EmPowering Tomorrow with New Energy



What a Solar Inverter aspires to be

Thea Energy specializes in renewable energy solutions, particularly solar technology.

We have a 30-year history in manufacturing reliable solar inverters and launching global brands like Kaco New Energy in India.

We are known for our Grid-Tied Solar Inverters tailored to Indian conditions and have expanded into energy storage solutions, including hybrid inverters, Li-ion batteries, and EV chargers. We also contribute to India's Renewable Energy roadmap and operate a carbon-neutral production facility powered by solar energy.

SE-TH HYB(E) 3-6 kW (Single Phase Hybrid)

FOR RESIDENTIAL, SMALL COMMERCIAL HYBRID APPLICATIONS



SUPERIOR PERFORMANCE

- Maximum efficiency upto 97.3%
- Upto 10 kW of PV Input Power supported for extended self-consumption
- Very High battery Charge and Discharge Currents to support loads
- Support Time of the Day Charging / discharging; allows grid charging
- Allows / Disallows grid feed in

HIGH RELIABILITY

- IP 65 construction, supports Smart Meter and CT and inbuilt WiFi
- Compatible with a wide range of power and grid voltage and high harmonic power, grid environments

INTELLIGENT MAINTENANCE

- Has inbuilt Smart port – Allows to connect another grid connected inverter / DG set / Smart Load
- Supports Lithium ion (pylon protocol) and lead acid batteries
- Remote Configuration and Update supported

Replacement for DG set and Backup Inverter – Solar powered.

Thea Energy Pvt. Ltd

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THEA HYBRID (Energy Storage) Inverter 3kW - 6kW (Single Phase Hybrid)

Model and Rating	SE-TH HYBE 3.0TL1 3 KW eco	SE-TH HYBE 5.0TL1 5 KW eco	SE-TH HYBE 6.0TL1 6 KW eco	SE-TH HYB 3.0TL1 3 KW	SE-TH HYB 5.0TL1 5 KW	SE-TH HYB 6.0TL1 6 KW
Efficiency						
Max. Efficiency (PV to AC)	97.30%					
Eur. Efficiency (PV to AC)	96.80%					
Max. Efficiency (BAT to AC)	94.30%					
Input (PV)						
Max. PV Usable Power	7,800 W			10,000 W		
Max. PV Voltage	500V					
Start-up Voltage	90V					
MPPT Operating Voltage Range	70V - 480V					
Max. Input Current	18A / 18A					
Max. Short Circuit Current	25A / 25A					
Nos. of MPPT	2					
String per MPPT	1/1					
Input / Output (BAT)						
Battery Type	Lithium-ion / Lead-acid					
Nominal Battery Voltage	48V					
Battery Voltage Range	40V—60V					
Max. Charge/Discharge Current	75A / 75A	110A / 110A	135A / 135A	75A / 75A	110A / 110A	135A / 135A
Max. Charge/Discharge Power	4,000W / 4,000W	5,500W / 5,500W	6,000W / 6,000W	4,000W / 4,000W	5,500W / 5,500W	6,000W / 6,000W
Input / Output (Grid)						
Nominal AC Output Power	3,000W	5,000W	6,000W	3,000W	5,000W	6,000W
Max. AC Apparent Power	3,300VA	5,500VA	6,600VA	3,300VA	5,500VA	6,600VA
Max. AC Output Power (PF=1)	3,300W	5,500W	6,600W	3,300W	5,500W	6,600W
Max. AC Output Current	14.4A	23.9A	28.7A	14.4A	23.9A	28.7A
Max. Input Power From Grid	9.0kVA					
Max. Input Current From Grid	39.1A					
Rated Grid Voltage	230V, L+N+PE					
Grid Voltage Range	150V-300V (Adjustable)					
Rated Grid Frequency	50Hz / 60Hz					
AC Frequency Range	45Hz-55Hz / 55Hz-65Hz (Adjustable)					
Power Factor	>0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)					
THDI	<3%@Rated Power					
Output (Off Grid)						
Nominal Output Power	3,000W	5,000W	6,000W	3,000W	5,000W	6,000W
Max. Output Apparent Power	3,300VA	5,500VA	6,600VA	3,300VA	5,500VA	6,600VA
Max. AC Output Current	14.4A	23.9A	28.7A	14.4A	23.9A	28.7A
Peak Output Power (1min)	3,600VA	6,000VA	7,200VA	3,600VA	6,000VA	7,200VA
Peak Output Power (10s)	6,000VA	9,300VA		6,000VA	9,300VA	
Nominal Output Voltage	230V, L+N+PE					
Nominal Output frequency	50Hz / 60Hz					
Transfer Time	10ms (Typical)					
THDv	<3% @100% R Load					
Protection						
Protection Category	Class I					
DC Switch	Optional			Yes		
Anti-islanding Protection	Yes					
AC Over Current Protection	Yes					
PV / AC Over Voltage Protection	DC Type II, AC Type III					
AC Short Circuit Protection	Yes					
PV Reverse Protection	Yes					
Surge Arrester	DC Type III, AC Type III					
Insulation Detection	_ _			Yes		
Leakage Current Protection	_ _			Yes		
General						
Max. Operation Altitude	4,000m					
Protection Degree	IP65					
Operating Temperature Range	(-25°C to 60°C)					
Relative Humidity	0 - 100%					
Cooling Method	Smart Fan Cooling					
Mounting	Wall bracket					
Dimensions (W*H*D)	367mm * 421mm * 215mm					
Weight	15.5Kg			16Kg		
HMI & COM						
Display	LED + LCD (with Colour Touch Screen)					
Communication Interface	RS485/CAN (for BMS), CAN (for parallel), 1*DO, 1*DI, WiFi/LAN (Optional)			RS485/CAN (for BMS), RS485 (for Meter), DRMs, CAN (for parallel), 2*DO, 2*DI, WiFi/LAN (Optional)		
Certification						
Safety	_ _			IEC 61727, IEC 62116, IEC 62109		
Grid Code	_ _			IEC 61683, IEC 60068		
BIS (R-51002593)	IS 16221 (Part 2):2015/IEC 62109-2:2011, IS 16169:2019/IEC 62116:2014 & IS 17980:2022/IEC 62891:2020					

Remarks :

The range of output voltage and frequency may vary depending on different grid codes.
Specifications are subject to change without advance notice.

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