

# Sunbird 1000

**Solar Inverter - 1 to 12.5 kW**  
Single Phase Output

## **Sunbird™ True bi-directional Solar Inverter** for smarter, efficient and reliable Solar energy conversion

Neowatt, founded by a team of Power Electronic technocrats, having multifaceted experience of designing large capacity state-of-the-art UPS, Grid Tied Solar Inverter, Active Harmonic Filters etc. Neowatt intent to bring contemporary technology to produce power quality enhancement and energy saving solutions, for business and industry.

Sunbird off grid bi directional solar inverter is the new generation inverter, which has been designed specially for the solar application. Our long standing Two decade expertise in solar On Grid and Off grid inverter market has resulted in to a smart, more reliable and efficient Sunbird Solar Inverter.

Sunbird Solar inverter has many unparallel features, which gives best ROI for the user and helps in bringing the dream of Green planet more closer.

### 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





Neowatt

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Solar Inverter Single Phase Output

SPECIFICATIONS	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)		120			240			300
Maximum PV power recommended (KW)	1.1	2.2	3.3	4.4	5.5	6.6	8.2/11/13.7	
MPPT base Charge Controller								
Switching Element	MOSFET						IGBT	
Controller	32 Bit DSP controlled							
Type of Charger	PWM with MPPT							
Grid Input								
Input Supply	230VAC , 50Hz (-20%, +15%), 1Phase 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, 50Hz, 1Phase 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%							
Max. 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.

The information contained in this publication is subject to change without prior notice.

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