

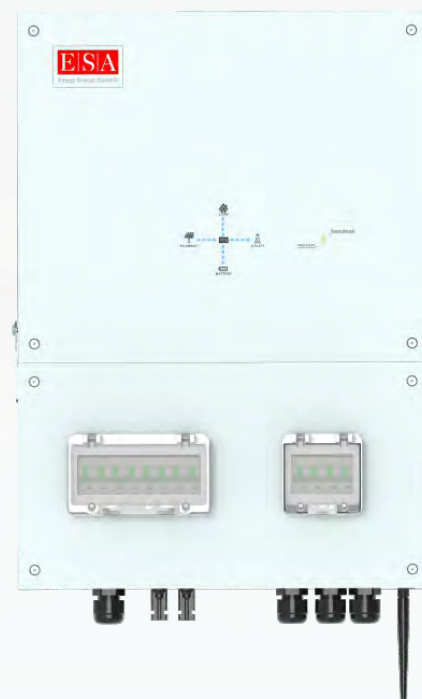
(ESA-3600 / 5000)

# HYBRID INVERTER



## INVERTER - PV (GRID) ONLY APPLICATION

- Hybrid Solar Inverter
- An all-in-one inverter - single unit for PV, storage, grid exporting and back up power
- High visibility: multi-function LED system display
- Highly efficient (MPPT>99.5%, PEAK CONVERSION 97.3%)
- Multiple MPPT solar input
- Internet connection for outstanding monitoring package
- Remote firmware upgrades
- Remote diagnostics with full monitoring visibility
- Market leading warranty
- Future proof inverter as battery ready with simple and low cost adding of battery storage
- Low turnoff DC voltage -wide voltage range
- Ground fault protection



## WITH BATTERY STORAGE BENEFITS

- Off peak charging
- Automatic transfer switch
- Grid island mode
- Essential Back up Supply
- Export limitation
- Remote monitoring and control
- DC coupling



## SPECIFICATION

### ESA-3600

### ESA-5000

SPECIFICATION	ESA-3600	ESA-5000
<b>INPUT DATA (AC)</b>		
Max. DC power	4500W	6500W
Max. DC voltage	600V	
Start voltage	120V	
DC nominal voltage	360V	
PV voltage range	100V-600V	
MPP voltage range	120V-550V	
Max. input current per string of tracker A/tracker B	11A/11A	
Number of independent MPP inputs	2	
<b>OUTPUT DATA (DC)</b>		
Nominal AC output power (at 230V 50Hz)	3680W	5000W
Max, AC apparent power	3680VA	5000VA
Max. output current (at 230V 50Hz)	16.4 A	22.8A
AC nominal voltage; range	220V/230V/240V; 180V-280V	
AC grid frequency; range	50,60 Hz; +/- 5 Hz	
Power factor at rate power	1	
Power factor	0.8 leading...0.8 lagging	
THDi	<3%	
AC connection	single phase	

## BATTERY

Battery Type	LiFePO <sub>4</sub>
Nominal voltage	51.2V
Battery capacity	>=161Ah
Energy	6.56kWh
Max. discharging / charging power	2500W
Charging curve	3-stage adaptive with maintenance
Operating voltage range	44.4VDC - 57.6VDC
Max. charging / discharging current	60A/60A

## BACKUP OUTPUT

Output rate power	2300VA
Peak power	3540VA, 10s
Output voltage	230V +/-2%, 50Hz (60Hz Optional) +/- 0.2%, THDv<3% (linear load)

## EFFICIENCY

Max. efficiency	97.00%	97.10%
Euro eta	96.50%	96.50%
MPPT efficiency	99.50%	99.50%

## PROTECTION DEVICES

DC reverse polarity protection	Yes
DC switch rating for each MPPT	Yes
Output over current protection	Yes
Output over voltage protection-varistor	Yes
Ground fault monitoring	Yes
Grid monitoring	Yes
Integrated all - pole sensitive leakage current	Yes
Monitoring unit	Yes

## GENERAL DATA

Dimensions (W / H / D)	480/675/198 mm	
Weight	39kg	39kg
Operating temperature range	-25°C ... +60°C (-13°F... + 140°F) With derating above 45°C (113°F)	
Noise emission (typical)	<_ 25 dB(A)	
Altitude	Up to 2000m (6560ft) without power derating	
Relative humidity	95%	
Consumption: operating (standby) / night	<5W / <0.5W	
Topology	Transformerless	
Cooling concept	Natural	
Environmental Protection Rating	IP65	

## FEATURES

DC connection	H4
AC connection	Screw terminal
Display	LED / LCD
Interfaces: Wi-Fi/USB/GPRS/RS485	Yes/Yes/Opt/Opt
Warranty: 5 years / 10 years / 15 years	Yes/Opt/Opt
Certificates and approvals	CE, IEC 62109-1&2, VDE 0126-1-1, G83/2, AS4777 & AS/NZS 3100