



NovaPlus

DATASHEET

THREE-PHASE HIGH-VOLTAGE HYBRID INVERTER

PHI-40~60K-TH-US

Three-Phase · High Voltage · 40 kW – 60 kW



10+

YEARS
WARRANTY



60 kW

MAX. POWER

<10 ms

SWITCHOVER

99.9%

MPPT EFF.

IP66

PROTECTION

Technical Specifications

Models PHI-40K · 50K · 60K-TH-US

PHI-40~60K-TH-US · Hybrid Inverter · Three-Phase High Voltage

Model	PHI-40K-TH-US		PHI-50K-TH-US	PHI-60K-TH-US
DC Input (PV Side)				
Max. PV access power	80kW		100kW	120kW
Max. PV input power	64kW		80kW	96kW
Max. PV input voltage			1000V	
Startup voltage			200V	
MPPT operating voltage range			180V–850V	
Nominal input voltage			600V	
No. indep. MPPT / strings per MPPT			8/3	
Max. MPPT current			8×45A	
AC Output/Input (Grid Side)				
Nominal apparent power	40kW		50kW	60kW
Max. apparent power	44kVA		55kVA	66kVA
Nominal current	111.1A/104A		138.8A/131.2A	166.6A/157.4A
Max. current	120A		152A	183A
Max. AC current from grid	2×100A/2×100A		2×100A/2×100A	2×100A/2×100A
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 (Backup)				
Nominal apparent power	40kW		50kW	60kW
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*100A/2*100A	
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

 **Intelligent storage and flexible operation**

IP66 · Smart Energy Storage