



NovaPlus

TECHNICAL DATASHEET

HIGH-PERFORMANCE HYBRID INVERTER

PHI-8~12K-TL-US

Three-Phase · 208/220V · Up to 12 kW



12 Kw

MAX. POWER

<10 ms

SWITCHOVER

240 A

BATTERY CHARGE

Type 4

NEMA PROTECTION

Technical Specifications

Full range PHI-8K to PHI-12K

PHI-8~12K-TL-US · Hybrid Inverter · Three-Phase

Model	PHI-8K	PHI-10K	PHI-12K
DC INPUT (PV SIDE)			
Max. PV access power	16kW	20kW	24kW
Max. PV input power	12.8kW	16kW	19.2kW
No. indep. MPPT / strings per MPPT	2/2	2/2	2/2
Max. MPPT current	2*36A	2*36A	2*36A
Max. PV input voltage	1000V		
Nominal input voltage	360V		
MPPT working voltage range	180V–850V		
Start-up voltage	200V		
AC OUTPUT/INPUT (GRID SIDE)			
Nominal apparent power	8kW	10kW	12kW
Max. apparent power	8.8kVA	11kVA	13.2kVA
Nominal current	22.2/21.1A	27.7/26.2A	33.3/31.4A
Max. current	25A	30A	35A
Nominal frequency and voltage	60Hz, 3L+N+PE, 120/208V · 127/220V		
Power factor	–0.8~+0.8 (adjustable)		
THDi	<3% (nominal output)		
Grid system	Three-phase (3L+N+PE)		
Max. AC current from grid	60A		
AC OUTPUT (BACKUP)			
Nominal apparent power	8kVA	10kVA	12kVA
Max. apparent power	8.8kVA	11kVA	13.2kVA
Output frequency and voltage	60Hz, 3L+N+PE, 120/208V · 127/220V		
Output THDV	<3%		
Automatic switchover time	<10ms		
BATTERY INPUT		EFFICIENCY	
Battery type	Li-ion / Lead-acid	Max. MPPT efficiency	99.9%
Battery voltage range	40V–60V	European efficiency	97.5%
Li-Ion charging strategy	BMS self-adaptation	Max. battery-to-load efficiency	94.5%
Max. charge/discharge current	190A	210A	240A
INTERFACE & CONTROL		GENERAL DATA	
Topology	Transformerless	Dimensions (L/W/H)	425 × 290 × 710 mm
Display	LCD and App	Weight	45 kg
Communication	WiFi/4G/USB/CAN/RS485	Protection rating	NEMA Type 4
Operating environment	–25°C ... +60°C · Intelligent cooling · Nighttime consumption <3W · Max. altitude 4000 m		

 **10-year warranty**

Option to extend to 15 years