



NovaPlus

DATASHEET

THREE-PHASE HIGH-VOLTAGE HYBRID INVERTER

PHI-20~30K-TH-US

Three-Phase · High Voltage · 20 kW – 30 kW



10+

YEARS
WARRANTY

30 kW

MAX. POWER

<10 ms

SWITCHOVER

99.9%

MPPT EFFIC.

IP66

PROTECTION

Technical Specifications

Models PHI-20K · 25K · 30K-TH-US

PHI-20~30K-TH-US · Hybrid Inverter · Three-Phase High Voltage

Model	PHI-20K-TH-US		PHI-25K-TH-US	PHI-30K-TH-US
DC Input (PV Side)				
Max. PV access power	40kW		50kW	60kW
Max. PV input power	32kW		40kW	48kW
Max. PV input voltage			1000V	
Start-up voltage			200V	
MPPT operating voltage range			180V–850V	
PV voltage range at full power			150V–750V	
No. indep. MPPT / strings per MPPT			4/3	
Max. MPPT current			4×45A	
AC Output/Input (Grid Side)				
Nominal apparent power	20kW		25kW	30kW
Max. apparent power	22kVA		27.5kVA	33kVA
Nominal current	55.5A/52.5A		69.4A/65.6A	83.3A/78.7A
Max. current	60A		77A	90A
Max. AC current from grid	2×50A/2×50A		2×50A/2×50A	2×50A/2×50A
Power factor			–0.8~+0.8 (adjustable)	
THDi			<3% (nominal output)	
Grid system			Three-phase	
Nominal frequency and voltage			50Hz/60Hz, 3L/N/PE, 120/208V, 127/220V	
AC Output (Back-up)				
Nominal apparent power	20kW		25kW	30kW
Output frequency and voltage			50Hz/60Hz, 3L/N/PE, 120/208V, 127/220V	
Output THDV			<3%	
Automatic switchover time			<10ms	
Battery Input Data				
Battery type			Li-ion	
Battery voltage range			200V–800V	
Max. charge/discharge current			2*50A/2*50A	
Li-Ion charging strategy			Self-adaptation to BMS	
Features		Interface and Control		
Max. MPPT efficiency	99.9%	Display		Color touchscreen
Protection rating	IP66	Monitoring		Smart Wi-Fi
Unbalanced output	100% per phase	GEN port		Generator / AC couple
General Functions and Data				
Operating modes	On-grid + Storage + Off-grid	Parallel		Up to 10 units (on/off-grid)
Peak shaving	Grid optimization	Flexible three-phase output		120/208V · 127/220V

 **Smart storage and flexible operation**

IP66 · Smart Energy Storage