

BSE50KH3

Three Phase Energy Storage Inverters

50KW
High Voltage



Features:

- 4 Integrated MPPTs with string current capacity of up to 20A
- Maximum charge/discharge current of up to 70A+ 70A on two independently controlled battery ports
- Supports peak shaving control in both "self-use" and "generator" mode
- Backup port supports 1.6 times overload for short durations
- Generator connectivity with multiple input methods and automatic generator On/Off control
- Allows parallel operation of up to 6 units for both on-grid and off-grid applications
- Support to work as grid-tied inverter without battery connection during on-grid
- Compatible with a wide voltage range to accommodate various batteries

Models	BSE50KH3
Input DC (PV side)	
Recommended max PV array size	100 kW
Max. usable PV input power	96 kW
Max. input voltage	1000 V
Rated voltage	600 V
Start-up voltage	180 V
MPPT voltage range	150-850 V
Max. input current	4*40 A
Max. short circuit current	4*60 A
MPPT number/Max. input strings number	4*8
Battery	
Battery type	Li-ion
Battery voltage range	150-800 V
Max. charge / discharge power	55 kW
Max. charge / discharge current	70 A*2 ⁽¹⁾
No. of battery inputs	2
Max. charge / discharge power of each input	40 kW
Communication	CAN/RS485
Output AC (Grid side)	
Rated output power	50 kW
Max. apparent output power	50 kVA
Rated grid voltage	3/N/PE, 220 V / 380 V 3/N/PE, 230 V / 400 V
Rated grid frequency	50 Hz / 60 Hz
Rated grid output current	76 A / 72.2 A
Max. output current	76 A / 72.2 A
Power factor	>0.99 (0.8 leading - 0.8 lagging)
THDi	< 3%
Input AC (Grid side)	
Max. AC passthrough current	152 A / 144.4 A
Rated input voltage	3/N/PE, 220 V / 380 V 3/N/PE, 230 V / 400 V
Rated input frequency	50 Hz / 60 Hz
Input Generator	
Max. input power	50 kW
Rated input current	76 A / 72.2 A
Rated input voltage	3/N/PE, 220 V / 380 V 3/N/PE, 230 V / 400 V
Rated input frequency	50 Hz / 60 Hz
Output AC (Back-up)	
Rated output power	50 kW
Max. apparent output power	1.6 times of rated power, 2 s
Back-up switch time	< 10 ms
Rated output voltage	3/N/PE, 220 V / 380 V 3/N/PE, 230 V / 400 V
Rated frequency	50 Hz / 60 Hz
Rated output current	76A / 72.2 A
THDv (@linear load)	< 2%
Efficiency	
Max. efficiency	97.8%
EU efficiency	97.4%
BAT charged by PV Max. efficiency	98.5%
BAT charged/discharged to AC Max. efficiency	97.5%
Protection	
Anti-islanding protection	Yes
Output over current protection	Yes
Short circuit protection	Yes
Integrated DC switch	Optional
DC reverse-polarity protection	Yes
Surge protection	DC Type II / AC Type II
Integrated AFCI (DC arc-fault circuit protection)	Yes ⁽²⁾
General Data	
Dimensions (W*H*D)	530*880*290 mm
Weight	73 kg
Topology	Non-isolated
Self-consumption (night)	<25 W
Operating ambient temperature range	-25 ~ +60°C
Relative humidity	0-95%
Ingress protection	IP66
Cooling concept	Intelligent redundant fan-cooling
Max. operation altitude	4000 m
Grid connection standard	G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15 / VFR:2019, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA
Safety/EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-3
Features	
PV connection	MC4 Quick connection plug
Battery connection	Terminal connector
AC connection	Terminal Block
Display	LED + Bluetooth + APP
Communication	CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN

(1) Supporting parallel 140A input. (2) Activation required.