# RACK MOUNT HIGH FREQUENCY INVERTER

EFFICIENT AND COMPLETE POWER SOLUTION

------Designed for Industrial Application



- ---Pure sine wave
- ---High Frequency inversion
- ---Rack-mount cabinet type, 2U 19 inch
- ---RS485/RS232/Dry Contact Communication
- ----Double input & regulate AC-AC

# Introduction

### **Description**

Pure sine wave inverter is a new generation of dual input inverter solution designed for the field of communication applications, which is suitable for the high reliability of the communication system. The solution is equipped with 220AC power supply and a 110VDC power supply, which fills the gap between the traditional UPS power supply and common pure sine wave inverter solutions.

It uses a novel design structure that helps users to provide clean, stable and durable AC power for critical loads, and has the same high reliability as the DC power supply system. The design characteristics of the dedicated communication pure sine wave inverter ensure the seamless conversion between the AC and DC power supply, almost no conversion delay, and no need to use the static switch.

#### **Feature**

- True sine wave output (T.H.D < 3%)
- Large 128\*64 digital Lcd display data information, 4 led display working,;
- Standard 19" Rack mount case
- 5 Routes Dry contact for system (DC input fault, AC input fault, overload information, by-pass information and output fault)
- RS232 and RS485 & Optional SNMP communication Port
- Power-on self-test, Soft output start
- Auto switch function: DC to AC, AC bypass, less than 5ms;
- By-pass AC220V input filtering;
- Real-time monitoring of the system operating status;
- Audible and visual alarm;
- Record the historical alarm message and can be queried;
- Start auto restart while Ac or Dc is recovering;
- Automatic start temperature control fan;
- Build in voltage regulator Stabilize AC voltage;
- Maintenance bypass /DC available;
- Protection :Short load protection, over load protection, battery over/under voltage protection,
  over current, over temperature
- Unattended operation: the system switches automatically to provide AC Power to the load between the DC input and AC input;

# **Application**



- 8.City WIFI device
- 9. Emergency communication car

**POWER FROM 1-10KW** 

- 10. Railway & metro
- 11. Distributed Antenna Systems
- 12. Marine & offshore
- 13. Building Management Systems
- 14. Fire Alarm Systems

- 1. Telecom station/base/ Cable Equipment
- 2. Communication Station.
- 3. Computer data center
- 4. SCADA Networks and Data Equipment
- 5. Phone /cell base
- 6. Radio Base stations/ Cell Sites
- 7. Monitoring center room



MAXIMIM PROTECTION IN THE CORPORATED ENVIRONMENT



- **RAILWAY**
- 15. power utilities System Control /field
- 16. power plant/station
- 17. Power monitoring system
- 18. Solar power system
- 19.Wind energy system

Technica	l Paramet	ers HF Rackmoun	t Inverter	110Vdc to	<mark>220V serie</mark> s	5					
Technical Index(VA)			1KVA	2KVA	3KVA	4KVA	5KVA	6KVA	8KVA	10KVA	
INPUT	110Vdc input Max current (A)		9.09A	18.18A	27.27A	36.36A	45.45A	51.54A	72.72A	90.9A	
	Voltage Range 104Vdc—131Vdc		Rate Voltage 110Vdc, Power off voltage≤90Vdc, ≥135Vdc								
	Voltage Rage		180Vac~265VAC								
	By-pass	Rate Voltage	220Vac								
		Current(A)	4.54A	9.09A	13.63A	18.18A	22.72A	27.27A	36.36A	45.45A	
	By-pass Transient time <8ms										
	frequency		60Hz/50Hz								
	Rated output Power(W)		800W	1600W	2400W	3200W	4000W	4800W	6400W	8000W	
	Rated Output current(A)		3.63A	7.27A	10.9A	14.54A	18.18A	21.8A	29.09A	36.36A	
	Output Voltage		220Vac(±10V)Adjustable LCD display								
	Output Voltage precision (V)		220V±1.5%								
AC OUTPUT	Power factor		>0.8								
	Inversion efficiency (80%)		≥85%(80% liner Load)								
	Over load		100%-120% 60s ,121%-150% 10s								
	Dynamic response time		Dynamic response time: < 5% Vnom for load change 0% to 100%, transient time < 5ms								
	Waveform		Pure sine wave								
	By-pass Switch time		<10ms								
	Output Frequency precision		60Hz/50Hz±0.1%								
	Output Frequency		50-60Hz(auto sync with bypass input)								
	THD		≤3%								
Dimensions			482/347/88mm W/D/H 2U 482/430/88mm W/D/H 2U 482/470/176mm W/D/H							nm W/D/H 4U	

# **Technical Parameters**

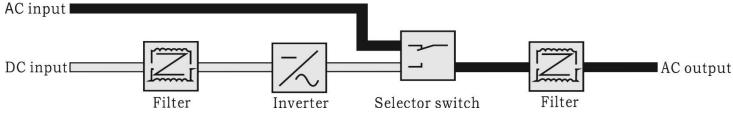
Technical Index(VA)		1KVA	2KVA	3KVA	4KVA	5KVA	6KVA	8KVA	10KVA	
Protection	Internal Protection	Overload /Over temperature /Short circuit protection, Input ac voltage limit protection ,Reverse polarity on dc input side								
	Input DC Voltage Alarm	Battery Under-voltage,								
	LCD Audible and visual alarm	false Red LED light and Beebe								
	Temperature	Temperature control fan								
	Alarm record	standard is 1000 events (alarms), minimum is 100								
Interface	5 Routes Dry relay contact	For remote indication of alarm / shut down conditions								
	RS232& RS485	Both of available, For remote operation and monitoring								
	Option	SNMP								
Dielectric strength	between output and input	3500Vdc/10mA//1min . No flashover, no breakdown								
	between input and chassis	3500Vdc/10mA//1min . No flashover, no breakdown								
	between output and chassis	750Vdc/10mA//1min. No flashover, no breakdown								
Working Environment	Noise(1m)	≤40dB								
	Operating Environment Temperature	-20~+50°C								
	Operating Altitude (m)	Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m								
	Humidity	595%, non condensing								
COMPLIANCE	LVD	EN 60950-1								
	EMC/EMI	EN 61000-6-3; EN 61000-6-1 ;IEC 61000-6-2 and IEC 61000-6-4								
	Rohs	IEC 62321-4 , IEC 62321-5,IEC 62321-6,IEC 62321-7,IEC 62321-8								
Cooling	Temperature control & Force Cooling	2Fai	ns	4 Fans		6Fans		4 F	ans	
Color	Black /Customizable									

# **Inverter Management software**



#### **AC** power supply mode

Namely AC inverter working mode: the inverter employs mains for load when there is mains and switches to inverter working mode when the mains is abnormal.



AC input [

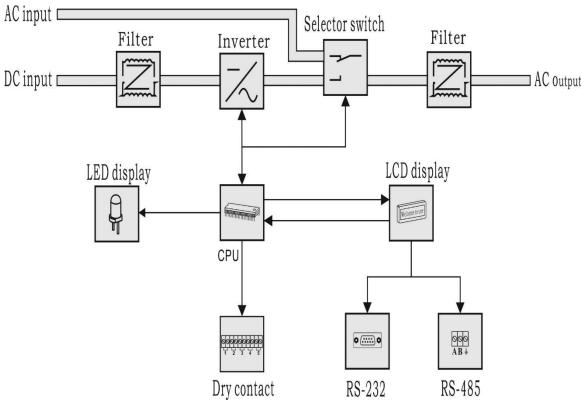
DC input

Filter

### DC power supply mode

Namely DC-dominated inverter working mode: under normal condition, DC-dominated inverter is under inverter output status all the time; in case of DC fault, it switches to mains by-pass.

#### Hardware structure and working principle



Selector switch

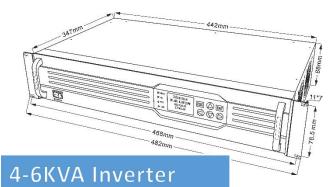
Inverter

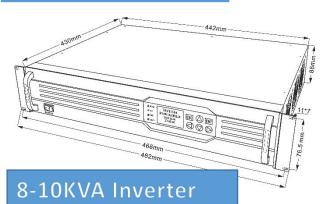
■AC output

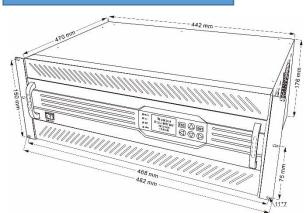
Filter

#### Appearance

# 1-3KVA Inverter

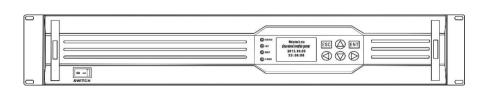




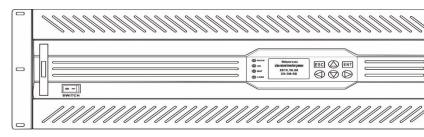


### **Front Panel**

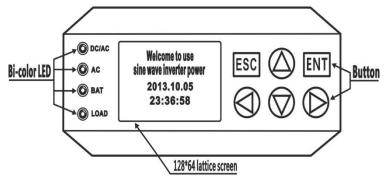
#### 1-6KVA



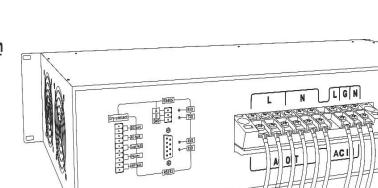
#### 8-10KVA



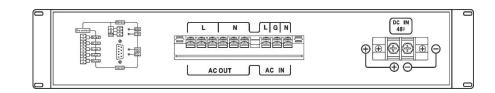
# LCD Display



# Connecting cable



## **Back Panel**



# **Live Photos**









Bwitt reserves the right to change the specification without notice Created: 23.04.2005/ Updated: 27.April.2019 .