



HT/HD Series High Frequency Power Inverter

User Manual

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Note:

1. Please do not open the case, otherwise our company would not take the warranty issues;
2. It must be follow the installation instructions to install
3. Please keep the instructions for reference in anytime.
4. It is normally with certain heat during Industrial sine wave inverter power supply working. but it must be keep the installation environment are air cooling and clean and clean, especially not block the vents

Warning :

Please do not take down any shell or module from the power supply, it may occur fatal disaster or high-power voltage.

I . YKDA-HT/HD Series Model Notes

1. Please keep this manual for future use.
2. Please read this manual carefully at the first time, and install, operate and maintain as per the manual instructions.
3. AC input voltage of the series is 220V/50Hz, DC input voltage can be
4. 12VDC/24VDC/48VDC/110VDC/220VDC, please connect wires as per the instructions, avoiding the possible damage.
5. Please turn off the inverter and disconnect all cables before moving.
6. For avoiding hurting people and damage to inverter, please don't open cover by yourself.
7. Do not use it with overload which can affect inverter life.
8. Please put the inverter in the dry place, at least 10cm away from the wall.
9. Protecting from direct sunlight, rain and moisture.
10. Please put it far away from fire and high temperature.
11. Please do not put things on the top of inverter.
12. Please contact dealer or manufacturer service center for any problem, do not open the cover avoiding any further damage and risk.

II . Model Table

Chart1 : YKDA-HT/HD Series Table

	YKDA-HT 12 series	YKDA-HT 24 series	YKDA-HT 48 series	YKDA-HD 110 series	YKDA-HD 220 series
1000VA	YKDA- HT 12/220-1000L	YKDA-HT 24/220-1000L	YKDA- HT 48/220-1000L	YKDA- HD 110/220-1000L	YKDA-HD 220/220-1000L
2000VA		YKDA- HT 24/220-2000L	YKDA- HT 48/220-2000L	YKDA- HD 110/220-2000L	YKDA- HD 220/220-2000L
3000VA		YKDA-24 HT /220-3000L	YKDA- HT 48/220-3000L	YKDA- HD 110/220-3000L	YKDA- HD 220/220-3000L
4000VA			YKDA- HT 48/220-4000L	YKDA- HD 110/220-4000L	YKDA- HD 220/220-4000L
5000VA			YKDA- HT 48/220-5000L	YKDA- HD 110/220-5000L	YKDA- HD 220/220-5000L
6000VA			YKDA- HT 48/220-6000L	YKDA- HD 110/220-6000L	YKDA- HD 220/220-6000L
7000VA			YKDA- HT 48/220-7000L	YKDA- HD 110/220-7000L	YKDA- HD 220/220-7000L
8000VA			YKDA- HT 48/220-8000L	YKDA- HD 110/220-8000L	YKDA- HD 220/220-8000L
10000VA			YKDA- HT 48/220-10000L	YKDA- HD 110/220-10000L	YKDA- HD 220/220-10000L

III . YKDA-HT/HD Series Model Functions

1. With micro-CPU control, YKDA-HT/HD Series inverter is an intelligent model product, with good designing and reliability.
2. YKDA-HT/HD Series inverter is adopting SPWM technology, with the output of stabilized voltage and frequency, pure sine-wave.
3. YKDA-HT/HD Series inverter has good compatibility, built-in by-pass switch, high overload feature for reliable and continuous power supply.
4. YKDA-HT/HD Series inverter can be AC power type and DC power type:
 - AC power type means the city power supply is main when the city power is normal, when city power is off, inverter comes into work state.
 - DC power type means the inverter power supply is main when the city power is normal, when inverter power is off, city power comes into work state automatically.
5. With the excellent designing, YKDA-HT/HD Series inverter can be auto switched to bypass on the running state, its easy to maintain and replace the battery without effecting load power supply.
6. In case there is battery voltage high/low or overload, the overload warning shutdown output, when battery voltage recovers normal, battery voltage recovers; power supply output will auto recovers in 50 seconds after overload off. This function is very suitable for the communication station in which there is no person on duty.
7. YKDA-HT/HD Series inverter can support network communication system, power working state can be monitored by the supervision software.
8. YKDA-HT/HD Series inverter provides with two dry connectors which can be used for DC input fault checking and AC output problem warning.

IV . Model Introduction

YKDA-XX YYYY A/D I (ZZ/220) ↵

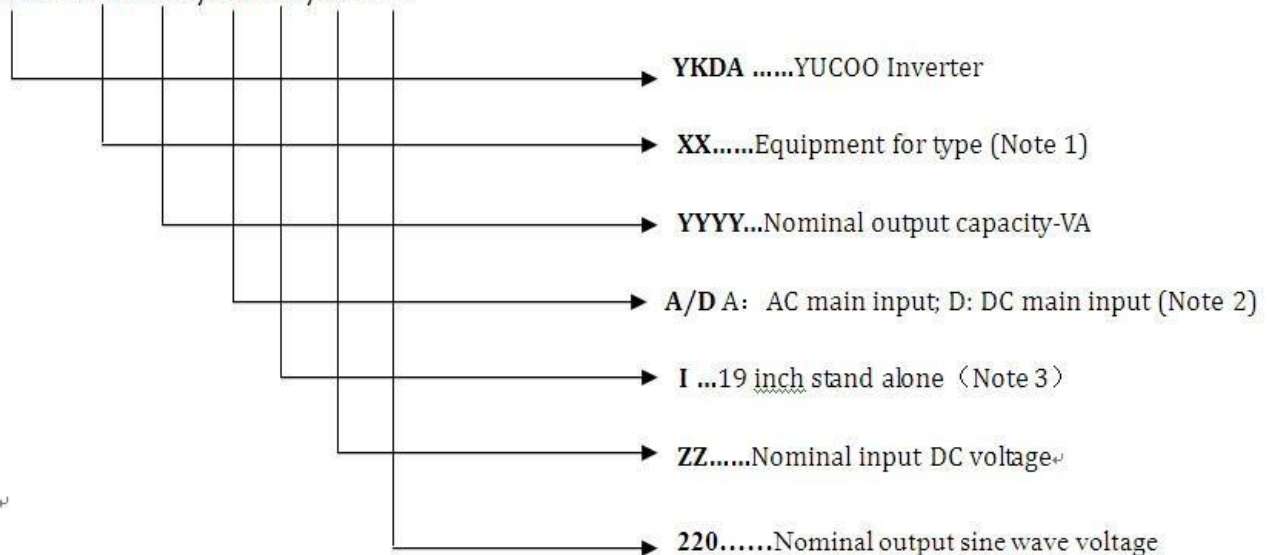
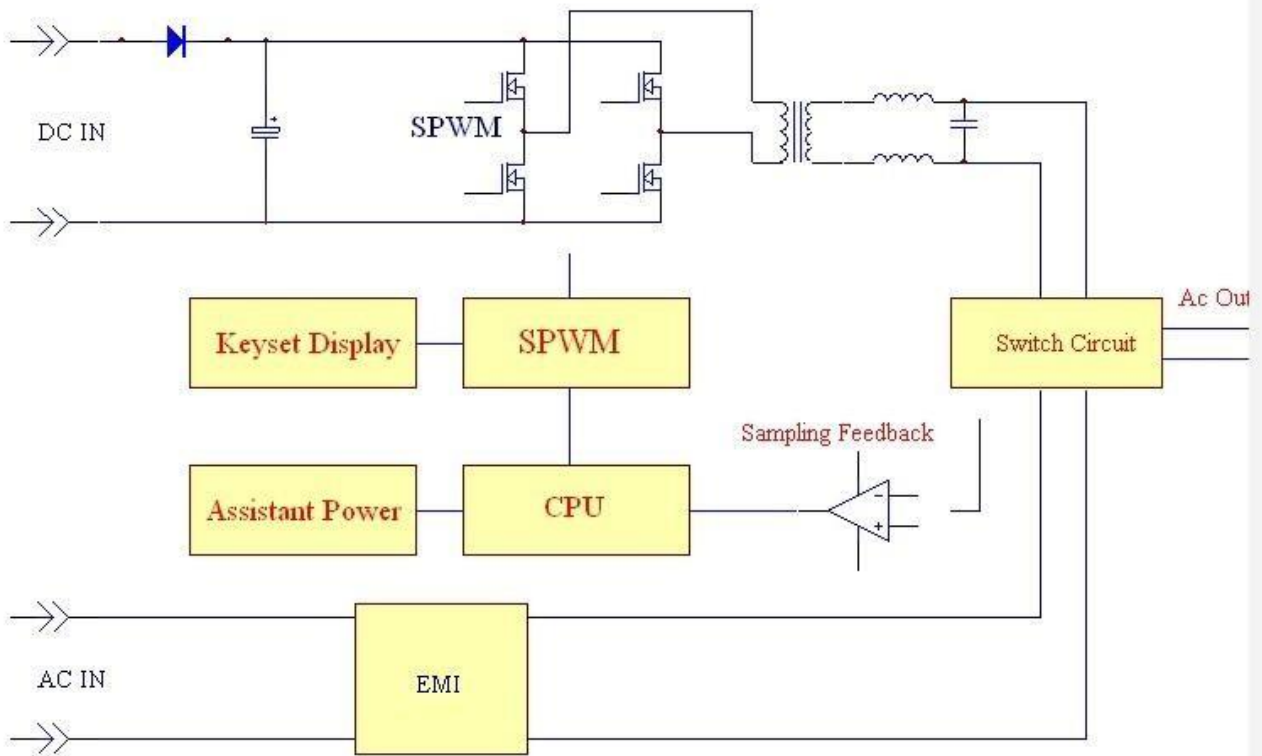


Figure1 : Inverter Function Diagram



V . YKDA-HT/HD Series Model Technical Specifications

Chart2 : YKDA—HT/HD Series Model Technical Specifications

Technical Specifications(VA)	500	1000	2000	3000	4000	5000	6000	7000	8000	10000
DC INPUT										
Input Voltage (Vdc)	See chart3									
Input current (A)	See chart3									
Input range of Voltage (Vdc)	See chart3									
Reverse Noise Current	≤10%									
AC Bypass										
Bypass Volt (Vac)	165V-285V									
Input Current (A)	2.3	4.5	9.1	13.6	18.2	22.7	27.3	31.8	36.4	45.4
Transfer Time (ms)	≤5ms									
AC OUTPUT										
Rated Capacity (VA)	500	1000	2000	3000	4000	5000	6000	7000	8000	10000
Output Power (W)	400	800	1600	2400	3200	3500	4200	4900	5600	7000
Voltage and Frequency	220Vac, 50HZ									
Output Current (A)	1.8	3.6	7.2	10.8	14.5	16	19.1	22.3	25.4	31.8
Voltage Precision (V)	220±1.5%									
Frequency Precision (Hz)	50±0.1%									
Output	Pure Sine Wave									
Wave Distortion (THD)	≤3%, linear load									
Dynamic Reaction Time (Load 0←→100%)	5% (load 0←→100%)									
Power Factor (PF)	0.8/0.7									
Overload	120%, 30 sec									
Inversion Efficiency (80% Resistant Load)	≥85%									
Transfer Time (ms)	≤5ms									
ENVIRONMENT										
Isolation (IN/OUT)	1500Vac, 1 min									
Noise (1m)	≤40dB									
Temperature	0℃~+40℃									
Humidity	0~90%, with no condensation.									
Sea Level (m)	≤1000									
SHOW										
LCD	I/P volt, O/P volt, frequency, O/P current, temperature, percentage									
LED	Mains & inversion available, battery under voltage, Output overload									
Protection Function:										
Input Low/High Voltage ; Output Overload/Shortage ; Reversed Input Connecting Protection										

Chart3 : YKDA—HT/HD Series Model INPUT VOLT、 Current、 Efficiency(+/-0.5~1V)

	YKDA-12 Series		YKDA-24 Series		YKDA-48 Series		YKDA-110 Series		YKDA-220 Series	
Input volt (Vdc)	12V		24V		48V		110V		220V	
Input range of DC (Vdc)	Normal Volt 9.8V—14.5V		Normal Volt 20V—30V		Normal Volt 42V--59V		Normal Volt 92V—132V		Normal Volt 190V—270	
	Start Volt 11V—13V		Start Volt 22V—28V		Start Volt 45.5V—57V		Start Volt 101V—127V		Start Volt 207V—260V	
Rated Input Current (A)	1000VA	83	1000VA	42	1000VA	21	1000VA	9	1000VA	5
			1500VA	63	1500VA	31	1500VA	14	1500VA	7
			2000VA	83	2000VA	42	2000VA	18	2000VA	9
					3000VA	63	3000VA	27	3000VA	14
					4000VA	83	4000VA	36	4000VA	18
					5000VA	104	5000VA	45	5000VA	23
					6000VA	125	6000VA	55	6000VA	27
					7000VA	146	7000VA	64	7000VA	32
					8000VA	167	8000VA	73	8000VA	36
				10000VA	208	10000VA	91	10000VA	45	

NOTE :

1. Inverter for 220V,0.5-2KVA off point:192-270V; 3-6KVA off point :180-270V.
2. The scope of points may have some deviation as per the testing Instruments
3. The current in the table will be for reference of current distribution only.

Remarks:

1. To maintain the battery, the inverter will start only when the battery voltage is within the starting voltage scope.
2. When entering into the working state, as long as the battery voltage is within the scope of turn-off voltage, the inverter can work properly. There will be a low-voltage alarm when the battery voltage drops to the lower limit, if below the power-off voltage, the inverter will power off automatically.

VI . YKDA-HT/HD Series Model Use Instruction

● Installation

1. Open the package and check accessories (1-pc AC Input Cable and 1 Manual)
2. Choose a clean and ventilation area.
3. Make sure DC voltage and battery voltage are inverter required.
4. Check the power Positive and Negative line.
5. Connecting Positive Cable with the terminal DC48V“+” on the back panel, and negative Cable with the “-”.
6. Connecting AC input L/N/G with AC Input terminals L/N/G.(AC Ground must be connected into ground area)
7. Connecting load cables with AC output terminals L/N/G.

● Start

1. Make sure that input DC and AC output cables are right connected.
2. Turn on DC input switch.
3. Put the start switch on “I”, inverter comes into the state of self-inspection, showing inverter is on.



Notes:

Self-inspection-----Before the output is delivered, the inverter will check the related parts and system state. When the all meters of inverter is in normal, the inverter will be in working status of power supply and inversion. This checking takes about 10 seconds, indication LED lights from left to right two times during this period.

● Power off

Power off: Press the “SWITCH” button, all of the LED indicator lights at the same time, then darken, and the inverter will power off.










● Sound off

If the inverter power occur some fault at the working time, the system will have a sound alarm, and the sound alarm can be muted by the Mute button  , the mute button  is the touch type.

Continue to press the mute button (about 3 seconds), the alarm sound will be shut down, press the mute button again (about 3 seconds), the alarm sound will be turned on. The same alarm won't work automatically if muted, and when another alarm happens, the system will turn on the sound alarm automatically, regardless the mute button is turned on last time.

VII . YKDA-HT/HD Series Maintenance Information

● Figures

ON/OFF button-- (SWITCH)		Upturning menu button	
“mains electricity”LED, green		Down turning menu button--	
“Invertion” LED, blue		backspace and enter key	
“Battery Fault” LED, red-		“Load fault”LED, red	
Mute button			

● Dry contact pin definitions (optional content)

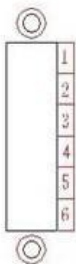
	12pin	DC input fault
	34pin:	inverter output fault
	56pin:	AC input fault

Chart4 : LED Lights and Indication

Status Item	Output	Out Type	Mains supply Green	Invertion Blue	Batter y Red	Load Red	buzzer		Remarks
1	Starting Self Test	Yes(mains)	→Light	→Light	→Light	→Light	Mute with 5 sound	One sound three sec	BAC12 A
		No (no mains)					Mute with 3 sound		
2	Self-test Battery fault	Yes(mains)	Dark	Light	Blink	Dark	scream		
		No (no mains)							
Mains available	Mains normal	Yes	Mians	Light	Dark	Dark	Dark	No	
4	Mains	Yes	inversio	Dark	Light	Dark	Dark	No	

	fault Change to inversio n		n					Mute after 4 seconds	BAC12 A
5	DC Voltage Low	Yes(Lowe r than starting voltage)	inversio n	Dark	Blink	Dark	Dark	three seconds One sound	
								two seconds One sound	BAC12 A
6	DC Starting Voltage Low	No(Lowe r than starting voltage)	No	Blink	Blink	Blink	Blink	three seconds One sound	
				Dark	Dark	Dark	Dark	mute	BAC12 A
7	DC input Voltage high	Yes(main s)	Mains	Light	Dark	Dark	Dark	No	
								three seconds One sound	
		No (no mains)	No	Blink	Dark	Blink	Dark	one second One sound	
								three seconds One sound	
Yes(main s)	No	Blink	Dark	Dark	Blink	scream	BAC12 A		
No (no mains)									
8	Inversio n output fault (output volt overtop or too low)	Yes(main s)	Mains supply						
		No (no mains)	No	Dark	Blink	Blink	Dark	scream	
9	Overload alarm of mains supply	Power off after 3 min	No	Light	Dark	Dark	Light	one second One sound	
10	Overload alarm of Inversio n State	Power off after 30 seconds	No	Dark	Light	Dark	Light	one second One sound	
11	Overload shutdow n	No	No	Dark	Dark	Blink	Light	scream	

12	Shortage Shutdown	No	No	Light	Light	Blink	Light	scream	
13	Inversion Wave Fault	Yes(mains)	Mains supply	Blink	Blink	Blink	Dark	scream	
		No (no mains)	No						
14	DC off	Yes(mains)	Mains supply	Light	Dark	Blink	Dark	Three seconds one sound	
				Light	Dark	Dark	Dark	No	

Remark:

Some special indicator lights and alarm info are a little different from the actual situation, this won't affect working status. plz contact the technician

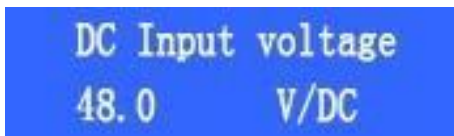
VIII . YKDA-HT/HD Series LCD display menu Information

The system can monitor the input and output voltage, input and output frequency, load rate and the device temperature, by monitoring the technical parameters of the machine, suitable for current time recording to get the quick recording and monitoring of the load and machine operating status.

1、2Uinverter LCD displaythe content

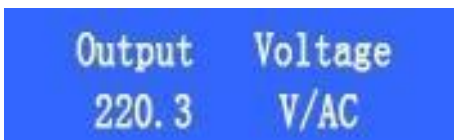
A、 Show company name: (For example)

B、 DC input voltage: (For example)



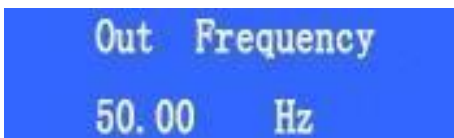
DC Input voltage
48.0 V/DC

C、 inversion output voltage: (For example)



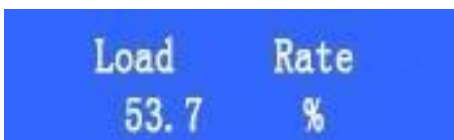
Output Voltage
220.3 V/AC

D、 show inversion output frequency: (For example)



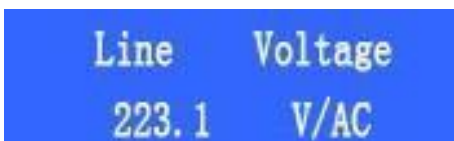
Out Frequency
50.00 Hz

E、 The percentage of the total load(For example) F



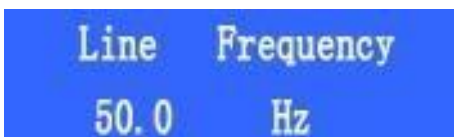
Load Rate
53.7 %

、 Mains output voltage: (For example)



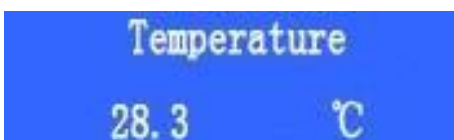
Line Voltage
223.1 V/AC

G、 Mains output frequency: (For example)



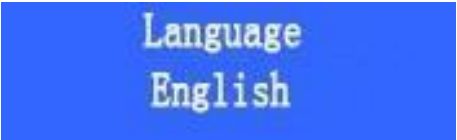
Line Frequency
50.0 Hz

H、 device temperature(For example)



Temperature
28.3 °C

I : Language display (For example)



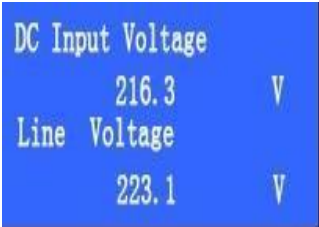
Note: English is the default language

2、4Uinverter LCD display content:

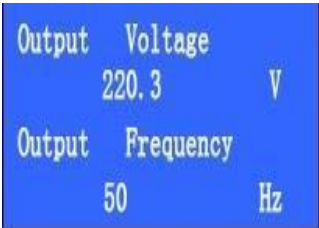
A、 company name and the model type(For example)



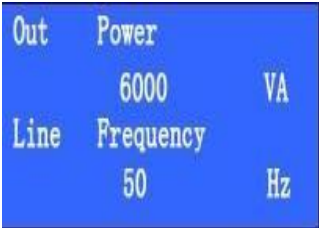
B、 DC voltage and mains voltage(For example) C、



output voltage and frequency(For example) D、



output power and mains frequency(For example) E、



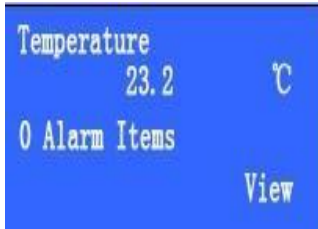
working mode(For example)



F、 sound control(For example)



G、 inner temperature and alarm(For example)



F、 Language: Chinese and English(For example)



3. Cycle LCD screen can flip,scroll upturning button and downturning keyboard press the upturning button when standby,the first show will be:

Language → Temperature → and so on

IX . YKDA-HT/HD Series Model Mechanical Information

Figure1: 1~2KVA LCD display case front view and installation dimension (2U/19 inch rack-mounted)

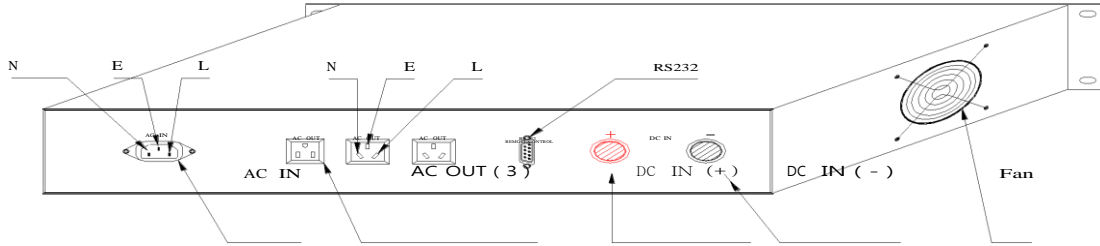


Figure2 : 1~2KVA LCD display case back view wiring diagram(2U/19 inch rack-mounted wiring row type)

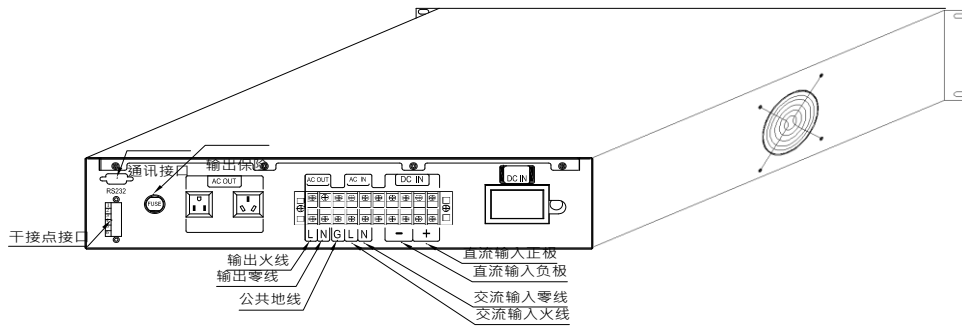


Figure3 : 3~5KVA LCD display case front view and installation dimension(2U/19 inch rack-mounted)

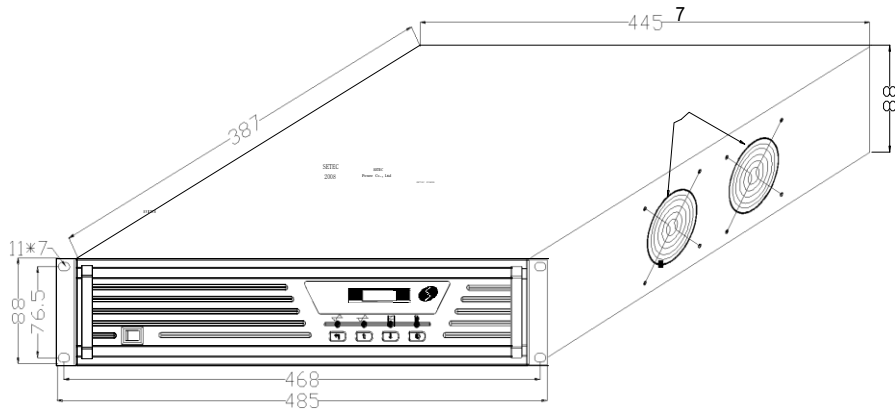


Figure4 : 3~5KVA LCD display case back view wiring diagram(2U/19 inch rack-mounted wiring row type)

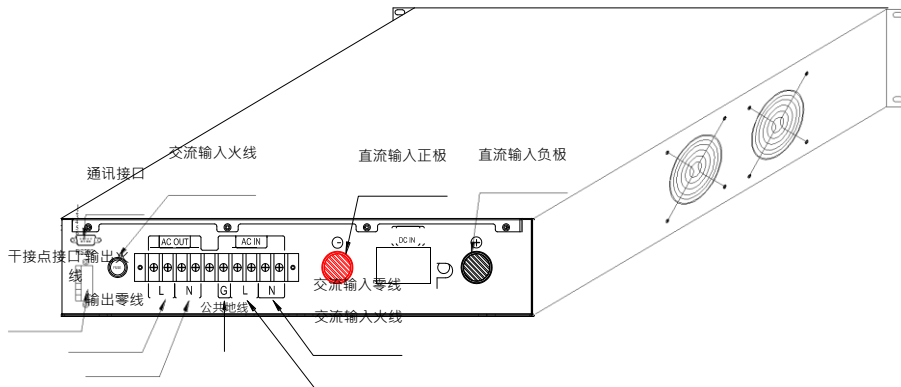


Figure5 : KVA LCD display case front view and installation dimension(4U rack-mounted)

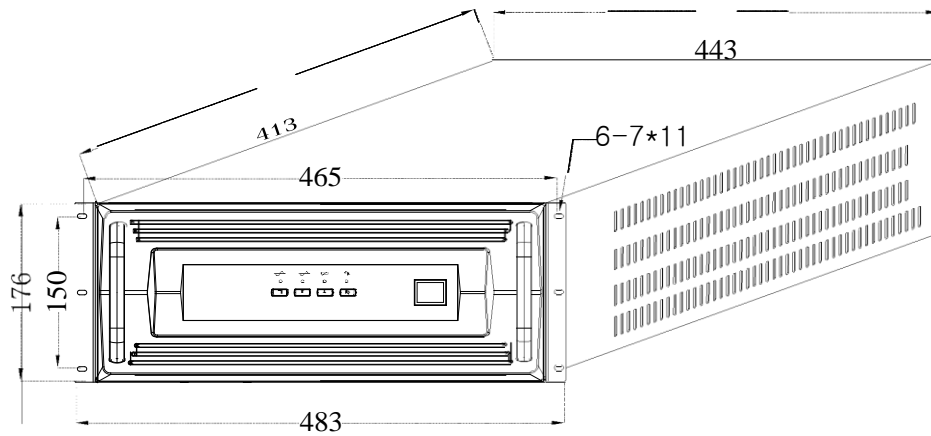


Figure6 : LCD display case back view wiring diagram(4U rack-mounted)

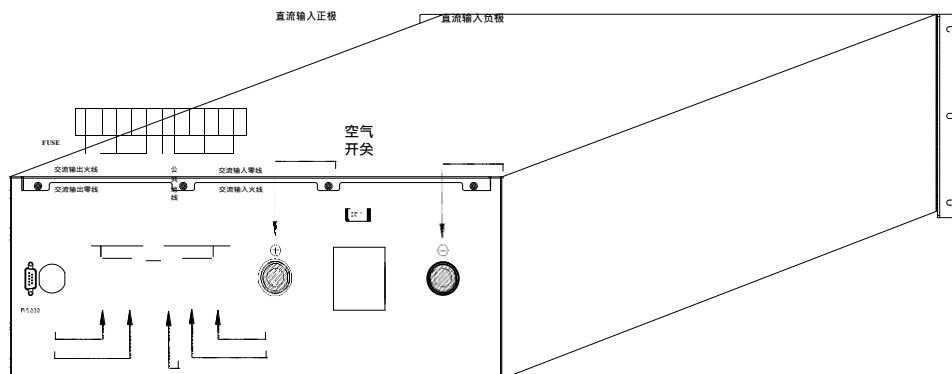


Figure7 : LCD display case front view

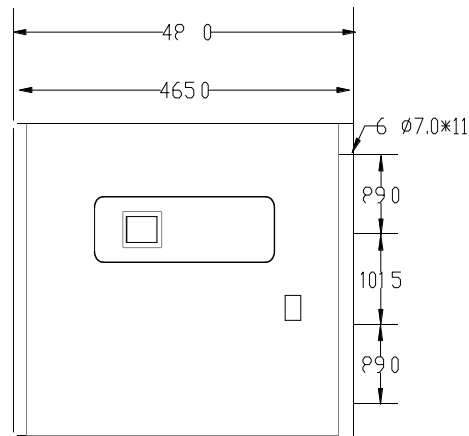


Chart5 : Mechanical information

Power	IVS12 Series	IVS24 Series	IVS48 Series	IVS110 Series	IVS220 Series	Weight
1000VA	A	A	A	A	A	11Kg
2000VA		A	A	A	A	12kg
3000VA		B	B	B	B	14Kg
4000VA			B	B	B	14.5Kg
5000VA			B	B	B	15Kg
6000VA			C	C	C	16Kg
7000VA			D	C	C	17Kg
8000VA			D	C	C	18Kg
10000VA			D	C	C	20Kg

A : 482 (W) ×88 (H) ×250 (D) mm

B : 482 (W) ×88 (H) ×300 (D) mm

C : 482 (W) ×88 (H) ×380 (D) mm

D : 175 (W) ×275 (H) ×452 (D) mm

E : 222 (W) ×328 (H) ×452 (D) mm

X . Attached Accessories

1. 1-pc cable for AC input. (3000VA is not included) ;
2. 1-pc of User Manual

XI . Guarantee

After the day of buying the equipment, non man-made failure, there is 1 year guarantee

If there is failure please contact with the sellers

The following no included in the guarantee:

- * Man-made failure or out of guarantee period or disassemble the cabinet or cover of inverter without permission
- * The failure or broken cause by Force Majeure or external reason
- * Misapplication, accident, neglect, amendment or repair without permission
- * Use goes beyond the limit
- * Break the operation instruction

Guarantee Card				
Product name			Product NO.	
Product model			Purchase time	
Remark :				
Purchase company				
Contact person			Telephone	
Distributor				
Maintain Record				
Date	Maintain type	Summery	Maintenance man signature	User signature