



PV INVERTERS

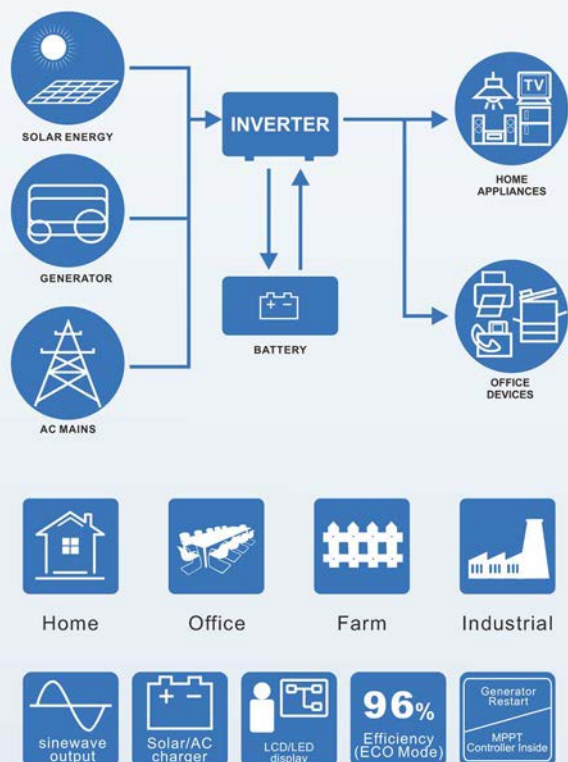
ZON SERIES OFF-GRID (HYBRID CHARGER INVERTER)

3KVA ~ 5KVA

 Uninterruptible
power supply

ZON SERIES (HYBRID CHARGER INVERTER)

Application:



Zon Series (Hybrid Charger Inverter)

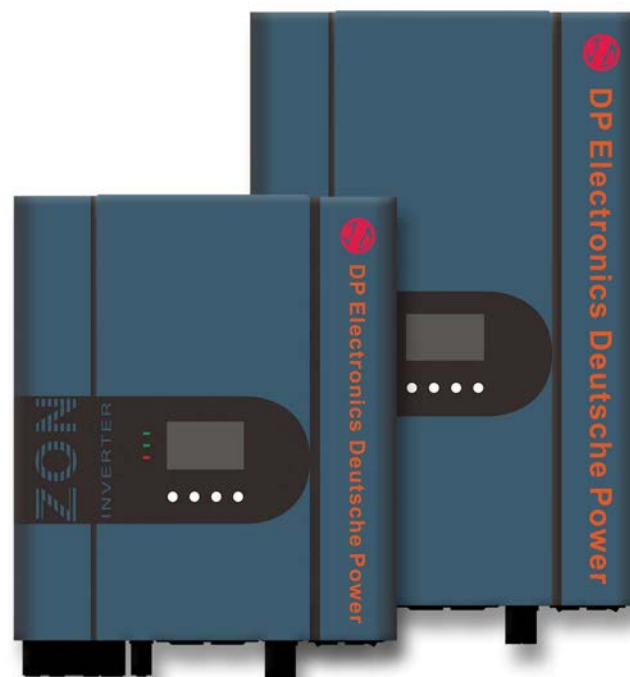
Uninterruptible Power Supply

Product Introduction

ZON series is a pure sine wave stand-alone inverter/charger system combining the function of inverter, solar charger and AC charger, and provides a long run-time uninterruptible power supply. Its comprehensive LCD display provides system status, and user-friendly panel eases parameters settings. Computers and power tool, etc.

Feature

- AC/Solar charge hybrid off grid inverter.
- LCD displays comprehensive operation status
- Built-in 40A/60/80A MPPT solar charger controller.
- External remote display panel.
- Adjustable 5 stages AC charging current. AC charging also can be closed.
- AC/DC priority modes can be set.
- Generator restart signal (Dry contact).
- 3 times peak power, Strong loading capacity.
- Thorough protections: Input low voltage / Overload / Short circuit / Low battery alarm / Input over voltage / Over temperature
- Supports Home Appliances / Office Equipment / Lighting Equipment / Motor-based Equipment (such as Fan, Air-Conditioner, Washing Machines)



ZON SERIES (HYBRID CHARGER INVERTER)

TECHNICAL SPECIFICATION FOR ZON SERIES

MODEL	3KVA-24	3KVA-48	4KVA-48	5KVA-48
Rating	3KW/3KVA- 24VDC + 2*40A MPPT SCC	3KW/3KVA- 48VDC + 60A MPPT SCC	4KW/4KVA-48VDC +60A MPPT SCC	5KW/5KVA-48VDC +80A MPPT SCC

Table 1 Line Mode Specifications

INPUT	3KVA-24	3KVA-48	4KVA-48	5KVA-48
Input Voltage Waveform	Sinusoidal (utility or generator)			
Nominal Input Voltage	230Vac			
Low Loss Voltage	170Vac±7V(UPS) 90Vac±7V (Appliances)		175Vac±7V (UPS) 125Vac±7V (Appliances)	
Low Loss Return Voltage	180Vac±7V (UPS) 100Vac±7V (Appliances)		185Vac±7V (UPS) 135Vac±7V (Appliances)	
High Loss Voltage	280Vac±7V			
High Loss Return Voltage	270Vac±7V			
Max AC Input Voltage	300Vac			
Nominal Input Frequency	50Hz / 60Hz (Auto detection)			
Low Loss Frequency	40±1Hz			
Low Loss Return Frequency	42±1Hz			
High Loss Frequency	65±1Hz			
High Loss Return Frequency	63±1Hz			
OUTPUT				
Output Short Circuit Protection	Circuit Breaker			
Efficiency (Line Mode)	>95% (Rated R load, battery full charged)			
Transfer Time	10ms typical (UPS) 20ms typical (Appliances)			
Output power derating: When AC input voltage drops to 180V, the output power will be derated.				

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Table 2 Inverter Mode Specifications

INVERTER MODEL	3KVA-24	3KVA-48	4KVA-48	5KVA-48
Rated Output Power	3KW/3KVA		4KW/4KVA	5KW/5KVA
OUTPUT				
Output Voltage Waveform	Pure Sine Wave			
Output Voltage Regulation	230Vac±5%			
Output Frequency	50Hz			
Peak Efficiency	93%			
Overload Protection	5s@>150% load; 10s@110%~150% load			
Surge Capacity	2* rated power for 5 seconds			
Nominal DC Input Voltage	24Vdc	48Vdc		
INPUT				
Cold Start Voltage	23.0Vdc	46.0Vdc	46.0Vdc	
Low DC Warning Voltage	21.4Vdc	42.8Vdc	42.0V	
Low DC Warning Return Voltage	23.0Vdc	43.2 V	43.2 V	
Low DC Cut-off Voltage	20.0Vdc	40.8Vdc	40.0 Vdc	40.0Vdc

Table 4 General Specifications

INVERTER MODEL	3KVA-24	3KVA-48	4KVA-48	5KVA-48
Safety Certification	CE			
Operating Temperature Range	-10°C to 50°C			
Storage temperature	-15°C ~ 60°C			
Dimension (D*W*H)/ mm	126*300*485		486*330*130	
Net Weight ,kg (MPPT/PWM model)	8.6	8.2	11.6	12.4

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Table 3 Charge Mode Specifications

Utility Charging Mode					
INVERTER MODEL		3KVA-24	3KVA-48	4KVA-48	5KVA-48
Charging Algorithm		3-Step			
AC Charging Current (Max) (@Vi/p=230Vac)		10/25Amp	8/15Amp	15/35Amp (@Vi/p=230Vac)	
Bulk Charging Voltage	Flooded Battery	14.6Vdc	58.4Vdc	58.4Vdc	
	AGM / Gel Battery	14.1Vdc	56.4Vdc	56.4Vdc	
Floating Charging Voltage		13.7Vdc	54.0Vdc	54.8Vdc	
Charging Curve		<p>The graph shows two curves: Battery Voltage (per cell) and Charging Current (%). The x-axis is Time, divided into three stages: Bulk (Constant Current), Absorption (Constant voltage), and Maintenance (Floating). The y-axis for Voltage ranges from 2.35Vdc to 2.43Vdc, and for Current from 0% to 100%. The Bulk stage duration is T0. The Absorption stage duration is T1, which is 10 times T0, with a minimum of 10 minutes and a maximum of 8 hours. The Voltage curve starts at 2.35Vdc, rises to 2.43Vdc during the Bulk stage, remains constant during Absorption, and then drops to a floating voltage during Maintenance. The Current curve starts at 100% during Bulk, drops to 0% during Absorption, and remains at 0% during Maintenance.</p>			
MPPT Solar Charging Mode					
Maximum PV Array Power		3000W	3000W	4KVA-48	5KVA-48
Charging Current		40Amp×3	60Amp	60 Amp	80Amp
PV Array MPPT Voltage Range		30Vdc-80Vdc	60Vdc-150Vdc	60 to 150Vdc	
Max. PV Array Open Circuit Voltage		100Vdc	150Vdc	150Vdc	
Max Charging Current (AC charger plus solar charger)		145Amp	75 Amp	95Amp	115Amp