



Special Features

- ❖ Multiple 32 bit DSP controllers
- ❖ Space Vector Modulation
- ❖ Battery less operation
- ❖ High efficiency
- ❖ True Bi-directional Solar Inverter
- ❖ Higher Array voltage capacity optionally available
- ❖ Inbuilt charge controller
- ❖ MPPT – Achieved through Incremental Conductance Algorithms
- ❖ Modular construction gives higher MTTR
- ❖ Battery charging through Grid up to 100%
- ❖ Selectable source feature – Grid / Battery
- ❖ DC fan for low power consumption
- ❖ Inbuilt isolation transformer for galvanic isolation
- ❖ 128 x 64 Graphics display
- ❖ PF correction while on mains / Grid supply (Line interactive)
- ❖ Variable fan speed – for increased reliability, results into lesser dust suction inside the cabinet

Sunbird 3000

10 to 100 kW

State-of-the-art R&D and Manufacturing facility

Service centres across India



Solar Inverter

Sunbird 3000 - 10 to 100kW

Three Phase Output

SPECIFICATIONS

MODEL		SUNBIRD 3000 (HYBRID PCU)					
System Rating (KW)	10	15	20	25	30	50	100
Photovoltaic Input :-							
MPPT Voltage Range /Voc (VDC)	165-265)/315			(330-480) / 750V			
Maximum Input Current (A)	67	52	70	87	105	175	349
Mppt Base Charge Controller							
Switching Element & Type of Charger	IGBT Device MPPT With PWM Switching						
Grid Input							
Input Supply Phases /Nominal Voltage &	3Phase 4 Wire / 415VAC(+10%, -15%), 50Hz						
Active filtering when load on mains (Load harmonic corrections) with 100% Load							
a. THDi ; b. PF ; c. Harmonic attenuation ratio	<5% ; > 0.9 ; up to 96%						
Battery							
Battery Voltage	120V	240V (optional for 100KW in 360 & 480VDC)					
Battery Type	SMF/VRLA/Wet Lead Acid/ TGel						
Output / Inverter							
Switching Element & Control	IGBT 32 bit DSP controller with Space Vector technology						
Nominal Output Voltage / (Output Waveform)	415VAC L-L (240VAC L-N) / (Pure Sine Wave)						
Voltage regulation / Output Phases/ Frequency	± 2% / 3Phase 4 Wire / 50Hz						
Load Power Factor	0.6 lag to 1 (Within KVA and KW rating)						
Output voltage distortion with 100% linear load	< 2%						
Overload at nominal output voltage for 10 / 1 minutes resp.	125% / 150%						
Environment							
Operating Temperature (Storage Temperature)	Inverter : 0-50 °C (0-70 °C)						
Max. Relative humidity @25°C	Up to 95% (non condensing)						
Max. Altitude above sea level without de- rating	1000 m (For higher altitude complies with IEC/EN 62040-3)						
Noise @ 1 meter (dBA ± 2dBA)	< 60dBA	< 62dBA				< 68dBA	
Cooling	Forced Air						
Physical Characteristics							
Ingress Protection (IP) of cabinet (Location)	IP20 Indoor (Free from corrosive gases & conductive dust)						
Cable Entry / Colour	Bottom- Front / RAL 7016 Texture -Anthracite Grey						
Dimensions (WxDxH in mm)							
Free standing, Floor Mounting, Modular Structure	10-30kW - 600 x 800 x 1200; 50kW - 600 x 800 x 1750; 100kW - 1000 x 900 x 1750						
Display & User Interface							
Protection	Under/Over voltage for Input, Output, Array & Battery. Array & Battery reverse polarity. Output overload, short circuit, Over temperature, MCCB at Input, Output, Array & Battery path, Surge protection for Grid and Array, Wound Component OT; Inbuilt isolation transformer at inverter output						
Display Parameter (128X64 Graphics LCD & Mimic)	Array/Battery/Grid - Voltage, Current, Power Output - Voltage, Current, Inv. H/S temp, Power Statics - Grid kWh, PV kWh, O/P kWh, Battery charging, Discharging						
Indications (with Audible Alarm for all Faults)	MPPT Charger ON/OFF, Battery on Float, Battery on Boost, Battery low, Battery Charging/Discharging, Grid Switch ON, Inverter Switch ON, Grid ON, Load ON, Inverter ON						
Audible Alarm / Data log & Events/ Communication	For Fault condition Built in Alarm log 240 numbers and Data log 268 numbers (expandable with SD card optional); Ethernet Based (RJ 45)/ RS232/ RMS with GPRS						
Reference Standards							
Efficiency : IEC 61683 ; Environmental Testing : IEC 60068 ; Inverter Testing: IEC 62040 part III Active filter function (for 1000E model) :Complies to IEEE 519 ; Islanding Certification (for 1000E model) : IEC 62116							

*Specification are subject to change

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