



AC Power Source

交流变频电源

使

用

手

册

深圳市华鑫泰电气有限公司
ShenZhen HuaXinTai Electric Co.,Ltd

◆ 注意事項	2
◆ 產品簡介	3
◆ 面板圖及功能說明	4-7
◆ 變頻電源外觀說明	8-9
◆ 安裝說明	10
◆ 配綫綫徑參考表	11
◆ 配綫注意事項	12
◆ 操作說明	13
◆ 電氣規格	14
◆ 狀況處理	15
◆ 共同規格	16

△感谢你购买本公司产品,在使用前请务必详阅此手册,并妥善保存。

△机器搬运时请小心轻放,避免碰撞。

△电源请依照电工法规及安装说明施工。

△请依照操作说明指示步骤,依序操作。

△请勿打开机盖,以避免触电及机器损坏。

△请保持机器之干净与清洁。

△请勿将机器置于潮湿、闷热让阳光直射之处。

△若有异常现象,请参阅“状况处理”程序。

使用场所介绍

1. 外销品测试:

- A、产品行销目的地使用电源模拟化。
- B、规格之认定统一化。
- C、无干扰促使产品功能进极化。
- D、研发好帮手，各国电力测试随心所得电源国际化。
- E、制程上无缺点的产品规格化。

2. 品质认证:

- A、产品规格一致化，促进产业升级。
- B、各国标准之认证标准电源。
- C、纯净正弦波，电源建立标准之利器。
- D、EMI/EMC 安规测试标准电源。

3. 精密度仪器设备的专用电源

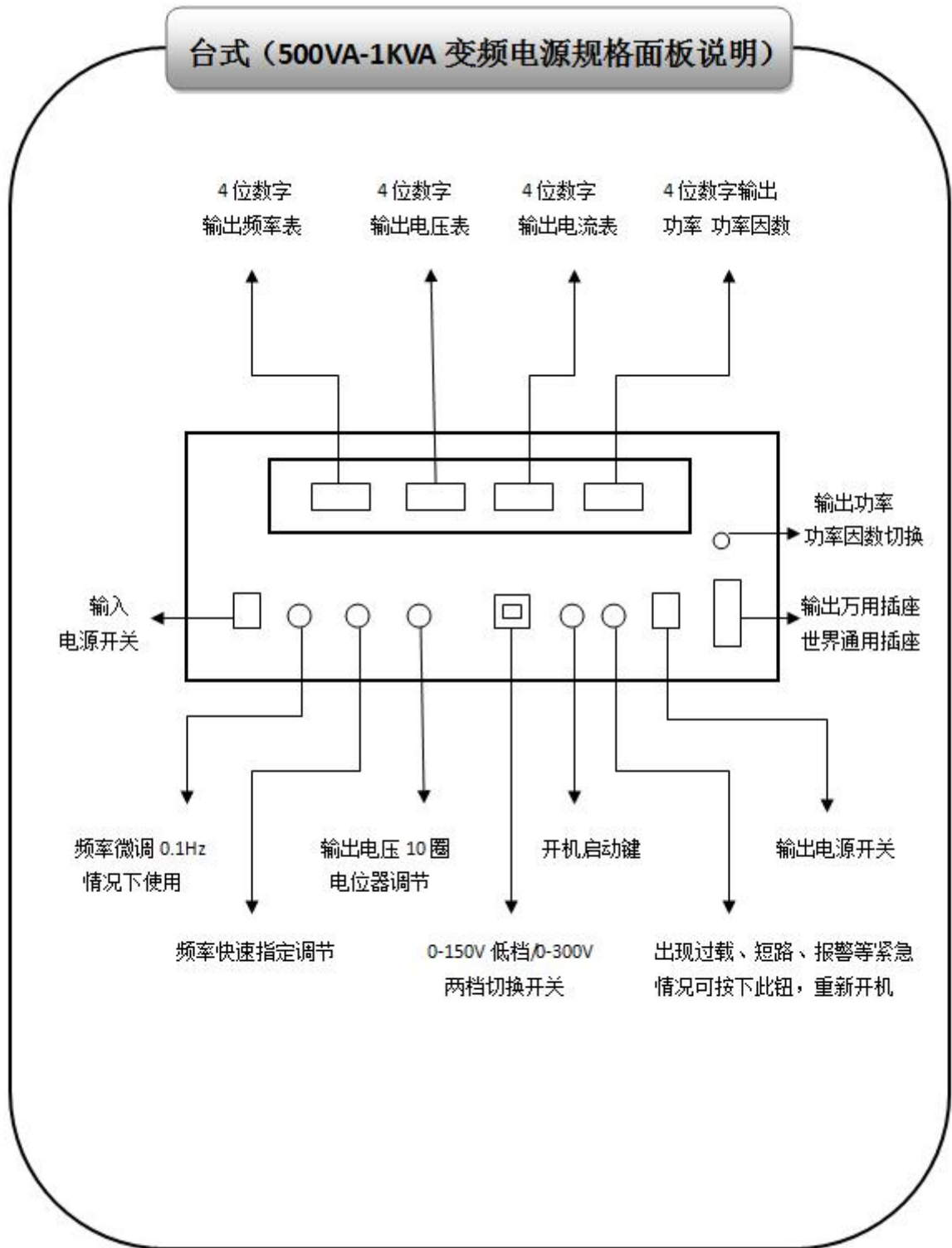
- A、高精度之仪器使用电源，能使各种功能完完整整的表现出来。
- B、整厂设备输出，事前模拟，促进设备之全功能化。
- C、制造无障碍设备的专属电源。

使用产品介绍:

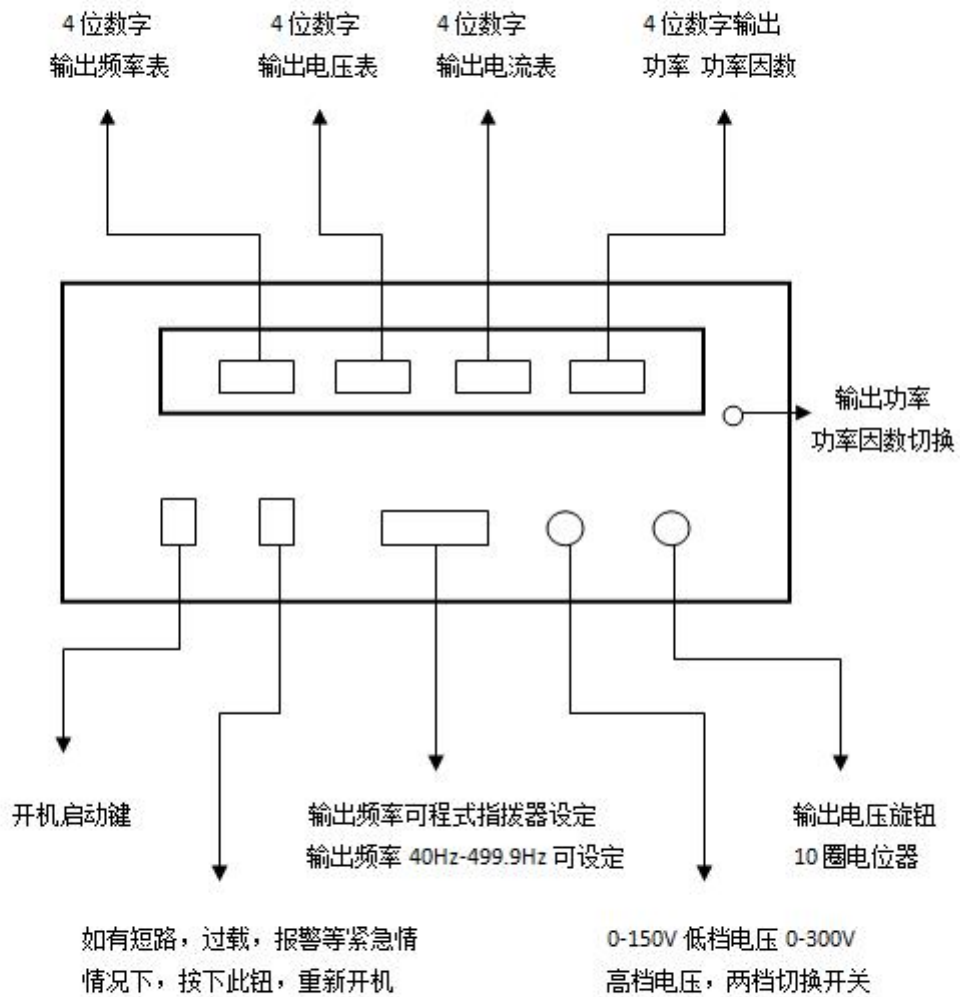
- | | |
|--------------|------------------|
| 电脑(PC) | 空调设备 |
| 监视器(Monitor) | 日光灯安定器测试 |
| 电脑用直流电源供应器 | 各种电器用品 |
| 变压器 | 音响设备 |
| 马达电器设备测试 | 家用电器产品(冷气、冰箱、电视) |
| 冷气压缩机制遗 | |

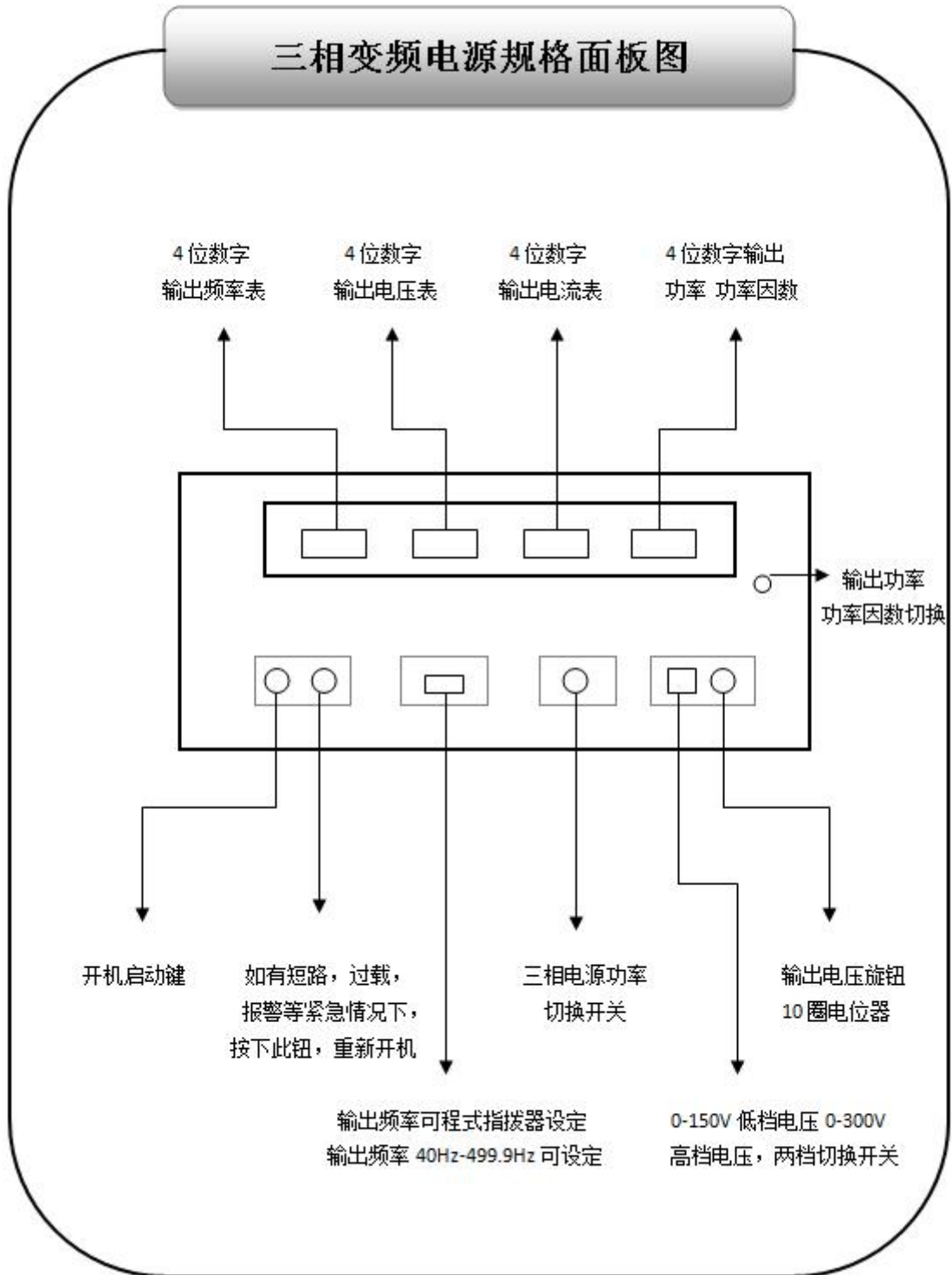
400HZ:

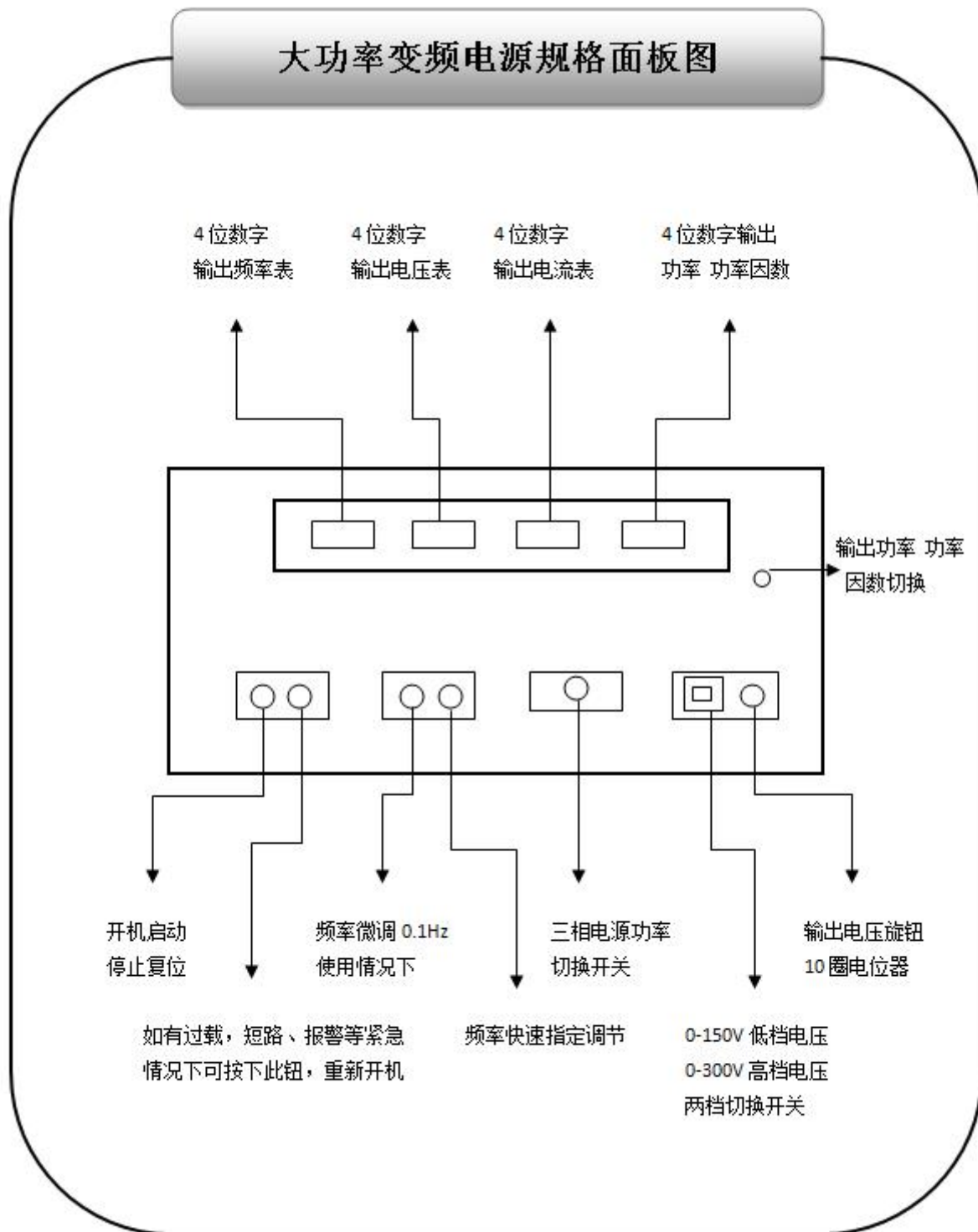
- | | |
|------|------------------|
| 军用设备 | 机场设备 |
| 通讯设备 | 航太工业 船舶及导弹设备专用电源 |



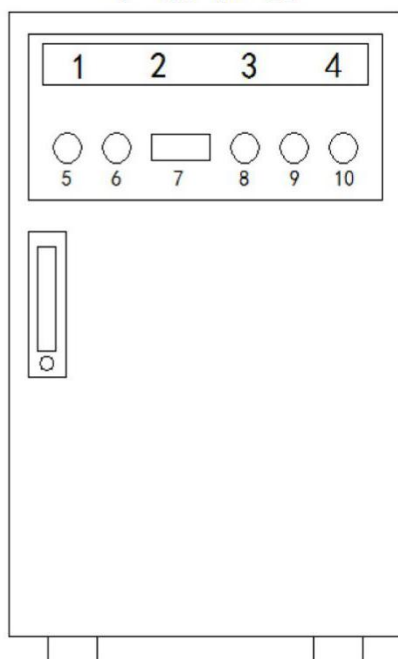
单相变频电源规格面板图



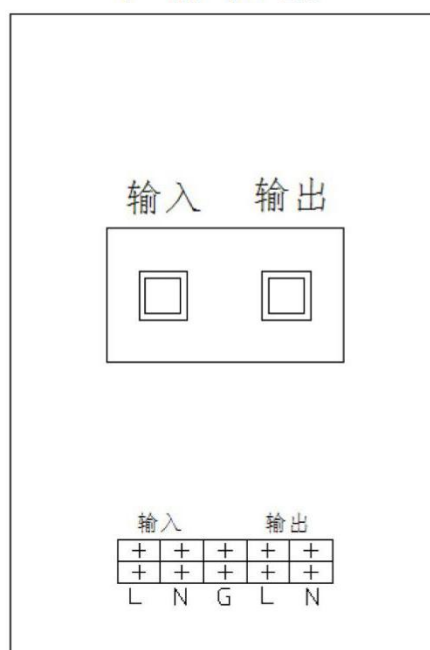




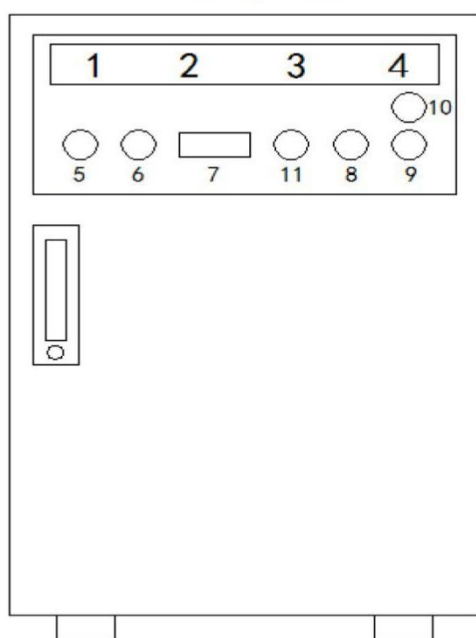
单相机型



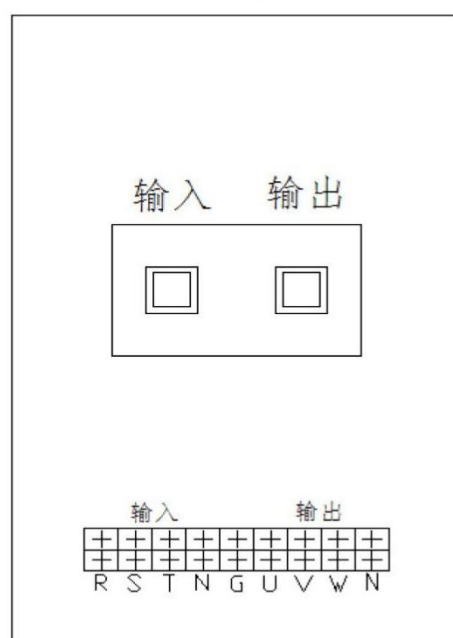
单相机型



三相机型



三相机型



说明顺序由左至右，由上至下，逐步叙述之：

- 1.输出频率指示表：数位式显示输出频率至小数点下一位。
- 2.输出电压指示表：数位式显示输出电压值。
- 3.负载电流指示表：数位式显示输出电流值。
- 4.负载瓦特指示表：数位式显示输出功率值。
- 5.电源开关钮：开关启动之按钮。
- 6.开机重置开关：因过载或断路造成变频器跳脱，警报器响时，可按此按钮重新开启。
- 7.频率指拨开关：固定频率 40~499.9HZ 可程式(指拨)设定。
- 8.输出电压切换开关：二档 0~150V 或 0~300V。
- 9.标准电压输出微调钮：十转式微调开关，可由微调得到您所需要的标准电压。
- 10.三相输出电流显示切换开关：可切换显示各相之输出电流值。(仅用于三相输出机种)。
- 11.输出万能插座：10A 以下负载。(仅限于单相 500W~5KVA 变频电源)
- 12.POWER：电源总开关。
- 13.O/P：输出负载开关。
- 14.输入端子排。
- 15.输出端子排。

- 变频电源的机种型号是否符合您订购之型号与容量。
- 变频电源是否因运送不慎造成损坏，若有损坏请勿接上电源。
- 确认入电电压是否和机器规格相符合。
- 勿将机器装置于靠近水源、高温、潮湿场所。
- 防止油雾、盐分侵蚀。
- 防止粉尘、棉絮及金属细物侵入。
- 让机器远离尘埃、闷热及换气不良的场所，并保持环境清洁。
- 安装机器时请注意机器背面散热空间距离，以避免散热不良。
- 机器请放置于坚固及没有震动的水平面上。
- 安装前请先参考背面之规格。
- 使用前确定输入电压。
- 接上电源之前须注意 L-N-G(单相)规格是否正确 R-S-T(三相)。
- 之相序装接，切勿接反。
- 在接电源之前先将所有开关置于 OFF 以确保设备无损害之虞。
- 配线时注意所有接线端之插头、插座，有无松动以避免导电不良产生。
- 危险。
- 装机完毕后，确保设施规格与电源系统完全匹配后，才将电源插上，并检查线路没问题后即可开机使用。

1. 输入 220V 单相系统

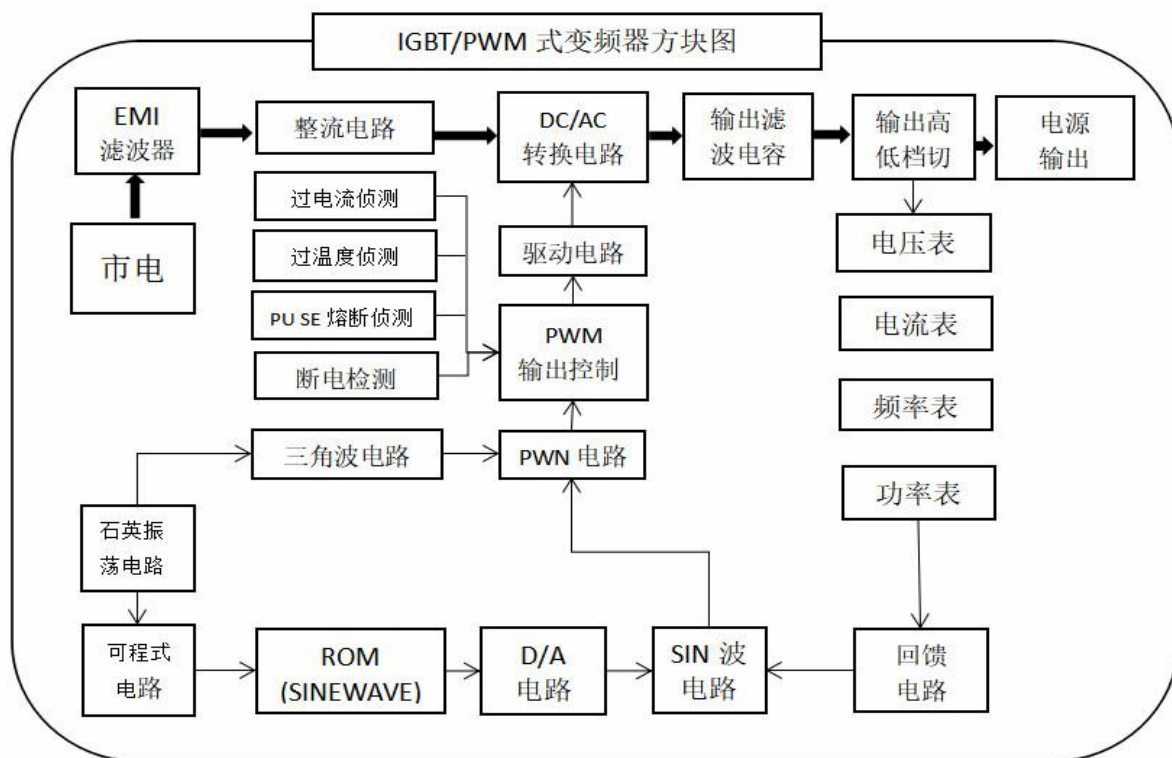
输入 1Ø2W 220V/110V				输出 1Ø2W	
规格及容量	最大电流	保护开关	使用线径	额定电流	使用线径
500W	4A	5A	2.5mm ²	110V:4.2A 220V:2.1A	2.5mm ²
1KVA	8A	10A	4mm ²	110V:8.4A 220V:4.2A	4mm ²
2KVA	10A	15A	4mm ²	110V:16.8A 220V:8.4A	4mm ²
3KVA	20A	30A	6mm ²	110V:25A 220V:12.5A	6mm ²
5KVA	36A	40A	10mm ²	110V:41.7A 220V:20.8A	10mm ²
10KVA	65A	70A	16mm ²	110V:83.4A 220V:41.7A	16mm ²
15KVA	100A	125A	25mm ²	110V:125A 220V:62.5A	25mm ²
20KVA	150A	175A	35mm ²	110V:166.8A 220V:83.4A	35mm ²
30KVA	200A	225A	50mm ²	110V:250A 220V:125A	50mm ²

2. 输入 380V 三相系统

输入 3Ø4W 380V/480V/220V				输出 3Ø4W	
规格及容量	最大电流	保护开关	使用线径	额定电流	使用线径
10KVA	15A	20A	6mm ²	110V:27.8A 220V:13.9A	8mm ²
15KVA	25A	30A	10mm ²	110V:41.7A 220V:20.8A	16mm ²
20KVA	30A	40A	10mm ²	110V:55.6A 220V:27.8A	16mm ²
30KVA	50A	60A	16mm ²	110V:83.4A 220V:41.7A	25mm ²
45KVA	70A	100A	25mm ²	110V:125A 220V:62.5A	35mm ²
60KVA	90A	125A	35mm ²	110V:166.4A 220V:83.3A	50mm ²
75KVA	136A	150A	35mm ²	110V:208.4A 220V:104.2A	50mm ²
100KVA	150A	225A	50mm ²	110V:277.8A 220V:138.9A	70mm ²

- 1.变频电源因容量大小不同而有不同的安装标准，请依照您的变频电源的规格选择适当的方式配线，尤应注意其线径须符合规定。
- 2.请注意变频电源之输入端，应避免与其他设备共用一开关，并接近市电源头。
- 3.确认输入电源电压符合变频电源之输入额定电压。
- 4.接线时请关闭电源，严禁火线作业安全。
- 5.配线线径大小请依电工法规规定选用，并注意螺丝旋紧。
- 6.接线端子请选用 O 型端子施工。
- 7.变频电源的接地线请务必确实实施。
- 8.输入电源不可与输出电源接错位置。
- 9.内部控制板上半导体元件易受静电影响及破坏，请勿触摸控制板。
- 10.变频电源的使用环境及配线作业对变频电源正常功能发挥及使用寿命，甚至安全均有直接影响，故所以务必遵照以上要求指示进行安装与配线。

- 1.先将电源开关切至 OFF 之位置。
- 2.使用前请先视察设备之完整性开关，旋转各种功能之按键显示器是否齐全均无松动之现象。
- 3.确认输入电源是否在规格内，再将电源总开关切至 ON 位置。
- 4.设定输出频率指拨档上指示频率即是输出频率，设定百位数频率时需先按 OFF/RESET 键后进行。
- 5.按启动开关：按此开关前请先关闭输出开关。
- 6.调整输出电压：将输出电压切换开关切至所需档位。
 - (a)Lo-V 档位 0-150V PS: 150V 以下请用此档。
 - (b)Hi-V 档位 0-300V PS: 150V 以上请用此档。
- 7.将负载输入线接上，打开输出开关即可获得各功能显示器上所显示值之标准电源。
- 8.本机负有过载或短路装置，在过载或短路时保护电路立即切断输出电源，蜂鸣器报警，此时请先将负载关闭，再按重置开关警声停止后，再按启动开关即开始供电。检查负载状况，确认无异常，再重新开启负载开关。
- 9.工作中按 OFF-RESET 键即可切断输出电源。



1. 输入电源: 1^Φ 2W 220V±15% 3^Φ 4W380±15% 频率 50Hz Or 60Hz.
2. 输出相电压: 0-150V/0-300V 两档 10 转调整.
输出线电压 0-260V/0-520V 两档 10 转调整.
3. 输出频率: FIXED 40.0Hz~499.9Hz.
4. 功率因素: >85%, 在满载下下测量, 谐波失真度: <1% (在阻性负载下测量)
5. 电压稳定度: ±1%.
6. 频率稳定度: FIXED ±0.01Hz.
7. 谐波失真度: <1%.
8. 保护装置: 过载、短路、过温度、过电流、及告警装置。
9. 工作环境: 0~40°C, 相对湿度: 0~90% (非凝结状态)

本机器仅限电工专业人员进行检测及维修。请注意内部高压，非专业授权人员不得擅自打开机门进行检修。请先关机并检测以下步骤：

现象	检查方法	故障排除
无输入电源	<ol style="list-style-type: none"> 1. 市电输入开关是否打开？ 2. 输入电源是否插妥、锁紧？ 3. 输入电压是否符合额定规格？ 4. 检查保险丝是否烧断？ 	<ol style="list-style-type: none"> 1. 打开市电输入开关。 2. 将输入电源重新接妥、锁紧。 3. 修改或重新安装正确的电压规格。 4. 请检查机器并换同规格的保险丝、
输出电源中断	<ol style="list-style-type: none"> 1. 是否有停电或瞬间停电？ 2. 是否有超载现象？ 	<ol style="list-style-type: none"> 1. 按激活开关(ON)重新开机。 2. 若因超载而跳脱,请减轻负载。
无输出电压	<ol style="list-style-type: none"> 1. 检查保险丝是否烧断？ 2. 检查是否超载？ 3. 检查电压是否正常？ 	<ol style="list-style-type: none"> 1. 请检查机器并换同规格的保险丝。 2. 将输出电压调至开关归零。 3. 将电源开关切至(ON)位置。
输出频率显示正常,电压、电流与功率显示为“0”		<ol style="list-style-type: none"> 1. 将电源开关切至“OFF”位置。 2. 将输出电压调至开关归零。 3. 将电源开关切至“ON”位置。
输出频率显示正常,电压、电流与功率显示为“0”,同时警告声响起。		<ol style="list-style-type: none"> 1. 检查并降低负载电流。 2. 按关机/重置钮(OFF/RESET) 3. 等待机器延时激活。 4. 重新操作。
温度过高	<ol style="list-style-type: none"> 1. 负载过重？ 2. 风扇转速慢或不转？ 	<ol style="list-style-type: none"> 1. 减轻负载。 2. 更换风扇。
紧急叫修		<p>请告知：</p> <ol style="list-style-type: none"> 1. 机器型号/出厂序列号 2. 故障发生日期及时间。 3. 负载名称。 4. 详细描述发生状况。

◆共同规格

相数/容量		单相/500VA~800KVA	三相/3KVA~2000KVA
制作方式		IGBT/PWM 脉波宽度调变方式	
输入	电压 (任选一种)	1 相 2 线+G:110V(2-5KVA) , 220V/230V/240V±10%	
		3 相 4 线+G: Y 接法 190/110, 200/115, 208/120, 220/128, 230/132, 240/139V±10%	
		3 相 4 线+G: Y 接法 380/220, 400/230, 415/240, 440/254, 460/265, 480/277V±10%	
	频率(选一种)	3 相 4 线+G: De ltn 接法 220, 230, 240, 380, 400, 415, 400V±10%	
输出	电压	110V 系统: 0-150V (Low Range)	110V 系统: 0-260V (Low Range)
		220V 系统: 0-150V (Low Range)	220V 系统: 0-520V (Low Range)
	负载稳压率	≤±1%	
	频率	40Hz~499.9Hz(可程式设定)	
	频率稳定率	≤±0.01%	
	波形失真	正弦波·≤2%	
	频率表	4 位数·数位频率表, 解析度 0.1Hz/Step	
	电压表	4 位数·数位电压表, 解析度 0.1V	
	电流表	4 位数·数位电流表, 解析度 0.1A	
瓦特表	4 位数·数位电流表, 解析度 0.1W		
保护装置		俱过载、过高温、短路、瞬间断电保护, 告警装置	
工作环境	周温	0-40 deg.C	
	湿度	0-90% (非凝结状态)	

◆实体规范 (单相)

规格及容量	500VA	1KVA	2KVA	3KVA	5KVA	10KVA	15KVA	20KVA	30KVA	45KVA	
制作方式	IGBT/PWM 脉波宽度调变方式										
输出	线电流低档 L=	4.2A	8.4A	16.8A	25A	41.6A	83.2A	125A	166.6A	250A	375A
	高档 H=	2.1A	4.2A	8.4A	12.5A	20.8A	41.6A	62.5A	83.3A	125A	188A
尺寸(mm) (W*D*H)	500*430*180		530*350*660			680*350*940			750*550*1220		
重量 (KG)	32	38	45	55	67	110	160	210	300	420	

◆实体规范 (三进单出)

规格及容量	10KVA	15KVA	20KVA	30KVA	45KVA	60KVA	75KVA	90KVA	100KVA	120KVA	
制作方式	IGBT/PWM 脉波宽度调变方式										
输出	线电流低档 L=	83.4A	125A	166.6A	250A	416.6A	500A	625A	750A	833.3A	1000A
	高档 H=	41.7A	62.5A	83.3A	125A	208.3A	250A	312.5A	375A	416.6A	500A
尺寸(mm) (W*D*H)	650*350*850			650*500*840			750*550*1220		800*600*1420		
重量 (KG)	120	170	220	310	430	610	690	740	780	850	

◆实体规范 (三相)

规格及容量	3KVA	6KVA	10KVA	15KVA	20KVA	30KVA	45KVA	60KVA	75KVA	100KVA	
制作方式	IGBT/PWM 脉波宽度调变方式										
输出	线电流低档 L=	8.4A	16.8A	27.8A	41.6A	55.6A	83.4A	125A	166.6A	208.4A	277.8A
	高档 H=	4.2A	8.4A	13.9A	12.5A	27.8A	41.7A	62.5A	83.3A	104.2A	138.9A
尺寸(mm) (W*D*H)	650*500*940				750*550*1220			800*600*1420			
重量 (KG)	145	170	195	240	310	385	470	680	740	890	

■本公司保有规格变更权力, 规格变列时, 恕不另行通知。

■本公司接受特殊规格定制。

TABLE OF CONTENTS

A.IMPORTANT SAFETY INSTRUCTION.....	2
B.INTRODUCTION.....	3
C.CIRCUIT THEORY.....	4
D.OUTER CONSTRUCTION.....	5
E.FRONT PANEL LAYOUT	6
F.INSTALLATION	
SAFETY PRECAUTIONS.....	7
INSTALLERS.....	8
INSTALLATION CONSIDERATION	9
UNLOADING AND EXTERNALINSPECTION.....	10
INTERNAL INSPECTION.....	11
WIRE SIZE GUIDELINES.....	12
TABLE1: POWER LINE REFERENCE DATA.....	13
POWER WIRING.....	14
POWER SOURCE POLATITY IDENTIFICATION.....	15
G.OPERATION PROCEDURE	
PRELIMINARY INSPECTION.....	16
INITIAL SYSTEM OPERATION.....	16
H.HOWTO ASKEND USERSDESCRIBE FAULTY STATUS?.....	17
I.MAINTENANCE.....	18
PRECAUTIONS.....	18
PERIODIC MAINTENANCE.....	18
J.TROUBLESHOOTING.....	19
K.TECHNICAL SPECIFICATION.....	20

A. Important Safety Instructions

Save These Instructions.

Thank you for selecting this AC Power Source/Frequency Converter. This manual explains how to correctly install, operate, maintain, serve and get the best performance from the unit, please read this manual carefully before installing, the keep it near the unit for reference.

1. Please read all of these instructions before installation and operation of this unit.
2. Save these instructions in a convenient place for later reference.
3. Use only attachment methods (electrical plugs, etc.) that are approved by the manufacturer or recognized body (UL, CE, CSA). Use of unapproved attachments may cause hazards to personnel and equipment.
4. Use only one AC power cord per AC receptacle. Do not overload any AC receptacle or extension cords. This may result in a shock or fire hazard.
5. Do not overload wall outlets and extension cords as this can result in fire or electrical shock.
6. Do not Place this unit on an unstable cart, stand or table, Keep the unit on a flat stable surface with adequate space around it for proper ventilation.
7. Slots, grilles and openings of the unit are provided for ventilation, to protect it from overheating and to ensure reliable operation. These openings must not be covered, and the rear panel of the unit must be at least 5 inches (13cm) from any wall.
8. This unit should be operated only from power sources to which it is rated. Do not attempt to operate the unit beyond its ratings. In the event of an electrical storm, unplug the unit to prevent damage.
9. The power cord is used as a main disconnect device. Disconnect the power cord before servicing.
10. Do not allow anything to rest on the power cord since inadvertent damage or hazards may occur. Avoid locating the power cord in high traffic areas.
11. Do not place the unit near a heat register, and avoid placing the unit in direct sunlight. Do not place the unit near water or excessive moisture.
12. Service to this unit should be done by factory-trained personnel only. Opening or removing covers may expose dangerous voltage points or other hazards.
13. Adjust only those controls that are listed by the Adjustment Section. If the unit does not operate normally by following the operating instructions, contact the factory for assistance.

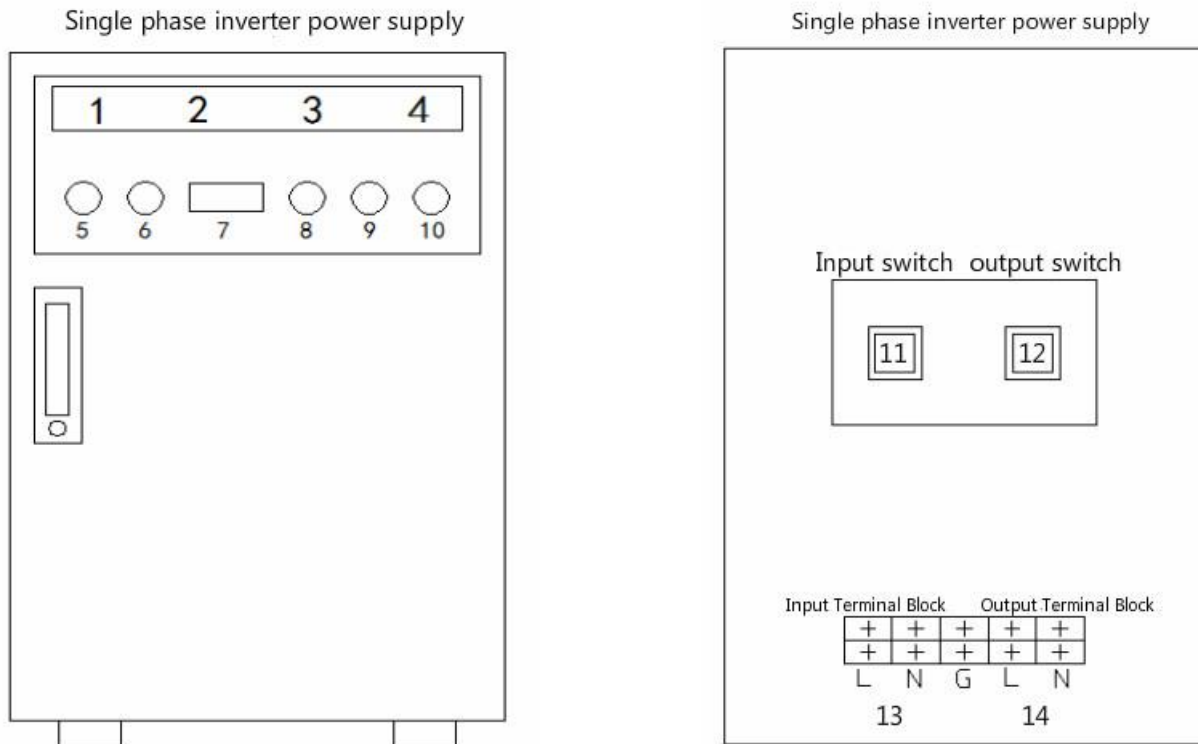
GENERIC PRODUCT FEATURES

- This unit is suitable for use with Resistive, Capacitive, Inductive and Non-linear loads.
- 50Hz, 60Hz or 400Hz Input Frequency.
- 0 to 300V AC Output Voltage Selector.
- 40 to 499.9Hz Output Frequency Selector.
- PROGRAMMABLE Output Frequency.
- Precise 4 LED Digital display Output Frequency, Voltage, ampere & Wattage.
- Full Galvanically Isolated. No Harmonic Distortion (EMI, MEC).
- Full Galvanically Isolated. No Harmonic Distortion (EMI, MEC).
- Pure and Stable Sinewave Output.
- Fast Response Time.
- Sustained 300% Overload Capability.
- IGBT/PWM technology enhances Compact Size; Low Noise; High Reliability.
- Capable to Simulate Global Voltage, Frequency for Export Electrical Products test.
- Units are equipped with Electronic Circuit/Instant Trip Breaker/Buzzer Alarm for Over Voltage, Over Current, Over Temperature, Output Short Protection.

APPLICATIONS

- Standard power source for EMI/EMC/safety testing.
 - QA/QC/Life & safety testing.
 - Electric Machinery Product test.
 - Excellent AC power source for R&D or Lab.
 - Switching Power supply testing.
 - AC Fan test.
 - Compressor test.
 - Motor test.
 - Air Conditioner.
 - Copier/OA Equipment.
 - Computer/Monitor/scanner.
 - Transformer/Triac/SCR test.
- 400Hz Power system:**
- Military
 - Telecommunication Facilities.
 - Airport Grounding Facilities.
 - Avionics, Marine, Missile, Projectile Facilities.
 - Any Facilities/Instruments have 400Hz Power system

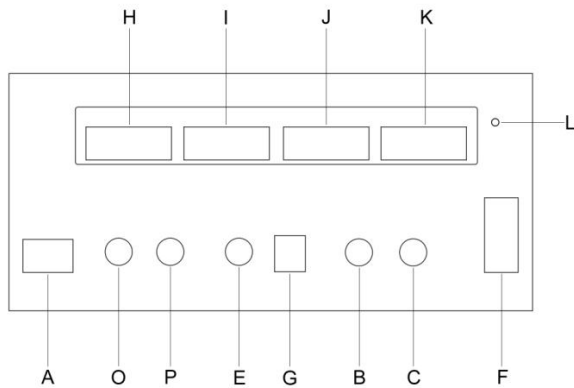
(Number refer to location on accompanying diagram)



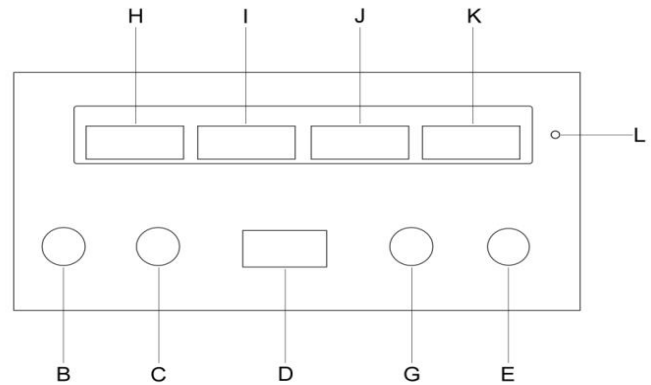
- 1.Frequency Meter: 4 Digital LED display for output frequency.(Hz)
- 2.Voltnmeter: 4 Digital LED Display for output voltage.(V)
- 3.Ammeter: 4 Digital LED Display for output current.(A)
- 4.Wattmeter: 4 Digital LED a is play for output pow re.(W)
- 5.Input Power ON Button: To put on utility power.
- 6.OFF/Reset Switch: When load is abnormal, warning buzzer will sound.And power will be cutoff;press to reset the unit when the o lad returns to normal conditions.
- 7.Output Frequency Setting Counter: programmable setting output frequency value.
- 8.Output High/Low Voltage Range Setting Switch.Switch to select output voltage range of 0~300v(High: Orange LED light) /0~150V (Low:LED not lits on;Button raised) .
- 9.Ten-turn Output Voltage Adjustment: Adjusts output voltage value.
- 10.Wattage/Power Factor Selector
- 11.Input Power Switch
- 12.Output Circuit Breaker
- 13.Input Terminal Block
- 14.Output Terminal Block

E.Front Panel LAYOUT

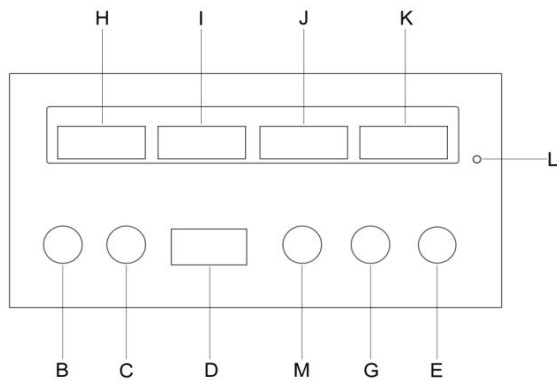
(Number refer to locations on accompanying diagram)



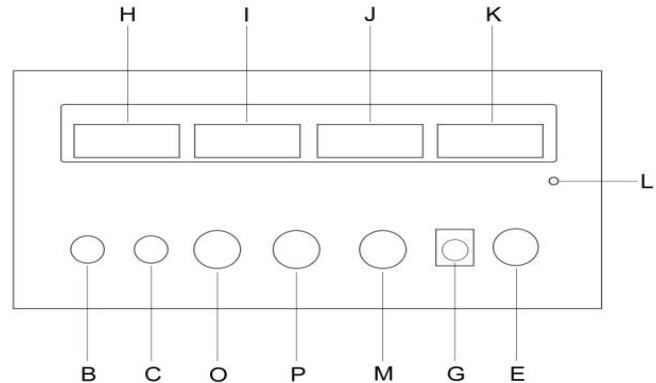
Front Panel for 500VA, 1KVA



THREE PHASE UNITS



SINGLE PHASE UNITS




HIGH POWER PHASE UNITS

- A.** AC Input circuit Breaker.
- B.** Input Power On.
- C.** OFF/Reset Switch Electronic Circuit Breaker instant trip and alarm when Overload.
- D.** Output Frequency Programmable Key Lock Setting: Provides Precise & Stable Frequency.
- E.** 10 Turns Output Voltage Adjustable Knob.
- F.** Universal Output Outlet.
- G.** 0-150V (Low) / 0-300V (High) Output Voltage Selector Switch.
- H.** Output Frequency.
- I.** Output Voltage.
- J.** Output Ampere
- K.** Output Wattage
- L.** Output Wattage/Power Factor Selector.
- M.** Phase Selector Switch to select R.S.T Phase's current & power (3 Phase Units only)
- O.** Frequency fine-tuning, adjusting stride 0.1 Hz
- P.** Frequency specified adjustment

SAFETY PRECAUTIONS

Read this manual thoroughly, paying special attention to the sections that apply to you before working with the AC Power Source/Frequency Converter.

WARNING

 Under typical operation, only normal safety precautions are necessary.

The area around the AC Power Source/Frequency Converter should be kept free from puddles of water, excess moisture, or debris.

ONLY qualified service personnel should perform maintenance on the AC Power Source/Frequency Converter. When performing maintenance with any part of the equipment under power, service personnel and test equipment should be standing on rubber mats. The service personnel should wear insulating shoes for isolation from direct contact with the floor(earth ground) .

Unless power is removed from the equipment, one person should never work alone. A second person should be standing by to assist and summon help in case an accident should occur.

INSTALLERS

ATTENTION INSTALLERS

Proper wire sizing(service ratings) and phase rotation are critical to the successful Installation of this products.

Make sure you have installed properly sized external over-current protection.

Proper planning will speed AC Power Source/Frequency Converter unloading, location and connection.Make sure there is adequate clearance for the AC power Source/Frequency Converter to open full swing.Check for a minimum of 5 inches (13cm) from the rear panel of the unit to from any wall for exhaust air to flow without restriction.Make sure room has adequate ventilation and cooling.Install the AC power Source/Frequency Converter in a clean and dry location.

WARNING

READ THIS MANUAL THOROUGHLY BEFORE ATTEMPTING TO WIRE OR OPERATE THE UNIT.IMPROPER INSTALLATION IS THE MOST SIGNIFICANT CAUSE OF AC POWER SOURCE/FREQUENCY CONVERTER START-UP PROBLEMS.

DO NOT INSTALL THE EQUIPMENT NEAR ANY GAS OR ELECTRIC HEATERS OR UNDER WATER LINES OR AIR CONDITIONING EQUIPMENT. INSTALL THE EQUIPMENT IN A RESTRICTED LOCATION TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.

INSTALLATION CONSIDERATION

- 1.Utilize the shortest output distribution cable runs possible at the installation site,
Consistent with logical equipment arrangement and in compliance with NEC and
local electrical codes.Allow space for future equipment additions.
- 2.Recommended ambient temperature for operation is 0 to 40°C(32 to 104°F) .
Relative humidity must be less than 90% non*condensing.In altitudes above
2,000 meters(6,565 feet 0) ,the AC Power Source Frequency Converter rating
will be reduced.
- 3.The route and foundation to the installation site must be capable of supporting
The weight cabinets and moving equipment.
- 4.Plan the route to ensure unit will pass through all elevators,comers,
and doorways to prevent damage.

UNLOADING AND EXTERNAL INSPECTION

1. Inspect equipment and shipping container(s) for any signs of damage or mishandling.

Do not attempt to install the system if damage is apparent. If any damage is noted, file a damage claim with the shipping agency within 24 hours, and contact your dealer to inform them of the damage claim and the condition of the equipment.

2. Compare contents of shipment with the bill of lading. Report any missing items to the carrier and to your dealer immediately.
3. Check nameplate on the inside of cabinet front door to verify model number, KVA Rating, and input voltage corresponds with the one specified. Record model and Serial number in the inside of this unit. A record of this information is necessary should servicing become required.

INTERNAL INSPECTION

1. Verify that all items have been received.
2. If spare parts were ordered, verify arrival.
3. Check for shipping damage internally.
4. Check for any loose connections or unsecured components in the AC Power Source/Frequency Converter.
5. Check for installation of safety shields on the AC Power Source/ Frequency Converter. There should not be any exposed terminals when the cabinet doors are opened.
6. Check for any unsafe feature that may be a potential safety hazard.

WARNING

EACH AC POWER SOURCE/FREQUENCY CONVERTER WEIGTHS BETWEEN 45KGS (AROUND 100POUNDS) AND 1,230KGS(AROUND 2.700POUNDS,DEPENDING ON MODEL. EXERCISE EXTREME CARE WHEN HANDLING TO AVOLD EQUIPMENT DAMAGE OR INUYRY TO PERSONNEL.A FORKLIFT OR OTHER ADEQUATE MATERIAL HANDLING DEVICE SHOULD BE SUED FOR UNLLADING.MOVING AND POSITION NING THE CABINETS.

INSTALLATION TIP

Install the leveling feet while the unit is on the forklfit or other material handing equipment.Leveling feet cannot be installed with the unit sitting on its caster wheels.

- 1.Use a forklift or other material handling device to move the cabinets as close as possible to the final installation site.
- 2.Casters are provided on the unit to aid in final positioning.
- 3.As with all electrical equipment,installation and serviceability will be easier if access is provided on all sides of the equipment.Minimum access requirements are 3feet front, 1foot top.
- 4.Verity adequate clearance for cabinet doors to open.
- 5.Verity openings must not be covered and the rear panel of the unit must be at least 5 inches(13cm) from any wall.
- 6.Verify AC Power Source/Frequency Converter is installed in a clean,cool and dry location.

WIRE SIZE GUIDELINES

Proper wire sizing must be based on numerous site-specific conditions.


Refer to notes 1 through 6 below, the present edition of the NEC, and all applicable local codes for your particular site requirements.

1. Refer to the recommended wiring charts that show the Ampacity for your AC Power Source/Frequency Converter.
2. Input Ampacity must be based on 125% of input current at full rated load.
3. Be sure to refer to all requirements within Article 310 of NEC.
4. Minimum sized grounding conductors are to be per NEC 250-95.
5. Neutral conductors are to be sized per NEC 310-16, note 10.
6. The AC Power Source/Frequency Converter system must be installed in accordance with the present 6 edition of the NEC and all local codes, including the codes of foreign countries where applicable.

TABLE 1:POWER LINE REFERENCE DATA

Input 1Ø2W 220V/110V				Output 1Ø2W	
MODEL CAPACITY	MAX.I/P Corrent	Protection Breaker	Power Line	MAX.O/P Corrent	Power Line
1KVA	8A	10A	4mm ²	110V:8.4A 220V:4.2A	4mm ²
2KVA	10A	15A	4mm ²	110V:16.8A 220V:8.4A	4mm ²
3KVA	20A	30A	6mm ²	110V:25A 220V:12.5A	6mm ²
5KVA	36A	40A	10mm ²	110V:41.7A 220V:20.8A	10mm ²
10KVA	65A	70A	16mm ²	110V:83.4A 220V:41.7A	16mm ²
15KVA	100A	125A	25mm ²	110V:125A 220V:62.5A	25mm ²
20KVA	150A	175A	35mm ²	110V:166.8A 220V:83.4A	35mm ²
30KVA	200A	225A	50mm ²	110V:250A 220V:125A	50mm ²
Input 3Ø4W 380V/480V/220V				Output 3Ø4W	
MODEL CAPACITY	MAX.I/P Corrent	Protection Breaker	Power Line	MAX.O/P Corrent	Power Line
10KVA	15A	20A	6mm ²	110V:27.8A 220V:13.9A	8mm ²
15KVA	25A	30A	10mm ²	110V:41.7A 220V:20.8A	16mm ²
20KVA	30A	40A	10mm ²	110V:55.6A 220V:27.8A	16mm ²
30KVA	50A	60A	16mm ²	110V:83.4A 220V:41.7A	25mm ²
45KVA	70A	100A	25mm ²	110V:125A 220V:62.5A	35mm ²
60KVA	90A	125A	35mm ²	110V:166.4A 220V:83.3A	50mm ²
75KVA	136A	150A	35mm ²	110V:208.4A 220V:104.2A	50mm ²
100KVA	150A	225A	50mm ²	110V:277.8A 220V:138.9A	70mm ²

POWER WIRING

 ALL POWER SHOULD BE TURNED OFF BEFORE ANY CABLES OR WIRES ARE INSTALLED OR CONNECTED. A QUALIFIED PERSON SHOULD CHECK TO INSURE THE POWER IS IN FACT 'OFF'

1. Verify that power wiring is run in individual, separate conduit or cabletray.
2. All input wiring must be run in its own conduit.
3. All Output wiring must be run in its own conduit.

 CAUTION

Power wiring must be separated!

INSTALLATION TIP

For 3 phase units, make sure that wiring is installed with a clockwise phase rotation of all Power wiring, Phase R leads Phase S leads Phase T.

4. Observe local, state and national electrical codes. Verify utility power and its over-current protection rating will accommodate the AC Power Source/Frequency Converter INPUT rating.
5. A safety ground wire must be run from building ground to ground point in the AC Power Source/Frequency Converter Cabinet. The grounding conductor shall comply with the following Conditions of installation:
 - a. An insulated grounding conductor that is identical in size, insulation material, and thickness to the grounded and ungrounded branch-circuit supply conductors except that it is green with or without one or more yellow stripes is to be installed as part of the branch circuit that supports the unit or system.
 - b. The grounding conductor described in Item a is to be grounded to earth at the service equipment. Or, if supplied by a separately derived system, at the supply transformer or motor-generator set.
 - c. The attachment-plug receptacles in the vicinity of the unit or system are all to be of a grounding Type, and the grounding conductors serving these receptacles are to be connected to earth ground at the service equipment.
6. Observe clockwise phase rotation of all power rating, Phase R leads Phase S leads Phase T. A qualified electrician should check the phase rotation.

F. Installation

POWER SOURCE POLARITY IDENTIFICATION:

1. Line: The voltage of L-G or L-N should be nominal voltage.
2. Neutral: The voltage of L-N should be nominal voltage; N-G is around 0.5v~2V.(Neutral line has loading current conduit.)
3. Ground: Please find out the exact Grounding point.

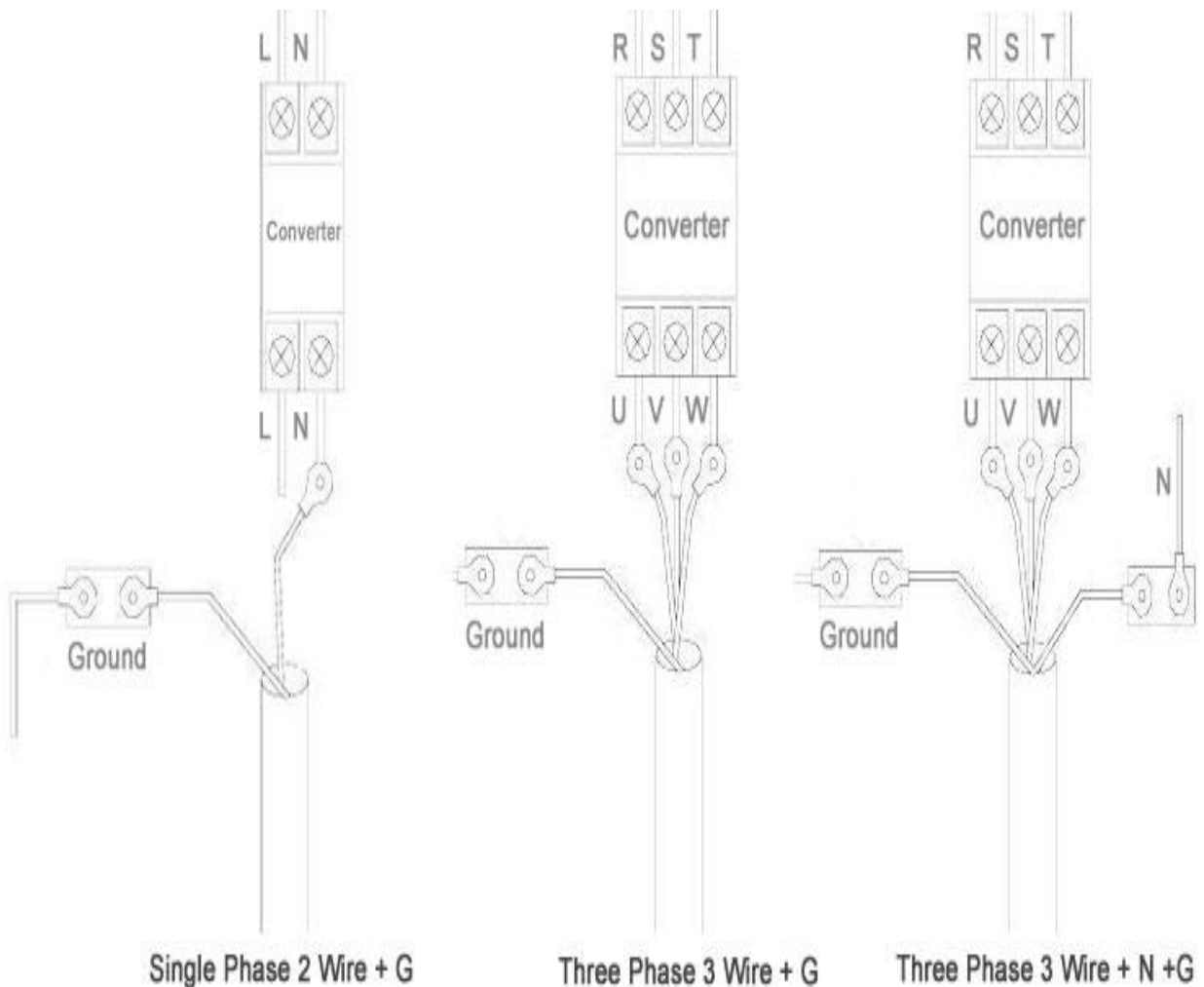
WARNING

Incase the voltage between Neutral and Ground is greater than 5V.or computer specified tolerance, please check and re-install the AC Power Source/Frequency Converter by a qualified electrical contractor

UTILITY POWER INPUT

UTILITY POWER INPUT

UTILITY POWER INPUT



G.Operation Procedure

PRELIMINARY INSPECTION

Inspect for damage that may have occurred during shipment. If any damage is noted, please contact your dealer without any hesitation. To have the unit run smoothly, please confirm the following requirements prior to operation:

1. Assure Breaker is at "OFF" status.
2. Verify all power connections are tight.
3. Verify all power wires and connections have proper spacing between exposed surfaces, phase-to-phase and phase-to-ground.
4. Measure with Digital Voltmeter all input and output voltage phase to phase, phase to line and line to line which voltage should be within the nominal range.

INITIAL SYSTEM OPERATION

When the above requirements have been approved, follow the start-up procedure listed below.

1. Put ON the input Circuit Breaker. Use Digital Voltmeter to measure the input voltage is consistent with the requirements of the unit.
2. Put Off the Input Circuit Breaker. Connect the load into the output end.
3. Tune the Ten-turn Output Voltage Adjustment Knob counter-clockwise to ZERO.
4. Set Output Voltage Select switch to the Low or High voltage position. (Low range: 0V-150V per phase; High range: 0V-300V per phase)
5. Set Output Frequency Counter to the required output frequency.
NOTE: When setting 1xx.x frequency, be sure to press OFF/RESET button first; after that, power it on.
6. Put on the Input Circuit Breaker, Press Power ON button at the front panel. All LED Meters will display digital figures.
7. Put the Output Power Switch to the ON position.
8. When overload/short circuit, the unit will auto shutdown and buzzer alarm to protect the load. After troubleshoot the problems, press Power OFF/RESET button to restart.
9. Press OFF/RESET button to cut off output voltage.

H.How to ask end users describe faulty status?

1. Model No.&Serial No.
2. Does the input Power Switch power ON?
3. Does the Mains Power normal?What's the Input Voltage?
4. How many Output Panel Meters are lighted?
5. What's the Readings on Front Panel Meter?
 - Output Frequency
 - Output Voltage?
 - Output Ampere?
 - Output Wattage?
6. Measure Output Socket or Terminal Block to get Output Voltage.
7. Measure Output Peak Current.
8. Under what circumstances the unit is malfunction?
 - What Load?
 - How long has it been worked since turn on?
 - Are there any Abnormally factors(output factors) occurred during operation? For example, transient power brown out or power failure; thundering; or bulb is flashing.
 - Operating Environment?

The unit does not require any routine maintenance. However, reasonable care of the unit will extend its life. The following preventive and periodic measures are recommended:

PRECAUTIONS

Keep all liquids away from the unit. Accidental spillage of liquid into the unit can cause severe damage.

Do not block the air flow around the unit. Do not place tools, or other heavy equipment on top of the unit.

Special care should be taken to protect the unit if it is used in an unfriendly environment such as a machine shop, a dusty or sandy area, etc.

PERIODIC MAINTENANCE

Cleaning the unit is the most important action the user can perform. The frequency of cleaning is dependent upon the environment.

Turn the power OFF.

Clean the case, covers and air flow openings with a soft cloth. Use any mild commercial cleaner as needed, insuring that no liquids enter the unit.

Visually inspect all wires/terminals for damage, wear, etc. Repair or replace any defective parts.

NOTE: Do not perform any maintenance on the unit while it is in operation.

J.Troubleshooting

Please pay attention to internal high voltage components, only qualified electricians can maintain the frequency converter.

Turn off the frequency converter before proceeding troubleshooting procedures if it's not necessary to do live troubleshooting.

Phenomenon	Inspection methods	Troubleshooting
No input power	<ol style="list-style-type: none"> 1. Input switch is turn on or not? 2. Input voltage is right or not? 3. The fuse is burn down or not? 	<ol style="list-style-type: none"> 1. Turn the power supply input switch. 2. Connect to correct voltage power supply. 3. Check the fuse and replace the fuse with same specification if necessary.
Output power outage	<ol style="list-style-type: none"> 1. Is it power off or momentary power off? 2. Is it overload? 	<ol style="list-style-type: none"> 1. Press the activate switch (ON) to reboot 2. Make sure the loads are within the frequency converter's capacity.
No output voltage	<ol style="list-style-type: none"> 1. Is the fuse burn down or not? 2. Is it overloaded? 	<ol style="list-style-type: none"> 1. Check the fuse and replace the fuse with same specification if necessary. 2. Replace a larger capacity frequency converter
Voltmeter, ammeter and power show "0" when the output frequency is normal.		<ol style="list-style-type: none"> 1. Turn the power switch to "OFF" position. 2. Change output voltage switch to zero. 3. Turn the power switch to "ON" position.
Voltmeter, ammeter and power show "0" and alarm rings when the output frequency is normal.		<ol style="list-style-type: none"> 1. Check and decrease the loads' current. 2. Press the shutdown/reset button (OFF/RESET) 3. Re-operation
High temperature	<ol style="list-style-type: none"> 1. Is it overload? 2. Cooling fan speed is slowdown or not to work 	<ol style="list-style-type: none"> 1. Decrease loads. 2. Replace a new cooling fan.
Emergency		<p>Please advise:</p> <ol style="list-style-type: none"> 1. Frequency converter model & serial number. 2. Date & Time of the failure. 3. Loads. 4. Detailed description of the failure.

L. Technical Specifications

◆ Characteristics

PHASE/MODEL		SINGLE/500VA~800KVA	THREE/3KVA~2000KVA
TYPE		IGBT/Pulse Width Modulation Type	
INPUT	Voltage (Select One)	1Phase2Wire:110V(2-5KVA) , 220V/230V/240V±10%	
		3Phase4Wire:Wye Type 190/110, 200/115, 208/120, 220/128, 230/132, 240/139V±10%	
		3Phase4Wire:Wye Type 380/220, 400/230, 415/240, 440/254, 460/265, 480/277V±10%	
	3Phase4Wire:Delta Type 220, 230, 240, 380, 400, 415, 400V±10%		
FREQUENCY(Select one)		380/220, 400/230, 415/240, 440/254, 460/265, 480/277V±10%	
OUTPUT	VOLTAGE	110V Setting (Low Range) : 0-150V	110V Setting (Low Range) : 0-260V
		220V Setting (Low Range) : 0-150V	220V Setting (Low Range) : 0-520V
	LOAD REGULATION	≤ ±1%	
	FREQUENCY	40Hz~499.9Hz (Program settings)	
	FREQUENCY STABILITY	≤ ±0.01%	
	DISTORTION	Pure Sine Wave • ≤2%	
	FREQUENCY METER	4LED Digital display.. Res 0.1Hz/Step	
	VOLTMETER	4LED Digital display.. Res. 0.1V	
	AMMETET	4LED Digital display.. Res. 0.1A	
WATTMETER	4LED Digital display.. Res. 0.1W		
PROTECTIER		Electronic Circuit/circuit Breaker for Overload,Over Temperature,Instant Cut off,Short Circuit	
WORKING ENVIRONMENT	AMB. TEMP	0-40 deg. C	
	HUMIDITY	0-90% (Non-condensing)	

◆ 1- Phase specifications

MODEL & CAPACITY	500VA	1KVA	2KVA	3KVA	5KVA	10KVA	15KVA	20KVA	30KVA	45KVA	
TYPE	IGBT/Pulse Width Modulation Type										
CURRENT	L=	4.2A	8.4A	16.8A	25A	41.6A	83.2A	125A	166.6A	250A	375A
UMIT:	H=	2.1A	4.2A	8.4A	12.5A	20.8A	41.6A	62.5A	83.3A	125A	188A
DIMENSION (W*D*H)	430*430*180			530*350*660			680*350*940			750*550*1220	
WEIGHT (KG)	20	25	45	55	67	110	160	210	300	420	

◆ 3-Phase input 1-Phase output Specifications

MODEL & CAPACITY	10KVA	15KVA	20KVA	30KVA	45KVA	60KVA	75KVA	90KVA	100KVA	120KVA	
TYPE	IGBT/Pulse Width Modulation Type										
CURRENT	L=	83.4A	125A	166.6A	250A	416.6A	500A	625A	750A	833.3A	1000A
UMIT:	H=	41.7A	62.5A	83.3A	125A	208.3A	250A	312.5A	375A	416.6A	500A
DIMENSION (W*D*H)	650*350*850			650*500*840			750*550*1220			800*600*1420	
WEIGHT (KG)	120	170	220	310	430	610	690	740	780	850	

◆ 3- Phase specifications

MODEL & CAPACITY	3KVA	6KVA	10KVA	15KVA	20KVA	30KVA	45KVA	60KVA	75KVA	100KVA	
TYPE	IGBT/PWM 脉波宽度调变方式										
CURRENT	L=	8.4A	16.8A	27.8A	41.6A	55.6A	83.4A	125A	166.6A	208.4A	277.8A
UMIT:	H=	4.2A	8.4A	13.9A	12.5A	27.8A	41.7A	62.5A	83.3A	104.2A	138.9A
DIMENSION (W*D*H)	650*500*940				750*550*1220			800*600*1420			
WEIGHT (KG)	145	170	195	240	310	385	470	680	740	890	

■ All specifications are subject to change without prior notice.

■ Custom-made specifications are acceptable.

保修卡 Warrnty Card

产品名称 Product Name		出厂编号 Product No	
购买日期 Purchase Date		发票号码 Invoice No	
用户名称 Customer Name		电话 Telephone	
保修说明 Warranty Description:			
<ul style="list-style-type: none">•在保修期内（1年），凡属于正常使用情况下由于产品质量问题引起的故障，本公司将负责给予免费维修。•During the period (1 year), any belongs to under normal usage Circumstance cause because of the product quality's problem of breakdown,out company will be responsible for giving free maintain			
<ul style="list-style-type: none">•本卡为保修凭证，请妥善保管。•The card for the warranty certificate,please reserve them carefully.			

