

Solar Inverter

Sunbird 3000

10 KW - 400 KW

Three Phase Output



Features & Benefits

- 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 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 Lesser 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 | 625 | 825 | 1100 |
| Mppt 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

FE/SUNBIRD 3000/1219

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