

**TBEA**

## TH5/6/8/10/12K-TLA01

Three Phase Hybrid inverter  
Operation With Low-voltage Battery



### High Power Generation

- 160V start-up voltage
- Wide range of MPPT voltage

### Safe and Reliable

- <4ms UPS- level switching
- Easy setting of smart working modes

### Intelligent O&M

- Remote diagnosis & update
- 24-hour intelligent energy management

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Residential ESS Solution

## Technical Datasheet

Model	TH5K-TLA01	TH6K-TLA01	TH8K-TLA01	TH10K-TLA01	TH12K-TLA01
Max input power	75kW	95kW	120kW	150kW	180kW
Max input voltage	1000V				
Rated voltage	1000V				
Start-up voltage	160V				
MPPT voltage range	110~900V				
Max input current	75A/16A			25A/20A	
Max short circuit current	200/20A			25A/20A	
MPPT number	2			2	
Max. input string number	2			4	
<b>Input Battery</b>					
Battery type	Li-ion/LiFePO4				
Battery voltage range	40~50V				
Number of battery input channels	4				
Max. charge / discharge current	120A/20A	150A/15A	150A/10A	210A/20A	250A/20A
Communication	CAN/RS485				
Charging Strategy for Li-ion Battery	Self-adaptation to BMS				
<b>Output AC (Grid side)</b>					
Rated output power	50W	65W	80W	100W	120W
Max. apparent output power	50kVA	65kVA	80kVA	100kVA	120kVA
Max. rated current	15.6A	15.6A	15.2A	22.7A	23.5A
Max. output current	15.6A	15.6A	15.2A	22.7A	23.5A
Grid voltage range	195~255V/Phase voltage (200~260V/Line voltage)				
Rated grid voltage	220V/180V/230V/400V/517V/PE				
Rated grid frequency	50/60Hz				
Power Factor	+0.9V (0.8 leading ~ 0.8 lagging)				
THD <sub>v</sub>	≤3%				
<b>Input AC (Grid side)</b>					
Rated input power	50W	65W	80W	100W	120W
Max. input power	120W	120W	80W	200W	240W
Max. apparent input power	120kVA	120kVA	120kVA	200kVA	240kVA
Max. input current	16.2A	16.2A	24.2A	30.5A	36.4A
Rated input voltage	220V/180V/230V/400V/517V/PE				
Rated input frequency	50/60Hz				
<b>Output AC (Backup)</b>					
Rated output power	50W	65W	80W	100W	120W
Max. output current	15A	15A	15A	15.2A	15.2A
Max. output power	50kVA	65kVA	80kVA	100kVA	120kVA
Backup switch time	2 times of rated power/3s				
Rated output voltage	220V/180V/230V/400V/517V/PE				
Rated frequency	50/60Hz				
THD <sub>v</sub>	≤3%				
<b>Efficiency</b>					
Max efficiency	97.5%				
EU efficiency	96.8%				
MPPT efficiency	99.9%				
<b>Protection</b>					
Integrated DC switch	Yes				
DC reverse polarity protection	Yes				
Anti-islanding protection	Yes				
Short-circuit protection	Yes				
Output over current protection	Yes				
DC Surge protection	Type I				
AC Surge protection	Type II				
Insulation impedance detection	Yes				
Ground Fault Monitoring	Yes				
Residual leakage current detection	Yes				
Temperature protection	Yes				
UL97	Yes				
AC Over-voltage Protection	Yes				
DC Over-current Protection	Yes				
24-hour fault monitoring	Yes				
Integrated AFCI (DC arc-fault circuit protection)	Optional				
Anti-backflow	Yes				
RoHS	Yes				
<b>General Data</b>					
Dimensions (W*H*D)	197*197*140mm				
Weight	5.5kg				
Self-consumption@90% Rated voltage	≤10W				
Operating temperature range	-40 to +40°C				
Cooling control	Smart control w/ Cooling				
Max. operation altitude	8000m				
Relative Humidity	0~100%				
Ingress protection	IP66				
Topology Structure	Transformerless				
Grid connector standard	IEC 60728/IEC 61851-1/IEC 61855				
Safety EMC standard	EN 61801-2/IEC 61801-2/EN 61000-6-1/3				
Type of DC terminal	MC4 Max. 6mm <sup>2</sup>				
Battery connection type	Terminal				
Type of AC terminal (Backup)	Terminal				
Type of AC terminal (Grid side)	Terminal				
<b>Display/Communication</b>					
Display	LCD+48000mAh				
Communication interface	RS485/CAN/Wi-Fi/Bluetooth				

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