

Hybrid Inverter Model	Guard Plus 3680E	Guard Plus 5000E
PV String Input		
Max. DC Voltage	580V	580V
Nominal Voltage	400V	400V
MPPT Voltage Range	80V-560V	80V-560V
Start Voltage	130V	130V
Number of MPPT Tracker	2	2
Strings Per MPPT Tracker	1	1
Max. Input Current Per MPPT	15A	15A
Max. Short-circuit Current Per MPPT	18A	18A
Output (On Grid)		
Nominal AC Output Power	3680W	5000W
Max. AC Apparent Power	7360VA (from grid)	7360VA (from grid)
Max. AC Output Power	3680W	5000W ¹
Nominal AC Voltage	230Vac	230Vac
AC Grid Frequency Range	50 / 60Hz±5Hz	50 / 60Hz±5Hz
Max. Output Current	16A	22A ²
Max. Input Current	32A	32A
Power Factor (cosφ)	0.8leading-0.8lagging	0.8leading-0.8lagging
Max. total harmonic distortion	<3%	<3%
Battery Input		
Battery Type	LFP (LiFePO4)	LFP (LiFePO4)
Nominal Battery Voltage	48V	48V
Charging Voltage Range	40-60V	40-60V
Max. Charging Current	50A	100A
Max. Discharging Current	80A	100A
Battery Capacity	100-400Ah	100-400Ah
Charging Strategy for Li-ion Battery	Depend on the BMS	Depend on the BMS
Output (Off-Grid)		
Max. Output Apparent Power	4000VA	5000VA
Peak Output Apparent Power	6900VA 10sec	6900VA 10sec
Max. Output Current	16A	20A
Rated Output Voltage	230V	230V
Nominal Output Frequency	50/60Hz	50/60Hz
Output THDv (@Linear Load)	<3%(Linear Load)	<3%(Linear Load)
Power Factor Range	0.8leading-0.8lagging	0.8leading-0.8lagging
Efficiency		
Max. PV Efficiency	97.6%	97.6%
Euro. PV Efficiency	97.0%	97.0%

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Features & Protection		
DC Switch	Bipolar DC Switch (125A/Pole)	Bipolar DC Switch (125A/Pole)
Anti-islanding Protection	Yes	Yes
Output Over Current	Yes	Yes
DC Reverse Polarity Protection	Yes	Yes
String Fault Detection	Yes	Yes
AC/DC Surge Protection	DC Type II; AC Type III	DC Type II; AC Type III
Insulation Detection	Yes	Yes
AC Short Circuit Protection	Yes	Yes
Input-side disconnection device	YES	YES
Residual current monitoring	YES	YES
AC overcurrent protection	YES	YES
AC overvoltage protection	YES	YES
Ripple receiver control	YES	YES
Battery reverse charging from grid	YES	YES
General Data		
Dimensions W x H x D	540*590*240mm	
Weight	32kg	
Operating Temperature Range	-25 ℃ ~+60 ℃	
Noise (dB)	<25	
Cooling Type	Natural Convection	
Max. Operation Altitude	2000m	
Operation Humidity	0~95% (No Condensation)	
IP Class	IP65	
Topology	Battery Isolation	
Communication	RS485/CAN2.0/WIFI/4G	
Display	LCD/APP	
Standard Compliance (more available upon request)		
Certificates	IEC 62109-1:2010; EN IEC 61000-6-1:2019 EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019 EN 61000-6-3:2007/A1:2011; EN IEC 61000-3-11:2019 IEC 62109-2:2011; IEC 61683:1999; IEC63056:2020	
Grid connection standards	VDE-AR-N 4105:2018 DIN VDE V 0124-100:2020; CEI 0-21:2019; EN50549-1; G99; UNE217001, UNE217002, UNE206007 NTS V2.1 Type A	

*1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa.

*2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.