PHOTON

SOLAR INVERTER AND ENERGY STORAGE

CHARGING YOUR FUTURE

Product Catalogue

- **PHT** Ongrid Series
- **Pi-Plus** Hybrid Series
- **Lihtium** Batteries
- **HPT** Hybrid Series IP65

www.photonindustriespvt.com

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PHOTON

Pi-Plus Hybrid Series

- Achieves up to 98% peak efficiency for minimal energy loss.
- Operates reliably in extreme temperatures ranging from -15°C to 60°C.
- Supports parallel operation, enabling scalability for larger systems.
- Compatible with multiple battery configurations and robust charging capabilities.
- Produces low noise (<50 dB) for residential and commercial suitability.

Parameter	Pi-Plus 3.6k	Pi-Plus 6.2k	Pi-Plus 11k
PV INPUT			
Max. PV Input Power (W)	5000	8500	2×5500
MPPT Tracking Range (V)	60~500	60~500	90~500
Max. PV Input Voltage (V)	500	500	500
Max. PV Input Current (A)	18	27	18/18
Short Circuit Current (A)	27	36	27
AC OUTPUT - GRID			
Output Voltage (V)	208/220/230/240±5%	208/220/230/240±5%	208/220/230/240±5%
Frequency (Hz)	50/60±0.1%	50/60±0.1%	50/60±0.1%
Output Current (A)	16.3	26.9	-
Power Factor	>0.99	>0.99	>0.99
AC OUTPUT - LOAD			
Rated Power (W)	3600	6200	11000
Dual Output Power (W)	3600/3600	6200/6200	11000/11000
Second Load Cut Off Voltage (V)	22	44	44
Second Load Return Voltage (V)	26	52	52
Peak Power (W)	7200	11000	22000
Peak Efficiency	98%	98%	98%
AC INPUT			
Input Voltage Range (V) Normal Mode	90-280VAC±3V	90-280VAC±3V	90-280VAC±3V
Input Formation	L+N+PE	L+N+PE	L+N+PE
BATTERY PARAMETERS			
Rated Voltage (V)	24	48	48
Constant Charging Voltage (V)	28.2	56.4	56.4
Float Charging Voltage (V)	27	54	54
Max. PV Charge Current (A)	120	120	150
Max. AC Charge Current (A)	100	100	150
Max. Charge Current (A)	120	120	150
OTHERS			
Operating Temperature (°C)	-15~60	-15~60	-15~60
Storage Temperature (°C)	-15~60	-15~60	-15~60
Operating Humidity (%)	20%~95% (Non-condensing)	20%~95% (Non-condensing)	20%~95% (Non-condensing)
Operating Altitude (m)	No more then 1000m	No more then 1000m	No more then 1000m
RS232	5PIN/Pitch2.54mm,Baud Rate 2400	5PIN/Pitch2.54mm,Baud Rate 2400	5PIN/Pitch2.54mm,Baud Rate 2400
Dimensions (LWH mm)	495*312*125	570.8*500*148.2	570.8*500*148.2
Weight (kg)	11.2	12	22.5
Warranty	2 years	2 years	2 years
Standards	EN-IEC 60335-1, EN-IEC 60335-2-29, IEC 62109-1, IEC 61683	EN-IEC 60335-1, EN-IEC 60335-2-29, IEC 62109-1, IEC 61683	EN-IEC 60335-1, EN-IEC 60335-2-29, IEC 62109-1, IEC 61683

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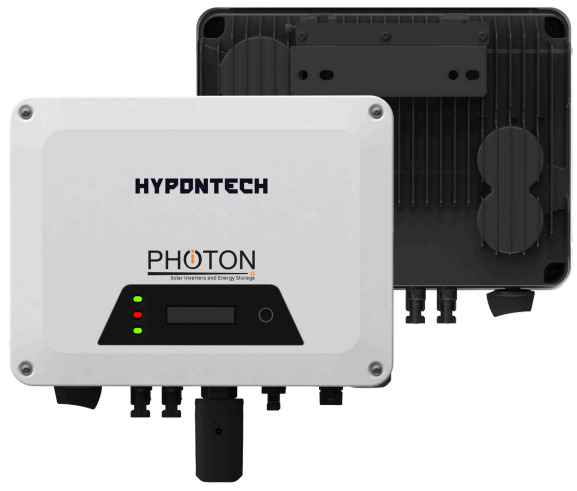
PHOTON

PHT Ongrid Series 3-6 KW



- Converts up to 98.6% of DC electricity into usable AC electricity, ensuring optimal efficiency.
- Built with an IP66-rated design, offering superior durability and protection against dust and water.
- Features die-cast aluminum alloy infrastructure for enhanced heat dissipation and long-term reliability.
- Equipped with advanced EMI filters for stable and interference-free power output.
- Backed by a 10-year warranty, ensuring peace of mind and confidence in quality.

Parameter	PHT-3000P	PHT-6000P
Input / DC		
Max. PV Power (Wp)	4500	9000
Max. Input Voltage (V)	600	600
MPPT Voltage Range (V)	50-550	50-550
Min. DC Voltage (V)	50	50
Nominal DC-Input Voltage (V)	360	360
Max. Input Current (A)	16/16	16/16
Max. Short DC Current (A)	20/20	20/20
No. of Independent MPPT Inputs	2	2
No. of PV Strings Per MPPT	1	1
Output / AC		
Rated Power (W)	3000	6000
Max. Apparent AC Power (VA)	3300	6600
Rated Grid Voltage (Vac)	220/230/240	220/230/240
Rated Power Frequency (Hz)	50/60	50/60
Max. Output Current (A)	14.3	28.7
Displacement power factor	0.8 leading-0.8 lagging	0.8 leading-0.8 lagging
THDI at Rated Power	<3%	<3%
Grid Connection	L/N/PE	L/N/PE
Efficiency		
Max. Efficiency	98.1%	98.1%
MPPT Efficiency	99.9%	99.9%
Insulation Resistor Detection	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated
Surge Protection	Integrated, DC Type II / AC Type II	Integrated, DC Type II / AC Type II
General Data		
Dimensions (WHD mm)	366*276*133	366*276*133
Weight (Kg)	8.2	8.2
Noise Emission (Typical) db(A)	<45	<45
User Interface	LCD&LED or LED	LCD&LED or LED
Communication	RS485/Wi-Fi/GPRS(Optional)	RS485/Wi-Fi/GPRS(Optional)
Operating Ambient Temperature Range (°C)	-25°C to +60°C	-25°C to +60°C
Allowable Relative Humidity Range	0% - 100%	0% - 100%
Max. Operating Altitude (m)	3000(>3000 derating)	3000(>3000 derating)
Degree of Protection (IEC 60529)	IP66	IP66
Isolation Method	Transformerless	Transformerless
Power Loss in Night Mode (W)	<1W	<1W

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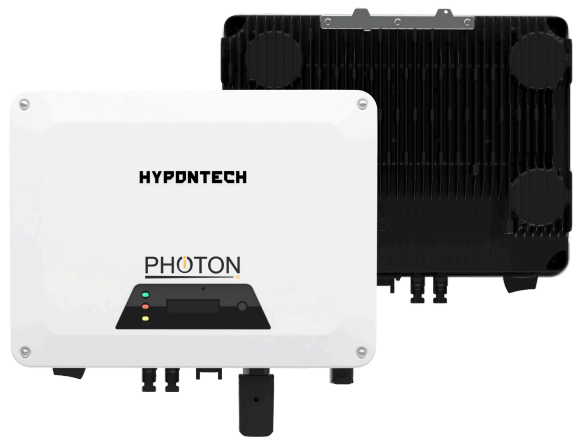
PHOTON

PHT Ongrid Series 10-15 KW

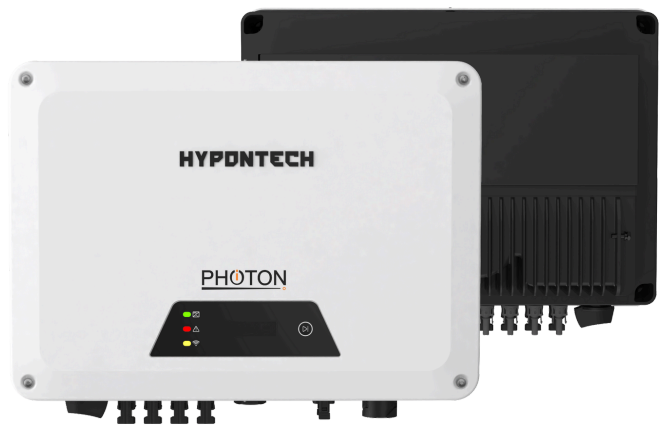
- Converts up to 98.6% of DC electricity into usable AC electricity, ensuring optimal efficiency.
- Built with an IP66-rated design, offering superior durability and protection against dust and water.
- Features die-cast aluminum alloy infrastructure for enhanced heat dissipation and long-term reliability.
- Equipped with advanced EMI filters for stable and interference-free power output.
- Backed by a 10-year warranty, ensuring peace of mind and confidence in quality.



Parameter	PHT-10000	PHT-15000
Input / DC		
Max. PV Power (Wp)	15000	22500
Max. Input Voltage (V)	1000	1000
MPPT Voltage Range (V)	200-900	200-900
Min. DC Voltage (V)	150	150
Nominal DC-Input Voltage (V)	620	620
Max. Input Current (A)	20	26
Max. Short DC Current (A)	20	40
No. of Independent MPPT Inputs	2	2
No. of PV Strings Per MPPT	1	1
Output / AC		
Rated Power (W)	10000	15000
Max. Apparent AC Power (VA)	10000	16500
Rated Grid Voltage (Vac)	380/400	380/400
Rated Power Frequency (Hz)	50/60	50/60
Max. Output Current (A)	15.2	26
Max. Output Overcurrent Protection (A)	25	40
Inrush Current (Peak and Duration)	18.4A @ 0.214ms	39.6A @ 320us
Max. Output Fault Current (Peak and Duration)	35.5A @ 420us	39.6A @ 320us
Adjustable Displacement Power Factor	0.8ind to 0.8cap	0.8ind to 0.8cap
THDI at Rated Power	<3%	<3%
Efficiency		
Max. Efficiency	98.2%	98.6%
MPPT Efficiency	99.9%	99.9%
Insulation Resistor Detection	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated
General Data		
Dimensions (WHD mm)	425*436*160	425*351*200
Weight (Kg)	20	<45
Noise Emission (Typical) db(A)	<45	<45
User Interface	LCD&LED or LED	LCD&LED or LED
Communication	RS485/Wi-Fi/GPRS(Optional)	RS485/Wi-Fi/GPRS(Optional)
Operating Ambient Temperature Range (°C)	-25°C to +60°C	-25°C to +60°C
Allowable Relative Humidity Range	0% - 100%	0% - 100%
Max. Operating Altitude (m)	3000 (>2000 derating)	3000 (>2000 derating)
Degree of Protection (IEC 60529)	IP66	IP66
Isolation Method	Transformerless	Transformerless
Power Loss in Night Mode (W)	<1W	<1W

PHOTON

PHT Ongrid Series 20-25 KW



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- Features die-cast aluminum alloy infrastructure for enhanced heat dissipation and long-term reliability.
- Equipped with advanced EMI filters for stable and interference-free power output.
- Backed by a 10-year warranty, ensuring peace of mind and confidence in quality.

Parameter	PHT-20000	PHT-25000
Input / DC		
Max. PV Power (Wp)	30000	37500
Max. Input Voltage (V)	1100	1100
MPPT Voltage Range (V)	150-1000	150-1000
Min. DC Voltage (V)	150	150
Nominal DC-Input Voltage (V)	620	620
Max. Input Current (A)	16+16	16+16
Max. Short DC Current (A)	20+20	20+20
No. of Independent MPPT Inputs	2	2
No. of PV Strings Per MPPT	2	2
Output / AC		
Rated Power (W)	20000	25000
Max. Apparent AC Power (VA)	22000	27500
Rated Grid Voltage (Vac)	220/380:230/400	220/380:230/400
Rated Power Frequency (Hz)	50/60	50/60
Max. Output Current (A)	31.9	39.9
Displacement power factor	0.8 leading-0.8 lagging	0.8 leading-0.8 lagging
THDI at Rated Power	<3%	<3%
Grid Connection	3L-N-PE	3L-N-PE
Efficiency		
Max. Efficiency	98.6%	98.6%
MPPT Efficiency	99.9%	99.9%
Insulation Resistor Detection	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated
Surge Protection	Integrated, DC Type II / AC Type II	Integrated, DC Type II / AC Type II
General Data		
Dimensions (WHD mm)	481*351*168	481*351*168
Weight (Kg)	20	<45
Noise Emission (Typical) db(A)	<45	<45
User Interface	LCD&LED or LED	LCD&LED or LED
Communication	RS485/Wi-Fi/GPRS(Optional)	RS485/Wi-Fi/GPRS(Optional)
Operating Ambient Temperature Range (°C)	-25°C to +60°C	-25°C to +60°C
Allowable Relative Humidity Range	0% - 100%	0% - 100%
Max. Operating Altitude (m)	3000 (>2000 derating)	3000 (>2000 derating)
Degree of Protection (IEC 60529)	IP66	IP66
Isolation Method	Transformerless	Transformerless
Power Loss in Night Mode (W)	<1W	<1W

PHOTON

PHT Ongrid Series 30-50 KW

- Converts up to 98.6% of DC electricity into usable AC electricity, ensuring optimal efficiency.
- Built with an IP66-rated design, offering superior durability and protection against dust and water.
- Features die-cast aluminum alloy infrastructure for enhanced heat dissipation and long-term reliability.
- Equipped with advanced EMI filters for stable and interference-free power output.
- Backed by a 10-year warranty, ensuring peace of mind and confidence in quality.

Parameter	PHT-30000	PHT-50000
Input / DC		
Max. PV Power (Wp)	49500	65000
Max. Input Voltage (V)	1100	1100
MPPT Voltage Range (V)	150-1000	150-1000
Min. DC Voltage (V)	150	150
Nominal DC-Input Voltage (V)	620	620
Max. Input Current (A)	30/30/30	30/30/30/30
Max. Short DC Current (A)	45/45/45	45/45/45/45
No. of Independent MPPT Inputs	3/2	3/2
No. of PV Strings Per MPPT	3/2	3/2
Output / AC		
Rated Power (W)	30000	50000
Max. Apparent AC Power (VA)	33000	55000
Rated Grid Voltage (Vac)	380/400	380/400
Rated Power Frequency (Hz)	50/60	50/60
Max. Output Current (A)	50	80
Displacement power factor	0.8 ind-0.8 cap	0.8 ind-0.8 cap
THDI at Rated Power	<3%	<3%
Grid Connection	3L-N-PE	3L-N-PE
Efficiency		
Max. Efficiency	98.7%	98.7%
MPPT Efficiency	99.9%	99.9%
Insulation Resistor Detection	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated
Surge Protection	Integrated, DC Type II / AC Type II	Integrated, DC Type II / AC Type II
General Data		
Dimensions (WHD mm)	580*435*242	580*435*242
Weight (Kg)	42.3	42.3
Noise Emission (Typical) db(A)	<45	<45
User Interface	LCD&LED or LED	LCD&LED or LED
Communication	RS485/Wi-Fi/GPRS(Optional)	RS485/Wi-Fi/GPRS(Optional)
Operating Ambient Temperature Range (°C)	-25°C to +60°C	-25°C to +60°C
Allowable Relative Humidity Range	0% - 100%	0% - 100%
Max. Operating Altitude (m)	(>2000 derating)	(>2000 derating)
Degree of Protection (IEC 60529)	IP66	IP66
Isolation Method	Transformerless	Transformerless
Power Loss in Night Mode (W)	<1W	<1W

PHOTON

Lithium Ion Solar Energy Storage System

- Backed by a 5-year replacement warranty and a 5-year performance warranty with up to 80% capacity retention.
- 10-year service warranty ensures long-term reliability and customer support.
- 100% guaranteed Grade A cells for maximum efficiency and performance.
- Features a sleek, durable design that combines aesthetics with functionality.
- Engineered with advanced thermal management to enhance safety and battery life.
- Optimized for solar systems, ensuring seamless compatibility and reliable energy storage.

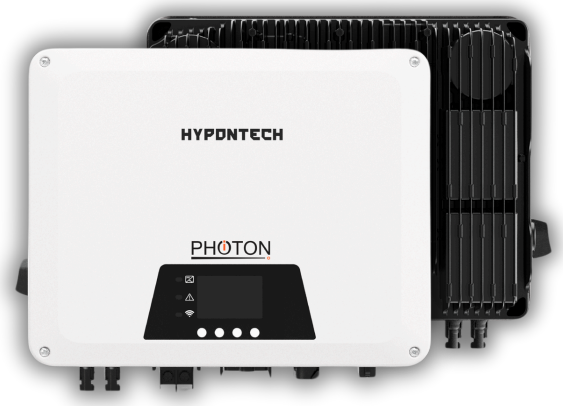
Parameter	2.6k8s	5.2K16s	10.4K16s
Nominal			
Nominal Capacity (Wh)	2560	5120	10240
Usable Capacity	2400	4800	9600
Physical			
Weight (kg)	29	45	85
Electrical			
Discharge Voltage	23 V	46 V	46 V
Charge Voltage	27.8 V	55.6 V	55.6 V
Charge / Discharge Current	75 Recommended	75 Recommended	200 Recommended
	100 amp max	100 amp max	230 amp Max
Other			
Dimensions (WHD mm)	410*280*170	410*410*170	432*432*257
Communication	RS485,CAN	RS485,CAN	RS485,CAN
Single String Capacity Packs	16	16	16
Working Temperature	Charge 0 to 50 C°	Charge 0 to 50 C°	Charge 0 to 50 C°
	Discharge -10 to 50 C°	Discharge -10 to 50 C°	Discharge -10 to 50 C°
Altitude	<4000	<4000	<4000
IP Rating	IP21	IP21	IP21
Humadity	5 to 95 %	5 to 95 %	5 to 95 %
Certification	IEC62619	IEC62619	IEC62619
Designed Life	10+ Years (25C°)	10+ Years (25C°)	10+ Years (25C°)
Cycle Life	>4500 (25 C°)	>4500 (25 C°)	>4500 (25 C°)
Screen	LCD, Touch Screen	LCD, Touch Screen	LCD, Touch Screen
Breaker	Standard	Standard	Standard
Reset Key	Available	Available	Available
Maintenance Interface	Standard	Standard	Standard

Battery Management System

The standard Photon lithium battery module is equipped with a Battery Management System (BMS) to monitor cell and module voltage, current, and temperature. The BMS ensures protection against overcharging, over-discharging, overcurrent, overheating, under-temperature, and short circuits. It also facilitates cell balancing and limits current during the charging process to guarantee safety and optimal performance. Additionally, Photon provides customized upper computer software for BMS communication via RS485, allowing users to configure parameters and access monitoring data.

PHOTON

Photon Hybrid HPT Series 3-6KW



Fully dust-tight and protected against water jets — suitable for outdoor installations.

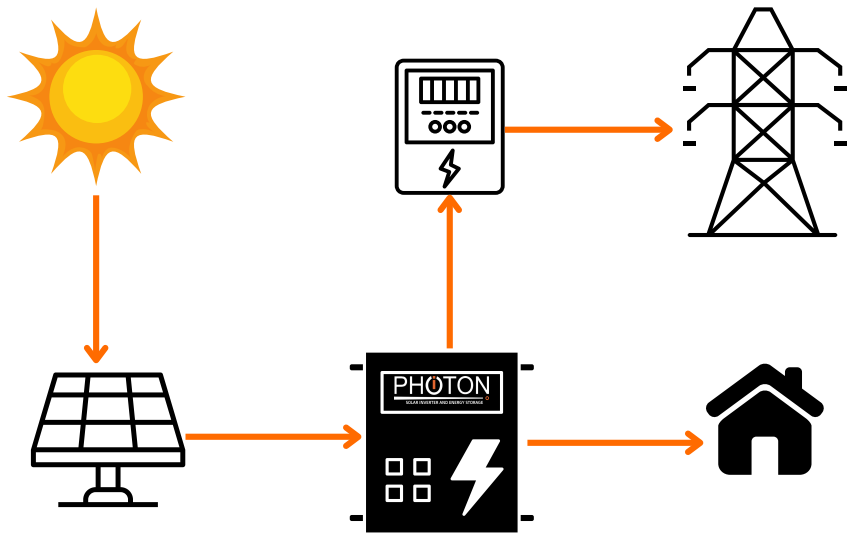
Allows smart load prioritization to ensure critical appliances keep running.

Keeps the system operating closer to its full potential throughout the day.

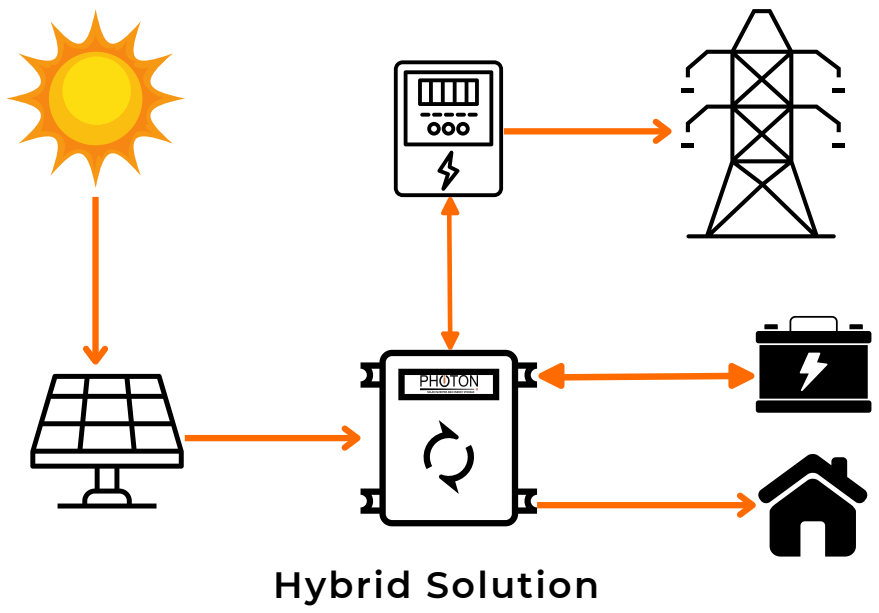
Parameter	HPT-3000	HPT-6000
Input / DC		
Max. PV Power (Wp)	6000	6000
Max. Input Voltage (V)	600	600
Start up voltage (V)	70	70
MPPT Voltage Range (V)	80-550	80-550
Rated Input Voltage	360	360
Max. Input Current (A)	16/16	16/16
Battery Input		
Battery Type	Lithium / Lead Acid	
Input Voltage Range	40-60	
Max Chargin Discharging Current (A)	70	120
Rated Battery Voltage	48	
Max Xharging Dischargin Voltage (V)	<= 60 (Adjustable)	
AC Output		
Rated Power (W)	3000	6000
Max.Apparent Power (VA)	3300	6600
Max Apparent Power From Frid (VA)	6600	10000
Rated Grid Voltage / V	220/230/240	220/230/240
Rated Grid Frequency / Hz	50/60	50/60
Rated Output Current	13	26.1
Max. Output Current	14.3	28.7
Max. Current From Grid	28.7	40
Power Factor	0.8ind-0.8cap	0.8ind-0.8cap
THDi @ Rated Power	<3%	<3%
Grid Connection	L-N-PE	L-N-PE
Efficiency / Protection		
MPPT Efficiency	99.90%	
Max Efficiency	98.00%	
Charged Efficiency	96.00%	
Charge/Discharge Effiiciency@Batter<->Grid/Load	95.00%	95.00%
Anti-Islanding and PV String RP Protection	Integrated	
Surge Protection	DC Type II AC Type II	
Over Circuit Protetion	Integrated	
Short Circuit Protetion / Over Voltage	Integrated	
Battery Reverse / Terminal Temp Protection	Integrated	
General Data		
Dimensions (W*H*D) / mm	455*365*182	
Weight / Kg	18.4	
Communication with cloud	RS485/Wi-Fi/4G/LAN(optional)	
Communication with BMS	CAN/RS485	
Operating Ambient Temperature	-30-+60	
Degree of Protection	IP65	

Residential Energy Solutions

- Combines solar power with battery storage to ensure uninterrupted energy supply, even during outages.
- Allows self-consumption by storing excess solar energy for later use, reducing reliance on the grid.
- Offers smart energy management with programmable supply priorities for efficient power usage.
- Supports both on-grid and off-grid operations, providing flexibility for diverse energy needs.
- Compatible with advanced battery technologies for long-lasting and efficient energy storage.
- Equipped with monitoring systems for real-time performance tracking and system optimization.



On Grid Solution



Hybrid Solution

- Directly connects to the utility grid, allowing you to offset electricity bills with solar power.
- Highly efficient energy utilization by feeding excess solar energy back to the grid.
- Simplified system design with no need for battery storage, reducing installation costs.
- Supports net metering, enabling users to earn credits for the surplus energy generated.
- Environmentally friendly solution for reducing carbon footprint and dependence on non-renewable energy.
- Reliable and low-maintenance operation, ideal for residential and commercial applications.

PHOTON
SOLAR INVERTER AND ENERGY STORAGE

CHARGING YOUR FUTURE

Vision

To lead the renewable energy sector by driving technological advancements and providing high-quality solar products that enable a greener, energy-independent future for all.

Mission

To deliver innovative and reliable solar solutions, including hybrid inverters, on-grid inverters, and lithium batteries, empowering individuals and businesses to harness clean energy efficiently and sustainably.

Core Values

- **Sustainability:** Driving eco-friendly energy solutions for a greener future.
- **Innovation:** Delivering cutting-edge solar technologies to meet evolving energy needs.
- **Quality:** Ensuring reliable, high-performance products with long-term value.

SCAN FOR DATASHEETS

Ongrid 3-6 KW

Ongrid 10-15 KW

Ongrid 20-25 KW

Hybrid Inverter 3-11 KW

Lithium Battery

PHOTON
SOLAR INVERTER AND ENERGY STORAGE

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