

## Three Phase High Voltage Energy Storage Inverters

### Features:

- 2 seconds of 160% overload capability
- Supports a maximum input current of 20A, making it ideal for all high-power PV modules of any brand
- Real-time battery monitoring, remote upgrade, and battery heating function to prolong battery life
- Supports peak shaving features in "self-use" and "generator" modes
- Supports Unbalanced and Half-Wave Loads on both the Grid and Backup Port
- A wide battery voltage range accommodates the prevalent high-voltage lithium batteries found in the market
- Battery charging/discharging current 140A/70A+70A, suitable for 280Ah cell standard 0.5C application condition
- Supports 200% DC/AC ratio and makes full use of PV charging, providing a long backup

### Models:

3P30K

3P40K

3P50K



# DATASHEET

# 3P(30-50)K

Models	30K	40K	50K
<b>Input DC (PV side)</b>			
Recommended max. PV array size	60 kW	80 kW	100 kW
Max. usable PV input power	60 kW	80 kW	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	3 × 40 A		4 × 40 A
Max. short circuit current	3 × 60 A		4 × 60 A
MPPT number / Max. input strings number	3 / 6		4 / 8
<b>Battery</b>			
Battery type		Li-ion	
Battery voltage range		150 - 800 V	
Max. charge / discharge power	33 kW	44 kW	55 kW
Max. charge / discharge current		70 A × 2 <sup>(1)</sup>	
No. of battery inputs		2	
Max. charge / discharge power of each input	33 kW	35 kW	35 kW
Communication		CAN / RS485	
<b>Output AC (Grid side)</b>			
Rated output power	30 kW	40 kW	50 kW
Max. apparent output power	30 kVA	40 kVA	50 kVA
Rated grid voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated grid frequency		50 Hz / 60 Hz	
Rated grid output current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Max. output current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 3%	
<b>Input AC (Grid side)</b>			
Max. AC passthrough current	91.2 A / 86.6 A	121.6 A / 115.4 A	152 A / 144.4 A
Rated input voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated input frequency		50 Hz / 60 Hz	
<b>Input Generator</b>			
Max. input power	30 kW	40 kW	50 kW
Rated input current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Rated input voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated input frequency		50 Hz / 60 Hz	
<b>Output AC (Back-up)</b>			
Rated output power	30 kW	40 kW	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, 230 V / 400 V	
Rated frequency		50 Hz / 60 Hz	
Rated output current	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
THDv (@linear load)		< 2%	
<b>Efficiency</b>			
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%	
<b>Protection</b>			
Anti-islanding protection		Yes	
Output over current protection		Yes	
Insulation resistance monitoring		Yes	
Short circuit protection		Yes	
Integrated DC switch		Yes	
DC reverse-polarity protection		Yes	
Surge protection		DC Type II / AC Type II	
Integrated AFCI 2.0		Optional	
<b>General Data</b>			
Dimensions (W*H*D)		530 × 880 × 290 mm	
Weight		73 kg	
Topology		Transformerless	
Self-consumption (night)		< 35 W	
Operating ambient temperature range		- 25 - +60° C	
Relative humidity		0 - 95%	
Ingress protection		IP66	
Cooling concept		Intelligent fan-cooling	
Max. operation altitude		4000 m	
Grid connection standard	G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1/EN 50549-10, VDE 0126/UTE C 15/VFR:2019, NTS 631/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, PORTARIA N° 140, DE 21 DE MARÇO DE 2022		
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011		
<b>Features</b>			
PV connection	MC4 Quick connection plug		
Battery connection	Terminal connector		
AC connection	Terminal Block		
Display	7.0" LCD display & Bluetooth + APP		
Communication	CAN, RS485, Ethernet, Optional: S3-WiFi-ST, Cellular, LAN		

(1) Supporting parallel 140A input.