

HYBRID INVERTER

Savings & Backup All Together

Hybrid Inverter range from Luminous is a combination of an on-grid inverter and off-grid inverter making it more versatile than other solar inverters helping in lowering your electricity bills and protecting from power outages. It can supply solar power to run your electrical appliances, store electricity in batteries required during power outages as well as export excess power generated to grid. Available in 3.75KVA & 5KVA.



Remote Monitoring



Savings & Backup Together



Safe and Reliable



Export Excess Power Generated & Also Get Backup

Store electricity in battery for backup as well as export excess electricity to grid



User Selectable Priority Settings

Allows users to choose among reduced grid dependency & energy savings, enhanced backup and autonomy from grid and export access power when required



Anti-Islanding protection

Disconnects the inverter from grid during power failure preventing any electrical shock to the linemen at work



Energy Independence

In case of grid unavailability, automatically switches over to battery supply, continuing to operate independently from grid



Remote Monitoring

Multiple modes of connectivity for remote monitoring enables keeping track of solar generation and proactive maintenance

Solar Estimation Chart

Solution			Panel Connection Combination (Series-Parallel)	Approx. Roof Top Area Required (Sq. ft.)
Hybrid Inverter	Solar Battery	PV Panel Watt		
HYBRID TX 3.75KVA	150Ah x 4	550Wp x 4 Nos.	2 (S) 2 (P)	120
HYBRID TX 5KVA	150Ah x 4	550Wp x 6 Nos.	3 (S) 2 (P)	240

Hybrid Inverter



Technical Specifications

Model	HYBRID TX 3.75kVA	HYBRID TX 5kVA
Nominal Battery Voltage (Vdc)	48V	
Output Waveform	Pure Sine Wave	
SOLAR PHOTOVOLTAIC INPUT		
Type of Charger	MPPT	
Maximum PV Power (kW)	3KW	4KW
Input Voltage Range (Voc)	65V - 165 V	
Input Voltage Range (Vmp)	65V - 130 V	
Maximum I/P Current (Array)	46A	61A
Maximum MPPT Output current (A)	60A	80A
Maximum Conversion Efficiency (%)	>95%	
GRID INPUT		
Input Supply Phase	Single Phase	
Grid Voltage Range	180V - 270V	
Nominal Grid Current (import)	21A	29A
GRID OUTPUT		
Grid Current (export)	12A ± 2A	16A ± 2A
BATTERY		
Nominal Battery Voltage	48VDC	
Charging Stages	Boost, Float, Absorption	
INVERTER		
Switching Element	MOSFET	
Control	32 Bit DSP controlled	
Nominal Output Voltage (V) & Voltage range	230 V ± 2%	
Output Supply Phase	1 Phase 2 Wire	
Output waveform	Pure Sine Wave	
Nominal Frequency (Hz)	50 Hz	
Nominal Output Current (A)	13A	17A
Output Voltage Distortion (THD)	<4%	
Overload at nominal output voltage	110% for 10 minutes, 125% for 1minute, 200% for 5 seconds	

Technical Specifications

Model	HYBRID TX 3.75kVA	HYBRID TX 5kVA
SYSTEM DATA		
Transfer Time	< 20 mS	
Protection	Under/Over voltage protection for Input/Output, Battery & Array; Reverse polarity protection for Array & Battery; Protection for Output Overload, Short circuit and Over Temperature; MCB & Surge protection at Grid/DG Input, Battery, Wrong Wiring, Low Battery, Anti-Islanding Protection	
Display Parameters	"Voltage/Current: Array, Battery, Grid, Output; Day kWh, Cumulative kWh, Date, Time "	
Indications	Battery Charging/ Discharging, Grid Available, Grid Select, Solar Available, Inverter On, Load On, System on Battery, Low Battery Pre-alarm, Wrong Wiring, Short Circuit Trip, Fault LED Indicator (For Overload, Low Battery, Over Temperature)	
	"Battery type, Battery voltage (Boost, Float, Absorption), Priority (SGB/SBG/Solar Only/Grid Feed), Charging Current from Grid, Zero feed/Allow feed in GFM Current Settings"	
INTERFACE		
DC Connection	MC4 Connectors	
Connectivity	WiFi Dongle (optional)	
GENERAL		
Display / Indications	LCD Display (20*4) / LED Indications	
Dimensions (WxDxH in mm)	300 x 504 x 515	350x635x589
Net Weight (kg)	50 kg	64 kg
Mounting	Surface Mount	
Cooling	Air Cooling	
Enclosure Protection	IP21	
Galvanic Isolation	Inbuilt Isolation Transformer	
Operating Temperature	0°C - 45°C	