

Power-Box

SH3/3.7/4.6/5/6K

Single-Phase Hybrid Inverter



KEY FEATURES



Energy Management

- Max. efficiency 97.7%
- Max. PV input current 16 A * 2
- 200% PV input oversizing
- Max. battery charge / discharge current 35 A



Safe & Convenient

- SPD type : DC II / AC III
- Working noise < 25 dB
- Quick installation and easy debugging



Powerful Backup

- THDv < 2%
- 200% peak output power
- Seamless on-grid / off-grid switching



Smart O & M

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



TECHNICAL PARAMETERS

Models	Power-Box SH3K	Power-Box SH3.7K	Power-Box SH4.6K	Power-Box SH5K	Power-Box SH6K
Input (PV)					
Max. PV Input Power	6,000 Wp	7,360 Wp	8,280 Wp	9,000 Wp	9,000 Wp
Max. PV Input Voltage	600 V				
Start-up Voltage	120 V				
Rated Voltage	360 V				
MPPT Voltage Range	80 V ~ 550 V				
Max. Current per MPPT	16 A				
Max. Short Circuit Current per MPPT	24 A				
Number of MPP Trackers	2				
Number of Strings per MPPT	1/1				
Battery					
Compatible Battery	BYD Battery-Box HVE / HVB / HVM+ / HVS+				
Battery Voltage	80 V ~ 480 V				
Max. Charge / Discharge Current	35 A				
Max. Charge / Discharge Power	3,000 W	3,680 W	4,600 W	5,000 W	6,000 W
AC Input / Output (Grid)					
Rated AC Input / Output Power	3,000 W	3,680 W	4,600 W	5,000 W	6,000 W
Max. AC Input / Output Apparent Power	3,300 VA	4,048 VA	4,600 VA	5,500 VA	6,600 VA
Rated AC Input / Output Current	13 A	16 A	20 A	21.7 A	26.1 A
Max. AC Input / Output Current	26 A / 14.3 A	32 A / 17.6 A	40 A / 20 A	44 A / 23.9 A	52 A / 28.7 A
Rated AC Voltage Range	1 / N / PE, 220 V / 230 V / 240 V				
AC Voltage Range	0.9 Ur ~ 1.1 Ur				
AC Grid Frequency	50 Hz (47.5 Hz ~ 52.5 Hz) / 60 Hz (57 Hz ~ 63 Hz)				
Power Factor	0.99, 0.8 leading ~ 0.8 lagging adjustable				
THDi	< 3%				
AC Output (Backup)					
Rated AC Output Power	3,000 W	3,680 W	4,600 W	5,000 W	6,000 W
Peak Output Power	6,000 VA, 10 s	7,360 VA, 10 s	9,200 VA, 10 s	10,000 VA, 10 s	12,000 VA, 10 s
Back-up Switch Time	< 13 ms	< 13 ms	< 13 ms	< 13 ms	< 13 ms
Rated AC Output Current	13 A	16 A	20 A	21.7 A	26.1 A
Rated Output Voltage	1 / N / PE, 220 V / 230 V / 240 V				
Rated Output Grid Frequency	50 Hz / 60 Hz				
THDv	< 2%				
Efficiency					
MPPT Efficiency	99.90%				
Max. Efficiency	97.70%				
EU Efficiency	96.60%				
Protection					
Protection Class	I				
Anti-islanding Protection	Yes				
DC Reverse Polarity Protection	Yes				
Insulation Monitoring	Yes				
DC Surge Protection	II				
AC Surge Protection	III				
Residual Current Monitoring	Yes				
AC Overcurrent Protection	Yes				
DC Overvoltage Protection	Yes				
DC Undervoltage Protection	Yes				
AC Short-circuit Protection	Yes				
Overvoltage Category	DC: II / AC: III				
Battery Reverse Charging From Grid	Yes				
Ground Fault	Yes				
Overheat Protection	Yes				
General Data					
Operating Temperature Range	-25 °C ~ +60 °C				
Relative Operating Humidity	0 ~ 100% RH, Non-Condensing				
Operating Altitude	4000 m				
Cooling	Natural Convection				
Noise	< 25 dB				
Dimensions (H / W / D)	480 mm × 480 mm × 180 mm				
Weight	20 kg				
Inverter Topology	Non-isolated				
Display	LED				
Communication	WiFi, LAN, Bluetooth, RS485, CAN				
Ingress Protection	IP65				
Nighttime Power	< 13 W				
Standards Compliance					
Safety / EMC Standard	EN/IEC 62109-1 / 2, EN/IEC 62040-1, EN/IEC 62477-1, EN IEC 61000-6, EN IEC 61000-3				
Grid Connection Standard	CEI 0-21, EN 50549-1, VDE-AR-N 4105, UNE 217002, NTS TYPEA, G99				