



## ICE ONE Hybrid Inverter

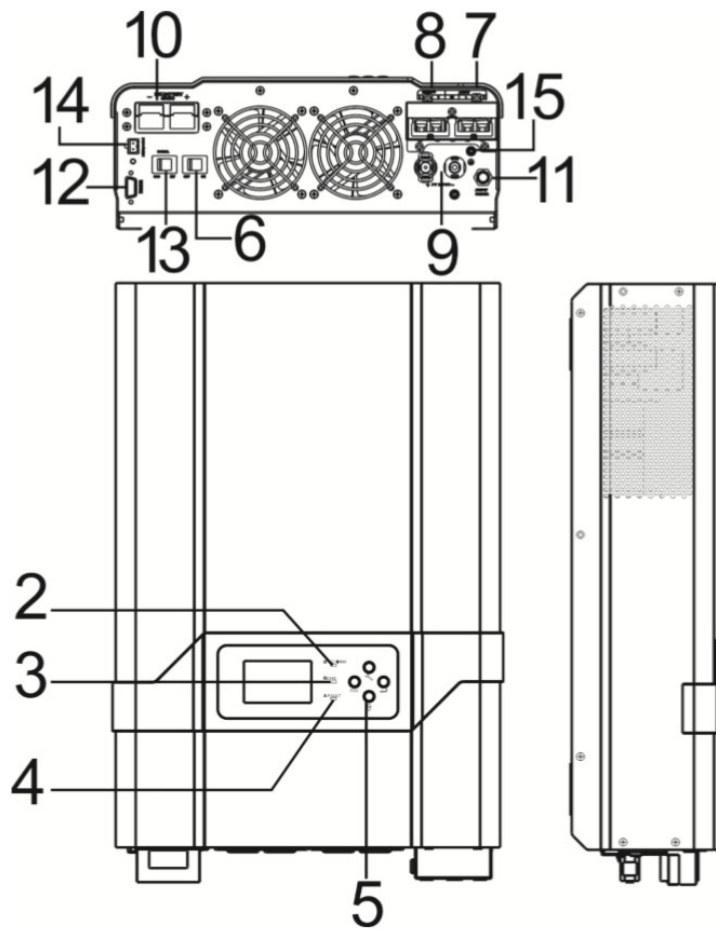
Advanced 1:1 Energy efficiency (1.PF)

### Key Features

- Hi-frequency switching technology
- Pure sine wave technology
- Built-in solar charger/controller with MPPT technology
- Highest conversion efficiency (DC-to-AC)
- Standby charging mode
- Intelligent fan control
- Isolated input/output design (safety)
- LCD with comprehensive display
- Configurable AC input priorities
- Lightweight and easy to install
- 60/80 Amp variable charging
- SMS option – fault and alerting

## INTRODUCTION

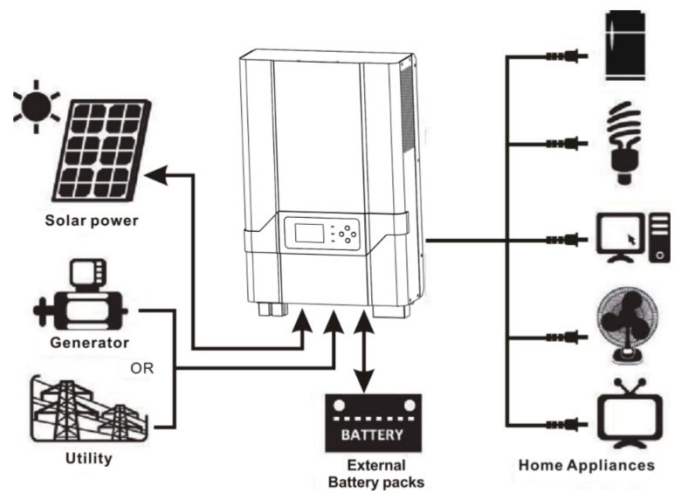
The iCE ONE hybrid inverter is a pure sine wave, stand-alone, inverter/charger system. The combination of AC charging, Solar charging and highly efficient inverting of DC to AC power makes this an ideal solution for long periods of backup and uninterruptible power. The compressive, interactive and user-friendly LCD display offers easy programming and setup options. The iCE ONE hybrid inverter operates with or without solar panels.



## PRODUCT OVERVIEW

### Description

1. LCD display
2. Status indicator
3. Charging indicator
4. Fault indicator
5. Function buttons
6. Power on/off switch
7. AC input
8. AC output
9. PV input
10. Battery input
11. AC Breaker
12. RS232 communication port
13. Maintenance switch
14. Dry contact
15. Ground screw



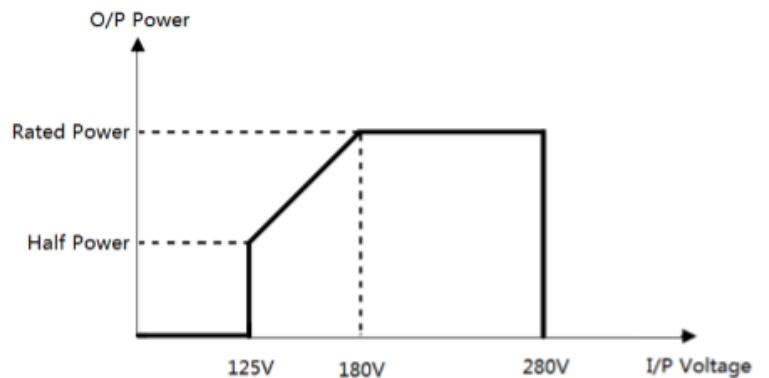
## MODELS

MODEL	4KVA-48 Plus VM	5KVA-48 Plus VM
Rating	4KW/4KVA-48VDC +60A MPPT SCC	5KW/5KVA-48VDC +80A MPPT SCC

## LINE MODE SPECIFICATIONS

MODEL	4KVA-48	5KVA-48
<b>INPUT</b>		
Input Voltage Waveform	Sinusoidal (utility or generator)	
Nominal Input Voltage	230ac	
Low Loss Voltage	175Vac ± 7V (UPS) 125Vac ± 7V (Appliances)	
Low Loss Return Voltage	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	
<b>OUTPUT</b>		
Output Short Circuit Protection	Circuit Breaker	
Efficiency (Line Mode)	>95% ( Rated R load, battery full charged )	
Transfer Time	10ms typical 15ms max.(UPS) 20ms typical 40ms max.(Appliances)	

Output power de-rating:  
When AC input voltage drops to 180V, the output power will be de-rated.



## INVERTER SPECIFICATIONS

MODEL	4KVA-48	5KVA-48
Rated Output Power	4KW/4KVA	5KW/5KVA
<b>OUTPUT</b>		
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	48Vdc	
<b>INPUT</b>		
Cold Start Voltage	46.0Vdc	
Low DC Warning Voltage	42.0V	
Low DC Warning Return Voltage	43.2 V	
Low DC Cut-off Voltage	40.0V	
High DC Cut-off Voltage	58.0V	

## UTILITY CHARGING SPECIFICATIONS

Utility Charging Mode		
MODEL	4KVA-48	5KVA-48
Charging Algorithm	3-Step	
AC Charging Current (Max)	15/35Amp (@Vi/p=230Vac)	
Bulk Charging Voltage	Flooded Battery	58.4Vdc
	AGM / Gel Battery	56.4Vdc
Floating Charging Voltage	54.8Vdc	
Charging Curve		

**SOLAR CHARGING SPECIFICATIONS**

<b>MPPT Solar Charging Mode</b>		
<b>MODEL</b>	<b>4KVA-48</b>	<b>5KVA-48</b>
Charging Current	60 Amp	80Amp
PV Array MPPT Voltage Range	60 to 150Vdc	
Max. PV Array Open Circuit Voltage	150Vdc	
Max Charging Current (AC charger plus solar charger)	95Amp	115Amp

**GENERAL SPECIFICATIONS**

<b>MODEL</b>	<b>4KVA-48</b>	<b>5KVA-48</b>
Safety Certification	CE	
Operating Temperature Range	-10°C to 50°C	
Storage temperature	-15°C to 60°C	
Dimension (D*W*H)/ mm	486*330*130	
Net Weight ,kg (MPPT model)	11.4	11.8