

HYBRID SOLAR INVERTER PH9100 EU-HM Series

3.6-12KW | IP66 | WiFi



Flexible Energy Storage Configuration

- Built-in WiFi for remote monitoring and management.
- Compatible with 40–60V low-voltage battery systems.

Rugged Protection Design

- IP66-rated enclosure for reliable outdoor installation.
- Independent cooling air duct design minimizes dust ingress and extends product lifespan.

Smart Energy Management

- Built-in CT sensor enables real-time load monitoring and export power control.
- Dual AC input supports flexible integration for smart home energy systems.
- Supports feed-in to the grid with adjustable export power

Flexible System Expansion

- Supports up to 10 units in parallel in off-grid mode.
- Easily expand system capacity as household energy needs grow.

Intelligent Monitoring

- 4.3-inch color touchscreen for easy operation.
- Built-in WiFi for remote monitoring and management.

MAIN PARAMETER

MODEL	PH91-3.6KL1-EU-HM	PH91-5KL1-EU-HM	PH91-6KL1-EU-HM	PH91-8KL1-EU-HM	PH91-10KL1-EU-HM	PH91-12KL1-EU-HM
Rated power	3600W	5000W	6000W	8000W	10000W	12000W
BATTERY INPUT DATA						
Battery type	Lead-acid battery / Lithium battery					
Battery voltage	48V					
Battery voltage range	40~60V					
Charging curve	3-stage adaptive with maintenance/Equalization					
Charging Strategy for Li-Ion Battery	Self-adaption to BMS					
Maximum charging/discharging power	3600W	5000W	6000W	8000W	10000W	12000W
Maximum charging/discharging current	90A	120A	135A	180A	210A	230A
PV STRING INPUT DATA						
Max. PV access power	9200W	12000W	14000W	18000W	22000W	26000W
Max. PV input power	7200W	10000W	12000W	16000W	20000W	24000W
Max. PV Input Voltage (Voc)	500V					
Start-up Voltage	125V					
PV Input Voltage Range	125~500V					
Full Load Voltage Range	300~425V					
Rated PV Input Voltage	370V					
Max.Operating PV Input Current	18A+18A	18A+18A	18A+18A	32A+32A	36A+36A	36A+36A
No.of MPP Trackers	2/1+1	2/1+1	2/1+1	2/2+2	2/2+2	2/2+2
Input terminal type	H4/MC4					
AC INPUT/OUTPUT DATA						
Rated AC Output Power	3600W/ 3600VA	5000W/ 5000VA	6000W/ 6000VA	8000W/ 8000VA	10000W/ 10000VA	12000W/ 12000VA
Rated AC Output Current	15.7A	21.7A	26A	34.7A	43.4A	52.2A
Max. AC Input Current	30A	35A	40A	62.2A	81.8A	81.8A
Rated Input/Output Voltage/Range	230VAC					
Rated Input/Output Grid Frequency	60Hz±5Hz/ 50Hz±5Hz					
Rated output power factor	1					
Power Factor Adjustment Range	0.8 leading to 0.8 lagging					
Total Harmonics Current Distortion (THDi)	<3%					
Grid Type	Single phase					
EFFICIENCY						
Max. Efficiency	97.5%					
Euro Efficiency	96.5%					
MPPT Efficiency	>99%					
PROTECTION						
Integrated	DC Polarity Reverse Connection Protection; AC Output Overcurrent Protection; AC Output Overvoltage Protection; AC Output short Circuit Protection; Island Protection Monitoring; Integrated all-pole sensitive leakage current(opention); ISO monitoring(opention); Over temperature protection; Gird monitoring; Surge proterction level, Battery Input Over-current protection/ Battery Input Battery Over-temperature protection					
Surge Protection	Type II (DC); Type II (AC)					
Overvoltage Category	OVC II (DC); OVC III (AC)					

OTHER PARAMETER

MODEL	PH91-3.6KL1-EU-HM	PH91-5KL1-EU-HM	PH91-6KL1-EU-HM	PH91-8KL1-EU-HM	PH91-10KL1-EU-HM	PH91-12KL1-EU-HM
GENERAL DATA						
Operating Temperature Range (°C)	-25°C~+60°C, >45°C Derating					
Permissible Ambient Humidity	0~100%					
Cooling	Fan cooling					
Noise (dB)	≤50dB			≤55dB		
Altitude	3000m, >3000m Derating					
Inverter Topology	Battery-side transformer isolation, PV-side non-transformer isolation					
Communication	WiFi/RS485/CAN/Bluetooth					
Display	4.3-inch touch screen+LED					
Protection Degree	IP66					
Installation Style	Wall-mounted					
MECHANICAL SPECIFICATIONS						
Machine Dimension (W*H*D)(mm)	320*445*200			372*610*240		
*Variations in dimensions and weights may occur due to production batches.						
Warranty	5 year					
CERTIFICATION & STANDARDS						
IEC/EN61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2						