BYD Energy Storage

Power-Box
TH5/6/8/10/12/15K

Three-Phase Hybrid Inverter



KEY FEATURES

Energy Management

- Max. efficiency 98.2%
- DC 18 A current input, compatible with high-power PV module
- 100% three phase unbalanced output

Robust

- Built-in arc-fault circuit-interrupter
- IP66 protection
- SPD type II : DC & AC

Powerful Backup

- THDv < 2%
- 150% peak output power (60 s)
- Backup switch time < 10 ms

Smart O & M

- 24/7 online monitoring
- Smart remote diagnosis
- Firmware OTA updates

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TECHNICAL PARAMETERS

Models	Power-Box TH5K	Power-Box TH6K	Power-Box TH8K	Power-Box TH10K	Power-Box TH12K	Power-Box TH15K
Input (PV)						
Max. Input Power	7,500 Wp	9,000 Wp	12,000 Wp	15,000 Wp	18,000 Wp	22,500 Wp
Max. Input Voltage	1,000 V					
Start-up Voltage	180 V					
Rated Voltage	620 V					
MPPT Voltage Range	160 V - 950 V					
Max. Current per MPPT	18 A				32 A / 18 A	
Max. Short Circuit Current per MPPT	25 A				40 A / 25 A	
Number of MPP Trackers	2				2	
Number of Strings per MPPT	1 / 1				2 / 1	
Battery						
Compatible Battery	BYD Battery-Box HVE / HVB / HVS+ / HVM+					
Battery Voltage	160 V - 600 V					
Max. Charge / Discharge Current	25 A / 25 A				30 A / 30 A	
Max. Charge / Discharge Power	7,500 W / 7,500 W	9,000 W / 9,000 W	12,000 W / 12,000 W	15,000 W / 15,000 W	18,000 W / 18,000 W	18,000 W / 18,000 W
AC Input / Output (Grid)						
Nominal Voltage	3 / N / PE, 220 / 380 V, 230 V / 400 V					
Nominal Frequency	50 Hz / 60 Hz					
Nominal Output Power	5,000 W	6,000 W	8,000 W	10,000 W	12,000 W	15,000 W
Max. Apparent Output Power	5,500 VA	6,600 VA	8,800 VA	11,000 VA	13,200 VA	16,500 VA
Rated Output Current	7.6 A / 7.3 A	9.1 A / 8.7 A	12.2 A / 11.6 A	15.2 A / 14.5 A	18.2 A / 17.4 A	22.8 A / 21.8 A
Max. Output Current	8.4 A / 8.0 A	10.0 A / 9.6 A	13.4 A / 12.8 A	16.7 A / 16.0 A	20.0 A / 19.2 A	25.0 A / 24.0 A
Rated (Max.) Input Power	7.5 kW	9 kW	12 kW	15 kW	18 kW	22.5 kW
Rated (Max.) Input Current	11.4 A / 10.9 A	13.7 A / 13.1 A	18.2 A / 17.4 A	22.8 A / 21.8 A	27.3 A / 26.1 A	34.1 A / 32.7 A
Power Factor	0.8 (leading) - 0.8 (lagging)					
THDi	≤ 3%					
AC Output (Backup)						
Nominal Output Power	5,000 W	6,000 W	8,000 W	10,000 W	12,000 W	15,000 W
Peak Output Power	7,500 VA, 60 s	9,000 VA, 60 s	12,000 VA, 60 s	15,000 VA, 60 s	18,000 VA, 60 s	18,000 VA, 60 s
Backup Switch Time	10 ms					
Nominal Voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V					
Nominal Frequency	50 Hz / 60 Hz					
THDv	≤ 2%					
Efficiency						
MPPT Efficiency	> 99.90%	> 99.90%	> 99.90%	> 99.90%	> 99.90%	> 99.90%
Max. Efficiency	97.80%	97.80%	98.20%	98.20%	98.20%	98.20%
EU Efficiency	97.20%	97.20%	97.30%	97.50%	97.50%	97.50%
Protection						
Anti Islanding Protection	Yes					
Leakage Current Protection	Yes					
PV Reverse Protection	Yes					
Short Circuit Protection	Yes					
Arc-fault Circuit-interrupter	Yes					
Surge Protection	DC II / AC II					
Battery Reverse Protection	Yes					
General Data						
Operating Temperature Range	-25 °C - +60 °C					
Relative Operating Humidity	0% - 100% RH					
Operating Altitude	4,000 m (> 3,000 m Derating)					
Cooling	Natural Convection				Smart Fan Cooling	
Dimensions (H / W / D)	537 mm × 577 mm × 206 mm					
Weight	26 kg				29 kg	
Inverter Topology	Transformerless					
Display	LED + App					
Communication	WiFi / Ethernet, RS485, CAN					
Ingress Protection	IP66					
Standards Compliance						
Safety / EMC Standard	IEC 62109-1 / 2, IEC 61000-6, IEC 61000-3, IEC 62116, IEC 61727, IEC 61683, IEC 60068, IEC 62477					
Grid Connection Standard	EN50549-1, VDE4105, C10 / 11, CEI-0-21, TOR Type A, PTPiREE: 2021, AS4777-2, PPDS					

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