



# Cloverfour Renewable Energy Solutions



## Energy Storage Integrated Inverter



**This versatile inverter is suitable for both on Grid and off grid Solar systems.  
And for systems with or without battery**

**This gives the opportunity to spread investment costs.**

PT Vistana Insinyur Servis Co. reg. no (NPWP): 03.297.743.1-215.000

Sakura Garden Block AA no 7 Kampung Seraya Batu Ampar

Batam Kepri Indonesia 29454 [vistanainsinyurservis@gmail.com](mailto:vistanainsinyurservis@gmail.com)

Datasheet	HYD 3000-ES	HYD 3600-ES	HYD 4000-ES	HYD 4600-ES	HYD 5000-ES	HYD 6000-ES
<b>Battery Parameters</b>						
Battery Type	Lithium-ion, Lead-acid					
Nominal battery voltage	48V					
Battery voltage range	42-58V					
Battery Capacity	50-2000Ah					
Maximum Charging / Discharging Power	3000W					
Maximum Charging Current	65A (Programmable)					
Maximum Discharging Current	70A (Programmable)					
Charging curve(Lithium-ion)	BMS					
Charging curve(Lead-acid)	3-Stage adaptive with maintenance					
Depth of discharge	Lithium-ion: 0-90% DOD adjustable. Lead-acid:0-50% DOD adjustable					
<b>Input DC(PV side)</b>						
Recommended Max. PV input power	3990W	4790W	5320W	6120W	6650W	7980W
Max DC power for single MPPT	2000W	2400W	2600W	2800W	3000W	3500W
Max. input voltage	600V					
Start-up voltage	120V					
Nominal DC Voltage	360V					
MPPT operating voltage range	90-580V					
Full power MPPT voltage range	160V-520V	180V-520V	200V-520V	230V-520V	250V-520V	300V-520V
MPPT number	2					
The max DC input current	12A/12A					
The max DC input short current	15A/15A					
<b>Output AC(Grid side)</b>						
Rated Power	3000W	3680W	4000W	4600W	5000W	6000W
Max. Output Power	3000VA	3680VA	4000VA	4600VA	5000VA	6000VA
Nominal Grid Voltage	L/N/PE, 220, 230, 240					
Operation phase	Single (L-N-PE)					
Max. Input / Output current	13.7A	16A	18.2A	21.0A	22.8A	27.3A
AC voltage Range	180V~276V (According to local standard)					
Grid Frequency range	44-55Hz/54-66Hz (According to local standard)					
THD	<3%					
Power factor	1 default (+/-0.8 adjustable)					
<b>Output AC(Emergency Power Supply)</b>						
EPS rated power	3000VA					
Operation phase	Single (L-N-PE)					
EPS rated voltage,Frequency	230V, 50/60Hz					
EPS rated current	13A					
Peak Output Apparent Power	4000VA, 10s					
THD	180-276Vac (According to local standard)					
Switch time	10ms default					
<b>Efficiency</b>						
MPPT efficiency	99.9%					
Max efficiency of solar Inverter	97.6%	97.6%	97.6%	97.8%	97.8%	98.0%
European efficiency of solar Inverter	97.2%	97.2%	97.2%	97.3%	97.3%	97.5%
Max. Charging efficiency of battery	94.6%					
Max. DisCharging efficiency of battery	94.6%					
<b>Protection</b>						
PV reverse polarity protection	Yes					
PV insulation detection	Yes					
Ground fault monitoring	Yes					
Over current protection	Yes					
Over voltage protection	Yes					
Battery soft start protection	Yes					
<b>General Data</b>						
Ambient temperature range	-30°C ~ +60°C (Above 45°C Derating)					
Standby Losses	< 10W					
Topology	High frequency insulation (for bat)					
DC-Switch	Yes					
Degree Of Protection	IP65					
Allowable Relative Humidity Range	0~100%					
Communication	RS485, Wifi/Ethernet/GPRS, SD, CAN2.0					
Protective class	Class I					
Max. Operating Altitude	2000m					
Current Sensor Connection	External					
Noise	<25dB					
Weight	20.5kg					
Cooling	Natural					
Dimension (W*H*D)	566*394*173 mm					
Display	LCD display					
Warranty	5 Years or more					
<b>Standard</b>						
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Safety standards	IEC62109-1/2, IEC62040-1, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30)					
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50438/EN50549, G83/G59/G98/G99, UTE C15-712-1, UNE 206 007.1					

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## Features:

### High-yield

- Real time precise MPPT algorithm for max power generation
- Wide input voltage operation range
- Independent dual MPPT tracking ,flexible solar roof system design

### Reliable and Safe

- High efficiency low energy loss, Low maintenance
- High frequency isolation between battery & PV/grid
- Advanced battery management technology to protect the battery life

### Easier Operation

- Free site selection due to IP65
- 4'LCD clear, easy-to-read display
- Easy monitoring on phone(APP) & PC(web)

### Multiple working modes

- PV & storage all in one, increases self-consumption to 80%+,decreases reliance on the electrical grid, decreases the electricity bill
- Stand alone mode(like UPS)available, ensures safe operation of critical loads
- Multiple operation modes selection: auto mode, time-of-use mode, timing mode, passive mode etc.

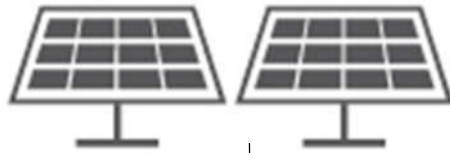
### Intelligent grid management

- Reactive power capability
- Limits AC output when grid frequency is too high or too low
- Limits AC output when grid voltage is too high
- Built in zero export function(optional)

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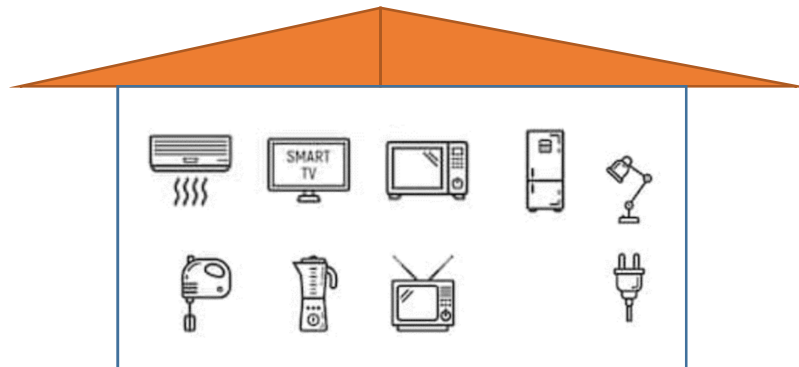
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**WO Power box**  
**7.2kwh wall mount**



Utility Grid



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