

Overview

The brand new Unicorn series is an inverter/charger that supports utility charging, oil generator charging, solar charging, dual output from utility or inverter, multiple operating modes, and smart energy management. It supports parallel operation for multiple units in single phase or three phase. The inverter with power of 3.5KW and 5.5KW perfectly suits residential applications, schools, health facilities, government buildings, and areas where the electricity is unstable.

Features

- Applicable for pure off grid / backup power / self-consumption
- PV input voltage range: 80Vdc-500Vdc
- PV input current up to 32A
- Supports battery mode & non battery mode
- Battery & PV reverse polarity protection
- Dual pure sine wave output
- Supports single-phase or three-phase parallel operation (up to 16 units)
- Sleep mode triggered by low power output or low battery voltage
- Independent BMS communication interface
- Built-in WiFi for mobile monitoring*
- Isolated RS485 interface: Connects with Bluetooth, WiFi, 4G, etc.
- Optional 320 x 480 high-resolution color LCD touchscreen or monochrome screen
- Historical data recording function, storage capacity of 25000 records
- Comprehensive electronic protection ensures safer and more stable operation
- IP20 enclosure design with anti-dust kit

*Only applicable to color screen series



Technical Specifications

Model	UC3522-1250P20/C	UC3542-0650P20/C	UC5542-1050P20/C
Utility Input			
Utility Input Voltage	176VAC ~ 264VAC(Default), 90VAC ~ 285VAC(Configurable)		
Utility Input Frequency	45Hz ~ 65Hz		
Max. Utility Charging Current	110A	60A	100A
Switch Response Time	Inverter to Utility : 10ms Utility to Inverter : 20ms		
Inverter Output			
Inverter Rated Power (@30°C)	3500W		5500W
3-Second Transient Surge Output Power	7000W		8500W
Inverter Output Voltage	220/230VAC		
Inverter Frequency	50/60Hz		
Output Voltage Waveform	Pure Sine Wave		
Load Power Factor	0.2-1(VA ≤ Rated output power)		
THDv (@linear load)	≤3%		
Max. Load Efficiency	92%		
Max. Inverter Efficiency	94%		
Max. Main Load	3500W		5500W
Max. Second Load	3500W		5500W
Main Output Cut-Off Voltage	24.4V(Default)	48.8V(Default)	
Second Output Cut-Off Voltage	22.2V(Default)	44.4V(Default)	
Dual Output Return Voltage	25.2V(Default)	50.4V(Default)	
PV Input			
PV Max. Open-Circuit Voltage	500V		
MPPT Voltage Range	85~450V		
Number of MPPTs	1	2	
Number of Strings per MPPT	1	1+1	
Max. Input Current	16A	16A+16A	
PV Max. Short Circuit Current	18A	18A+18A	
PV Max. Input Power	4200W		6600W
PV Max. Charging Current	120A	60A	100A
MPPT Max. Efficiency	≥99.5%		
Battery			
Battery Rated Voltage	24VDC	48VDC	
Battery Work Voltage Range	20.4VDC~32VDC	40.8VDC~64VDC	
Max. Charging Current	120A	60A	100A
General Data			
No-load Losses	<1.5A	<0.8A	<1.1 A
Standby Current	<1.1 A	<0.6A	<0.8A
Communication with BMS	RS485		
Communication with Portal	RS485 (4G/WiFi/Bluetooth)		
Parallel Function	Yes, Standard 12 units, Up to 16 units		
Work Temperature Range	-20°C~+50°C (>30°C Derating)		
Storage Temperature Range	-25°C~+60°C		
Enclosure	IP20 (With anti-dust kit)		
Relative Humidity	< 95% (N.C.)		
Altitude	4000m (>2000m Derating)		
Certifications and Standards	IEC 62109-1, IEC 62109-2, IEC 61683, IEC 62368		
Dimension (Length×Width×Height)	590mm×300mm×163mm	534mm×300mm×163mm	590mm×300mm×163mm
Mounting Size (Length×Width)	568mm x 245mm	512mm x 245mm	568mm x 245mm
Mounting Hole Size	Φ9mm/Φ10mm		
Net Weight	13.8Kg	12.7Kg	15.5Kg