

Hybrid Inverter Model Guard Plus 10KH3		
PV String Input		
Max. Continuous PV Input Power	20kW	
Max. DC Voltage	1100V	
Nominal Voltage	720V	
MPPT Voltage Range	140V-1000V	
MPPT Voltage Range (Full Load)	420V-850V	
Start Voltage¹	200V	
Number of MPPT	2	
Strings Per MPPT	1	
Max. Input Current Per MPPT	15A	
Max. Short-circuit Current Per MPPT	20A	
Output (On Grid)		
Nominal AC Output Power	10kW	
Max. AC Apparent Power	11kVA	
Nominal AC Voltage	400Vac	
AC Grid Frequency Range	50 / 60Hz±5Hz	
Nominal Output Current	14.5A	
Max. Output Current	16A	
Power Factor (cosΦ)	0.8leading-0.8lagging *	
Max. total harmonic distortion	< 3%	
Battery Input		
Battery Type	LFP (LiFePO4)	
Nominal Battery Voltage	51.2V	
Charging Voltage Range	44-58V	
Max. Charging Current	160A	
Max. Discharging Current	200A	
Battery Capacity	200/400/600/800Ah	
Output (Off Grid)		
Nominal AC Output Power	9.2kW	
Max. Apparent Power	10kVA	
Nominal Output Current	13.3A	
Max. Output Current	14.5A	
Nominal Output Voltage	400V	
Nominal Output Frequency	50/60Hz	
Output THDv (@Linear Load)	<3% (Linear Load)	
Power factor range	0.8leading-0.8lagging	
Efficiency		
Max. PV Efficiency	97.60%	
Euro. PV Efficiency	97.00%	
Features & Protections		
Anti-islanding Protection	Yes	
Output Over Current Protection	Yes	
DC Reverse Polarity Protection	Yes	
String Fault Detection	Yes	
AC/DC Surge Protection	DC Type II; AC Type III	
Insulation Detection	Yes	
AC Short Circuit Protection	Yes	
Input-side disconnection device	Yes	
Residual current monitoring	Yes	
AC overcurrent protection	Yes	
AC overvoltage protection	Yes	
Ripple receiver control	Yes	
Battery reverse charging from grid	Yes	
General Data		
Dimensions W x H x D	540*980*240mm	
Weight	49kg	
Operating Temperature Range	-25 °C ~ +60 °C	
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	
Grid connection standards	VDE-AR-N 4105:2018 DIN VDE V 0124-100:2020; CEI 0-21:2019; OVE-Richtlinie R 25:2020; EN 50549-1:2019/AC:2019	

* 0.95leading-0.95lagging for Germany.

Battery Model Guard Plus-Pack 5.1		
Performance		
Energy Capacity	5.12kwh	
Usable Capacity	4.6kwh	
Depth of Discharge (DoD)	90%	
Nominal Voltage	51.2V	
DC Circuit Breaker	125A	
Operating Voltage Range	44.8-56.5V	
Internal Resistance	<20mΩ	
Cycle Life	10,000cycle	
Battery type	LiFePO4	
System Weight	54KG	
Dimension (W x D x H)	540*490*240	
IP Protection	IP65	
Warranty	5 Years Product Warranty, 10 Years Performance Warranty	
General Specification		
Max. Charge/Discharge Current	50A/80A	
Rated DC power	4096W	
Max. Charge/Discharge Power	2825W/4096W	
Operating Temperature Range	0 to 50 °C charging -10 to 50 °C discharging	
General Specification		
Humidity	0~95% (No condensation)	
Capacity	200-800Ah	
Power Consumption	<2W	
Communication	CAN & RS485	
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement	
Cooling	Natural convection	
Noise emission	≤25db	
Max. operating altitude	≤2000m	
Display	SOC status indicator	
Installation	Floor stand, Wall mount(optional)	
Scalability	Max. 4 battery packs in parallel operation for single phase system; Max. 8 battery packs in parallel operation for 3 phase system;	
Compatibe inverters	Guard Plus 3680E/5000E, Guard Plus 8KH3/10KH3/12KH3	
Standard Compliance (more available upon request)		
Certificates	CE, EMC, IEC62619, UN38.3, UL1973	