

POWERSTAR IR[®] INVERTER

Low Frequency Inverter
 Pure sine wave combined inverter & charger



**COPPER
 TRANSFORMER**



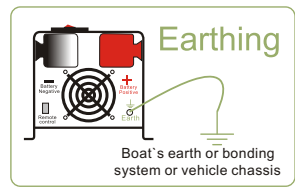
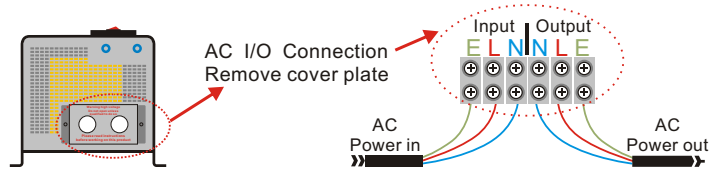
IR SERIES INVERTER 1KW-6KW

FEATURES

- Soft start capability for starting heavy loads
- Durable construction for long life under extreme environmental conditions
- Low idle current (less than 1 watt) conserves energy when no loads are present
- Built-in starting control circuits for two- and three-wire generator starting systems
- Simplified controls with a snap-on cover that protects settings from being accidentally changed
- Better thermal performance allows full output power to 50° C (122° F) without de-rating
- High surge capacity starts more difficult loads and handles overload conditions reliably
- Durable powder coated, corrosion resistant steel chassis
- New digital display shows kilowatts (kW) when inverting and amps (A) when charging, plus incorporates a robust ON/OFF switch and status indicators
- 70-amp automatic three-stage battery charger (bulk, absorption, and float) and battery equalization with remote temperature sensor for increased performance
- New power factor corrected (PFC) charging, combined with a more sophisticated multi-stage battery charging algorithm, reduces electricity draw and generator run-time

WHAT CABLE TO USE in mm²:

A charger or inverter	cable run distance 0-1.5m	cable run distance 1.5-4.0m
125-180 A	50 mm ²	70 mm ²
180-330 A	70 mm ²	90 mm ²



IR Series Inverter Specification

MODEL	HV MODEL							
IR	1012E	1024E	2012E	2024E	3024E	4048E	5048E	6048E
LINE MODE SPECIFICATIONS								
Input Voltage Waveform	Sinusoidal (utility or generator)							
Nominal Input Voltage	230Vac(120VAC selectable)							
Low Line Disconnect	184Vac±4%							
Low Line Re-connect	194Vac ±4%							
High Line Disconnect	265Vac±4%							
High Line Re-connect	255Vac±4%							
Max AC Input Voltage	270Vrms							
Nominal Input Frequency	50Hz/ 60Hz(Auto detection)							
Low Line Frequency Re-connect	58+0.3Hz for 60Hz;48+0.3Hz for 50Hz;							
Low Line Frequency Disconnect	57+0.3Hz for 60Hz;47+0.3Hz for 50Hz;							
High Line Frequency Re-connect	64+0.3Hz for 60Hz;54+0.3Hz for 50Hz;							
High Line Frequency Disconnect	65+0.3Hz for 60Hz;55+0.3Hz for 50Hz;							
Output Voltage Waveform	As same as Input Waveform							
Over-Load Protection(SMPSload)	Circuit breaker							
Output Short Circuit Protection	Circuit breaker							
Efficiency (Line Mode)	>95%							
Transfer Switch Rating	30A							
Transfer Time (Ac to Dc)	10ms (typical)							
Transfer Time (Dc to Ac)	10ms (typical)							
Pass Through Without Battery	Yes							
Max Bypass Overload Current	30A				30A			
INVERT MODE SPECIFICATIONS								
Output Voltage Waveform	Sine wave							
Rated Output Power (VA)	1000		2000		3000	4000	5000	6000
Rated Output Power (W)	1000		2000		3000	4000	5000	6000
Power Factor	0~1.0							
Nominal Output Voltage (V)	230Vac							
Nominal Output Frequency (Hz)	50Hz ± 0.3Hz							
Auto Tracking Main Frequency(Hz)	Yes (Following Main first connection)50Hz @48-54Hz ;60Hz @58-64Hz							
Output Voltage Regulation	±10% rms							
Nominal Efficiency	>80%							
Over-Load Protection(SMPS load)	(110%<load<125%) ±10%: Fault (shutdown output) after 15 minutes;(125%<load<150%) ±10%: Fault (shutdown output) after 60s;Load>150% ±10%:Fault (shutdown output) after 20s;							
Surge Rating (10s)	3000VA		6000VA		9000VA	12000VA	15000 VA	18000VA
Capable Of Starting Electric Motor	1 HP		1 HP		2 HP		3 HP	
Output Short Circuit Protection	Current limit (Fault after 10s)							
Inverter Breaker Size	10A				30A			
Nominal DC Input Voltage	12V	24V	12V	24V	24V	48V	48V	
Min DC Start Voltage	10V/20V/40V							
Low Battery Alarm	10.5Vdc ± 0.3Vdc for 12V battery;21.0Vdc ± 0.6Vdc for 24V battery;42.0Vdc ± 0.6Vdc for 48V battery							
Low DC Input Shut-Down	10.0Vdc ± 0.3Vdc for 12V battery;20.0vdc± 0.6Vdc for 24V battery;40.0Vdc± 0.6Vdc for 48V battery							
High DC Input Alarm & Fault	16Vdc ± 0.3Vdc for 12V battery;32Vdc ± 0.6Vdc for 24V battery; 64Vdc ± 0.6Vdc for 48V battery							
High DC Input Recovery	15.5Vdc ± 0.3Vdc for 12V battery;31.0Vdc ± 0.6Vdc for 24V battery; 62.0Vdc ± 0.6Vdc for 48V battery							
Power Saver	Load ≤25W (Enabled on "P/S auto" setting of Remote control)							
CHARGE MODE SPECIFICATIONS								
Nominal Input Voltage	230Vac							
Input Voltage Range	196~243Vac							
Nominal Output Voltage	According to the battery type							
Nominal Charge Current	35A	35A	65A	35A	45A	35A	40A	50A
Charge Current Regulation	± 5Adc							
Battery Initial Voltage	0 - 15.7 Vdc/31.4Vdc/62.8Vdc (can operate with 0V battery)							
Charger Short Circuit Protection	Circuit breaker							
Over Charge Protection	Bat. V ≥ 15.7Vdc/31.4Vdc/62.8Vdc,beeps 0.5s every 1s & fault after 60s							
GENERAL SPECIFICATIONS								
Safety Certification	CE							
Safety Certification	FCC							
Operating Temperature Range	0° C to 40° C							
Storage Temperature	15° C below zero to 60° C							
Operation Humidity	5% to 95%							
Audible Noise	60dB max							
Cooling	Forced air, variable speed fan							
Size	590*333*310				760*340*320			
Weight:Net / Gross (kg)	19		22		29	40	45	49

* Product specifications are subject to change without further notice.

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