

Solar Inverter

# Sunbird 3000

10 KW - 400 KW

Three Phase Output



## Features & Benefits

- Multiple 32 bit DSP Controllers
- Space Vector Modulation
- Battery Independent Operation
- High Efficiency
- True Bi-directional Solar Inverter
- Higher Array Voltage Capacity  
Optionally Available
- Inbuilt Charger Controller
- MPPT - Achieved through Incremental Conductance Algorithms
- Modular Construction Gives Higher MTTR
- Battery Charging through Grid up to 100%
- Selectable Priority 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 Less Dust Suction Inside the Cabinet

**Technical Specification**
**Sunbird 3000**

10 KW - 400 KW

General		Sunbird 3000 (Hybrid PCU)											
System Rating (KW)		10	15	20	25	30	50	100	150	200	300	400	
Photovoltaic Input													
MPPT Voltage Range / Voc (VDC) (V)		(165-265) / 315				(330-480) / 750			350-550 / 615		400-600 / 720		
Maximum Input Current (A)		67	52	70	87	105	175	350	475	550	825	1100	
Mpp Base Charge Controller													
Switching Element & Type of Charger		IGBT Device MPPT With PWM Switching using SPACE vector technology											
Grid Input													
Input Supply Phases / Nominal Voltage & Voltage Range Active filtering when load on mains (Load harmonic corrections) with 100% Load		3Phase 4 Wire / 415VAC(+10%, -15%), 50Hz											
THDi / PF / Harmonic attenuation ratio		<5% / > 0.9 / up to 96%											
Battery													
Battery Voltage		120V	240V (optional for 100KW - 360 & 480VDC)					540V	600V				
Battery Type		SMF / VRLA / Wet Lead Acid / TGel / Li ion											
Output / Inverter													
Switching Element & Control		IGBT 32 bit DSP Controller with Space Vector Technology											
Waveform		415VAC L-L (240VAC L-N) / (Pure Sine Wave)											
Voltage Regulation / Output Phases / Freq(Hz)		± 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		Upto 95% (non condensing)											
Max. Altitude above sea level without		1000 m (For Higher Altitude Complies with IEC / EN 62040-3)											
Noise @ 1 meter (dBA ± 2dBA)		< 60dBA	< 62dBA				< 68dBA			< 70dBA			
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; 150-300kW - 1650 x 1000 x 1750; 400kW - 2150 x 1000 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 for lifetime data log); 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 Complies to IEEE 519; Islanding : IEC 62116

\*Specification are subject to change

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