



Three Phase HYBRID INVERTER

PRODUCT MODEL

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|---------------|--------------|
| ■ HB-INV-TH4K | HB-INV-TH10K |
| ■ HB-INV-TH5K | HB-INV-TH12K |
| ■ HB-INV-TH6K | HB-INV-TH15K |
| ■ HB-INV-TH8K | |



HIGH PERFORMANCE

- 200% PV over management;
- 200% backup overload capacity, 50A battery current;
- Max. efficiency 98%, Battery efficiency 96%;
- Load monitoring accuracy 10W, Battery discharging threshold 10W.



HIGH RELIABILITY

- UPS level redundant protection against backup load breakdown;
- Three-level firmware and two-level hardware battery protection;
- Multiple temperature monitoring, delicate thermal management;
- Max. 6 Inverters in parallel to increase power availability.



HIGH INTELLIGENCE

- Internal EMS optimizes home energy supply automatically;
- PV production forecast;
- Built-in electric power service, FCAS, VPP, etc;
- Online monitoring, online diagnosis, online service.

INVERTER	HB-INV-TH4K	HB-INV-TH5K	HB-INV-TH6K	HB-INV-TH8K	HB-INV-TH10K	HB-INV-TH12K	HB-INV-TH15K
BATTERY PORT							
Battery Type	Li-on / Lead-acid						
Battery Voltage Range	80~700V						
Max. Charging Current	50A						
Max. Discharging Current	50A						
PV INPUT							
Max. PV Input Power	8kW	10kW	12kW	16kW	20kW	22.5kW	22.5kW
Max. PV Input Voltage	1100V						
MPPT Range	140~950V						
Startup Voltage	120V						
Max. Input Current	16A / 16A / 16A						
Max. Short Circuit Current	24A / 24A/ 24A						
MPPT Trackers	3						
Strings Per MPPT Tracker	1 / 1 / 1						
GRID PORT							
Rated Output Power	4kVA	5kVA	6kVA	8kVA	10kVA	12kVA	15kVA
Max. output current	6.7A	8.3A	10A	13.3A	16.7A	19.1A	23.9A
Max output apparent power	4kVA	5kVA	6kVA	8kVA	10kVA	12kVA	15kVA
Max. Input Power	8kVA	10kVA	12kVA	16kVA	20kVA	22.5kVA	22.5kVA
Rated Grid Voltage	220/380Vac, 230/400Vac, 3/N/PE						
Grid Voltage Range	180~270Vac						
Rated Grid Frequency	50 / 60Hz						
Power Factor	-0.8~+0.8						
THDi	<3%						
BACKUP PORT							
Surge Backup Power	8kVA	10kVA	12kVA	16kVA	20kVA	24kVA	30kVA
Rated Backup Power	4kVA	5kVA	6kVA	8kVA	10kVA	12kVA	15kVA
Rated Backup Voltage	220/380Vac, 230/400Vac, 3/N/PE						
Rated Backup Frequency	50 / 60Hz						
THDv	<3% (Linear Load) / <5% (Non-linear Load)						
DCV	<100mV						
Crest Ratio	3:1						
Transfer Time	<10ms						
EFFICIENCY							
Max. Efficiency	98%	98%	98.2%	98.4%	98.4%	98.4%	98.4%
Europe Efficiency	97.5%	97.5%	97.7%	97.9%	97.9%	97.9%	98%
MPPT Efficiency	99.9%						
Max. Round Trip Efficiency	96%						
GENERAL DATA							
Operating Temperature Range	-20~60 C						
Relative Humidity	0~95% (No Condensing)						
Operating Altitude	≤3000m (>3000m Derating)						
Cooling	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Intelligent Air Cooling
Noise	<30dB	<30dB	<30dB	<30dB	<30dB	<30dB	<45dB
Topology	Transformerless						
Dimensions (W*H*D)	590×416×205mm						
Protection Degree	IP65						
Weight	25kg						
Warranty	5 years / 10 years						
HMI&COMM.							
Communication with BMS	CAN / RS-485						
Load Monitoring	Meter / CT / Backup box						
External Communication	RS-485 / WIFI / 4G / Ethernet						
User Interface	LED / LCD						
CERTIFICATE							
Grid Regulation	VDE-AR-N 4105:2018, G98, G99, C10/11:2021, NTS 631, RD647:2020						
	UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1						
Safety Regulation	IEC/EN 62109-1&2, IEC/ 62477-1:2012						
EMC	IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4						

Note: Specifications are subject to change without advance notice.