

# **Sunbird** **1000**

## **Solar Inverter - 1 to 12.5 kW**

Single Phase Output

## **Nepal Power Solution**

### **Special Features**

- † Multiple 32 bit DSP controllers
- † 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
- † 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
- † Variable fan speed - for increased reliability, results into lesser dust suction inside the cabinet



**Service Centers in Kathmandu and Hetauda**

**24x7 Support**

Technical Specifications - Sunbird 1000							
System Rating (KW)	1	2	3	4	5	6	7.5/10/12.5
<b>Photovoltaic Input</b>							
MPPT Range	65 - 90 V		130 - 160 V			165 - 200 V	
Open Circuit Voltage (Voc)							
Maximum PV power recommended (KW)	1.1	2.2	3.3	4.4	5.5	6.6	8.2/11/13.7
<b>MPPT base Charge Controller</b>							
Switching Element	MOSFET			IGBT			
Controller	32 Bit DSP Controlled						
Type of Charger	PWM with MPPT						
<b>Grid Input</b>							
Input Supply	230V AC , 50 Hz (-20%, +15%), 1 Phase 2 Wire						
Battery							
Battery Voltage (V)	48		96			120	
Grid through Battery charging capacity (% KW Rating)	0-100%						
<b>Inverter</b>							
Switching Element	MOSFET			IGBT			
Control	32 Bit DSP Controlled						
Nominal Output Voltage, Frequency (Hz)	230V AC L-N , 50 Hz, 1 Phase 2 Wire						
Output Waveform	Sine Wave						
Load Power Factor	0.6 lag to 1 (within kVA and kW rating)						
Voltage regulation	± 2%						
Voltage Stability in dynamic condition	Complies with IEC/EN 62040-3, Class 1						
Output voltage distortion with 100% linear load	≤ 3%						
Inverter peak efficiency (Ref. STD IEC 61683)	88%		89%			90%	
Protection degree with open doors	IP20						
Colour	RAL 7016 Texture						
Dimension (WxDxH in mm)	250x620x550		250x640x680			600x800x1200	
Cooling	Forced Air						
Galvanic Isolation	Inbuilt isolation transformer at inverter output						
Protection	Under/Over voltage for Input, Output, Array & Battery, Output overload, short circuit, Over temperature, MCB & Surge protection at Input, Output, Array & Battery path.						
Display Parameter	1. Array – Voltage, Current, Power, Temperature, 2. Battery – Voltage, Current, 3. Grid – Voltage, Current, 4. Output – Voltage, Current, Inv. H/S temp. Power 5. Statistics – Grid Total, Total Output, PV Total, Battery Charging, Battery Discharging Power KWH						
<b>Environment</b>							
Temperature Operating	0 - 40°C						
Max. Relative humidity@ 25°C (non condensing)	Up to 95%						
Maximum Altitude above sea level without de-rating	1000 m (For higher altitude complies with IEC/EN 62040-3)						
Standard Compliance							
Testing	IEC 62040-3; IEC 61683; 60068-2						

Note : Sunbird 1000E available with Grid export and Grid sharing features.

All specifications are subject to change

Custom models available on request

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