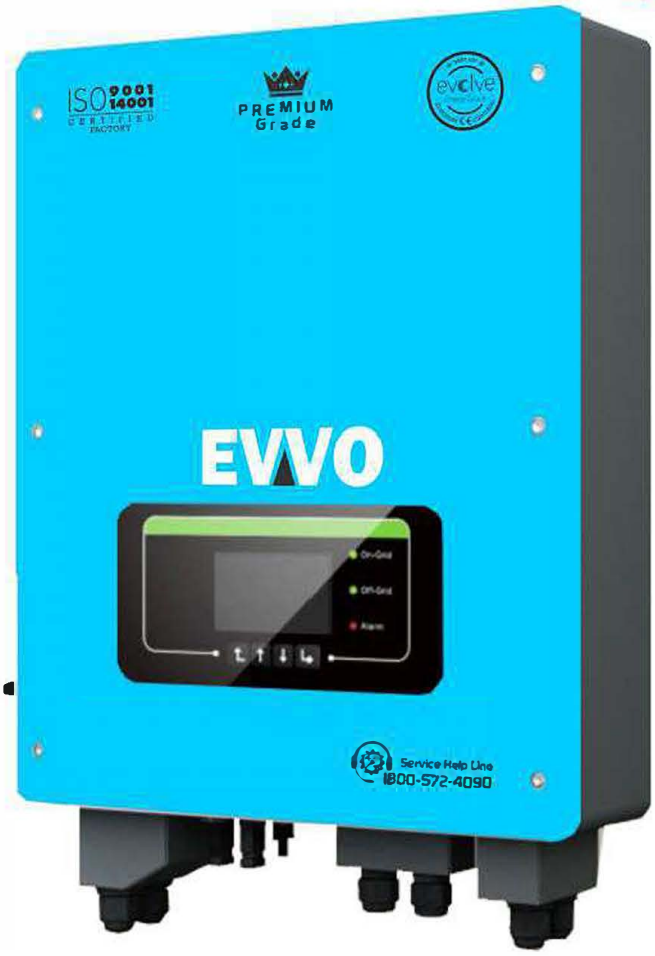
BEST QUALITY

IEC Certification As per MNRE

8 YEARS Warranty

HYBRID INVERTER



High Performance

High Efficiency

EVVO

HYBRID INVERTER

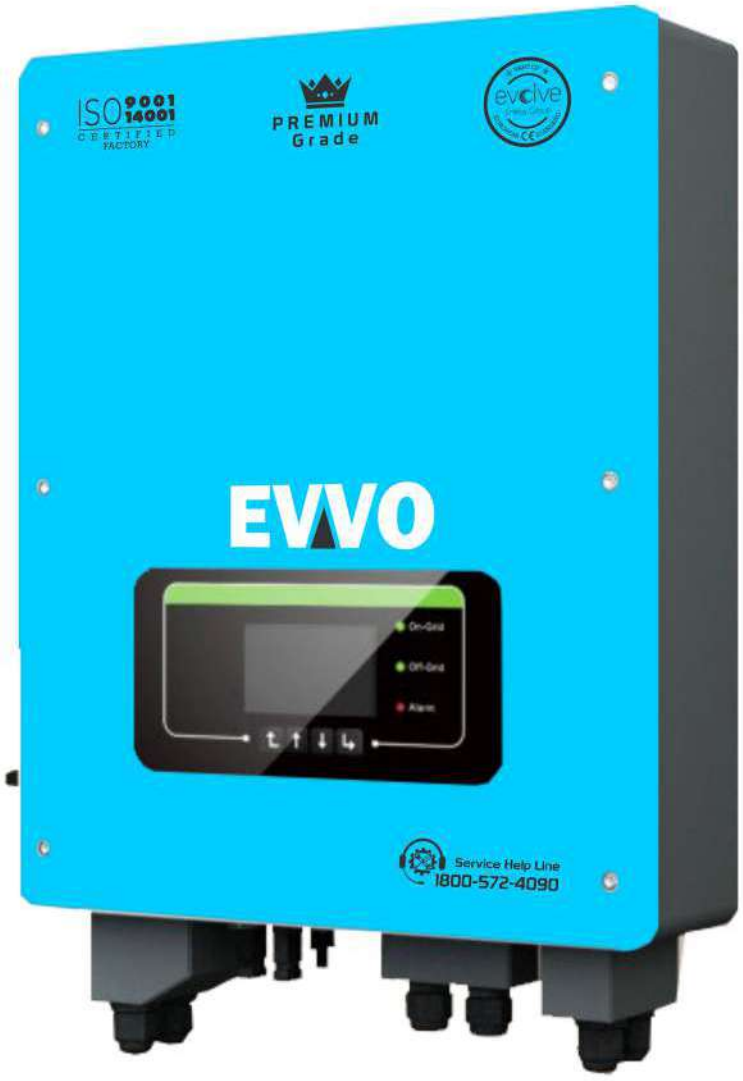
EVVO HYD 3000ES/4000ES/5000ES/6000ES

EVVO

HYD E-3k~6k-ES

Single - Phase

Energy storage integrated inverter



- Outdoor IP65 design
- A variety of work modes are optional
- Built - in Zero Export function
- Compatible with the two functions of the grid
- EPS function, switching time is less then 10ms
- Flexible configuration of lead acid or lithium battery
- Integrated fanless self-recognition heat dissipation design

EVVO HYD 3000ES/4000ES/5000ES/6000ES

Single-Phase - Energy storage integrated inverter

Datasheet	EVVO 3000-ES	EVVO 3600-ES	EVVO 4000-ES	EVVO 5000-ES	EVVO 6000-ES
Battery Parameters					
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% 000 adjustable, Lead-acid:0-50% 000 adjustable				
Input DC(PV side)					
Recommended PV input power	3500W	4000W	4400W	5500W	6600W
Max DC power for single MPPT	2000W	2400W	2600W	3000W	3500W
The max DC input voltage	600V				
Start-up DC voltage	120V				
Nominal DC Voltage	360V				
MPPT operating voltage range	90-580V				
Full load DC voltage range	160V-520V	180V-520V	200V-520V	250V-520V	300V-520V
MPPT number	2				
The max DC input current	12A/12A				
The max DC input short current	15A/15A				
Output AC(Grid side)					
Rated Power	3000W	3680W	4000W	5000W	6000W
Max. Output Power	3000VA	3680VA	4000VA	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	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)				
Output AC(Emergency Power Supply)					
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				
Efficiency					
MPPT efficiency	99.9%				
Max efficiency of solar Inverter	97.6%	97.6%	97.6%	97.8%	98.0%
European efficiency of solar Inverter	97.2%	97.2%	97.2%	97.3%	97.5%
Max. Charging efficiency of battery	94.6%				
Max. DisCharging efficiency of battery	94.6%				
Protection					
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				
General Data					
Ambient temperature range	-30℃~+60℃ (Above 45℃ Derating)				
Standby Losses	<5W				
Topology	High frequency insolation (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 dislay				
Warranty	8 Years				
Standard					
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				

BEST QUALITY

IEC Certification As per MNRE

5 YEARS Warranty

HYBRID INVERTER

High Performance High Efficiency

EVVO

HYBRID INVERTER

EVH-3P-10kW

Three Phase Hybrid Inverter

Technical Data		EVH-3P-10kW
Battery Input Data	Battery Type	Li-Ion
	Battery Voltage Range (V)	180~600
	Max. Charging Current (A)	25
	Max. Discharging Current (A)	25
	Charging Strategy for Li-Ion Battery	Self-adaption to BMS
PV String Input Data	Max. DC Input Power (W)	13000
	Max. DC Input Voltage (V)*	1000
	MPPT Range (V)	200~850
	Start-up Voltage (V)	180
	Nominal DC Input Voltage (V)	620
	Max. Input Current (A)	12.5/12.5
	Max. Short Current (A)	15.2/15.2
	No. of MPP Trackers	2
	No. of Strings per MPP Tracker	1/1
AC Output Data (On-grid)	Nominal Apparent Power Output to Utility Grid (VA)	10000
	Max. Apparent Power Output to Utility Grid (VA)**	11000
	Max. Apparent Power from Utility Grid (VA)	15000
	Nominal Output Voltage (V)	400/380, 3L/N/PE
	Nominal Ouput Freqency (Hz)	50/60
	Max. AC Current Output to Utility Grid (A)	16.5
	Max. AC Current from Utility Grid (A)	22.7
	Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)
	Output THDi (@Nominal Output)	<3%
AC Output Data (Back-up)	Max. Output Apparent Power (VA)	10000
	Peak Output Apparent Power (VA)***	16500, 60sec
	Max. Ouput Current (A)	16.5
	Nominal Output Voltage (V)	400/380
	Nominal Ouput Frequency (Hz)	50/60
	Output THDv (@Linear Load)	<3%
Efficiency	Max. Efficiency	98.2%
	Max. Battery to Load Efficiency	97.5%
	European Efficiency	97.5%
Protection	Anti-Islanding Protection	Integrated
	PV String Input Reverse Polarity Protection	Integrated
	Insulation Resistor Detection	Integrated
	Residual Current Monitoring Unit	Integrated
	Output Over Current Protection	Integrated
	Output Short Protection	Integrated
	Battery Input Reverse Polarity Protection	Integrated
	Output Over Voltage Protection	Integrated
General Data	Operating Temperature Range (°C)	-35~60
	Relative Humidity	0~95%
	Operating Altitude (m)	≤4000
	Cooling	Nature Convection
	Noise (dB)	<30
	User Interface	LED & APP
	Communication with BMS	CAN
	Communication with Meter	RS485
	Communication with EMS	RS485 (Insulated)
	Communicaiton with Portal	Wi-Fi
	Weight (kg)	24
	Size (Width*Height*Depth mm)	516*415*180
	Mounting	Wall Bracket
	Protection Degree	IP65
	Standby Self-Consumption (W)****	<15
	Topology	Transformerless
Standards	Grid Regulation	CEI 0-21; VDE4105-AR-N; VDE0126-1-1; EN50438; G98 ; G100
	Safety Regulation	IEC62109-1&-2, IEC62040-1
	EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-4-16, EN61000-4-18, EN61000-4-29

*: Maximum operating voltage is 950V. **: According to local grid regulation.

: Can be reached only if PV and battery power are enough. *: No back-up output.

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