

PURE SINE WAVE POWER SINUS INVERTER

VOLT POLSKA



GENERAL INFO

Pure Sine Wave **POWER SINUS** Inverter/Charger is a combination of an inverter, battery charger and AC auto-transfer switch into one complete system with a peak DC to AC conversion efficiency of 88%.

It is packed with unique features and it is one of the most popular and affordable inverter/chargers in the market today.

It features power factor corrected, sophisticated multi-stage charging and pure sine wave output with unprecedentedly high surge capability to meet demanding power needs of inductive loads without endangering the equipment.

The powerful battery charger of **POWER SINUS** Inverter/Charger goes as high as 120 Amps (varying on different models), and with power factor corrected, it uses 20-30% less energy from AC input than a standard charger, avoiding nuisance breaker trips or generator overloads.

The overload capacity is 300% of continuous output for up to 20 seconds to reliably support tools and equipment longer.

The idle consumption of the line is low, roughly 4% of its rated power.

These special features make this line compete very well with its high frequency counterparts.

The AC/Battery priority switch and auto generator start functionality make it ideally suitable to work in either backup power or renewable energy applications.

In AC priority mode, when AC power cuts off (or falls out of acceptable range), the transfer relay is de-energized and the load is automatically transferred to the Inverter output. Once the qualified AC power is restored, the relay is energized and the load is automatically reconnected to AC utility.

When customized to Battery Priority Mode via a DIP switch, the inverter will extract maximum power from external power sources in renewable energy systems and a minimal cycle of battery will be required. With the availability of auto generator start, an electrical generator can be integrated into the system as back up and started when the battery voltage goes low.

With audible buzzer and a remote LED display, the inverter gives the users comprehensive information of the operation status, making it easier for maintenance and troubleshooting.

APPLICATIONS

- **Power tools** – circular saws, drills, grinders, sanders, buffers, weed and hedge trimmers, air compressors.
- **Office equipment** – computers, printers, monitors, facsimile machines, scanners.
- **Household items** – vacuum cleaners, fans, fluorescent and incandescent lights, shavers, sewing machines.
- **Kitchen appliances** – coffee makers, blenders, ice makers, toasters.
- **Industrial equipment** – metal halide lamp, high – pressure sodium lamp.
- **Home entertainment electronics** – television, VCRs, video games, stereos, musical instruments, satellite equipment.

MAIN FEATURES

1. High overload ability up to 300% of rated power (20 sec)
2. Low quiescent current, low power “Power Saving Mode” to conserve energy
3. Automatic Generator Start
4. 4-step intelligent battery charger, PFC (Power Factor Correction) for charger
5. 8 pre -set battery type selector switch plus de sulphation for totally flat batteries
6. Powerful charge rate of up to 120 Amp, selectable from 0%-100%
7. 10ms typical transfer time between battery and AC, guarantees power continuity
8. Smart LED remote control panel
9. AC voltage regulation available
10. 15s delay before transfer when AC resumes, extra protection for loads when used with generator
11. Allows start up and through power with depleted batteries
12. Multiple controlled cooling fans
13. Extensive protections against various harsh situations
14. 13VDC battery recovery point, dedicated for renewable energy systems

Electrical Specifications									
	Model	1KW	1.5KW	2KW	3KW	4KW	5KW	6KW	
Inverter Output	Continuous Output Power	1000W	1500W	2000W	3000W	4000W	5000W	6000W	
	Surge Rating(20s)	3000W	4500W	6000W	9000W	12000W	15000W	18000W	
	Capable of Starting Electric Motor	1HP	1.5HP	2HP	3HP	4HP	5HP	6HP	
	Output Waveform	Pure Sine wave/Same as input(Bypass mode)							
	Peak Efficiency	88%							
	Line Mode Efficiency	>95%							
	Power Factor	0.9-1.0							
	Nominal Output Voltage rms	100-110-120Vac / 220-230-240Vac							
	Output Voltage Regulation	±10% RMS							
	Output Frequency	50/60Hz ± 0.3Hz							
	Short Circuit Protection	Yes, Current Limit Function (Fault after 1sec)							
	Typical transfer Time	10ms(Max)							
THD	< 10%								
DC Input	Nominal Input Voltage	12.0Vdc (*2 for 24Vdc, *4 for 48Vdc)							
	Minimum Start Voltage	10.0Vdc							
	Low Battery Alarm	10.5Vdc / 11.0Vdc							
	Low Battery Trip	10.0Vdc / 10.5Vdc							
	High Voltage Alarm & Fault	16.0Vdc							
	High DC Input Recovery	15.5Vdc							
	Low Battery voltage recover	13.0Vdc							
	Sleep Mode Threshold	> 25 W when Power Saver On							
Charge	Input Voltage Range	Narrow: 100~135VAC / 194~243VAC; Wide: 90~135VAC / 164~243VAC;							
	Input Frequency Range	Narrow: 47-55±0.3Hz for 50Hz, 57-65±0.3Hz for 60Hz Wide:43±0.3Hz plus for 50Hz/60Hz							
	Output Voltage	Depends on battery type							
	Charger Breaker Rating(230Vac)	10A	10A	10A	20A	20A	30A	30A	
	Charger Breaker Rating(120Vac)	10A	20A	20A	30A	40A	N/A	N/A	
	Max Charge Rate	See specific charge rates in "AC Charger" section							
	Over Charge Protection Shutdown	15.7V for 12Vdc (*2 for 24Vdc, *4 for 48Vdc)							
	Battery type	Fast Vdc				Float Vdc			

	Gel U.S.A	14				13.7			
	A.G.M 1	14.1				13.4			
	A.G.M 2	14.6				13.7			
	Sealed Lead Acid	14.4				13.6			
	Gel Euro	14.4				13.8			
	Open Lead Acid	14.8				13.3			
	Calcium	15.1				13.6			
	De-sulphation	15.5 for 4hrs							
	Remote Control	Yes. Optional							
Bypass & Protection	Input Voltage Waveform	Sine wave (Grid or Generator)							
	Nominal Voltage	120Vac				230Vac			
	Low Voltage Trip	80V/90V±4%				184V/154V±4%			
	Low Voltage re engage	90V/100V±4%				194V/164V±4%			
	High Voltage Trip	140V±4%				253V±4%			
	High Voltage re engage	135V±4%				243V±4%			
	Max Input AC Voltage	150VAC				270VAC			
	Nominal Input Frequency	50Hz or 60Hz (Auto detect)							
	Low Freq Trip	Narrow: 47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz							
		Wide:40±0.3Hz for 50Hz/60Hz							
	Low Freq re engage	Narrow: 48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz							
		Wide:45±0.3Hz for 50Hz/60Hz							
	High Freq Trip	Narrow: 55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz							
		Wide: No up limit for 50Hz/60Hz							
	High Freq re engage	Narrow: 54±0.3Hz for 50Hz, 64±0.3Hz for 60Hz							
		Wide: No up limit for 50Hz/60Hz							
Output Short circuit protection	Circuit breaker								
Bypass breaker rating (230Vac)	10A	15A	20A	30A	30A	40A	40A		
Bypass breaker rating (120Vac)	20A	20A	30A	40A	50A	N/A	N/A		
Mechanical Specification	Mounting	Wall/Ground mount							
	Inverter Dimensions(L*W*H)	382*218*179mm		442*218*179mm		598*218*179mm			
		15*8.5*7"		17.5*8.5*7"		23.5*8.5*7"			
	Inverter Weight	16KG	17KG	20KG	24KG	35KG	44KG	45KG	
		35.27lbs	37.48 lbs	44.1 lbs	52.91 lbs	77.16 lbs	97 lbs	99.21 lbs	
Shipping Dimensions(L*W*H)	530*325*315mm		595*330*320mm		800*360*350mm				

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	20.75*12.75*12.5"		23.5*13*12.5"		30.5*14.25*13.75"		
Shipping Weight	18KG	19KG	22KG	26KG	37KG	46KG	47KG
	39.68 lbs	41.89 lbs	48.51 lbs	57.32 lbs	81.57 lbs	101.41 lbs	103.61 lbs
Display	Status LEDs						