voltage Generating Device 直流电压发生装置

Power supply for accelerator 加速器用电源装置

Specifications 规格

● Incoming rated Three phase $\sqrt{3}$ V $\pm 10\%$ 50/60Hz

● Rated (beam power supply) Constant voltage characteristic

Input voltage	3 ϕ $\sqrt{3}$ V $\pm 10\%$ 50/60Hz
Output voltage	-20kV ~ 27kV Positive pole grounded type
Output current	1.7A
Ripple	At 27kV-1.7A Less than 135Vp-p
Stable accuracy	Stabilization range Rated output voltage At 30% or more Input voltage variation Less than $\pm 1\%$ (For 10% change of rated voltage) Output load variation Less than $\pm 1\%$ (For 30 ~ 100% change) Drift Less than 6H/1%
Indicating instrument	High voltage output voltmeter DPM 3 digits 1/2 F.S 99.9kV High voltage output ampere meter DPM 3 digits 1/2 F.S 9.99kV
Emergency stop	For HV and FIL Intercept MC
Protection circuit	High voltage over voltage OVR High voltage over current OLR Input over current Intercept fuse Blowout Discharging gap (Clover circuit) External input signal (Clover motion less than 10 μ S) Open collector External interlock (Outside door etc) Open collector Insulation oil temperature rise
Remote function	High voltage ON High voltage OFF Reset
External monitor function	Output voltage 0 ~ 30kV/0 ~ 3V Output current 0 ~ 2A/0 ~ 2
External signal (output) contact point	High-voltage operation High voltage over voltage Malfunction in waveguide High voltage over current Door open Ready Input over current Remote operation Abnormal oil temperature

● Rated (Filament power supply) Fixed voltage characteristic

Input voltage	1 ϕ $\sqrt{3}$ V $\pm 10\%$ 50/60Hz
Output voltage	ACO ~ 10V TVDC35kV For ten minutes
Output current	10A
Stable accuracy	Stabilization range Rated output voltage At 30% or more Input voltage variation Less than $\pm 5\%$ (For 10% change of rated voltage) Output load variation Less than $\pm 5\%$ (For 0.1 Ω ~ 1 Ω change) Drift Less than 6H/1%
Indicating instrument	Output voltmeter DPM 3 digits 1/2 F.S 39.9kV Output ampere meter DPM 3 digits 1/2 F.S 19.99kV Elapsed time indicator 99999Hr No reset
Protection circuit	Over current OLR
Remote function	Filament ON Filament OFF
External monitor function	(Output) contact point (Input) contact point Filament Operation Filament Remote / Local Filament Stop Adjust signal 4 ~ 20mA DC Filament over current

● Rated (DC power supply) Constant voltage characteristic

Input voltage	1 ϕ $\sqrt{3}$ V $\pm 10\%$
Output voltage	+0 ~ 10kV One side grounded type
Output current	100mA
Ripple	At 10kV-0.1A Less than 5% p-p 5% p-p 以下
Stable accuracy	Stabilization range Rated output voltage At 30% or more Input voltage variation Less than $\pm 1\%$ (For 10% change of rated voltage) Output load variation Less than $\pm 1\%$ (For 30 ~ 100% change)
Indicating instrument	High voltage output voltmeter DPM 3 digits 1/2 F.S 19.99kV High voltage output ampere meter DPM 3 digits 1/2 F.S 199.9kV
Protection circuit	High voltage over voltage OVR High voltage over current OLR
Accessories	High-voltage side code 5m $\times$ 2 Control BOX (for remote function) Fuse lamp Same number with active ones Ground rod 1 Munsell 7.5Y9/1
Outside	Dimensions W1600 $\times$ D1800 $\times$ H2400(mm) Outdoor cubicle type

※ Rating Voltage

● 受电额定

三相 $\sqrt{3}$ V $\pm 10\%$ 50/60Hz

● 额定 (束电源) 定电压特性

输入电压	3 ϕ $\sqrt{3}$ V $\pm 10\%$ 50/60Hz
输出电压	-20kV ~ 27kV 十端 接地式
输出电流	1.7A
纹波	27kV-1.7A 时 小于 135Vp-p
稳定精度	稳定范围 额定输出电压 30% 以上 输入电压变动 对额定电压 10% 的变化, 小于 $\pm 1\%$ 输出负载变动 对 30% ~ 100% 的变化, 小于 $\pm 1\%$ 偏流 6H/1% 以下
指示表	高压输出电压表 DPM 3 位 1/2 F.S 99.9kV 高压输出电流表 DPM 3 位 1/2 F.S 9.99kV
紧急停止	HV, FIL 用 截止 MC
保护电路	高压过电压 OVR 高压过电流 OLR 输入过电流 保险丝断 放电间隙 (短路开关电路) 外部输入信号 (短路开关动作 10 μ S 以内) 集电极开路 外部联锁装置 () 集电极开路
遥控功能	高压 ON 高压 OFF 复位
外部监视器功能	输出电压 0 ~ 30kV/0 ~ 3V 输出电流 0 ~ 2A/0 ~ 2
外部信号 (输出) 触点	高压运行 高压过电压 导波管内异常 高压停止 高压过电流 门开 准备完毕 输入过电流 运行遥控 油温异常

● 额定 (灯丝电源) 定电流特性

输入电压	1 ϕ $\sqrt{3}$ V $\pm 10\%$ 50/60Hz
输出电压	ACO ~ 10V TVDC35kV 10 分钟
输出电流	10A
稳定精度	稳定化电压 额定输出电压 30% 以上 输入电压变动 对额定电压的变化 $\pm 10\%$, 小于 $\pm 5\%$ 输出负载变动 对 0.1 Ω ~ 1 Ω 的变化, 小于 $\pm 5\%$ 计时器 6H/1% 以下
指示表	输出电压表 DPM 3 位 1/2 F.S 39.9V 输出电流表 DPM 3 位 1/2 F.S 19.99A 累计时间表 99999Hr 没有 RESET
保护电路	过电流 OLR
遥控功能	灯丝 ON 灯丝 OFF
外部信号	灯丝 运行 灯丝 遥控 / 本机 灯丝 停止 调节信号 4 ~ 20mA DC 灯丝 过电流

● 额定 (直流电源) 定电压特性

输入电压	1 ϕ $\sqrt{3}$ V $\pm 10\%$
输出电压	+0 ~ 10kV 单边接地式
输出电流	100mA
纹波	10kV 0.1A 时 5%p-p 以下
稳定精度	稳定化范围 额定输出电压 30% 以上时 输入电压变动 对额定电压 $\pm 10\%$ 的变化, 小于 $\pm 1\%$ 输出负载变动 对额定电压 30% ~ 100% 的变化, 小于 $\pm 1\%$
计时器	高压输出电压表 DPM 3 位 1/2 F.S 19.99kV 高压输出电流表 DPM 3 桁 1/2 F.S 199.9kV
保护电路	高压过电压 OVR 高压过电压 OLR
附加品	高压端线 5m $\times$ 2 控制箱 (遥控功能用) 保险丝灯 现用相同数量 接地棒 1 根 芒塞尔 7.5Y9/1 尺寸 W1600 $\times$ D1800 $\times$ H2400 (mm) 室外机壳型

※ 额定电压



AUTOMATIC VOLTAGE REGULATOR

自动电压调整器

- Digital Control Type70
数控型
- PWM Type74
开关型
- Slide Type78
滑动型
- Momentarily Correction Waveform Type84
瞬时波形补偿方式

Digital Control Type

TAC series

It keeps the output voltage constant by conducting high-speed switching digitally using a thyristor switch to a tap transformer for the voltage regulation.
It is a complete static type automatic electric voltage regulator applicable for any load, which is highly efficient and responsive.

对于电压变动，通过在分流变压器上使用晶闸管控制器开关，以进行数字高速切换，从而使输出电压保持一定。因此，它是一个效率高和响应性快等性能优异的可适应任何负载的完全静态型自动电压调整器。



Application 用途

- OA,FA machinery
OA, FA 机器
- Communications equipment
通讯器
- NC machine
NC 机床
- Die machine
模具机器
- Product line etc.
生产线 等等

Feature 特长

- The response speed is fast and the power variable is extremely low.
响应速度快，过渡变动极小。
- There is no outbreak wave pattern distortion and is equal.
波形失真非常小。
- All kinds of load are supported (R, L and C type).
不必选择负载。(R, L, C 性都可以使用)
- Strong against the load with inrush current.
适用于具有突流的负载。
- Highly efficient.
效率高。

Kind of main voltage 主要电压种类

Single phase 2 wire	单相二线式	100V	110V	115V	120V	220V	230V	240V
Single phase 3 wire	单相三线式	200/100V	210/105V	220/110V	230/115V	240/120V	400/200V	440/220V
Three phase 3 wire	三相三线式	200V	210V	220V	380V	400V	415V	440V
Three phase 4 wire	三相四线式	200/115V	208/120V	220/127V	380/220V	400/230V	415/240V	

※ It is also capable to manufactured input variable range of $\pm 20\%$ in addition to $\pm 15\%$ (standard).
除了提供输入变动范围在 $\pm 15\%$ (标准) 的产品外，还可根据需要设计制作 $\pm 20\%$ 的产品。

※ Abnormal voltage alarm Input is automatically cut when the output rated voltage is exceeded by $+ 10\%$.
The emergency lamp and buzzer are activated.
异常电压警报 输出额定电压超过 $+ 10\%$ 时，输入自动断路，警告灯及警报器将会发出警报。

※ As an option, bypass circuit, surge absorber and arrester can be built in.
用户可根据需要选配内置的旁路电路，电涌吸收器，防雷器。

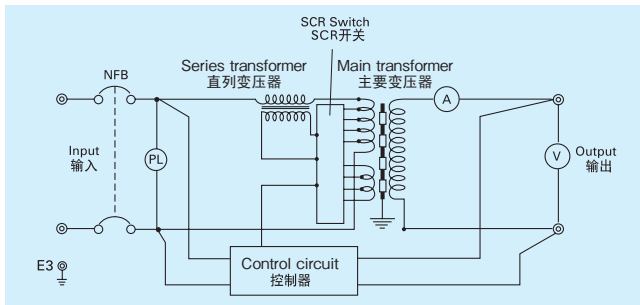
Note: The input capacity in the specification column is a value at the ratings voltage.
注) 规格栏中的输入容量为额定电压时的值。

数字控制方式

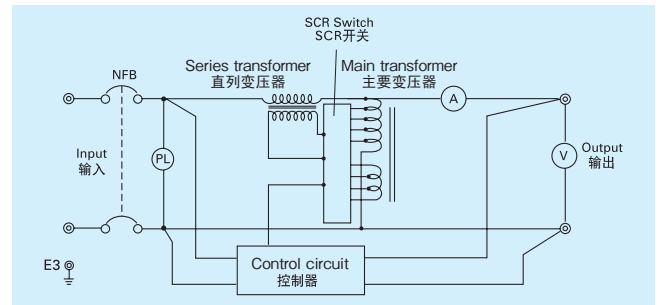
TAC系列

Block diagram 结构图

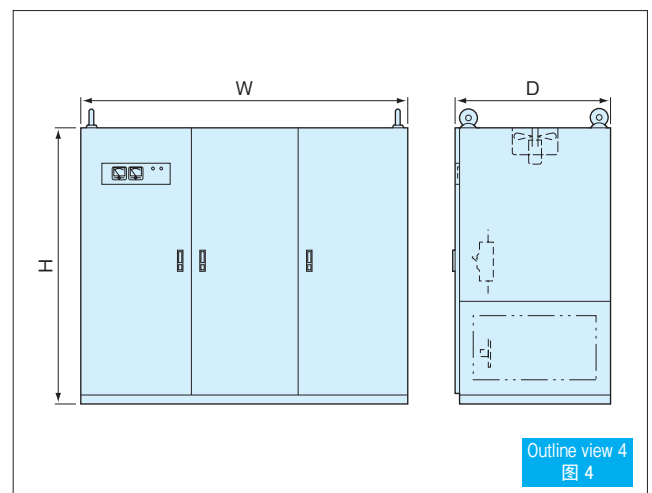
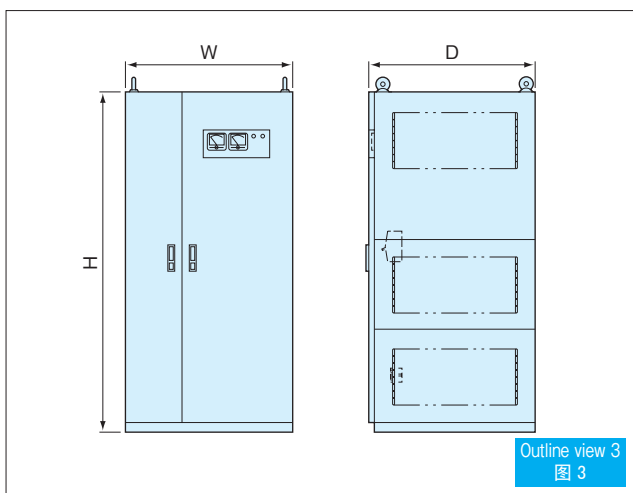
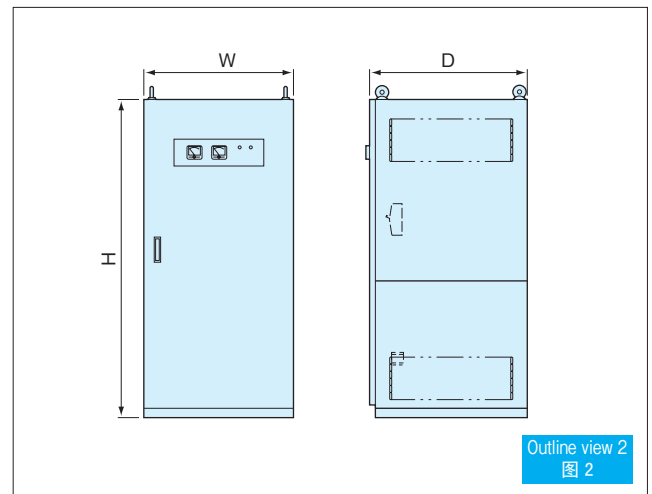
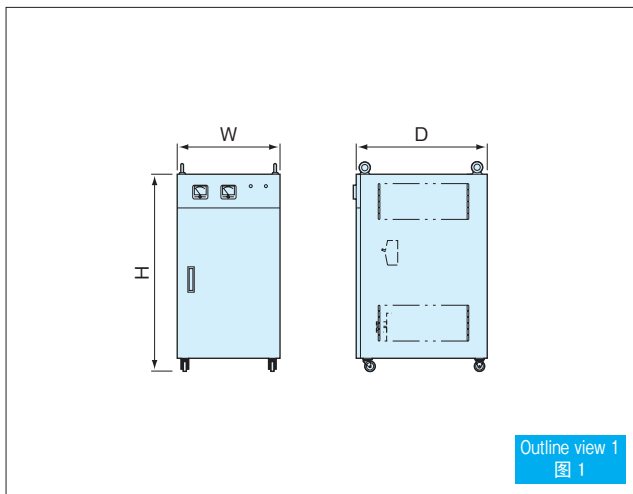
Insulation type 绝缘型



Non Insulation type 非绝缘型



Outline view 外观图



Digital Control Type

Specifications 规格

Insulation Type Single Phase 100V 绝缘型 单相 100V

Model 型号		TAC							
		5KCSX	10KCSX	15KCSX	20KCSX	25KCSX	30KCSX	40KCSX	50KCSX
Output 输出	Capacity(KVA) 容量(KVA)	5	10	15	20	25	30	40	50
	Phase 相位	Single Phase 2 Wire 单相二线							
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
	Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 低于 $\pm 2.0\%$							
	Transient Response 瞬态响应	less than $\pm 10\%$ 低于 $\pm 10\%$							
	Response Time 响应时间	less than 0.1Sec. 少于0.1秒							
	Adjust Range 调整范围	$\pm 2.5\%$							
	Wave Distortion 波形失真	less than 1% 低于1%							
Input 输入	Insulation 绝缘性	Insulation 绝缘							
	Capacity(KVA) 容量(KVA)	6	12	18	24	30	36	48	60
	Phase 相位	Single Phase 2 Wire 单相二线							
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
	Voltage Range 电压范围	$\pm 15\%$							
	Power Factor 功率因数	97%							
	Efficiency 效率	93%							

Insulation Type Single Phase 200V 绝缘型 单相 200V

Model 型号	TAC									
	5HCSX	10HCSX	15HCSX	20HCSX	25HCSX	30HCSX	40HCSX	50HCSX	75HCSX	100HCSX
Output 输出	Capacity(KVA) 容量(KVA)	5	10	15	20	25	30	40	50	100
	Phase 相位	Single Phase 2 Wire 单相二线								
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它								
	Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 低于 $\pm 2.0\%$								
	Transient Response 瞬态响应	less than $\pm 10\%$ 低于 $\pm 10\%$								
	Response Time 响应时间	less than 0.1Sec. 少于0.1秒								
	Adjust Range 调整范围	$\pm 2.5\%$								
	Wave Distortion 波形失真	less than 1% 低于1%								
Input 输入	Insulation 绝缘性	Insulation 绝缘								
	Capacity(KVA) 容量(KVA)	6	12	18	24	30	36	48	60	120
	Phase 相位	Single Phase 2 Wire 单相二线								
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它								
	Voltage Range 电压范围	$\pm 15\%$								
	Power Factor 功率因数	97%								
	Efficiency 效率	93%								

Insulation Type Three Phase 200V/400V 绝缘型 三相 200V/400V

Model 型号	TAC													
	10SCSX	15SCSX	20SCSX	25SCSX	30SCSX	50SCSX	75SCSX	100SCSX	150SCSX	200SCSX	250SCSX	300SCSX	400SCSX	500SCSX
Output 输出	Capacity(KVA) 容量(KVA)	10	15	20	25	30	50	75	100	150	200	250	300	500
	Phase 相位	Three Phase 3 Wire 三相三线												
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它												
	Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 低于 $\pm 2.0\%$												
	Transient Response 瞬态响应	less than $\pm 10\%$ 低于 $\pm 10\%$												
	Response Time 响应时间	less than 0.1Sec. 少于0.1秒												
	Adjust Range 调整范围	$\pm 2.5\%$												
	Wave Distortion 波形失真	less than 1% 低于1%												
Input 输入	Insulation 绝缘性	Insulation 绝缘												
	Capacity(KVA) 容量(KVA)	12	18	24	30	36	60	90	120	180	240	300	360	600
	Phase 相位	Three Phase 3 Wire 三相三线												
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它												
	Voltage Range 电压范围	$\pm 15\%$												
	Power Factor 功率因数	97%												
	Efficiency 效率	93%												

数字控制方式

Specifications 规格

Non Insulation Type Single Phase 100V 非绝缘型 单相 100V

Model 型号		TAC							
		5KSX	10KSX	15KSX	20KSX	25KSX	30KSX	40KSX	50KSX
O u t p u t 输出	Capacity(KVA) 容量(KVA)	5	10	15	20	25	30	40	50
	Phase 相位	Single Phase 2 Wire 单相二线							
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
	Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 低于 $\pm 2.0\%$							
	Transient Response 瞬态响应	less than $\pm 10\%$ 低于 $\pm 10\%$							
	Response Time 响应时间	less than 0.1Sec. 少于0.1秒							
	Adjust Range 调整范围	$\pm 2.5\%$							
	Wave Distortion 波形失真	less than 1% 低于1%							
I n p u t 输入	Insulation 绝缘性	non-Insulation 非绝缘							
	Capacity(KVA) 容量(KVA)	6	12	18	24	30	36	48	60
	Phase 相位	Single Phase 2 Wire 单相二线							
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
	Voltage Range 电压范围	$\pm 15\%$							
	Power Factor 功率因数	97%							
	Efficiency 效率	93%							

Non Insulation Type Single Phase 200V 非绝缘型 单相 200V

Model 型号		TAC									
		5HSX	10HSX	15HSX	20HSX	25HSX	30HSX	40HSX	50HSX	75HSX	100HSX
O u t p u t 输出	Capacity(KVA) 容量(KVA)	5	10	15	20	25	30	40	50	75	100
	Phase 相位	Single Phase 2 Wire 单相二线									
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它									
	Voltage Accuracy 电压精度	less than $\pm 2.0\%$ 低于 $\pm 2.0\%$									
	Transient Response 瞬态响应	less than $\pm 10\%$ 低于 $\pm 10\%$									
	Response Time 响应时间	less than 0.1Sec. 少于0.1秒									
	Adjust Range 调整范围	$\pm 2.5\%$									
	Wave Distortion 波形失真	less than 1% 低于1%									
I n p u t 输入	Insulation 绝缘性	non-Insulation 非绝缘									
	Capacity(KVA) 容量(KVA)	6	12	18	24	30	36	48	60	90	120
	Phase 相位	Single Phase 2 Wire 单相二线									
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它									
	Voltage Range 电压范围	$\pm 15\%$									
	Power Factor 功率因数	97%									
	Efficiency 效率	93%									

Non Insulation Type Three Phase 200V/400V 非绝缘型 三相 200V/400V

Model 型号		TAC														
		10SSX	15SSX	20SSX	25SSX	30SSX	50SSX	75SSX	100SSX	150SSX	200SSX	250SSX	300SSX	400SSX	500SSX	
O u t p u t 输出	Capacity(KVA) 容量(KVA)	10	15	20	25	30	50	75	100	150	200	250	300	400	500	
	Phase 相位	Three Phase 3 Wire 三相三线														
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它														
	Voltage Accuracy 电压精度	less than ± 2.0% 低于± 2.0%														
	Transient Response 瞬态响应	less than ± 10% 低于± 10%														
	Response Time 响应时间	less than 0.1Sec. 少于0.1秒														
	Adjust Range 调整范围	± 2.5%														
	Wave Distortion 波形失真	less than 1% 低于1%														
I n p u t 输入	Insulation 绝缘性	non-Insulation 非绝缘														
	Capacity(KVA) 容量(KVA)	12	18	24	30	36	60	90	120	180	240	300	360	480	600	
	Phase 相位	Three Phase 3 Wire 三相三线														
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它														
	Voltage Range 电压范围	± 15%														
	Power Factor 功率因数	97%														
	Efficiency 效率	93%														

PWM Control Type

MTS series

MTS series is PWM AC switching automatic voltage regulator. It can provide stable AC power for load with fast response speed, because the AC is switched directly in high efficiency and high frequency. Please use it as a power supply for AC control along with constant current, which is provided as an option.

MTS系列是PWM交流开关方式自动电压调节器。由于是直接对交流进行开关操作，所以效率高，而且由高频进行开关操作，所以响应速度快，可提供为负载提供稳定的交流功率。请把它与选配的定电流一起，作为交流控制用电源共同使用。

Application 用途

- Power supply for inspection and test of various electric products
各种电气产品检验和试验用的电源
- For load power source, light adjuster, temperature adjuster that requires high-speed response
需要快速响应的负载用电源，调光器和温度调节器
- For voltage adjustment of high voltage withstand tester and various types of electric power conditioning
耐压试验器电压调节用和各种功率调节用
- Product line etc.
生产线 等等

Feature 特长

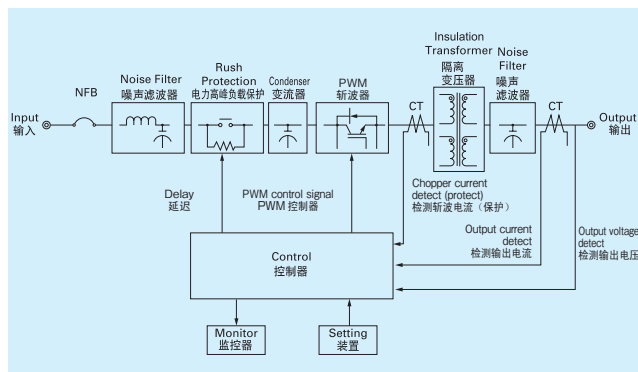
- Ultrafast response
响应速度极快。
- The voltage accuracy at a wave distortion is high because of effective value detection
由于可检测出的均方根值，故波形变形时的电压精度良好。
- Insulated between input and output
输入 - 输出间绝缘。
- The output variable type can set the output voltage from 0V as needed (external signal DC0-10V standard equipment)
输出可变量开关方式可从 0V 开始任意设定输出电压 (外部信号 DC0 ~ 10V 标准配置)。
- The output variable type can switch the power source ON/OFF, setup voltage, setup startup/shutdown time, schedule such operations, like repetitive task through a personal computer by connecting the output signal terminal with the GP-IB adaptor programming controller (optional).
输出可变量开关方式可以通过使外部信号端子与 GP-IB 适配器和程序调节器 (选配) 连接，进行开关电源，设定电压，开启 / 关闭时间的设定，重复等的预定运行及电脑控制等应用。
- The single phase variable type (KR and HR) can switch 100V / 200V type of output voltage.
单相可变量 (KR · HR) 开关方式可对输出电压 100V 系 / 200V 系进行切换。

Option 选项

- Change in input or output voltage
输入电压或者输出电压的变更
- Insertion output variable type of input side line filter
输入端线路滤波器插入输出可变量
- Change of external signal (DC4-20mA etc.)
外部信号的变更 (DC4 ~ 20mA 等)
- Attachment of GP-IB adaptor
附带 GP-IB 适配器
- Attachment of programming controller
附带程序调节器
- Constant current control
定电流控制



Block diagram 结构图



- 1) Line filter part (option) Prevents high frequency chopping noise from going back to the power source.
- 2) Rush current prevention Restricts the rushing current when the input opening/closing device is ON.
- 3) Input capacitor part Stabilizes high frequency chopping
- 4) Chopper part Chops alternating input and restrict output.
- 5) Insulation transformer part Input and output are insulated and also, output filter's reactance is utilized.
- 6) Output filter part Superimposed high frequency on the basic wave is removed.

- Protection function
1. Instant overcurrent ratings current Constant current at 300% peak current of rated current
 2. Overvoltage Constant current at 120% of the ratings effect value
 3. Overcurrent Output intercepted at 115% of the ratings effect value
- Note 1) The input capacitance in the specification column is a value at the ratings voltage.
Note 2) When a voltage is lowered in the KR-HR type, please use it within current rating or less.

- 1) 线路滤波器部 (可选) 防止高频截波噪音返回电源。
- 2) 突流防止 限制输入开闭器开启时的冲击电流。
- 3) 输入电容器部 使高频截波稳定。
- 4) 斩波器部 对交流输入进行截波以限制输出。
- 5) 绝缘变压器部 使输入和输出绝缘，同时，还兼作输出滤波器的阻抗。
- 6) 输出滤波器部 去除重叠在基波上的高频波。

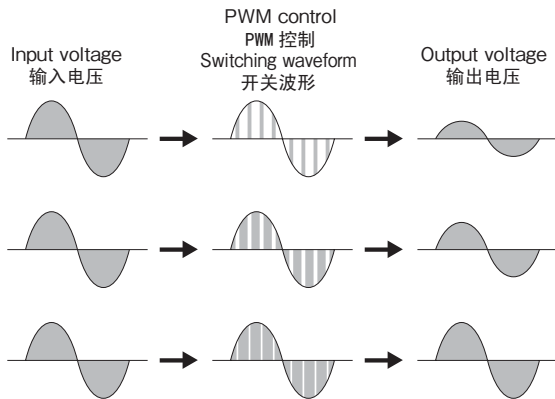
- 保护功能
1. 瞬间过电流 额定电流的 300% 峰值定电流
 2. 过电压 额定均方根值的 120% 定电流
 3. 过电流 额定输出电压的 115%，输出截止

注 1) 规格栏中的输入容量为额定电压时的值。
注 2) KR 和 HR 类型当电压降低时，请在额定电流以内使用。

开关控制方式

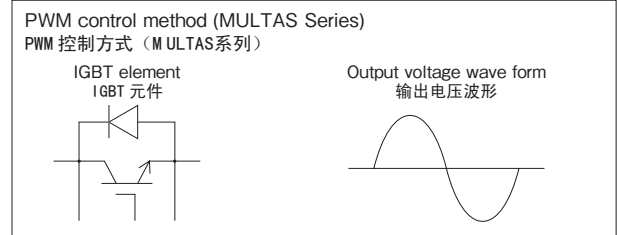
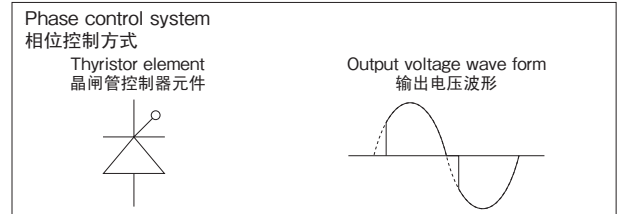
MTS系列

Principle of operation 工作原理



By using the semiconductor element for the main circuit of the device switching alternating input directly to high frequency wave and doing PWM (pulse width modulation) control, the amplitude of output voltage is controlled. As a result, the output voltage wave form is able to become sine wave. In addition, the voltage can be arbitrarily set from 0V for the output variable type device.

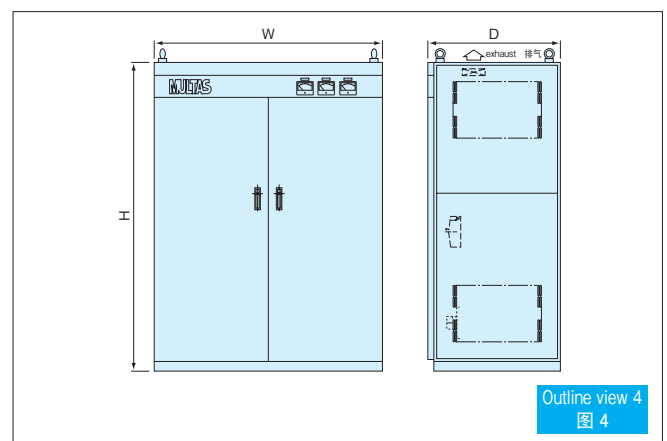
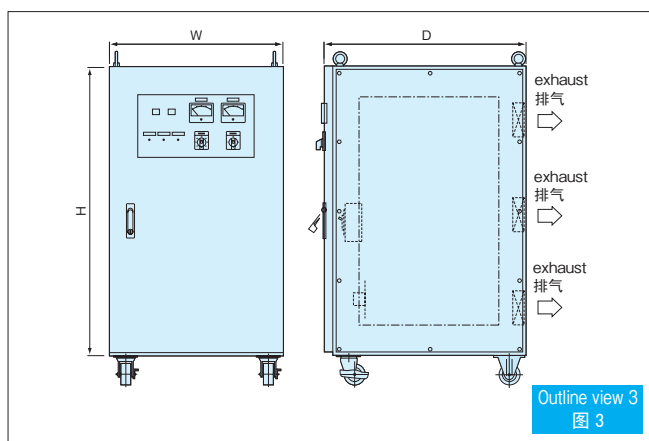
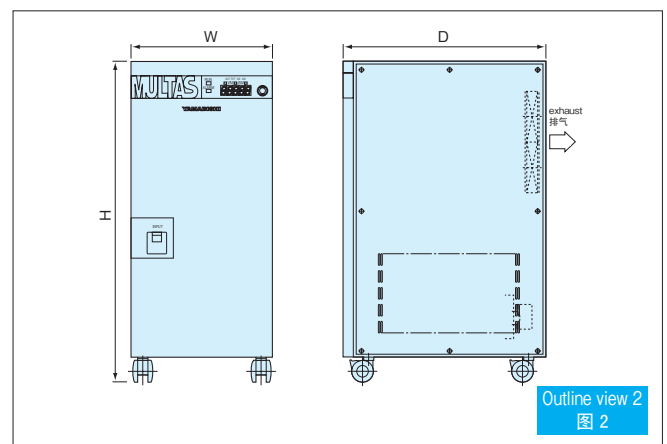
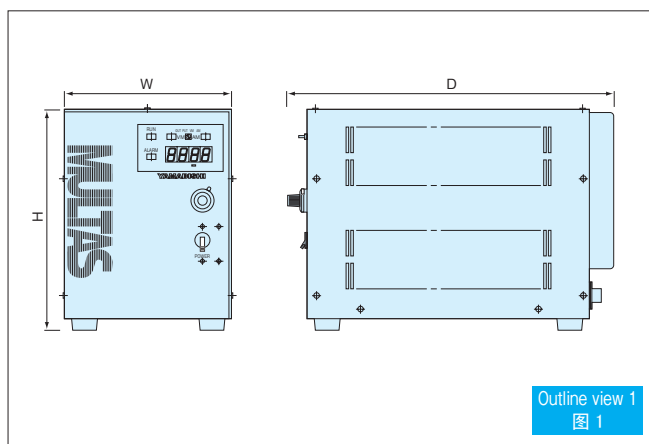
在装置主电路中使用半导体元件，直接对交流输入进行高频开关操作，进行PWM（脉宽调制）控制，从而可控制输出电压的振幅。结果，可以使输出电压波形变成正弦波。此外，对于输出可变型的装置，可以从0V开始任意设定电压。



Comparing with the phase control system that uses a thyristor, the wave shape distortion of the output voltage is less distorted sine wave.

与以往的使用晶闸管控制器进行的相位控制方式相比，本系列可得到输出电压波形变形小的正弦波。

Outline view 外观图



PWM Control Type

Specifications 规格

Output Voltage Fixed Type Single Phase 100V
输出电压固定型 单相 100V

Model 型号		MTS							
		1KX	2KX	3KX	5KX	7.5KX	10KX	15KX	30KX
Output 输出	Capacity(KVA) 容量(KVA)	1	2	3	5	7.5	10	15	30
	Phase 相位	Single Phase 2 Wire 单相二 线							
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
	Voltage Accuracy 电压精度	less than $\pm 0.5\%$ 低于 $\pm 0.5\%$							
	Response Time 响应时间	less than 0.03Sec. 少于0.03秒							
	Adjust Range 调整范围	$\pm 10\%$							
	Wave Distortion 波形失真	less than 1% 少于1%							
	Insulation 绝缘性	Insulation 绝 缘							
Input 输入	Capacity(KVA) 容量(KVA)	1.1	2.2	3.3	5.5	8.3	11	16.5	33
	Phase 相位	Single Phase 2 Wire 单相二 线							
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
	Voltage Range 电压范围	$\pm 15\%$							
	Efficiency 效率	90%							

Output Voltage Fixed Type Single Phase 200V
输出电压固定型 单相 200V

Model 型号		MTS								
		1HX	2HX	3HX	5HX	7.5HX	10HX	15HX	20HX	30HX
Output 输出	Capacity(KVA) 容量(KVA)	1	2	3	5	7.5	10	15	20	30
	Phase 相位	Single Phase 2 Wire 单相二線								
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它								
	Voltage Accuracy 电压精度	less than $\pm 0.5\%$ 低于 $\pm 0.5\%$								
	Response Time 响应时间	less than 0.03Sec. 少于0.03秒								
	Adjust Range 调整范围	$\pm 10\%$								
	Wave Distortion 波形失真	less than 1% 少于1%								
	Insulation 绝缘性	Insulation 绝缘								
Input 输入	Capacity(KVA) 容量(KVA)	1.1	2.2	3.3	5.5	8.3	11	16.5	22	33
	Phase 相位	Single Phase 2 Wire 单相二線								
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它								
	Voltage Range 电压范围	$\pm 15\%$								
	Efficiency 效率	90%								

Output Voltage Fixed Type Three Phase 200/400V
输出电压固定型 三相 200/400V

Model 型号		MTS										
		5SX	7.5SX	10SX	15SX	20SX	30SX	40SX	50SX	75SX	100SX	150SX
Output 输出	Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	40	50	75	100	150
	Phase 相位	Three Phase 4 Wire 三相四线										
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它										
	Voltage Accuracy 电压精度	less than ± 0.5% 低于±0.5%										
	Response Time 响应时间	less than 0.03Sec. 少于0.03秒										
	Adjust Range 调整范围	± 10%										
	Wave Distortion 波形失真	less than 1% 少于1%										
	Insulation 绝缘性	Insulation 绝缘										
Input 输入	Capacity(KVA) 容量(KVA)	5.5	8.3	11	16.5	22	33	44	55	83	110	165
	Phase 相位	Three Phase 4 Wire 三相四线										
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它										
	Voltage Range 电压范围	± 15%										
	Efficiency 效率	90%										

开关控制方式

Specifications 规格

Output Voltage Variable Type Single Phase 100V
输出电压可调型 单相 100V

Model 型号	MTS							
	1KRX	2KRX	3KRX	5KRX	7.5KRX	10KRX	15KRX	30KRX
Capacity(KVA) 容量(KVA)	1	2	3	5	7.5	10	15	30
Phase 相位	Single Phase 2 Wire 单相二线							
Voltage 电压	0 ~ 220V or 0 ~ 242V or 0 ~ 253 or 0 ~ 264V or another 0~220V或0~242V或0~253V或0~264V或其它							
Voltage Accuracy 电压精度	less than $\pm 0.5\%$ at the time of output voltage 30 ~ 100% 在输出电压30~100%时, 低于 $\pm 0.5\%$							
Response Time 响应时间	less than 0.03Sec. 少于0.03秒							
Wave Distortion 波形失真	less than 1% 少于1%							
Insulation 绝缘性	Insulation 绝缘							
Capacity(KVA) 容量(KVA)	1.1	2.2	3.3	5.5	8.3	11	16.5	33
Phase 相位	Single Phase 2 Wire 单相二线							
Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它							
Voltage Range 电压范围	$\pm 15\%$							
Efficiency 效率	90%							

Output Voltage Variable Type Single Phase 200V
输出电压可调型 单相 200V

Model 型号	MTS								
	1HRX	2HRX	3HRX	5HRX	7.5HRX	10HRX	15HRX	20HRX	30HRX
Capacity(KVA) 容量(KVA)	1	2	3	5	7.5	10	15	20	30
Phase 相位	Single Phase 2 Wire 单相二线								
Voltage 电压	0 ~ 220V or 0 ~ 242V or 0 ~ 253 or 0 ~ 264V or another 0~220V或0~242V或0~253V或0~264V或其它								
Voltage Accuracy 电压精度	less than $\pm 0.5\%$ at the time of output voltage 30 ~ 100% 在输出电压30~100%时, 低于 $\pm 0.5\%$								
Response Time 响应时间	less than 0.03Sec. 少于0.03秒								
Wave Distortion 波形失真	less than 1% 少于1%								
Insulation 绝缘性	Insulation 绝缘								
Capacity(KVA) 容量(KVA)	1.1	2.2	3.3	5.5	8.3	11	16.5	22	33
Phase 相位	Single Phase 2 Wire 单相二线								
Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它								
Voltage Range 电压范围	$\pm 15\%$								
Efficiency 效率	90%								

Output Voltage Variable Type Three Phase 200/400V
输出电压可调型 三相 200/400V

Model 型号	MTS										
	5SRX	7.5SRX	10SRX	15SRX	20SRX	30SRX	40SRX	50SRX	75SRX	100SRX	150SRX
Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	40	50	75	100	150
Phase 相位	Three Phase 4 Wire 三相四线										
Voltage 电压	0 ~ 220 or 0 ~ 418 or 0 ~ 440 or 0 ~ 456V or another 0~220V或0~418V或0~440V或0~456V或其它										
Voltage Accuracy 电压精度	less than $\pm 0.5\%$ at the time of output voltage 30 ~ 100% 在输出电压30~100%时, 低于 $\pm 0.5\%$										
Response Time 响应时间	less than 0.03Sec. 少于0.03秒										
Wave Distortion 波形失真	less than 1% 少于1%										
Insulation 绝缘性	Insulation 绝缘										
Capacity(KVA) 容量(KVA)	5.5	8.3	11	16.5	22	33	44	55	83	110	165
Phase 相位	Three Phase 4 Wire 三相四线										
Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它										
Voltage Range 电压范围	$\pm 15\%$										
Efficiency 效率	90%										

Slide Type

TAF series

Because it is a fixed voltage device that controls the volt slider by driving servo of YAMABISHI, it is highly efficient. It is adequate for using on the circuit that doesn't need the velocity respondent or in the opposite environment where the power changes are frequent. It can be used with a sense of reliability, because it is economical, compact and strong against inrush current.

由于本公司的对自耦变压器进行伺服驱动以进行控制的定电压装置的功率因数和效率非常好，所以非常适用于不需要快速响应性的电路以及相反电源变动非常剧烈的场所。其经济性好，节省空间，耐冲击电流，可以安心使用。

Application 用途

- Product line
生产线
- Inspection line
检验线
- Welding machine and machine tool
焊接机，机床
- Measuring instrument
测量工具

Feature 特长

- Voltage accuracy is maintained even in wave distortion because of effective value detection.
由于可检测出均方根值，故即使波形变形时也能保持电压精度。
- Generation of distorted wave form is almost none.
产生的波形几乎没有变形。
- High efficiency and high power.
高效率，高功率因数。
- All kinds of load are supported (R, L and C type).
不必选择负载（R，L，C 性任何一个都可以）
- Strong against the inrush current.
耐突流电流。

Kind of main voltage 主要电压种类

Single phase 2 wire 单相二线式	100V 110V 115V 120V 220V 230V 240V
Single phase 3 wire 单相三线式	200/100V 210/105V 220/110V 230/115V 240/120V 400/200V 440/220V
Three phase 3 wire 三相三线式	200V 210V 220V 380V 400V 415V 440V
Three phase 4 wire 三相四线式	200/115V 208/120V 220/127V 380/220V 400/230V 415/240V

※ We also manufacture input variable range of $\pm 20\%$, $+10\%$ and -20% besides $\pm 15\%$ (standard).
除了提供输入变动范围在 $\pm 15\%$ (标准) 的产品外，还可根据需要设计制作 $\pm 20\%$, $+10\%$, -20% 的产品。

※ As an option, bypass circuit can be built in. (Output voltage fixed type)
可内置选配的旁路电路。（输出电压固定型）

※ It is capable to manufacture input - output insulation shield type as an option.
还可为用户设计制作选配输入-输出绝缘保护型产品。

Note 1) The input capacity in the specification column is a value at the ratings voltage.

Note 2) When output voltage is lowered below the input voltage for R, RH and MR type, please use within current rating. In addition, when the output voltage is used more than the input voltage, the output current capacity becomes rating capacity divided by output voltage.

Note 3) Size/quantity may change.

注 1) 规格栏中的输入容量为额定电压时的值。

注 2) R, RH 和 MR 型的产品在使输出电压降低到输入电压以下时，请在额定电流以内使用。此外，在输出电压高于输入电压情况下使用时，输出电流容量为额定容量 ÷ 输出电压。

注 3) 根据需要，有时会改变尺寸 / 质量。



TAF

Three-phase output voltage fixed type 三相输出电压固定型

- Each phase individual control 各相独立控制

This method has three pairs of detection, comparison, amplifier and control circuits to controls each phase separately. Therefore, it guarantees no equilibrium of input power supply and load and provides three-phase voltage of regulated accuracy for output.

本方式由于具有 3 组检测，比较，放大，控制电路，并分别控制各相，所以还可以对输入电源及负载的不平衡进行补偿，并在输出中提供规定精度的三相电压。

- Each phase equalization control 各相平均控制

This method adjusts the three-phase circuit together with a couple of control mechanism by making the output three-phase circuit voltage into three-phase rectifying and detecting the voltage. Influence appears to the accuracy of the output voltage because it is controlled by equalized value of each phase, if input power supply and the load are not equilibrium at each phase.

本方式通过对输出三相电压进行三相整流，并检测其电压，从而可以利用一组控制机构对三相共同进行调节。输入电源及负载各相不平衡的话，由于用各相平均值进行控制，所以对输出电压的精度产生影响。

Variable output voltage type 输出电压可调型

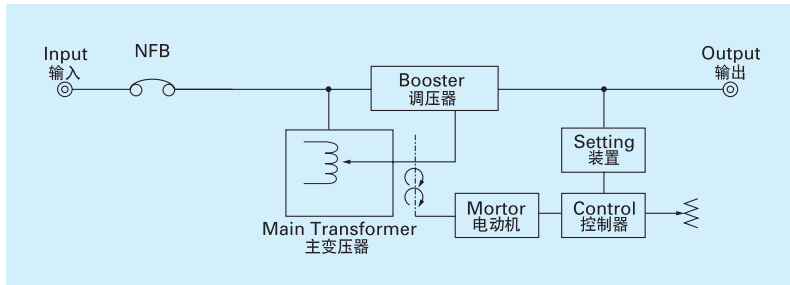
This method is a constant-voltage power supply that can adjust the output voltage in the wide range. It is easy to operate with the output voltage adjuster knob. Therefore, it is appropriate for the test power source of excess and deficiency voltage of the load side equipment and also for oversea products.

本方式是可在较宽范围内对输出电压进行调节的定电压电源。由于可以利用输出电压调节旋钮很方便地进行调节，所以非常适合作为负载端机器的欠电压的试验用电源，供海外试验用。

滑动方式

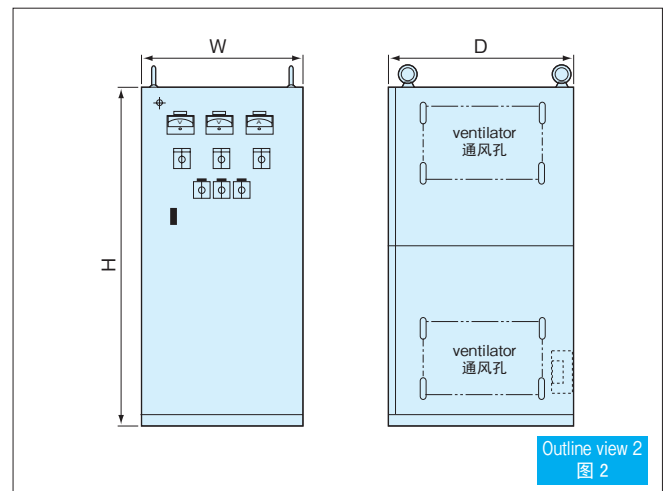
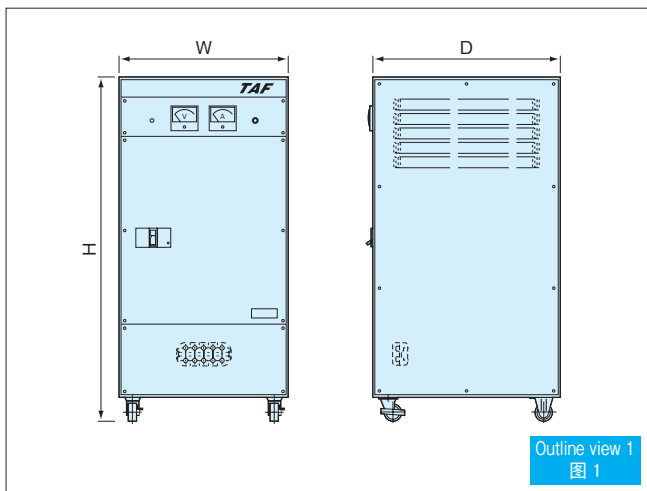
TAF系列

Block diagram 结构图



Outline view 外观图

TAF



Slide Type

Specifications 规格

Output Voltage Fixed Type Single Phase 100V
输出电压固定型 单相 100V

Model 型号		TAF									
		5KX	7.5KX	10KX	15KX	20KX	30KX	40KX	50KX	75KX	100KX
Output 输出	Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	40	50	75	100
	Phase 相位	Single Phase 2 Wire 单相二线									
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它									
	Voltage Accuracy 电压精度	less than ± 0.5% 低于± 0.5%				less than ± 1.0% 低于± 1.0%				less than ± 1.5% 低于± 1.5%	
	Response Time 响应时间	less than 0.5Sec. 少于0.5秒			less than 1.0Sec. 少于1.0秒					less than 1.5Sec. 少于1.5秒	
Input 输入	Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4	35.1	46.8	58.5	87.8	117
	Phase 相位	Single Phase 2 Wire 单相二线									
	Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它									
	Voltage Range 电压范围	± 15%									
	Power Factor 功率因数	95%									
	Efficiency 效率	90%									

Output Voltage Fixed Type Single Phase 200V
输出电压固定型 单相 200V

Model 型号		TAF									
		5KHX	7.5KHX	10KHX	15KHX	20KHX	30KHX	40KHX	50KHX	75KHX	100KHX
Output 输出	Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	30	40	50	75	100
	Phase 相位	Single Phase 2 Wire 单相二线									
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它									
	Voltage Accuracy 电压精度	less than ± 0.5% 低于± 0.5%				less than ± 1.0% 低于± 1.0%				less than ± 1.5% 低于± 1.5%	
	Response Time 响应时间	less than 0.5Sec. 少于0.5秒			less than 1.0Sec. 少于1.0秒					less than 1.5Sec. 少于1.5秒	
Input 输入	Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4	35.1	46.8	58.5	87.8	117
	Phase 相位	Single Phase 2 Wire 单相二线									
	Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它									
	Voltage Range 电压范围	± 15%									
	Power Factor 功率因数	95%									
	Efficiency 效率	90%									

滑动方式

Specifications 规格

Output Voltage Variable Type (Each Phase Individual Control) Three Phase 200/400V

输出电压可调型（各相独立控制）三相 200/400V

Model 型号	TAF															
	5SX	7.5SX	10SX	15SX	20SX	25SX	30SX	40SX	50SX	75SX	100SX	150SX	200SX	300SX	400SX	500SX
Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	25	30	40	50	75	100	150	200	300	400	500
Phase 相位	Three Phase 3 Wire 三相三线															
Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它															
Voltage Accuracy 电压精度	less than $\pm 1.0\%$ 低于 $\pm 1.0\%$						less than $\pm 1.5\%$ 低于 $\pm 1.5\%$				less than $\pm 2.0\%$ 低于 $\pm 2.0\%$				less than $\pm 3.0\%$ 低于 $\pm 3.0\%$	
Response Time 响应时间	less than 1.0Sec. 少于1.0秒						1.5Sec. 1.5秒	less than 2.0Sec. 少于2.0秒				less than 3.0Sec. 少于3.0秒				less than 4.0Sec. 少于4.0秒
Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4	29.3	35.1	46.8	58.5	87.8	117	178.5	234	351	468	585
Phase 相位	Three Phase 3 Wire 三相三线															
Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它															
Voltage Range 电压范围	$\pm 15\%$															
Power Factor 功率因数	95%															
Efficiency 效率	90%															

Output Voltage Variable Type (Each Phase Equalization Control) Three Phase 200/400V

输出电压可调型（各相平均控制）三相 200/400V

Model 型号		TAF										
		5MX	7.5MX	10MX	15MX	20MX	25MX	30MX	40MX	50MX	75MX	100MX
Output 输出	Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	25	30	40	50	75	100
	Phase 相位	Three Phase 3 Wire 三相三线										
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它										
	Voltage Accuracy 电压精度	less than ± 1.0% 低于±1.0%						less than ± 1.5% 低于±1.5%				
	Response Time 响应时间	less than 1.0Sec. 少于1.0秒					less than 1.5Sec. 少于1.5秒		less than 2.0Sec. 少于2秒			
Input 输入	Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4	29.3	35.1	46.8	58.5	87.8	117
	Phase 相位	Three Phase 3 Wire 三相三线										
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它										
	Voltage Range 电压范围	± 15%										
	Power Factor 功率因数	95%										
	Efficiency 效率	90%										

Slide Type

Specifications 规格

Output Voltage Variable Type Single Phase 100V
输出电压可调型 单相 100V

Model 型号	TAF				
	5RX	7.5RX	10RX	15RX	20RX
Output Capacity(KVA) 容量(KVA)	5	7.5	10	15	20
Phase 相位	Single Phase 2 Wire 单相二线				
Voltage 电压	30 ~ 110V or 33 ~ 121V or 34 ~ 126 or 36 ~ 132V or another 30~110V或33~121V或34~126V或36~132V或其它				
Voltage Accuracy 电压精度	less than $\pm 1.5\%$ 低于 $\pm 1.5\%$				$\pm 2.0\%$
Response Time 响应时间	less than 1.0Sec. 少于1.0秒				1.5Sec. 1.5秒
Input Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4
Phase 相位	Single Phase 2 Wire 单相二线				
Voltage 电压	100V or 110V or 115 or 120V or another 100V或110V或115V或120V或其它				
Voltage Range 电压范围	$\pm 15\%$				
Power Factor 功率因数	95%				
Efficiency 效率	90%				

Output Voltage Variable Type Single Phase 200V
输出电压可调型 单相 200V

Model 型号	TAF				
	5HRX	7.5HRX	10HRX	15HRX	20HRX
Output Capacity(KVA) 容量(KVA)	5	7.5	10	15	20
Phase 相位	Single Phase 2 Wire 单相二线				
Voltage 电压	60 ~ 220V or 66 ~ 242V or 69 ~ 253 or 72 ~ 264V or another 60~220V或66~242V或69~253V或72~264V或其它				
Voltage Accuracy 电压精度	less than $\pm 1.5\%$ 低于 $\pm 1.5\%$				$\pm 2.0\%$
Response Time 响应时间	less than 1.0Sec. 少于1.0秒				1.5Sec. 1.5秒
Input Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4
Phase 相位	Single Phase 2 Wire 单相二线				
Voltage 电压	200V or 220V or 230 or 240V or another 200V或220V或230V或240V或其它				
Voltage Range 电压范围	$\pm 15\%$				
Power Factor 功率因数	95%				
Efficiency 效率	90%				

滑动方式

Specifications 规格

Output Voltage Variable Type (Each Phase Equalization Control) Three Phase 200/400V
输出电压可调型（各相平均控制）三相 200/400V

Model 型号		TAF										
		5MRX	7.5MRX	10MRX	15MRX	20MRX	25MRX	30MRX	40MRX	50MRX	75MRX	100RMX
O u t p u t 输 出	Capacity(KVA) 容量(KVA)	5	7.5	10	15	20	25	30	40	50	75	100
	Phase 相位	Three Phase 3 Wire 三相三线										
	Voltage 电压	60 ~ 220 or 114 ~ 418 or 120 ~ 440 or 125 ~ 456V or another 60~220V或114~418V或120~440V或125~456V或其它										
	Voltage Accuracy 电压精度	less than ± 1.0% 低于± 1.0%			less than ± 1.5% 低于± 1.5%					less than ± 2.0% 低于± 2.0%		
I n p u t 输 入	Response Time 响应时间	less than 1.5Sec. 少于1.5秒			2.0Sec. 2.0秒	less than 3.0Sec. 少于3.0秒		4.0Sec. 4.0秒	5.0Sec. 5.0秒	less than 3.0Sec. 少于3.0秒		
	Capacity(KVA) 容量(KVA)	5.9	8.78	11.7	17.6	23.4	29.3	35.1	46.8	58.5	87.8	117
	Phase 相位	Three Phase 3 Wire 三相三线										
	Voltage 电压	200 or 380 or 400 or 415V or another 200V或380V或400V或415V或其它										
	Voltage Range 电压范围	± 15%										
	Power Factor 功率因数	95%										
	Efficiency 效率	90%										

Momentarily Correction Waveform Type

YHR series

It is sine wave type AVR by instant value compensation method of wave form through power amplifier. It is an effective AVR in removing of the influence (stabilization of peak-to-peak value) by electronic equipment capacitor input, pulse type noise superimposed to line wave form, and flicker from a steady luminance of the fluorescent lamp etc., which are main problems of the return method control.

它是功率放大器波形瞬间值补偿式的正弦波形 AVR。它可以有效地除去在反馈方式控制中经常遇到的荧光灯照明度稳定时的闪烁，线路波形上叠加的脉冲声，电子装置的电容输入引起的影响的问题（峰值稳定化）。



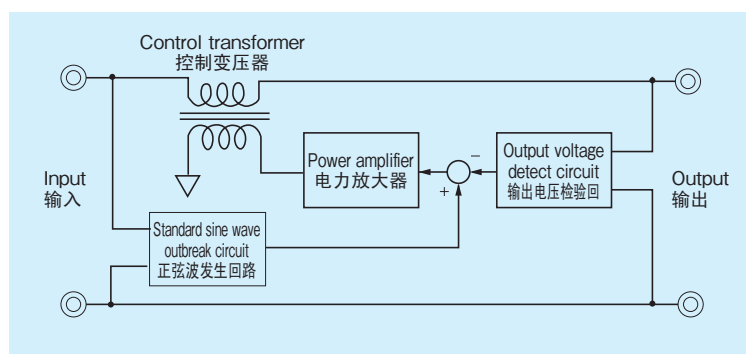
Application 用途

- For precision test and inspection
精密试验和检验用
- Measuring equipment
测量装置
- For system control etc.
系统控制用 等

Feature 特长

- Response time is extremely fast
高速响应。
- Output voltage precision is high
输出电压精度很高。
- Waveform distortion is low
波形失真很低。

Block diagram 结构图



Operation explanation

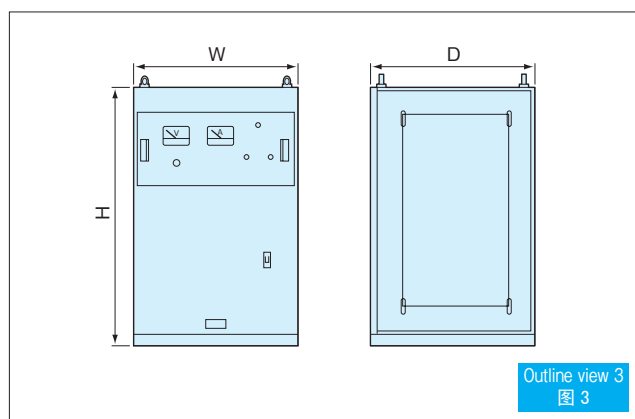
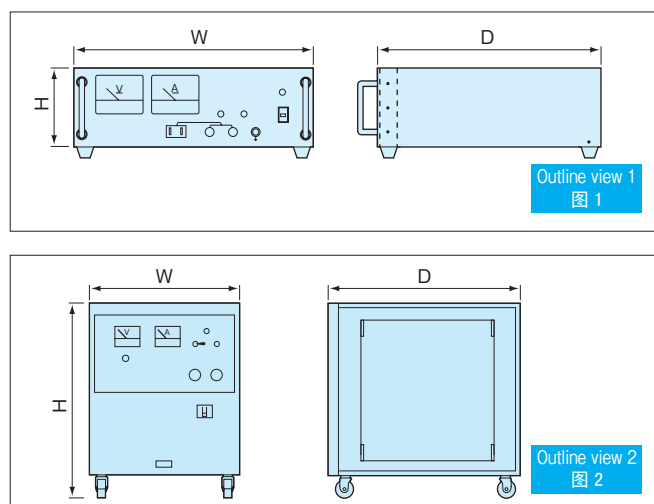
The pure bowstring wave voltage that completely synchronizes with the input voltage is generated and compared with detected output voltage.

The return control is executed by amplifying the error voltage that was generated as a result and supplying to the control transformer.

操作说明

产生与输入电压完全同步的纯正弦波电压，并与检测出的输出电压进行比较。对比较的误差电压进行功率放大，并提供给控制变压器，以此进行反馈控制。

Outline view 外观图



- There is a case to change dimensions and mass.
根据需要，有时会改变尺寸 / 质量。

瞬时波形补偿方式

YHR系列

Specifications 规格

Single Phase 单相

Model 型号		YHR							
		500X	1KX	2KX	3KX	5KX	7.5KX	10KX	20KX
Output 输出	Capacity (KVA) 容量 (kVA)	0.5	1	2	3	5	7.5	10	20
	Phase 相位	Single Phase 2 wire 单相二线							
	Voltage 电压	100/200V or 110/220V or 115/230V or 120/240V or another 100/200V 或 110/220V 或 115/230V 或 120/240V 或其它							
	Adjust Range 调整范围	$\pm 2.0\%$ $\pm 2\%$ 可变							
	Voltage Accuracy 电压精度	0.1% (Line regulation) 0.1% (Loading regulation) 0.1% (输入电压调节率) 0.1% (负载调节率)							
	Response Time 响应时间	less than 200 μ sec. 小于 200 微秒							
	Wave Distortion 波形失真	less than 0.5% (at 100V system) 1% (at 200V system) 100V 系 低于 0.5% 200V 系 低于 1%							
Input 输入	Capacity (KVA) 容量 (kVA)	0.75	1.5	3	4.5	7.5	11.25	15	30
	Phase 相位	Single Phase 2 wire 单相二线							
	Voltage 电压	100/200V or 110/220V or 115/230V or 120/240V or another 100/200V 或 110/220V 或 115/230V 或 120/240V 或其它							
	Voltage Range 电压范围	$\pm 10\%$							
	Frequency 频率	48 ~ 62Hz							
	Efficiency 效率	70%	more than 75% 75% 以上						

Three Phase 三相

Model 型号		YHR							
		5SX	7.5SX	10SX	15SX	20SX	30SX	50SX	75SX
Output 输出	Capacity (KVA) 容量 (kVA)	5	7.5	10	15	20	30	50	75
	Phase 相位	Three Phase 3 wire 三相三线							
	Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它							
	Adjust Range 调整范围	$\pm 2.0\%$ $\pm 2\%$ 可变							
	Voltage Accuracy 电压精度	0.1% (Line regulation) 0.1% (Loading regulation) 0.1% (输入电压调节率) 0.1% (负载调节率)							
	Response Time 响应时间	less than 200 μ sec. 小于 200 微秒							
Input 输入	Wave Distortion 波形失真	less than 1% 低于 1%							
	Capacity (KVA) 容量 (kVA)	7	11.25	15	22.5	30	45	75	112.5
	Phase 相位	Three Phase 3 wire 三相三线							
	Voltage 电压	200V or 380V or 400V or 415V or another 200V 或 380V 或 400V 或 415V 或其它							
	Voltage Range 电压范围	$\pm 10\%$							
	Frequency 频率	48 ~ 62Hz							
	Efficiency 效率	more than 75% 75% 以上							

LOADING INSTRUMENT

负载装置

- Electronic Loading Instrument88
电子负载装置
- For Switch Life Test90
开关寿命试验用负载装置
- AC Electric Contact Test Control System96
交流电触点试验用负载装置
- Integrated Switch Test System97
开关试验用综合设备系统
- For Generator Test98
发电机负载试验装置
- Water-cooling Resistance/Regenerative Loading
Instrument for Engine Generator 100
发电机 电动机试验台 / 再生负载装置
- For Generator of Engine Test 101
发动机发电机负载装置
- Artificial Load of Aerogenerator System
(Outdoor Type) 102
风力发电室外型模拟负载
- Generator and Electric Motor Test Table 103
发电机 电动机测试台
- For High Voltage Generating Device 104
高压负载装置
- Electronic Loading Instrument for Fuel Cell
Evaluation Test 105
燃料电池用电子负载装置
- Electronic Loading Instrument for Battery Test
..... 106
蓄电池试验用电子负载装置

Electronic Loading Instrument

YTR-KR series



Application 用途

- For battery electrical discharge test
蓄电池放电试验用
- For fuel cell evaluation test
燃料电池评价试验用
- For various type of generator test
各种发电机试验用
- Load test of DC electronic equipment and electronic parts
直流电子装置及电子零部件负载试验
- For life test of switch and relay
开关以及继电器的寿命试验
- Interception and shutdown test of breaker and fuse
断路器，保险丝的断路和熔断试验
- Electrical discharge test of capacitor
电容器的放电试验
- Characteristic test on various materials
各种材料的特性试验

Feature 特长

- High stability level ($\pm 0.05\%$)
具有很高的稳定性 ($\pm 0.05\%$)
- High-speed response (1mSec.)
高速响应 (1mSec.)
- A large capacity load is achieved with one device (possible to produce up to 3000A)
可以使用一台实现大容量负载 (最大可达 3000A)
- Over voltage overcurrent heating protection circuit
过电压过电流加热保护电路

Model 型号	YTR							
	80-5KR	80-7.5KR	80-10KR	80-15KR	80-20KR	80-25KR	80-30KR	80-60KR
Control type 控制方式	All transistor control 全三极管控制							
Voltage 电压	DC4 ~ 80V							
Current 电流	200A	300A	400A	600A	800A	1000A	1200A	2400A
Electric power 电力	5kW	7.5kW	10kW	15kW	20kW	25kW	30kW	60kW
Control 控制	Constant current control/fix electric power control Switch 定电流控制 / 定功率控制 切换							
Current stability 电流稳定程度	Within $\pm 0.05\%$ of the maximum current value compared with $\pm 10\%$ variable of operational power supply Within $\pm 0.05\%$ of the maximum current value compared with voltage variable of DC4-80V 相对操作电源的 $\pm 10\%$ 变动，可把最大电流值控制在 $\pm 0.05\%$ 以内 相对电压在 DC4 ~ 80V 的变动，可把最大电流值控制在 $\pm 0.05\%$ 以内							
Setting Current Remote/Local select 电流设置 (遥控 / 本机) 切换	Remote setup: At DC0 to 10V, 0 - maximum current value A (Insulation) Local setup: By ten-rotation potentiometer 遥控设置: 利用 DC0 ~ 10V 使电流值设置在 0 ~ 最大电流值 A 本机设置: 利用 10 圈电位差计进行设定							
Operation power supply 操作电源	Single phase 100V $\pm 10\%$ 50/60Hz (Single phase 100V and three-phase circuit 200V according to capacity) 单相 100V $\pm 10\%$ 50/60Hz (根据容量，单相 100V，三相 200V)							
Protection function 保护功能	Over electric power : A fixed electric power is controlled by 110% of the maximum electric power value (LED display) Over current : Interrupts at 110% of the maximum current value Over voltage : Interrupts at 90V Overheat : Shutdown at cooling fan 100 centigrade Restoration : Re-operation after reset 过电力 : 在最大功率值的 110% 时进行定功率控制 (LED 表示) 过电流 : 在最大电流值 110% 时进行断开 过电压 : 在 90V 时进行断开 过热 : 冷却风扇在 100℃ 时进行断开 复位 : 复位后，再操作							
Monitor indication 数字表	Current : Digital meter Voltage : Digital meter 电流 : 数字 电压 : 数字							
Cooling type 冷却方式	Dry type forced cooling air 干式强制风冷							

电子负载装置

YTR-KR系列

About the interface of YTR-KR series 关于YTR-KR系列的界面

● Panel display light 面板显示灯

1. MC (load connection) [ON/OFF]Lighting at ON
MC (负载连接) [ON/OFF][ON] 时灯点亮
2. Load electricity [ON/OFF]Lighting at ON
负载通电 [ON/OFF][ON] 时点亮
3. Operation power supplyLight ON at the time of turning on
操作电源接通时灯点亮
4. Over electric powerLight ON at the time of over electric power
过功率过功率时灯点亮
5. Overcurrent and excessive voltageLight ON at the time of shutdown
过电流和过电压断开时灯点亮
6. Abnormal overheatingLight ON at the time of malfunction
过热异常异常时灯点亮
7. Emergency stopLight ON at the time of shut-off
紧急停止停止时灯点亮

● Monitor output 监视器输出

1. VoltageDC0 ~ 80V/DC0 ~ 10V (Non Insulation)
电压DC0 ~ 80V/DC0 ~ 10V (非绝缘)
2. CurrentDC0 ~ Maximum current/DC0 ~ 10V (Non Insulation)
电流DC0 ~ 最大电流值 /DC0 ~ 10V (非绝缘)

● Operational signal 操作信号

1. Remote current setting0-maximum current value (insulated) to DC0-10V
遥控电流设定相对 DC0 ~ 10V, 电流设置在 0 ~ 最大电流值 (绝缘)
2. MC [ON]MC [ON] at close (momentary)
MC [ON]关闭时 MC [ON] (瞬间)
3. MC [OFF]MC [OFF] at close (momentary)
MC [OFF]关闭时 MC [OFF] (瞬间)
4. Energizing [ON/OFF]Energize by closing
通电 [ON/OFF]关闭时通电
5. Emergency stopMC shutdown at closing
紧急停止关闭时 MC 断开 (瞬间)
6. ResetMC shutdown released at opening
MC [ON] again after restoration
复位开启时 MC 断开解除 (瞬间)
复位时要再次使 MC [ON]

● Option 选配

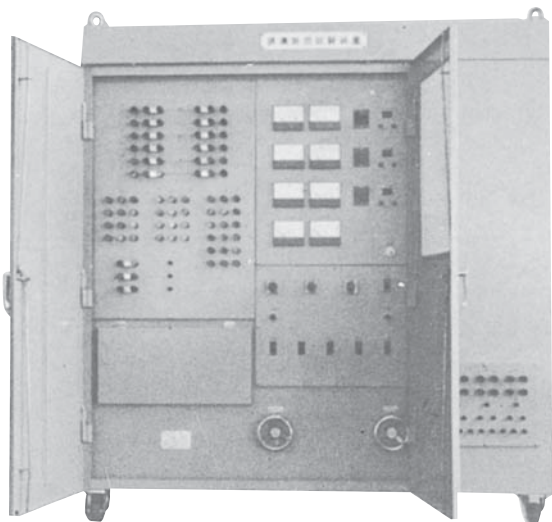
1. GP-IB·RS-232C interface
GP-IB·RS-232C 界面
2. We provide the voltage line drop amends power supply. (Built-in or external)
本公司还准备了电压线路欠压补偿电源 (内置或者另设)

For Switch Life Test

Inductive loading Instrument

This is a loading instrument for a longevity test that tests a mechanical parts such as a switch or relay if it can withstand tens of thousands times of ON-OFF action against a constant load value which is accurately setup. Its characteristic is that it can reproduce a delay current precisely that happens especially more in the RL load during OFF time than L. It has been adopted as the loading instrument of mechanical components of Electrical Appliance and Material Control Law, the UL standard and IEC standard.

它是相对开关或继电器等机构零部件准确设定为一定的负载值，确认是否能达到几万次或者几十万次开闭的寿命测试用的负载装置，特别是它具有在 RL 负载为关闭时，可以忠实地由 L 产生延迟电流这个特点，作为符合《电器用品取缔法令》，UL标准和IEC标准的机构部负载装置，它被广泛地采用。



Example of production specification 规格举例

Ex : 1 例 1

Supply voltage : Single Phase 125/250V 60Hz
供应电压：单相 125/250V 60Hz

Power factor adjustment range : 0.4 ~ 1.0
功率因数调节范围：0.4 ~ 1.0

Power factor setting accuracy : ± 0.025
功率因数设置精度： ± 0.025

Current : Standing 1 ~ 30A
电流：恒定 1 ~ 30A

Current setting accuracy : $\pm 0.05A$
电流设置精度： $\pm 0.05A$

Surge : 9 ~ 90A
电涌：9 ~ 90A

Ex : 2 例 2

Supply voltage : DC125V
供应电压：DC125V

L/R : 3mSec.
L/R : 3 毫秒

Current : Standing 4 ~ 25A
电流：恒定 4 ~ 25A

Current setting accuracy : +10A, -0%
电流设置精度：+10A, -0%

Surge : 25 ~ 150A
电涌：25 ~ 150A

Surge setting time : 50 ~ 300msec.
电涌设定时间：50 ~ 300msec.

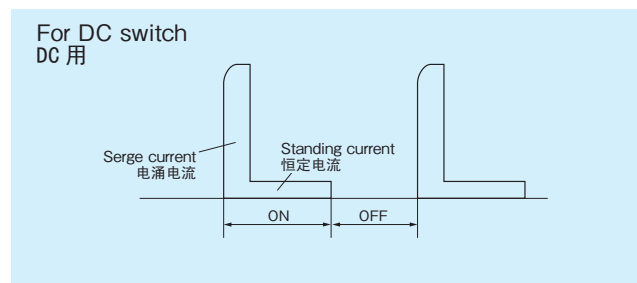
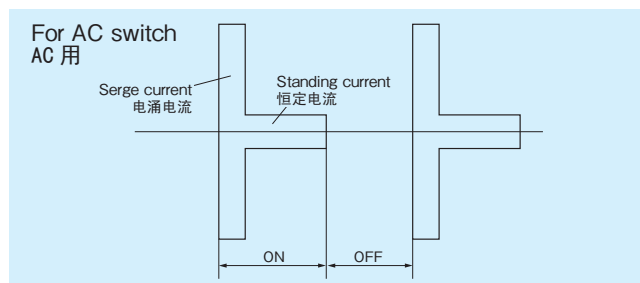
Specifications condition 规格条件

- Test power-supply voltage, number of phase and frequency
试验电源电压，相数和频率
- Type of sample, applicable standard and contents of test
试样的种类，适用标准和试验的内容
- Number of samples (number of test circuits)
试样的个数（试验电路数）
- Operation method (manual hand operation and manual remote control, etc)
操作方法（手动本机操作，手动远程操作等）
- Data processing method by a computer
利用计算机进行数据处理时的处理方法

开关寿命试验用负载装置

感应负载装置

Graphic chart 曲线图



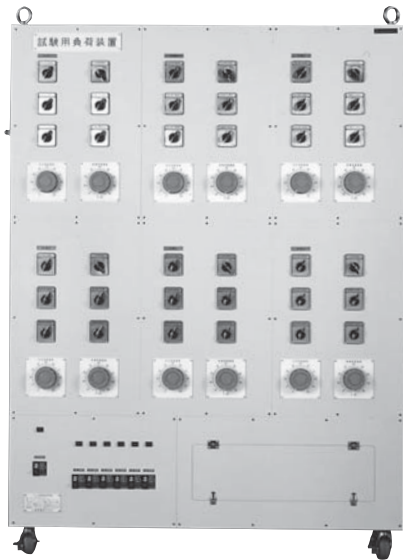
- It is a loading instrument to test the products with electric contact including electromagnetic contactor, relay, toggle and limit switch based on an applicable standard.
它是根据以电磁接触器，继电器，钮子开关和限位开关为主的，具有电触点的产品的标准进行试验的试验用负载装置。
- In general, the adopted standard includes the domestic ones as Japan Industrial Standards and Electrical Appliance and Material Control Law, etc. and overseas standard as UL, CSA, VDE and IEC. However, we also manufacture a device to match a standard as instructed as an option.
一般适用的标准以日本工业标准，《电器用品取缔法》等国内标准为主，还包括 UL，CSA，VDE 及 IEC 等国外标准，本公司还可以根据用户的标准要求制作相应的装置。
- The energizing test mode is manufactured with the circuit structures including the test mode applicable to the UL standard and the combination mode between inrush current and steady current that are applicable to the IEC-1058-1 standard, etc.
通电试验模式以符合 UL 标准的试验模式为主，还可以利用符合 IEC-1058-1 等标准的，冲击电流和恒定电流组合模式等的电路构成进行制作。
- It corresponds to other functions necessary for test and method, so that the number of test circuits and sample connection number, etc can be conducted efficiently and easily.
为了能够方便有效地进行试验电路数，试样连接数等试验，还具备方式以及试验所需的其他功能。
- The standard protection functions include sample welding/fusion detection and also a protection against sample and device itself. It is also possible to manufacture a customized device .
保护功能包含试样的熔断 / 熔断检测，还标准装备部分试样及装置本体的保护功能，本公司可以根据用户要求采取具体的保护措施。
- Except for a loading instrument, we manufacture a test board and opening /shutting test machine as requested.
不仅可以制作负载装置，而且还可根据要求制作试验台及开闭试验机。

For Switch Life Test

For Switch Test 开关试验用装置

This machine is designed for the CSA specification test of various switches and suited for the resistance load and the inducement load tests corresponding to 100V model and 200V model respectively.

本装置是为进行各种开关的CSA标准试验而设计，对应100V系／200V系各种产品，适合于电阻负载及感应负载试验。



SRL-125/250-17.5S

Specifications 规格

Model 型号	SRL-125/250-17.5S
Capacity 容量	125V × 17.5A = 2187.5A × 6Circuit = 13125VA 125V×17.5A = 2187.5A×6 条电路 = 13125VA
Voltage 电压	100V AC1 φ 125V (100 ~ 150V Can use) 100V 系 AC1 φ 125V (100 ~ 150V 可使用)
	200V AC1 φ 250V (200 ~ 300V Can use) 200V 系 AC1 φ 250V (200 ~ 300V 可使用)
Current 电流	100V 0 ~ 35A Variable (2Circuit Parallel connection) 100V 系 0 ~ 35A 可变 (2 条电路 并列连接)
	200V 0 ~ 17.5A Variable (2Circuit Series connection) 200V 系 0 ~ 17.5A 可变 (2 条电路 直列连接)
Frequency 频率	50/60Hz
Power factor 功率因数	Delay power factor 0.3 ~ 0.98/1.0 Select type 延迟功率因数 0.3 ~ 0.98/1.0 切换式

Lamp load For Switch Test 开关试验用电灯负载装置

This machine is designed for the CSA specification test of various switches and is suited for the TV standard by lamp load.

本装置是为进行各种开关的CSA标准试验而设计，适合于电灯负载的TV标准。



SYL-120-30

Specifications 规格

Model 型号	SYL-120-30
Capacity 容量	For TV-20 standard TV-20 试验用
Voltage 电压	AC1 φ 120V
Current 电流	TV-1 ~ TV-20 Variable type TV-1 ~ TV-20 可变
Frequency 频率	50/60Hz
Configuration 构成	It has six similar circuits. switches them as needed 可以收纳六个相同电路，并顺序切换使用。

开关寿命试验用负载装置

For Switch Endurance Test (Linear motion type) 开关耐久试验机（直线运动型用）

This device is especially designed for a toggle switch and slide switch, etc. that does the straight line ON-OFF motion operation.

Each switch is fixed or operated by a special tool.

The operation can be instructed by the controller and emergency stop is possible if there is abnormal signal from the loading instrument or visual abnormality is found.

本装置是专为像钮子开关和滑动开关等那样的，通过直线运动进行开闭动作的开关进行耐久试验而设计的。

各开关由专用夹具固定或者动作。

其动作受控制器指令控制，可以通过负载装置的异常信号或者目视进行紧急停止。

Switch for test 试验开关

A	Toggle switch in general	A	一般的钮子开关
B	Toggle switch with neutrality	B	钮子开关带中性稳定度
C	Slide switch in general	C	一般滑动开关
D	Slide switch with neutrality	D	滑动开关带中性稳定度
E	Push switch in general	E	一般的按钮开关
F	Push switch with a lock	F	按钮开关带锁定
G	Push and pull switch	G	推拉开关
H	Momentary switch	H	瞬时开关

Basic specification 基本规格

Straight advancement thrust 直进推力	MAX 100N (10.2Kgf) 最大 100N (10.2Kgf)
Straight advancement speed 直进速度	MAX 50mm/sec 最快 50mm/秒
Effective distance 有效移动量	MAX 100mm 最大 100mm
Test times 试验次数	MAX 999999 times 最多 999999 次
Load ON stop time 负载 ON 停止时间	MAX 9.9 sec 最长 9.9 秒

Condition setting controller 条件设定控制器

Test speed : 6-60 times/minute Set by timer
试验速度：6～60次/分 时钟设置

Stroke setting : Determined by jigs (by shape)
行程设定：根据机架确定（因形状而异）。

Test setting frequency : 6 digits digital switch
试验设置次数：6位数字开关

Test execution frequency : 6 digits LCD cycle counter x 6 reams
It counts using the air cylinder LS.

试验执行次数：6位LCD循环计数器×6串
利用汽缸的LS进行计数。

Operation method 驱动方法

It is operated with an air cylinder using an air compressor.

使用压缩机的气体，利用汽缸进行驱动。

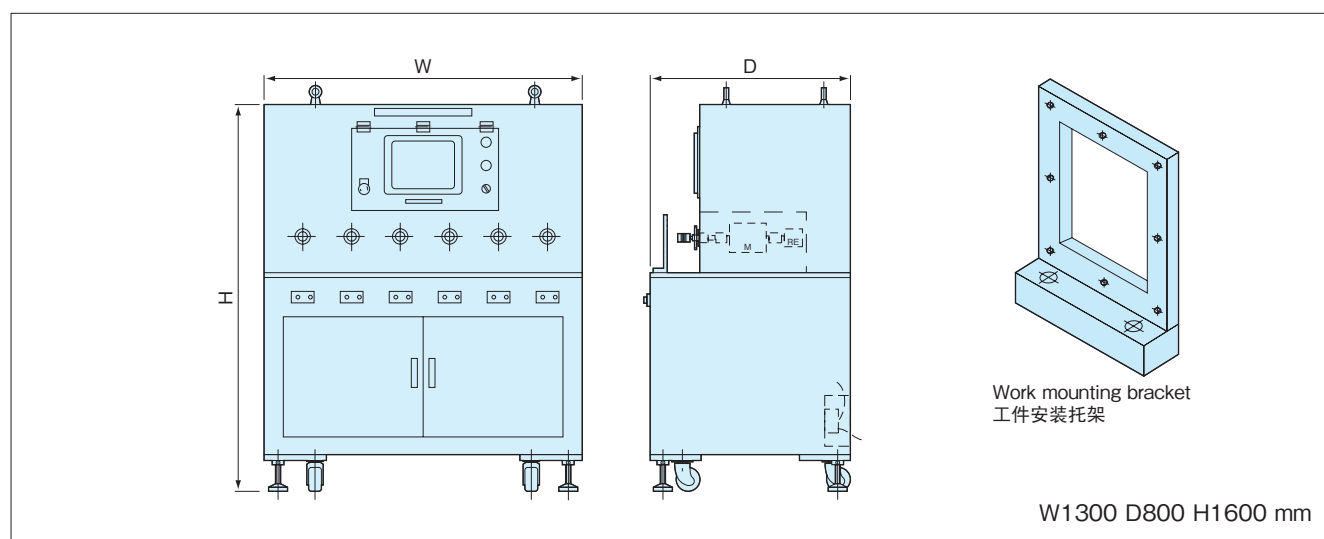
Test jigs 试验机架

This device is 6 ream type and we produce jigs for 6 ream according to a switch shape.

It is also capable to manufacture a jig for a certain switch shape as requested.

本装置是六串式，本公司可根据开关的形状制作相应的6串的机架。
本公司还备有各种开关形状用的机架。

Outline view 外观图



For Switch Life Test

Switch Endurance Test Machine (For Rotating Movement Type)

This device is the one especially designed for a rotary switch endurance test that does ON-OFF operation with rotating motion.
Each switch is fixed or operated by a special tool.
The operation can be instructed by the controller and the emergency stop is possible if there is an abnormal signal from the loading instrument or a problem is visually detected.

本装置是专为像旋转开关和钥匙开关等那样的，通过旋转运动进行开闭动作的开关进行耐久试验而设计的。
各开关由专用夹具固定或者动作。
其动作受控制器指令控制，可以通过负载装置的异常信号或者目视进行紧急停止。

Switch for test 试验开关

- A

Rotary switch
- B

Key switch
- A

旋转开关
- B

钥匙开关

Basic specification 基本规格

Rotating torque 旋转扭矩	MAX 1N/m (10.2Kgf/cm) 最大 1N/m (10.2Kgf/cm)
Rotating speed 旋转速度	MAX Angle 180/sec 最快 180度 / 秒
Rotation angle 旋转角度	MAX Angle ± 360 最大 ±360度
Test times 试验次数	MAX 999999 times 最多 999999 次
Load ON stop time 负载 ON 停止时间	MAX 9.9 sec 最长 9.9 秒

Condition setting controller 条件设定控制器

- Test speed : 6-60 times/minute Set by timer
试验速度：6 ~ 60 次 / 分 时钟设置
- Angle setting: Teach-in method
角度设定：指示方式
- Test setting frequency : 6 digits digital switch
试验设置次数：6 位数字开关
- Test execution frequency : 6 digits LCD cycle counter x 6 reams
试验执行次数：6 位 LCD 循环计数器 × 6 串

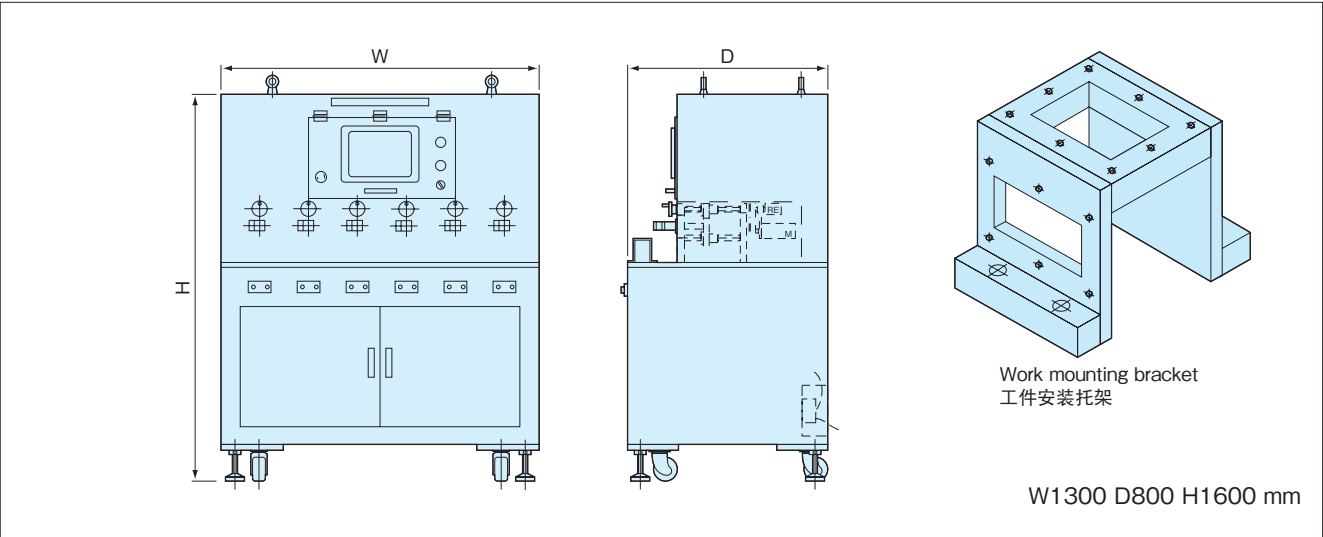
Operation method 驱动方法

It depends on a DC servo motor. It adopts the teach-in method to measure the angle through an encoder so that the switch is turned on at a certain time, at a specified contact point or at continuous rotation.
取决于 DC 伺服电机。其驱动方法为只对连续旋转或指定的触点进行设定时间开启等通过编码器对测量角度进行指示的方式。

Test jigs 试验机架

This device is 6 ream type and we produce jigs for 6 ream according to a switch shape.
It is also capable to manufacture a jig for a certain switch shape as requested.
本装置是六串式，本公司可根据开关的形状制作相应的 6 串的机架。
本公司还备有各种开关形状用的机架。

Outline view 外观图



开关寿命试验用负载装置

开关耐久试验机（旋转运动型用）

Others production specifications example

Ex:1

Device name	: Inductive loading instrument
Model	: SRL-125/250-20S
Test standard	: UL-1054 and CSA C22.2
Test voltage	: AC Single phase 125/250V
Frequency	: 50/60Hz
Setting current	: Continuous variable to 1A-20.5A
Setting error	: Able to set ± 0.1 A or below
Power factor	: Delay power factor 0.3-0.98 or more/1.0
Operation method	: Panel manual setting operation
Number of circuits	: Identical circuit 6 circuits
Protection circuit	: Resistance load part forced air cooling With load circuit operation and stop circuit by external signal
Others	: UL-1054 12.3 clause is satisfied in case of parallel connection.

Ex:2

Device name	: Lamp loading instrument
Model	: SYL-120-8W
Test standard	: UL-1054 and CSA C22.2
Test voltage	: AC Single phase 120V
Frequency	: 50/60Hz
Setting current	: TV-1-TV-8 continuous variable
Number of circuits	: Identical circuit 2 circuits
Number of banks	: 1 circuit 7 banks
Protection circuit	: With load circuit operation and stop circuit by external signal

Ex:3

Device name	: Capacity loading instrument (overcurrent generation device)
Model	: SRC-250-5S
Test standard	: IEC-065 compliance
Test voltage	: AC Single phase 250V
Frequency	: 50Hz
Setting current	: Steady-state current 1A · 2A · 4A · 5A · 8A Overcurrent magnification Twice · 4 times · 8 times · 16 times · 32 times

Ex:4

Device name	: Exchange pseudo load current generation device
Model	: SRL-300AC
Test standard	: UL-1054 · IEC-1058-1 compliance
Test voltage	: AC Single phase 125/250V 120/240V (switching type)
Frequency	: 50Hz
Setting current	: Rush current Max 200A (rms) Steady-state current Max 120A (rms) Rush time setting 0.001 (sec) ~ 9.999 (h)
Number of test circuits	: Able to use 9 circuits simultaneously
Others	: With preset counter, welding detection and loose connection detection circuit

其他制作规格（例）

例 1

装置名称	: 感应负载装置
型号	: SRL-125/250-20S
试验标准	: UL-1054 及 CSA C22.2
试验电压	: 交流 单相 125/250V
频率	: 50/60Hz
设定电流	: 1A ~ 20.5A 连续可变
设定误差	: 可设定在 ± 0.1 A 以下
功率因数	: 延迟功率因数 0.3 ~ 0.98 以上 / 1.0
操作方法	: 盘面手动设定操作
电路数	: 有六个相同电路
保护电路	: 电阻负载部分强制空冷 取决于外部信号 带负载电路运转和停止电路
其他	: 并列连接时, 为 UL-1054 满足 12.3 项。

例 2

装置名称	: 电灯负载装置
型号	: SYL-120-8W
试验标准	: UL-1054 及 CSA C22.2
试验电压	: 交流 单相 120V
频率	: 50/60Hz
设定电流	: TV-1 ~ TV-8 连续可变
电路数	: 两个相同电路
组合数	: 每个电路七个组合
保护电路	: 附带利用外部信号控制负载电路运转和停止的电路

Ex:3 例 3

装置名称	: 容量负载装置（过电流发生装置）
型号	: SRC-250-5S
试验标准	: 参照 IEC-065
试验电压	: 交流 单相 250V
频率	: 50Hz
设定电流	: 恒定电流 1A · 2A · 4A · 5A · 8A 过电流倍率 两倍 · 4 倍 · 8 倍 · 16 倍 · 32 倍

Ex:4 例 4

装置名称	: 交流仿真负载电流发生装置
型号	: SRL-300AC
试验标准	: 参照 UL-1054 · IEC-1058-1
试验电压	: 交流 单相 125/250V 以及 120/240V（切换式）
频率	: 50Hz
设定电流	: 冲击电流 最大 200A (rms) 恒定电流 最大 120A (rms) 电流冲击时间设定 0.001 (sec) ~ 9.999 (h)
试验电路数	: 九电路可同时使用
其他	: 带预设计数器, 熔敷检测以及接触不良检测电路

Control device for AC electric contact test 交流电触点试验用装置

This device is an AC specific controller for electric contact test. It can turn on a contact point at an arbitrary phase angle and shutdown.
It can be used for a quantitative lifetime measurement of electric contract.

本装置是交流专用电子触点试验用控制装置。可以以任意相位角进行触点接触和断开控制。
可用于电子触点定量寿命测定等。

Feature 特长

- It doesn't depend on relay and delay of a contactor. (delay time canceling function)
不依赖于继电器和接触器的延迟时间（延迟时间取消功能）。
- It uses microcomputer control instead of conventional analog circuit.
相对于以往的模拟电路，本装置采用的电脑控制。
- The phase angle is kept at a set value during an opening and closing test for a long time.
长时间开闭试验中也可把相位角保持在设定值。

Specifications (Example) 规格(例)

Sample contact point ratings : For single Within 250V 50/60Hz
试验触点额定：单相 250V 以内 50/60Hz

Sample coil ratings : DC48V 1A
试验线圈额定：DC48V 1A

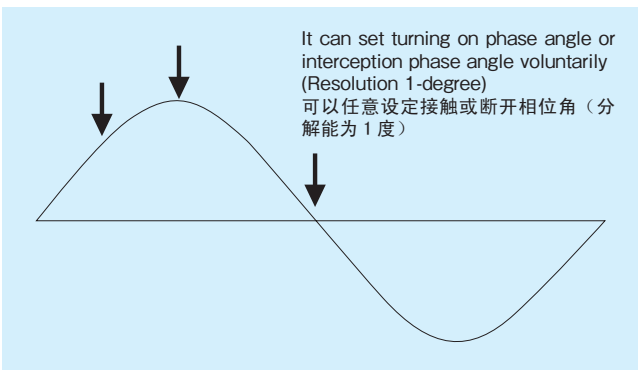
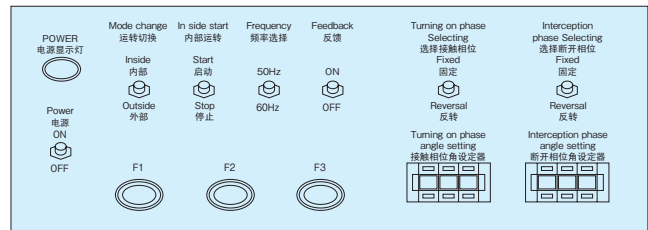
Turning on phase angle setting : 0 ~ 179 degrees (1-degree step, digital switch setting)
接触相位角设置：0 ~ 179 度（1 度间隔，数字开关设置）

Interception phase angle setting: 0 ~ 179 degrees (1-degree step, digital switch setting)
断开相位角设置：0 ~ 179 度（1 度间隔，数字开关设置）

Phase angle accuracy setting: Within ± 5 degrees
相位设置精度：±5 度以内

Remote/local switch
遥控 / 本机切换

Dimension : W300 × D100 × H250 (mm)
尺寸：W300×D100×H250 (mm)



Integrated Switch Test System 开关试验用综合设备系统

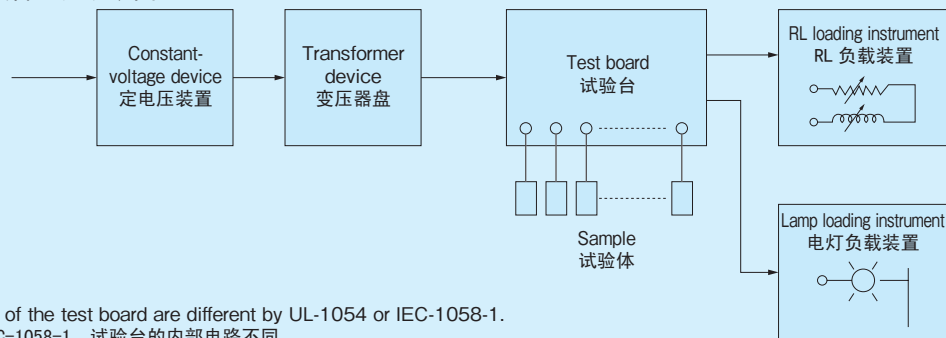
As an integrated test system for switches, it has superior functions. It is an example of ideal equipment (part) that covers both domestic and overseas standard adaptability.

本设备作为开关类综合试验系统，具有优异的功能，符合国内外各种标准。



System diagram 系统图

For test room and test of equipment electric power system diagram
试验室试验用设备电力系统图



The inside circuits of the test board are different by UL-1054 or IEC-1058-1.
根据 UL-1054 或 IEC-1058-1，试验台的内部电路不同。

For Generator Test

- It is a load characteristic tester for engine generator, electric motor-generator and DC generator. It is also used for an integrated test during load operation.
它是发动机发电机，电动发电机以及直流发电机等负载特性试验或者负载运转时的综合试验用负载装置。
- In case of a characteristic test of generator, a capacity variable instantaneous interruption method is adopted, because the load needs to be controlled continuously in a wide range.
在对被试验发电机的特性进行试验时，负载由于需要在较宽范围内连续进行控制，所以采用了不间断改变容量的方式。
- Though a loading instrument for generator test usually adopts a delay power factor loading instrument, we manufacture advance power factor loading instrument, too. Also, we manufacture a loading instrument that has both delay and advance power factors.
通常发电机等试验用负载装置虽然采用延迟功率因数负载，但是本公司还可为用户制作超前功率因数负载装置。此外，还可制作同时具备延迟和超前特性的负载装置。
- The test items of integrated test are expected to include frequency characteristic, voltage characteristic, load characteristic, noise, and fuel consumption amount, etc. A specification of loading instrument is decided considering these test conditions.
综合试验项目，一般包括频率特性，电压特性，负载特性，噪音和燃料消耗量等。负载装置的规格将根据这些试验条件决定。
- For the protection function, we provide the protection against sample and device itself based on customer's needs.
关于保护功能，对于试样及装置本体的保护，本公司可以根据用户的要求提供具体的保护措施。
- It is also capable to manufacture a test board and loading instrument as requested.
不仅是负载装置，而且试验台也可根据要求制作。



Specifications 规格

- Test item and condition
试验项目及试验条件
- General electric specification (voltage, current, frequency, and number of phase)
一般电气规格（电压，电流，频率以及相数）
- Range of power factor (delay or advance power factor)
功率因数的范围（延迟功率因数或者超前功率因数）
- Operation method (manual hand operation and manual remote control, etc)
操作方法（手动本机操作，手动远程操作等）
- Processing method when data processing being done by a computer
利用计算机进行数据处理时的处理方法
- Other special specifications conditions
其他的特殊规格条件

发电机负载试验装置

Production specifications example

Ex:1 例 1

Device name : Loading instrument for test
 Model : S3RL-200-20GT
 Test voltage : Three phase 200V
 Frequency : 60Hz
 Setting capacity : 0 ~ 20kW continuous variable
 Power factor : Delay power factor 0.8 ~ 1.0
 Operation method : Panel manual setting operation
 Protection circuit : Resistance load part forced air cooling
 With load circuit operation and stop circuit by external signal
 Others : Test board for measurement
 (Digital power meter and various record meters, etc. storage)

Ex:2 例 2

Model : S3RZ-220-150GT
 Voltage : Three phase 220V
 Capacity : 150kW 394A
 Frequency : 45 ~ 65Hz
 Variable range : 0 ~ 25kW 5kW 5 steps switchable
 0 ~ 125kW 25kW 5 steps switchable
 Dimension : 1250 × 1600 × 1800mm
 Weight : 650kg

Ex:3 例 3

Model : SRL-220-56k
 Resistance load : 45kW Three-phase circuit equilibrium
 40kW Three-phase circuit no equilibrium
 5kW (1.67kW × 3)
 Voltage : Three phase 4 wire 127/220V
 Frequency : 60Hz/400Hz select type
 Inductive load : 33kV (56kVA Cos ϕ = 80)
 Voltage : Three phase 4 wire 127/220V
 Frequency : 60Hz/400Hz select type
 6KVR at 400Hz (10kVA Cos ϕ = 80)

制作规格 (例)

例 1

装置名称 : 试验用负载装置
 型号 : S3RL-200-20GT
 试验电压 : 三相 200V
 频率 : 60Hz
 设定容量 : 0 ~ 20kW 连续可调
 功率因数 : 延迟功率因数 0.8 ~ 1.0
 操作方法 : 盘面手动设定操作
 保护电路 : 电阻负载部分强制空冷
 附带利用外部信号控制负载电路运转和停止的电路
 其他 : 测量用试验台
 (收纳数字功率表, 各种记录仪等)

例 2

型号 : S3RZ-220-150GT
 电压 : 三相 220V
 容量 : 150kW 394A
 频率 : 45 ~ 65Hz
 可调范围 : 0 ~ 25kW 每 5kW 5 段階可调
 0 ~ 125kW 每 25kW 5 段階可调
 外形尺寸 : 1250 × 1600 × 1800mm
 重量 : 650kg

例 3

型号 : SRL-220-56k
 电阻负载 : 45kW 三相平衡
 40kW 三相不平衡
 5kW (1.67kW × 3)
 电压 : 三相四线式 127/220V
 频率 : 60Hz 400Hz 切换
 感应负载 : 33kV (56kVA Cos ϕ = 80)
 电压 : 三相四线式 127/220V
 频率 : 60Hz 400Hz 切换
 400Hz 时 6kV (10kVA Cos ϕ = 80)

Water-cooled Resistance/Regenerative Loading Instrument for Engine Generator
发动机，发电机用水冷式电阻 / 再生负载装置

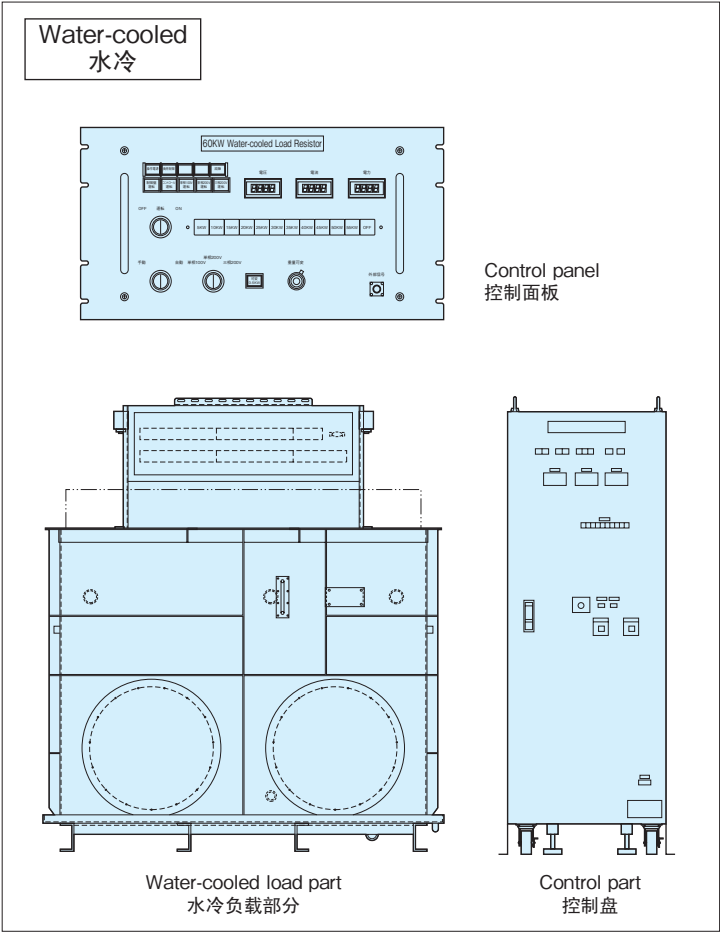
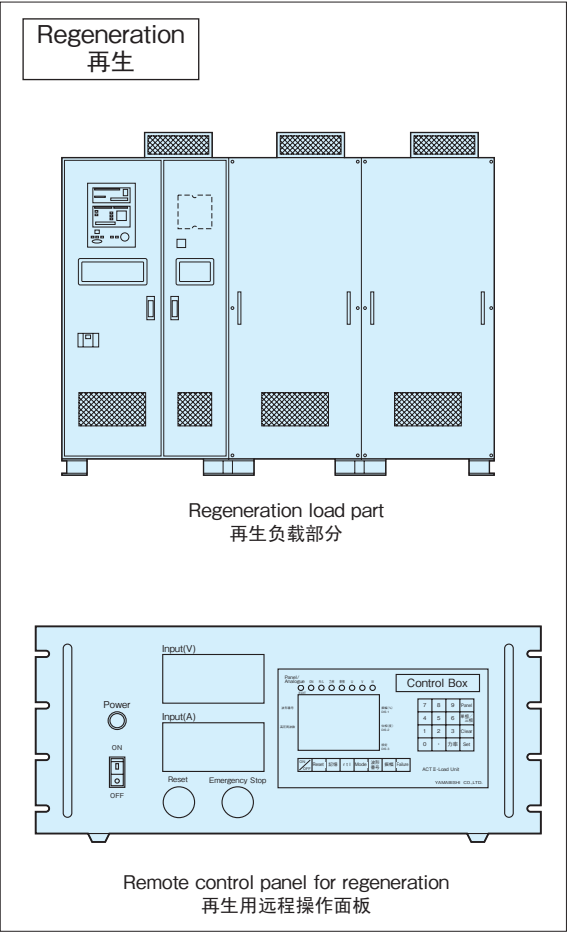
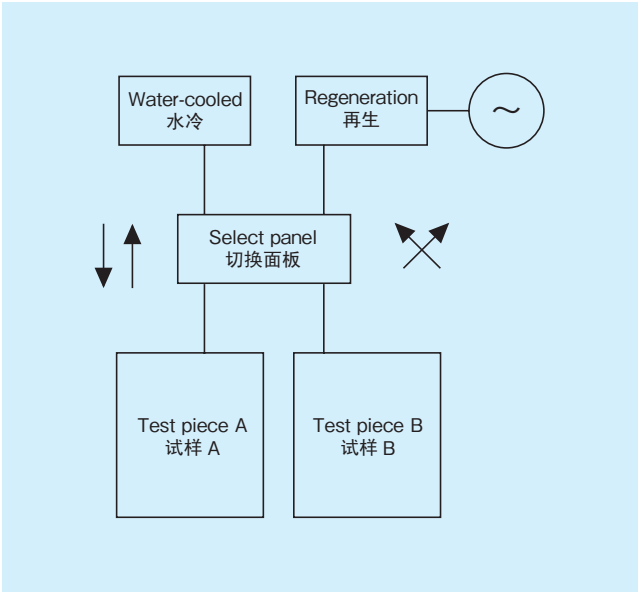
Feature 特长

Regeneration load and water-cooled resistance load can be selected by usage.
Regeneration...Reproduction of wave form
Power factor variable
Regeneration (conservation of energy)
Water-cooled...Instant variable
No heat radiation and noise free

根据用途可分别使用再生负载和水冷式电阻负载。
再生...波形的再现。
功率因数可变。
再生（节能）。
水冷...瞬时可变。
散热，无噪音。

Specifications 规格

- Regeneration
Input : 60 ~ 240V (Single phase, Three phase, Same phase)
Capacity : Max50kVA (Single phase, Three phase, Same phase)
Others :
● 再生
输入：60 ~ 240V
(单相，三相 相同)
容量：最大 50kVA
(单相，三相 相同)
其他：标准
- Water-cooled S3RZ-50GTW
Input : 100V/200V (Single phase) 200V (Three phase)
Capacity : 25kW (Single phase) 50kW (Three phase)
● 水冷
输入：100V/200V (单相) 200V (三相)
容量：25kW (单相) 50kW (三相)



For Generator of Engine Test 发动机负载试验装置

It is an outdoor DC high voltage loading instrument mainly used for a load test of automatic engine generator.

Especially, it has excellent stability of resistance value.

它是主要供汽车用发动机发电机负载试验用的室外型直流高电压负载装置。
特别是它具有电阻值稳定性优异的特点。

Feature 特长

- Load for DC high voltage
直流高电压用负载
- Excellent stability level of resistance value
电阻值稳定性好
- For outdoor
室外用

Specifications 规格

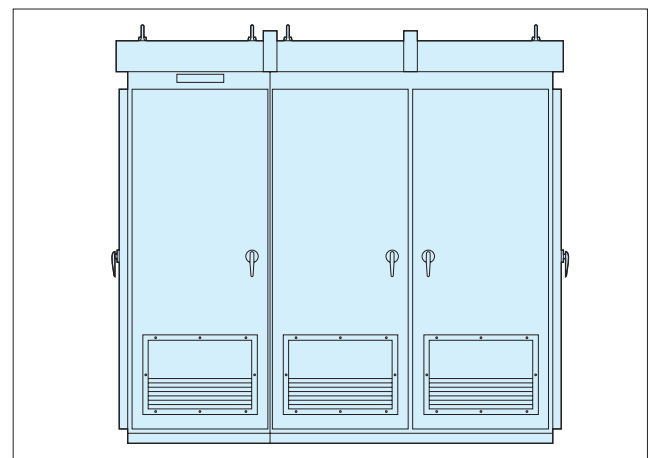
Input voltage : DC200 ~ 500V
输入电压 : DC200 ~ 500V (50V 级)

Capacity : Consecutive 50kW
容量 : 连续 50kW

Setting place : Outdoor
设置位置 : 室外

Dimension : W2700 × D2500 × H2500 (mm)
尺寸 : W2700 × D2500 × H2500 (mm)

Outline view 外观图



Artificial Load of Aerogenerator System(Outdoor type) 风力发电室外型模拟负载装置

This device is produced as an artificial load of wind generator system and used for power generation output test etc.
It is manufactured to withstand severe weather environments.

本装置作为风力发电系统的模拟负载而研制，供发电输出试验等使用。
它是根据严峻的气象环境条件研制的。

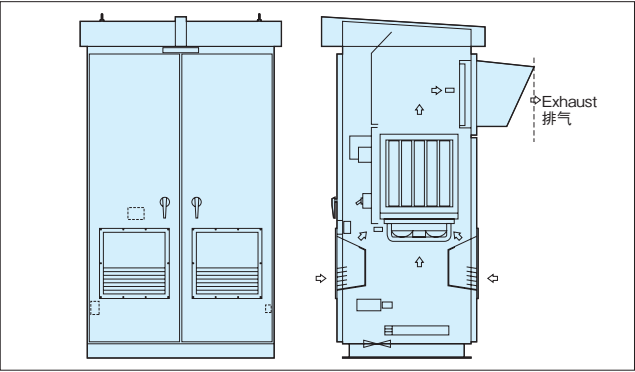
Feature 特长

- From outside, it can be set with per 10KW step using non-voltage contact signal. The voltage when releasing a contact point is DC24V.
可以从外部利用无电压触点信号每 10KW 进行设定。触点开放时的电压为 DC24V。
- It sends a signal (non-voltage making contact point) when control power supply is received.
控制电源首次送电时，将送出信号（无电压接通触点）。
- From outside, through non-voltage contact point signal, the main circuit can be turned on.
可以利用来自外部的无电压触点信号接通主电路。
- It sends an over voltage detection signal and a temperature abnormal signal (non-voltage making contact point for both).
送出过电压检测信号及温度异常信号（都是无电压接通触点）。

Specifications(Example) 规格(例)

- Load input voltage : 3 ϕ 210V 50Hz/60Hz common use
负载输入电压 : 3 ϕ 210V 50Hz/60Hz 共同使用
- Load Capacity : 60kW
负载容量 : 60kW
- Load setting : 12kW $\times$ 5 step
负载设定 : 12kW $\times$ 5 级
- Capacity rate of change : Less than $\pm$ 10%
容量变化率 : 低于 $\pm$ 10%
- The noise : Less than 65dB
噪音 : 低于 65dB
- Operation power supply : 1 ϕ 210V 50Hz/60Hz common use
操作电源 : 1 ϕ 210V 50Hz/60Hz 共同使用
- Operation power source capacity : 5kVA (It includes heater capacity)
操作电源容量 : 5kVA (包括加热器容量)
- Cooling Type : Forced cooling air
冷却方式 : 强制冷风
- Protection function : Over voltage protection
(MCO OFF at the main circuit 242V or more)
Temperature abnormality
(MCO OFF at 100°C or more)
保护功能 : 过电压保护 (主电路在 242V 以上时, MCO OFF)
温度异常 (在 100°C 以上时, MCO OFF)
- Setting place : Outdoor
设置位置 : 室外
- Ambient temperature : - 30 ~ + 40°C
环境温度 : -30 ~ +40°C
- Ambient humidity : 30 ~ 90% RH
环境湿度 : 30 ~ 90% RH

Outline view 外观图



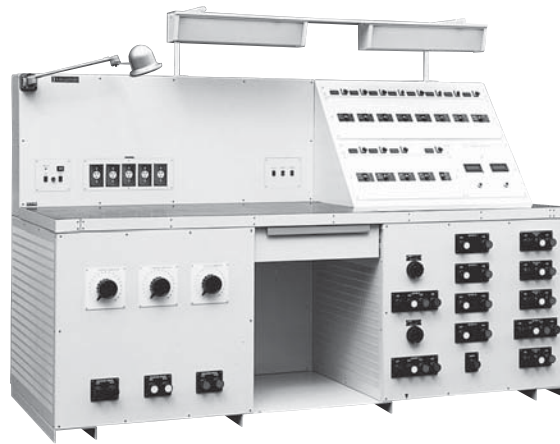
Generator and Electric Motor Test Table 发电机,电动机试验台

This device is produced for a repair inspection of a motor installed mainly on a ship and heavy machinery.

Besides 9 types of AC power supply, a voltage variable circuit, DC power supply and resistance load circuit are available. It is designed that almost all tasks can be done on this test board.

本装置主要是为了对搭载在船舶和重机械上的发电机及电机进行检查维修而研制。

除了可提供九种交流电压外，还准备了电压可变电路，直流电源供应以及电阻负载电路，可以在本试验台上进行几乎所有的作业。



Specifications 规格

3 ϕ 3W	AC450V	60Hz	100 A
3 ϕ 3W	AC220V	60Hz	100 A
3 ϕ 3W	AC115V	60Hz	100 A
3 ϕ 3W	AC115V	400Hz	100 A
3 ϕ 3W	AC0260V	60Hz	20 A
3 ϕ 3W	AC0140V	400Hz	20 A
	DC0140V		20 A
	DC0300V		150 A
	AC/DC 20 Ω		40 A

For High Voltage Generating Device 高压负载装置

- It is a loading instrument to test the load characteristic of high voltage power source device.
它是高电压电源装置负载特性试验用的负载装置。
- Usually, the test items of power supply device include the fixed voltage characteristic test, the overload characteristic test, the load sudden change test, no equilibrium load test and the continuous energizing test, etc.
Because the load condition is different per test item, a circuit structure and control method is decided as requested by a customer.
通常电源设备等的测试项目，包括定电压特性试验，超载特性试验，负载突变试验，负载不平衡试验，连续通电试验等。
由于各试验项目的负载条件不同，所以本公司将根据客户的要求确定电路构成及控制方式。
- For the protection function, we correspond to a customer's need about a protection against sample and device itself.
关于保护功能，对于试样及装置本体的保护，本公司可以根据用户的要求提供具体的保护措施。
- We manufacture based on Yamabishi's high-voltage technology.
我们将利用本公司的高压技术进行制作。

Specifications 规格

- Test item and condition
试验项目以及试验条件
- General electric specification (voltage, current, frequency, and number of phase)
一般电气规格（电压，电流，频率以及相数）
- Operation method (manual hand operation and manual remote control, etc)
操作方法（手动本机操作，手动远程操作等）
- Other special specifications conditions
其他的特殊规格条件

Production specifications example 制作规格例如

Device name : Load rack for test
装置名称：试验用负载架

Model : YHHR-10K-10KRN
型号：YHHR-10K-10KRN

Test voltage : DC 10kV
试验电压：直流 10kV

Load current : Max 1.0A
负载电流：最大 1.0A

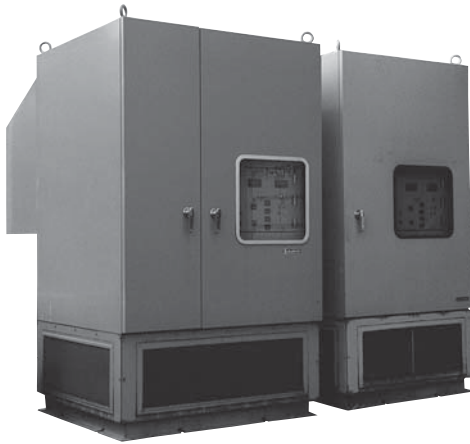
Capacity : 10kW
容量：10kW

Operation method: Panel manual and external signal operation
操作方法：盘面手动操作以及外部信号操作

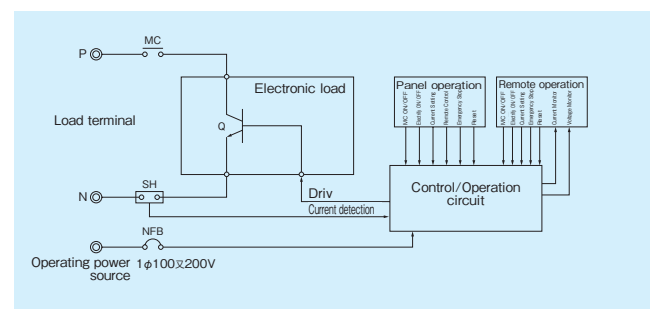
Electronic Loading Instrument for Fuel Cell Evaluation Test 燃料电池用电子负载装置

This device is manufactured for the fuel cell evaluation test with highly stable transistor control and a fixed current electronic load.

本装置作为燃料电池评价试验用而研制，是三极管控制高稳定的定电流电子负载装置。



Block diagram 结构图



Specifications 规格

- Voltmeter and ammeter digital meter display
- Remote/local operation
Current setting MC ON/OFF Energizing ON/OFF
Monitor output
- Protection function Over power Over voltage Over current Over heat
- 数字电压表和数字电流表显示
- 遥控 / 本机操作
电流设置 MC ON / OFF 通电 ON / OFF
监视器输出
- 保护功能 过功率 过电压 过电流 过热

Option 选项

- Emergency discharge resistance for protecting fuel cell evaluation
- Exterior type
- 带燃料电池保护用紧急放电电阻
- 室外型

Electronic Loading Instrument for Battery Test 蓄电池试验用电子负载装置

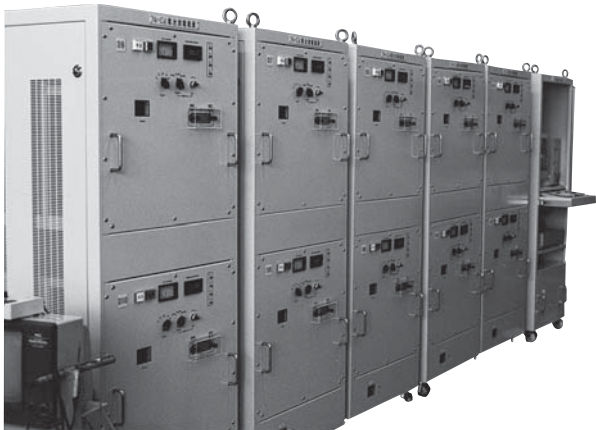
- It is a loading instrument to test continuous electrical discharge and discharging characteristic, etc of a general-purpose storage battery, fuel cell and solar batteries.
它是通用蓄电池，燃料电池和太阳电池等连续放电试验以及放电特性等试验用的负载装置。
- Though the load element is structured with the electronic loading instrument using a transistor, It is also capable to manufacture the one combined with the resistance body.
负载要素由晶体管电子负载装置构成，本公司还可制作与电阻体组合的产品。
- The voltage and current specification are different depending on the voltage capacity and the electrical discharge rate of a tested device.
电压及电流规格因被试验用机器的电压容量及放电率等的不同而异。
- The circuit configuration is decided depending on the test contents.
电路构成可根据试验内容通过商讨后确定。
- Computer operation (GP-IB, RS-232C control, etc) and data collection are also supported.
利用计算机（GP-IB，RS-232C 控制等）进行操作，还可根据数据收集等要求制作相应产品。

Application 用途

- For battery discharge
电池放电用

Specifications 规格

Input voltage 输入电压	AC200V ± 10%
Phase 相位	Three phase 3 wire 三相三线
Frequency 频率	60Hz
Ambient temperature 环境温度	0 ~ 40℃
Output voltage 输出电压	- 300 ~ + 800V
Output current 输出电流	20 ~ 6000 m A



CUSTOM & SYSTEM

定制 & 系统

- Power Supply for Fuel Cell Evaluation Test ··· 108
燃料电池用评价试验装置
- Electronic Loading Instrument for Demonstration of
NAS Battery for Electric Power Storage ····· 109
电力储备用 NAS 电池实证试验用电子负载装置
- Power Regulator by Large Capacity Thyristor
·········· 110
大容量晶闸管控制器电力调整器
- Switching Supply for Accelerator ······· 112
加速器用开关电源
- Power Supply for Completed Air-conditioner Test
·········· 113
空调成品检查装置
- Power Supply for Characteristic Test of Motor
·········· 113
电机特性试验装置
- High Voltage Testing Device for IT Equipment and
Safety Standard Test ········· 114
信息处理器安全标准试验用高电压试验装置
- Power Supply for Breaker Performance Test
·········· 115
电路断路器性能试验用装置
- Reactor Automatic Testing Device ······· 116
电抗器自动试验装置
- Space Station Equipment Evaluation System
·········· 117
宇宙空间站用机器评价试验系统

Power Supply for Fuel Cell Evaluation Test 燃料电池用评价试验装置

This device can be used for development, evaluation, and endurance test etc. of the fuel cell. It is composed from electronic loading instrument and auxiliary power supply (rectifier).

本装置由电子负载装置和辅助电源装置（整流器）构成，可以用于燃料电池的开发，评价和耐久试验等。



Feature 特长

- High-power fuel cell can be tested easily and linearly.
可以简单地大功率燃料电池的线性试验。
- Dummy resistance is turned on separating the load in abnormal circumstances to protect the fuel cell.
异常时可以断开负载加入虚设电阻，以保护燃料电池。
- Additionally, there are more protection functions.
还有其他完备的保护功能。
- Low cost when compared to a small capacity parallel operation
与小容量并行运行相比，价格低廉。
- Various remote control functions
具有各种遥控功能。

Specifications 规格

● All transistor control electron loading instrument

全三极管控制电子负载装置

Voltage 电压
DC4 ~ 30V

Current 电流
DC0 ~ 3000A MAX

Electric power 电力
DC30kW MAX

Current accuracy : $\pm (0.05 \% + 250\text{mA})$ compared with $\pm 10 \%$ variable of operational power supply
 $\pm (0.05 \% + 500\text{mA})$ compared with DC4 ~ 30V voltage variable

电流稳定度：相对操作电源 $\pm 10\%$ 的变动，电流控制在 $\pm (0.05 \% + 250\text{mA})$
 相对电压 DC4 ~ 30V 的变动，电流控制在 $\pm (0.05 \% + 500\text{mA})$

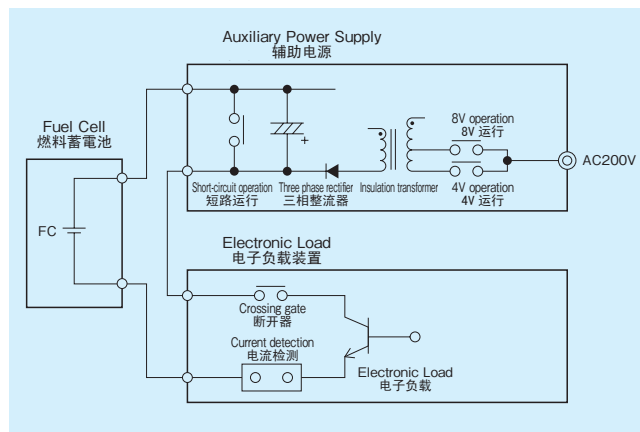
● Power supply for auxiliary power

辅助电源用电源

Input : Three phase 200V $\pm 10\%$
 输入：三相 200V $\pm 10\%$

Output : DC4/8V 3000A
 0V operation, 4V operation, 8V operation
 输出：DC4/8V 3000A
 0V 运行，4V 运行和 8V 运行

Block diagram 结构图



Electronic Loading Instrument for Demonstration of NAS Battery for Electric Power Storage 电力储备用NAS电池电子负载装置

This electronic load is a transistor load made for the vilification test of the NAS battery (Na sodium/S and sulfur). All controls can be done from a personal computer.

本电子负载是 NAS 电池（Na 钠 /S 硫）检验用晶体管负载，可以通过计算机进行全面控制。



Feature 特长

- Schedule setting can be done using the included software.
(Elapsed time/fixed current setting/fixed electric power setting)
可利用附属软件制定一览表。
(经过时间 / 定电流设定 / 定功率设定)
- It is executed with CSV file
由 CSV 文件实施。
- Logging function (monitor value is filed) voltage, current, and electric power
操作记录功能 (监视数值文件化) 电压, 电流, 功率。
- Highly accurate and superior protection functions
精度以及保护功能优异。

Specifications 规格

- Voltage : DC10 ~ 130V
电压 : DC10 ~ 130V
- Current : Continuous DC0-600A
电流 : DC0 ~ 600A 连续
- Max current : DC78kW MAX
Continuous 0 ~ 45kW
最大电流 : DC78kW MAX
0 ~ 45kW 连续
- Control method : Fixed current control method
控制方式 : 定电流控制方式
- Setting method : RS232C (12Bit)
控制方式 : RS232C (12Bit)
- Included software : Scheduling/executing software
Electronically controlled microcomputer software
附属软件 : 一览表制作 / 执行软件
电子控制计算机软件
- Standard hardware :
附属硬件 : windows 电脑 (15 英寸)

Power Regulator by Large-Capacity Thyristor

Boiling/condensation transient characteristic test facilities

Because a part of this electric power adjustment device is static type except for a part of structure parts, it has low noise and low maintenance.

However, excessive voltage and overcurrent tolerance are limited as for the semiconductor element. So, various protective devices are used to provide more adequate protection.

本功率调节装置除一部分构成零部件外，其余都是静态型，故具有低噪音和保养方便等特点。但是，使用的半导体元件其过电压和过电流容量有限。为此，需要通过各种保护装置进行保护。



Specifications 规格

- Input power source 输入电源
 <Main power source 主要项目>
 Rated AC voltage : 380V
 额定交流电压 : 380V

 Frequency : 50/60Hz
 频率 : 50/60Hz

 Phase : Three phase 3 wire
 相位 : 三相三线式

 Input capacity : 395kVA
 输入电力 : 395kVA

 <Input voltage 输入电压>
 Variation range of AC input voltage : Within $\pm 10\%$ of rated voltage
 交流输入电压变动范围 : 额定电压 $\pm 10\%$ 以内
- Specifications of Output 输出规格
 <Rated article 额定项目>
 Rated AC capacity : 359kVA
 额定交流电力 : 359kVA

 Rated Frequency : 50/60Hz
 额定频率 : 50/60Hz

 Rated AC voltage : 345V
 额定交流电压 : 345V

 Rated AC current : 600Arms (Crest value max1028)
 额定交流电流 : 600Arms (峰值 max1028)

 Kind of Rated : Continuous/1.0(Rated current/continuous)
 额定种类 : 1. 0/ 连续 (额定电流 / 连续)

 <Control characteristic 控制特性>
 Electric power adjustment circuit method : Three-phase circuit 2 directional control
 功率调节电路方式 : 三相双向控制

 Output adjustment method : Thyristor phase control
 输出调节方式 : 晶闸管相位控制

 Output adjustment range : $0 \sim 155^\circ$
 输出调节范围 : $0 \sim 155^\circ$

 Operational method : VCB2 is turned on from outside ON signal
 Gate phase can be changed by external 4-20mA signal.
 ※ Control delay is within 10ms for 4-20mA instruction.
 运行方式 : 利用外部的 ON 信号接通 VCB2。
 可以利用外部的 4-20mA 信号改变门相位。
 ※相对 4-20mA 的指令，控制延迟在 10ms 以内。

大容量晶闸管控制器电力调整器

沸腾·凝結过渡特性实验设备

Application 用途

Fast response power supply and measurement/control system for experiment equipment
实验设备用响应较快的电源和测量控制系

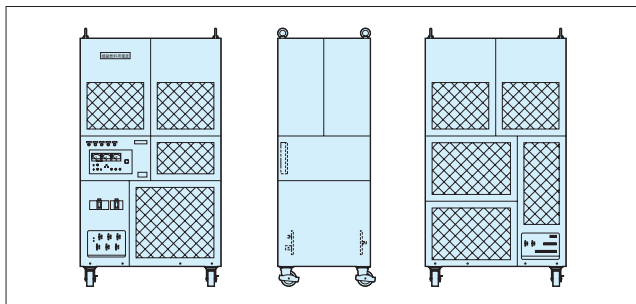
Specifications/Outline view 规格与外观图

● Power supply for simulant fuel 模拟燃料用电源

Input Three phase 200V $\pm$ 10% 50Hz
输入 三相 200V $\pm$ 10% 50Hz

Output DC600V/200A/120kW
输出 DC600V/200A/120kW

Control signal 16bit-TTL and DC0-10V switch High-power control/small electric power selectable (120kW/14kW)
控制信号 16bit-TTL 及 DC0 ~ 10V 切换 大功率控制 / 小功率控制 可选择 (120kW/14kW)

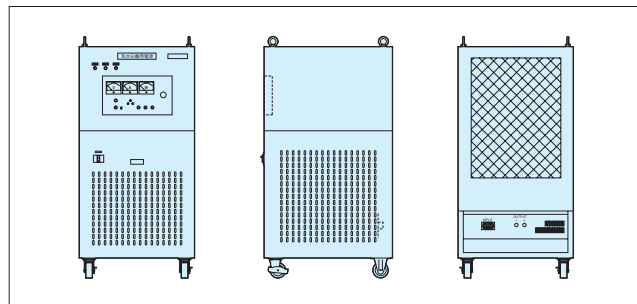


● Power supply for steam separation 水气分离用电源

Input Three phase 200V $\pm$ 10% 50Hz
输入 三相 200V $\pm$ 10% 50Hz

Output DC170V/90A/15.3kW
输出 DC170V/90A/15.3kW

Control signal DC0 ~ 10V 1 system
控制信号 DC0 ~ 10V 1 系统

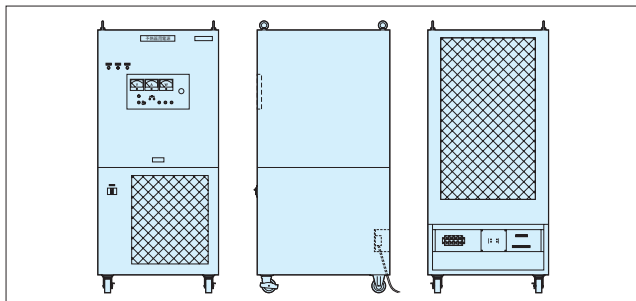


● Power supply for pre-heater 预热器用电源

Input Three phase 200V $\pm$ 10% 50Hz
输入 三相 200V $\pm$ 10% 50Hz

Output DC200V/160A/32kW
输出 DC200V/160A/32kW

Control signal DC0 ~ 10V 1 system
控制信号 DC0 ~ 10V 1 系统

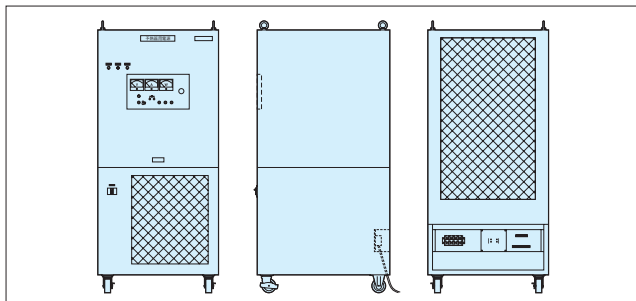


● Power source for chimney 烟囱用电源

Input Three phase 200V $\pm$ 10% 50Hz
输入 三相 200V $\pm$ 10% 50Hz

Output DC200V/20A/4kW
输出 DC200V/20A/4kW

Control signal DC0 ~ 10V 1 system
控制信号 DC0 ~ 10V 1 系统



Power Regulator by Large-Capacity Thyristor 大容量晶闸管控制器电力调整器

Switching Supply for Accelerator (constant current device for quadrupole electromagnet) 加速器用开关电源（四极电磁铁用定电流装置）

● Specification of output 输出规格

Rated capacity 额定容量	6kW 6kW
Rated voltage 额定电压	DC20V DC20V
Rated current 额定电流	300A (Current variable range 0A ~ 300A) 300A (电流 0 ~ 300A 之间可调)
Current stability 电流稳定性	20%~ 100% of the max rated electric current Less than $\pm 1 \times 10^{-3}/8\text{Hr}$ 最大额定电流的 20 ~ 100% $\pm 1 \times 10^{-3}/8\text{Hr}$ 以下

● Setting current 电流设定

Local setting 本机设定	0-100% output current variable by 10 rotation helipot 利用 10 匝螺旋电位计，可使输出电流在 0-100% 范围内变化
Remote setting 遥控设定	• Digital setting 0-100% output current variable by 16bit digital signal • Analog setting 0-100% output current variable by 0-10V analog signal • 数字设定 可利用 16bit 数字信号使输出电流在 0-100% 范围内变化 • 模拟设定 可利用 0 ~ 10V 模拟信号使输出电流在 0-100% 范围内变化

● Protection 保护

Chopper overcurrent 截波器过电流	Output intercepted by 300% of rated effective value current 在额定有效值电流的 300% 时输出断开
-------------------------------	---

● Operation 操作

Power supply ON / OFF (operation terminal) 电源 ON-OFF (操作端子)	
Local/remote switch (operation terminal) 本机 / 遥控切换 (操作端子)	

● Output signal 输出信号

Abnormal temperature (no voltage "a" contact point) 温度异常 (无电压 a 触点)	
Over current (no voltage "a" contact point) 过电流 (无电压 a 触点)	
Over voltage (no voltage "a" contact point) 过电压 (无电压 a 触点)	
Current monitor (0 ~ 10V/0 ~ 300A) 电流监视器 (0 ~ 10V/0 ~ 300A)	
Voltage monitor (0 ~ 10V/0 ~ 20V) 电压监视器 (0 ~ 10V/0 ~ 20V)	

● Specification of input 输入规格

Phase 相位	Three phase 3 wire 三相三线
Rated voltage 额定电压	210V 210V
Voltage range 变化范围	210V $\pm 10\%$ 210V $\pm 10\%$
Frequency 频率	50/60Hz 50/60Hz
Power supply for control 控制用电源	100V 100V

Power Supply for Completed Air-conditioner Test 空调成品检查装置

This device is for a final product line automation of air conditioner to collect various data and used for power saving and increased efficiency.

本装置是空调成品线自动化装置，可自动读取各种数据，从而可以节省劳力提高速度。



Application 用途

- Air conditioner automatic test
(running operation, pressure, wind velocity, wind temperature, humidity, current value, voltage, mega and high voltage withstand)
空调自动检查
(传动运动, 压力, 风速, 风温, 湿度, 电流值, 功率, 高阻表, 耐压)

Feature 特长

- Models read by bar code
通过条码读取机型数据。
- Possible to mix different models on a line (online power-supply voltage switching type)
生产线上可有多多种机型混合存在 (网上电源电压切换式)
- 1 ϕ 3 ϕ Both
1 ϕ 3 ϕ 两用途。
- Separates type Wind type Dual purpose type
分离型 窗机型 两用途。

Power Supply for Characteristic Test of Motor 电机特性试验装置

The following characteristic tests on 400-15KW motor (squirrel-cage induction motors) can be done automatically and manually.

- Dielectric voltage (5KV)
- Restraint (lock) test (JEC)
- No load test
- Noise vibration test
- Rotation direction test
- Y- Δ start-up test

可以通过自动及手动方式，对 400 ~ 15KW 电机（鼠笼式感应电动机）进行以下的特性试验。

- 绝缘耐压 (5KV)
- 限制 (锁定) 试验 (JEC)
- 无负载试验
- 噪音振动试验
- 旋转方向试验
- Y- Δ 启动试验

Feature 特长

Possible to collect data from PC through sequencer, calculate each characteristic and printout data automatically
Possible to conduct 25, 30Hz test, a motor's brake circuit voltage with a brake and current test.
可自动通过时序控制器，用计算机演算各种特性数据，直到打印出数据为止。
还可以进行 25, 30Hz 试验，带制动器电机的制动电路电压和电流试验。

Specifications 规格

- Input : 3 ϕ 200V 50/60Hz
输入：三相 200V 50/60Hz
- Output (Motor voltage) : 40V 80V 160V 200V
输出电机电压 220V 400V 440V

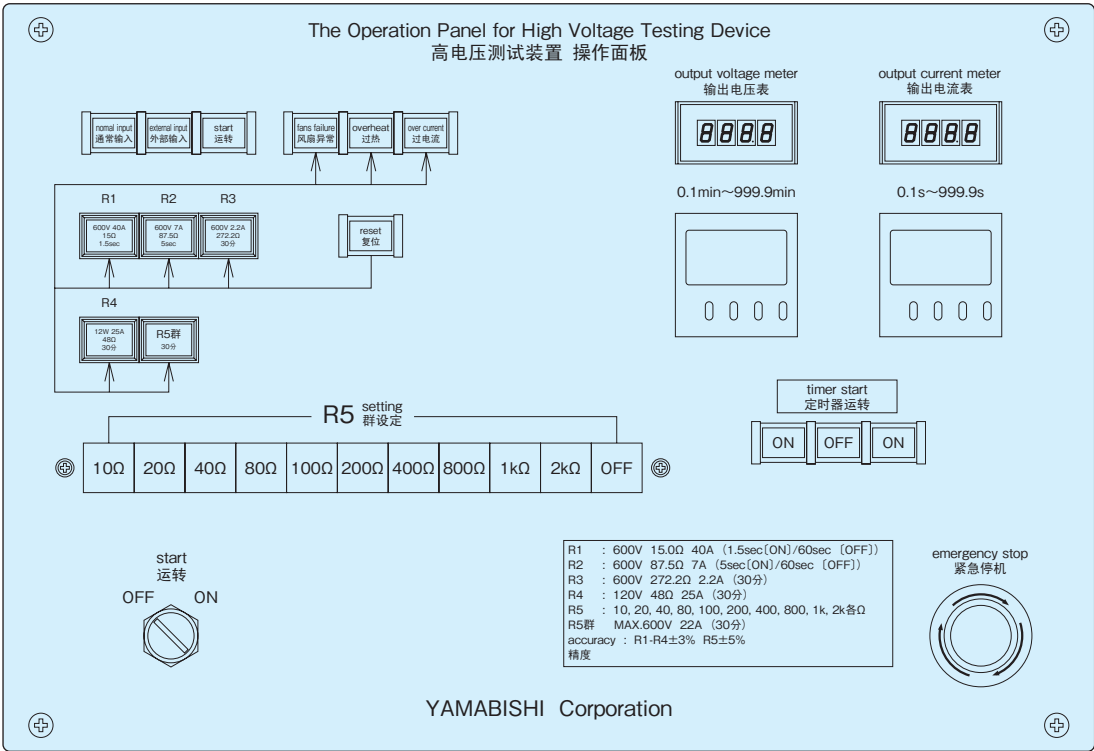
Constitution 构成

- Power supply panel
- 电源盘
- Test board
- 试验台
- PC
- 电脑
- Voltage regulator
- 电压调节器

High Voltage Testing Device for IT Equipment and Safety Standard Test
信息处理器 安全标准试验用高电压测试装置

This device is a high voltage tester produced for the UL standard (UL1459, UL1950) adaptability test of information processing equipment, telephone and fax.

本装置是为检验信息处理机，电话机及传真机是否符合 UL 标准（UL1459，UL1950）试验而研制的高压测试装置。



Specifications 规格

AC : Input single phase 2 wire 200V $\pm$ 5%
通常交流 : 输入单相二线 200V $\pm$ 5%

Frequency : 48 ~ 62Hz
频率 : 48 ~ 62Hz

AC output : Rated voltage 600/120V $\pm$ 2%
通常交流输出 : 额定电压 600/120V $\pm$ 2%

Outside AC input : Single phase 2 wire
外部交流输入 : 单相二线

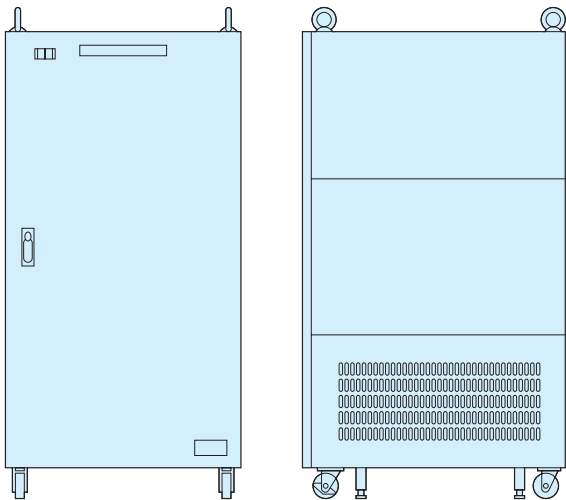
Application capable voltage : AC0 ~ 600V
可附加电压 : 交流 0 ~ 600V

Energizing current : Max 40A
通电电流 : 最大 40A

Load (resistance) performance : For 600V circuit 15.0Ω 40.0A 85.7Ω 7.0A
272.7Ω 2.2A
For 120V circuit 4.8Ω 25.0A
For variable 10.0Ω ~ 2.2KΩ MAX 2.2A
负载 (电阻) 性能 : 600V 电路用 15.0Ω 40.0A 85.7Ω 7.0A
272.7Ω 2.2A
120V 电路用 4.8Ω 25.0A
可以调节用 10.0Ω ~ 2.2KΩ 最大 2.2A

Feature 特长

- It consists of the main body power supply cubicle part and desk-top operation BOX. It is highly safe and has user-friendliness.
分为本体电源筐体部和桌面操作箱两个部分，其安全性和操作性优异。
- The operation panel is visually display that can be understood and handled easily.
操作面板的显示直观清晰，操作方便。



Power Supply for Breaker Performance Test 电流断路器性能试验用装置

This device consists of the constant current power supply part and the backup device part used for a breaker performance test.

本装置由电流断路器性能试验所使用的定电流电源部分和备用装置部分构成。



Specifications 规格

● Constant current power supply part

额定电流电源部

Device name AC chopper control type automatic current regulator
产品名称 交流截波器控制型自动电流调节器

Specifications	Input	Single phase 2 wire 200V $\pm 10\%$
规格	输入	单相二线 200V $\pm 10\%$ 50Hz / 60Hz either appointment 50/60Hz 之中选一个
	Output	Single phase 2 wire 0 ~ 15V
	输出	单相二线 Current variable range 0 ~ 250A 电流可调节范围 Incidence of distortion rate 2% 变形率 Constant current accuracy $\pm 1.0\%$ 额定电流精度 Response speed 50msec. 响应速度 Overshoot current Within 2% of setting value 电流过冲 设定值的 2% 以内

● Backup device part

备份装置部

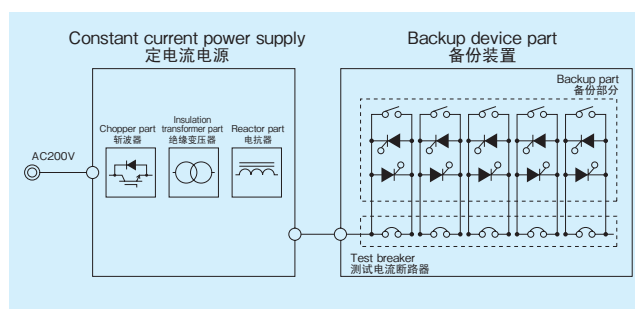
Device name Breaker backup device
产品名称 电流断路器备份装置

Specifications	Single phase	50V 250A
规格	单相	
	Response speed	5msec.
	响应速度	

Feature 特长

- Because the device has a different linear amplifier method (the control method from the previous model), it is highly efficient, small and low cost.
由于现有的线性放大器方式和控制方式不同, 故可实现高效率, 小型和低成本。
- Fast response speed
响应速度快。
- Constant current accuracy is high
定电流精度高。
- Possible to conduct 125AT breaker 200 % test with five breakers at the same time with this device
利用本装置可以同时五个电流断路器进行 125AT 电流断路器 200 % 试验。

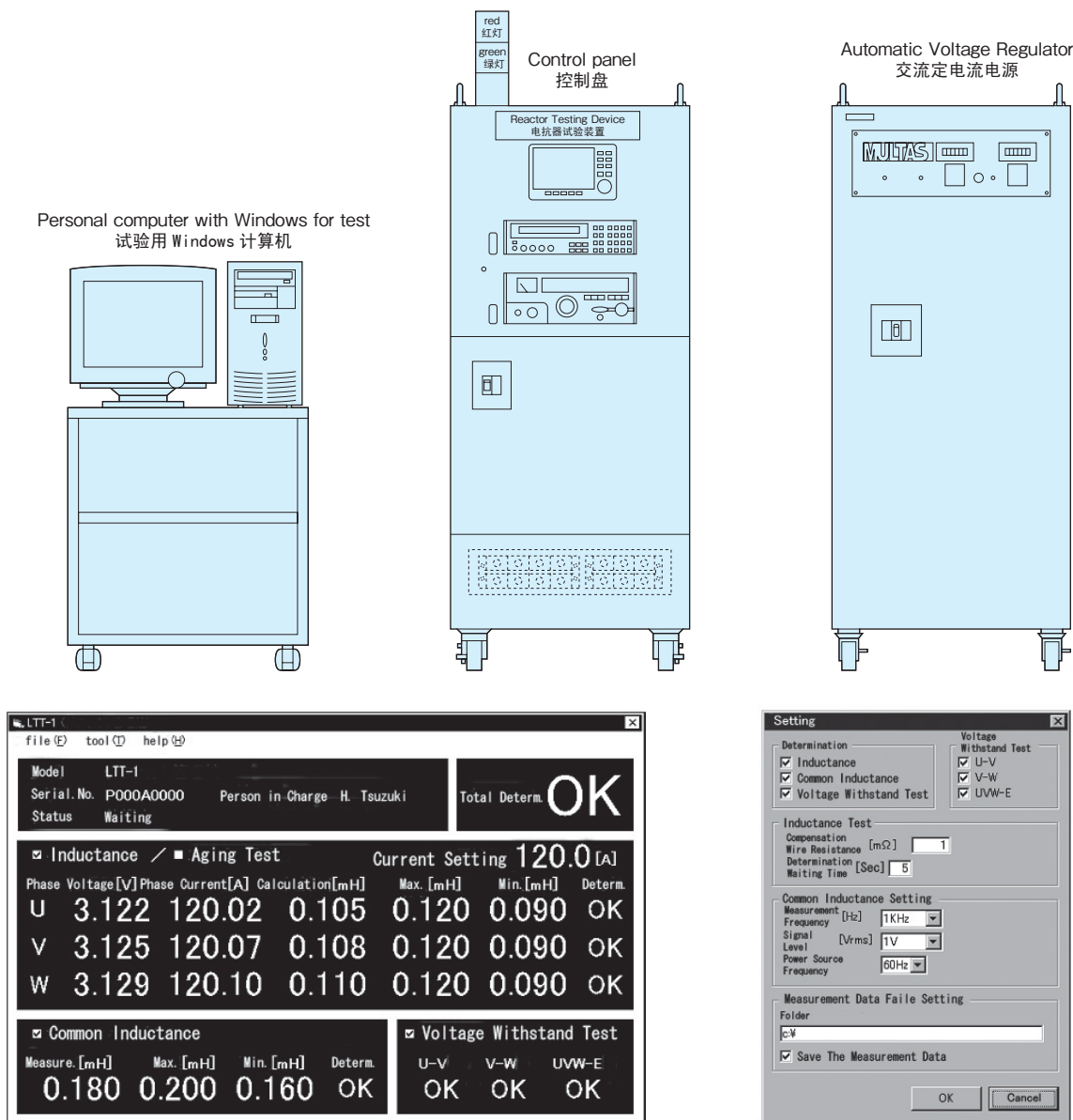
Block diagram 结构图



Reactor Automatic Testing Device 电抗器自动试验装置

It can test a reactor according to the control values preset by a user. Also, it is possible to save the measurement data which can be imported into Microsoft Excel.

本装置作为电抗器的试验系统，可以通过用户预设的管理值自动地判定合格与否。此外，测量值数据可以放入 Microsoft Excel 表格中保存。



Specifications 规格

Test item

试验项目

- Inductance measurement test 电感测定试验
Power source Three-phase circuit 3 line 0-20V and 0-250A (CVCC)
电源 三相 3 线 0 ~ 20V, 0 ~ 250A (CVCC)
- Common inductance measurement test 通用电感测定试验
- Voltage withstand test 耐压试验
Three places: between UVW-E, between V-W and between U-V
U-V 间, V-W 间, UVW-E 间三处
- Aging test 老化试验

Space Station Equipment Evaluation System 宇宙空间站用机器评价试验系统

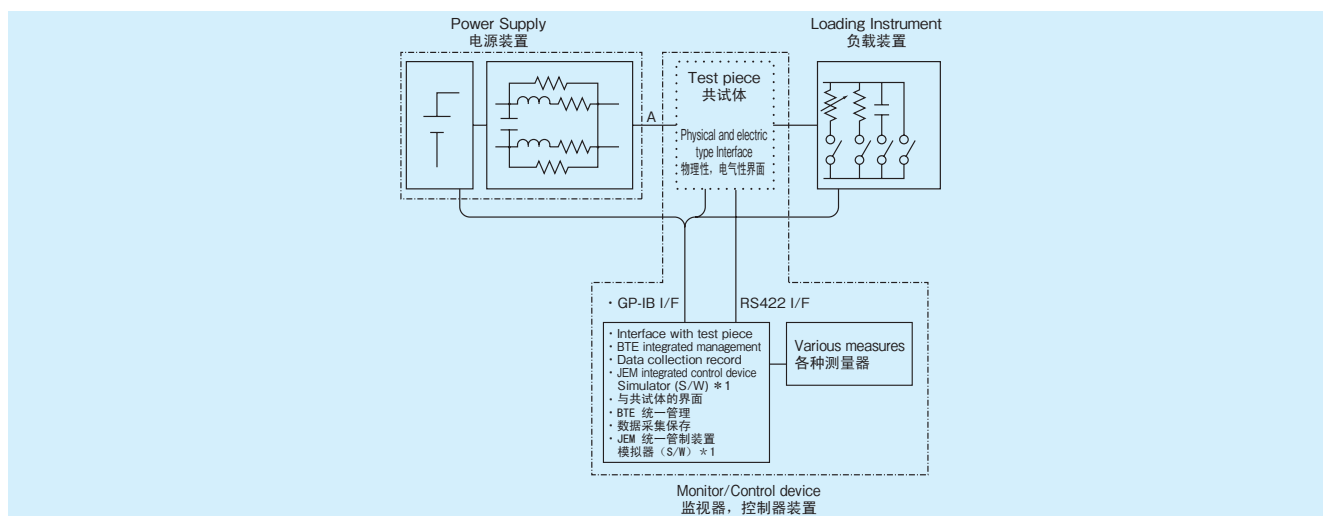
Everybody may be able to go to space in the 21st century. The development of the space platform is in process which will be a relay place and city in space.

A vast amount and more perfect simulation data are gathered for this future challenge. As a part of this task, this system is effectively used.

21 世纪每个人都有可能实现太空游。而作为中转站同时也是城市空间的宇宙空间站，其开发现在正在稳步推进。为了向未知世界进行挑战，要聚集庞大且更完美的模拟数据。在这项工作中，本系统也将发挥重要作用。



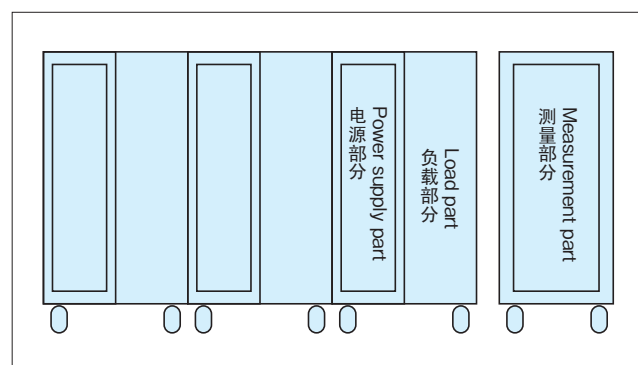
Block diagram 结构图



Specifications 规格

- Water-cooled method
水冷方式
- DC 160V150A (inrush output 350A)
DC 160V150A (突流输出 350A)
- Transient function Turn on Less than 1 μ sec
瞬态分析功能 接通 小于 1 μ sec
- Instantaneous break function Fall time Less than 1 μ sec
瞬断功能 关闭时间 小于 1 μ sec
- Instantaneous break time 10 μ sec $\sim$ 50m μ sec
瞬断时间 10 μ sec $\sim$ 50m μ sec
- Electronic load
电子负载
Frequency 10kHz
频率 10kHz
Current changing rate ; DT/DT = 0.5A/ μ s
电流变化率 ; DT/DT = 0.5A/ μ s

System constitution 系统构成



Model Index 型号索引

	Model 型号	Assortment 品名	Product name 产品名称	Page 頁
A	ALS	Uninterruptible Power Supply 不间断电源装置	On-line Type UPS 在线式供电方式	16
E	ESP	DC Power Supply 直流电源装置	Big capacity DC switching Power Supply 大容量直流开关电源装置	44
M	MTS	Automatic Voltage Regulator 自动电压调整器	PWM Type 开关模式	74
R	RL (3RL)	Loading Instrument 负载装置	Power factor Loading Instrument 功率因数负载装置	90
S	SFT	Uninterruptible Power Supply 不间断电源装置	On-line Type UPS 在线式供电方式	20
	SFT-D	Uninterruptible Power Supply 不间断电源装置	On-line Type UPS(Generator Corresponding Type) 在线式供电方式（可接电动机型）	26
	SYN	Converter · Inverter 转换器 · 逆变器电源	Frequency Changer 周波变换器	2
T	TAC	Automatic Voltage Regulator 自动电压调整器	Digital Control Type AVR数控方式	70
	TAF	Automatic Voltage Regulator 自动电压调整器	Slide Type AVR滑动方式	78
Y	YDA	Converter · Inverter 转换器 · 逆变器电源	DC · AC Inverter DC/AC变换器	12
	YDD	DC Power Supply 直流电源装置	Big Capacity DC Switching Power Supply 大容量直流开关电源装置	44
	YHID	High Voltage Generating Devices 高压电源装置	Destructive/Voltage Withstand Tester 高压破坏 · 耐压试验器	59
	YHIG	High Voltage Generating Devices 高压电源装置	Impulse Voltage Generating Device 脉冲电压发生装置	64
	YHPG	High Voltage Generating Devices 高压电源装置	High Voltage Pulse Generating Device 高压脉冲发生装置	54
	YHPS	High Voltage Generating Devices 高压电源装置	High Voltage DC Power Supply, DC High Voltage Generating Device 直流高压电源装置	65
	YHR	Automatic Voltage Regulator 自动电压调整器	Momentarily Correction Waveform Type AVR瞬时波形补偿方式	88
	YHT	High Voltage Generating Devices 高压电源装置	AC Voltage Withstand Tester Large Capacity Type 交流耐压试验器（大型）	62
	YHTD	High Voltage Generating Devices 高压电源装置	AC&DC Voltage Withstand Tester Large Capacity Type 交直流耐压试验器（大型）	60
	YNV	DC Power Supply 直流电源装置	Emergency DC Power Supply 紧急用直流电源装置	50
	YRD	Charge/Discharging Devices and Systems 充放电电源装置	Battery Charge/Discharging Devices and Systems 电池充放电电源装置	30
	YS	DC Power Supply 直流电源装置	SCR System type 晶闸管控制器整流器 其他	45
	YTR	DC Power Supply 直流电源装置	Series Regulated Type 串联型稳压方式	38
	YTR-KR	Loading Instrument 负载装置	Electronic Loading Instrument 电子负载装置	88



Safety precautions

Safety precautions

Please follow the following instruction when using a product in this catalog.

- Please read "Instruction manual" and use it appropriately.
- Follow the usage conditions and environments described in this catalog.
- Please never use it for the following usage or equipment.
 - a. Using for the tools or equipment that may be a danger to human's life or body, like medical equipment.
 - b. Using on train and elevator that may cause a damage to human
 - c. Using for equipment to vehicles or ships that cause vibration or impact
 - d. Using for equipment that may cause a significant effect to society and public like traffic system
 - e. Using for gas exhausting smoke-extraction equipment like a equipment that produces poisonous gas
 - f. Using for devices the installation is required by various regulations like Fire Defense Law and Building Standard Law, etc
 - g. Using for/under any devices or condition similar to above

※ When a device is used under a condition that may cause significant influences to the public and safety of human, please use a special caution by adopting multiplexing system or installing power generating equipment for emergency. In addition, make sure they are properly operated, maintained and managed.

- Some devices require electrical construction. Any electrical construction must be done by the qualified specialists only.
- The products in this catalog are manufactured for domestic use in Japan except for the ones especially manufactured for both domestic and foreign use. Please contact us regarding use of our products in foreign countries. If our device is used in a foreign country, it may cause a fire due to voltage and usage environment differences.
- If any product is used over standard and permissible value specified in this catalog, it may cause a fire.
- The products in this catalog are for indoor use only. Please be careful not to make it wet with rain or other way. For the outdoor type, please consult us.
- There is no guarantee for using with a vehicle and ship. Please consult us if you need to use a device on a vehicle or ship for manufacturing a device with custom specifications.
- Please place our device away from water. Wetting a device can cause electric leakage.
- If a device is placed those places as beach district where the device is exposed to sea breeze and a hot spring district where the sulfur gas exists, a special dust or rust preventive treatment for piping may be necessary.
- Please do not set it near heat source or under direct sunlight exposure. It may reduce cooling efficiency.
- The third class earth work is required. In order to prevent electrical leakage accident, please make sure that the earth construction is installed correctly.

It is prohibited to open a cover or disassemble to modify our products. Inside a device, there is an electric circuit with over 100V. Also, if the device has a built-in battery, the DC current voltage is still in the device even when it is turned off.

Life of batteries in devices

- Please do not keep using the battery over the life expectancy. If the exhausted battery is continued to be used, the battery container may crack causing secondary problems such as liquid leakage, abnormal odor, smoke and fire. To maintain the effectiveness of uninterruptive power supply, please request for battery change within the specified period.

Installation

- For an installation place, it should have a space for the main body (including the space for opening and closing door), air intake, exhaust tube, piping and service space.
- The floor should be structured to sustain the weight of a device. If necessary, please reinforce the floor with concrete or iron plate, etc.
- Please place it where the surrounding temperature is 0 - 40 centigrade. Ventilation is necessary using an exhaust fan at a place the air-conditioner stops during a night (like a basement). If surrounding temperature becomes 0 centigrade or less or 40 centigrade or more, adequate temperature may not be maintained for an installed device.

Disclaimers

- We cannot amend all problems including abnormality and damages of device, connecting equipment software and other secondary ones, even if a damage is originated from a power-supply unit.

■ Delivery and carry-in

- When there is no special instruction, a device is passed to a customer at a receiving door on the delivery vehicle.
- ※ We make a separately estimate for carry-in and installation.

■ About electric construction

- When requested, we make an estimate for the primary and secondary side wiring construction.
We also provide distribution panels.

■ About observed inspection

- We provide a paid observed inspection within our factory or at the customer site.

■ Sending a supervisor

- An engineer is sent domestically and overseas to the customer's site for a support based on our scheduled rate.

■ Spare parts

- When requested, we sell easily exchangeable spare parts for the overseas product.

■ Amends and guarantee term

- We provide one year free guarantee for obviously defective caused by the manufactures after delivery (in case of the products for overseas, after delivery at a specified location domestically in Japan). However, we do not compensate for secondary damages. Any defects not caused by the manufacture but caused by natural disaster or accidents after delivery are not compensated by YAMABISHI. There is no free guarantee period for the overase products. Excluding a specially determined condition, for installation at overseas, any additional costs that are more than the domestic installation is charged even during the guarantee period.

■ Export

- Based on the list regulations of export related laws, some applications may be required for the ones with specific features like a frequency transformer and DC stabilizing power source, and usage condition and customer. Please consult us when taking our product outside of Japan.

安全上的注意事项

安全上的注意事项

在使用本产品目录中的产品时，请遵守以下的规定。

- 使用前，请仔细阅读《使用说明书》，正确使用本产品。
- 请遵守本产品目录所述的使用条件和使用环境等。
- 请绝对不要用于以下用途或者机器。
 - a. 医疗器械等，与生命及人身安全直接相关的用途和机器。
 - b. 可能造成人身伤害等的电车及电梯等。
 - c. 车船等受到震动和冲击的用途和机器。
 - d. 交通系统等可能对社会和公共设施造成重大影响的用途和机器。
 - e. 有毒气体等的排气和排烟装置。
 - f. 根据《消防法》和《建筑基准法》等各种法令的规定，请不要用于有义务设置的装置。
 - g. 基于这些规定的用途和机器。

※ 对于与人身安全相关，对维持公共功能具有重大影响的装置等，要在其系统多重化和紧急情况用发电设备的设置等运用及维护和管理方面，给予特别的关注。

- 包括需要进行电气施工的产品。应请专家进行电气施工。
- 本产品目录中的产品，除了特别为出口制作的外，其他都是供日本国内使用。日本国外用产品，请另向本公司咨询。本装置在日本国外使用时，由于电压和使用环境不同的原因，有时会引起冒烟和着火。
- 超过各产品的目录规格和容许值使用时，会引起故障，冒烟和着火。
- 本产品目录所刊登的产品为室内用产品。请在没有漏雨的地方使用。有需要室外产品的用户，请向本公司咨询。
- 对于车辆和船舶的使用，本公司不给予保证。如果使用时，请使用特殊规格产品，对此请向本公司咨询。
- 请把产品设置在不会直接接触水的地方，因为有可能造成漏电。
- 当本产品设置在有海水潮气的海滨地区及含硫气体的温泉地区等特殊地区时，有时需要对管线进行防锈处理。
- 请不要把本产品设置在发热源附近以及阳光直射的地方，因为这些地方的冷却效率恶化。
- 需要对地线进行第三种接地施工。为了防止万一漏电事故，请务必进行正确的接地施工。

严禁打开盖子进行分解改造。装置内部的电路电压超过100V。此外，装置内装有内置蓄电池时，即使装置停止工作，其中也存在着直流电路电压。

■ 关于蓄电池搭载装置的蓄电池寿命

- 蓄电池到了寿命时，请不要继续使用。如果继续使用的话，蓄电池容器会破坏，其中的液体会泄漏出来，引起异臭，冒烟和着火等二次危害。此外，为了维持不间断电源装置的效力，请在期限内提出请求更换。

■ 安装场所

- 安装场所除了需要保证本体（包括门开闭空间）安装的空间外，还需要保证吸气管线和维护保养服务的空间。
- 地面结构应能承受机器重量。地面状况不良时，请使用混凝土或者钢板等进行加固。
- 请设置在环境温度为0～40℃的场所。此外，在楼房地下室等地方，在夜间空调停止的地方，需要用换气扇等进行排气。环境温度在0℃以下或40℃以上时，库内的温度难以保证合适的温度值。

■ 关于免责事项

- 即便事故是由于电源装置所引起，设备，连接器械及软件的异常和故障所造成的损失以及其他包括二次损害在内的所有损失，本公司一概不予补偿。

■关于产品的搬运

- 交货时，只要没有特别要求，通常是在日本国内客户搬运车上交接。

※搬运和安装施工要另行报价。

■关于电气施工

- 根据要求，本公司将对 1 次端和 2 次端布线施工进行估价。
- 此外，本公司还提供分电盘相关服务。

■关于现场检查

- 在本公司在工厂内或者客户工厂内进行现场检查时，根据检查内容相应收费。

■关于监理员的派遣

- 在日本国内和海外现场开始使用本公司产品时，技术人员的派遣根据规定收取费用。

■关于备件

- 根据要求，本公司将有偿提供海外用的可简单交换的备件。

■保修以及保修期间

- 对于明显是因厂家原因引起的故障，本公司在产品交货后（海外情况，在日本国内指定场所交货后）的一年内免费维修。但是，对于涉及二次的损害，恕本公司不予补偿。此外，因天灾以及交货后的事故等非厂家原因引起的故障，即使在保修期间内，恕本公司不予补偿。另外，出口海外（日本国外）的产品没有免费保修期间。日本国外的设置除了规定特殊条件外，即使在保修期间内，也将收取高出日本国内设置的各项部分费用。

■关于出口

- 根据出口相关法规的规定，变频器和直流稳定电源等具有特定性能的产品，或者由于用途和顾客的缘故，需要申请许可的产品，都受到出口限制，需要购买此类产品的客户请与向本公司咨询。

