

IP11 Series Solar/Hybrid Online
Single Phase IT & Infra
UPS Systems

Range: 1 kVA to 3 kVA (1:1)



HITACHI

About IP11 Series Solar/Hybrid Online UPS

Introducing the Solar/Hybrid Online UPS 1 kVA-3 kVA, a versatile power backup solution designed to harness solar energy efficiently. This UPS features a built-in MPPT (Maximum Power Point Tracking) solar charger and advanced SBU (Solar, Battery, Utility) priority smart management, allowing you to directly connect solar panels and optimize your power sources based on your preferences. Unlike traditional UPS systems that rely solely on utility power, this innovative model utilizes solar power to charge the battery when the grid is unavailable, ensuring continuous and reliable power.

The SBU priority management system enables users to customize the energy source, prioritizing solar power to reduce dependency on utility power and minimize electricity costs. The system's flexibility extends to its charger capacity, which can be expanded to 6A, significantly reducing charging time and improving overall efficiency. This feature-rich Solar/Hybrid Online UPS is ideal for ensuring uninterrupted power for critical applications, especially in areas with unstable grid supply or frequent power outages.

With its robust design and smart energy management, the IP11 Series Solar/Hybrid Online UPS 1 kVA-3 kVA offers a sustainable and cost-effective power solution, making it an excellent choice for homes, offices, and small businesses aiming to leverage renewable energy while maintaining power reliability.

Advantages

Extended Backup Time:

The IP11 UPS system with Tubular Gel batteries provides significantly longer backup time compared to conventional systems. This ensures continuous operation of critical equipment during power outages, enhancing reliability and performance.

Compact Design:

The compact nature of the IP11 system allows for efficient space utilization. This is particularly beneficial for customers with limited space, as it reduces the physical footprint of the power backup infrastructure.

Features

- SBU (Solar, Battery, Utility) priority smart management
- Built-in 1 KW or 1.5 KW MPPT solar charger
- True double-conversion
- Input power factor correction
- Wide input voltage (110V-280V)
- Converter mode available
- ECO mode for energy saving
- Generator compatible
- Optional isolation transformer for full isolation and complete common mode noise rejection
- Comprehensive display allows easy monitoring and access to UPS & solar energy status

Key Benefits to Customer

- Inbuilt MPPT charger for solar charging Input
- Inbuilt charger through utility supply (Dual Charging System)
- Advanced PFC & IGBT based Design
- Compact footprint

The Solution For

- Banking and small enterprises
- Rural smart education system
- Remote operation system and monitoring System

Targeted Industries

- Personal workstation
- Rural area Banks and ATMs
- Security system
- Health Sector
- Small Range server and corporate network
- Infrastructure, Small office Network

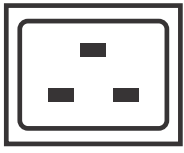
Optional Features

- SNMP Card
- External Isolation Transformer
- Remote Monitoring service through SNMP

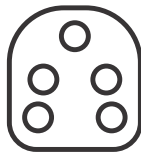
Certification



Input / Output Connection

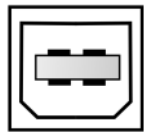


AC Input

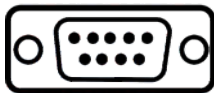


Output Receptacle

Communication Connection



USB Port



RS-232 Port

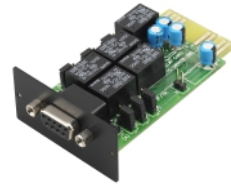


Intelligent Slot

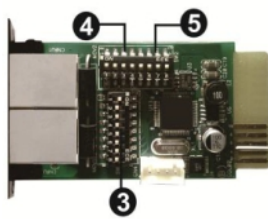
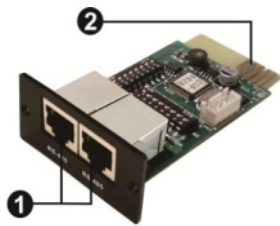
SNMP



AS-400 Remote shutdown

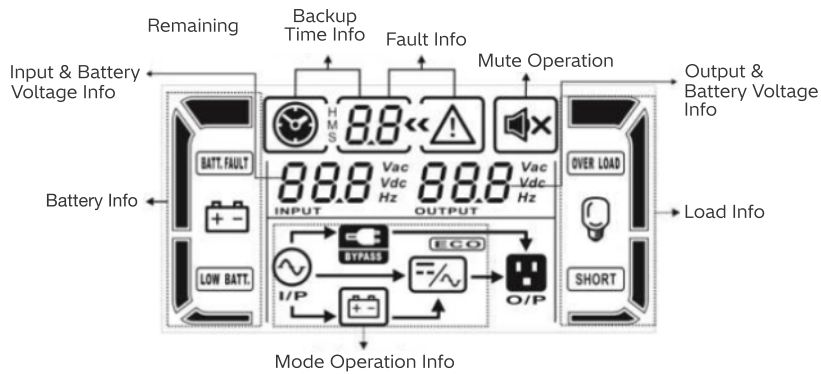


MODbus

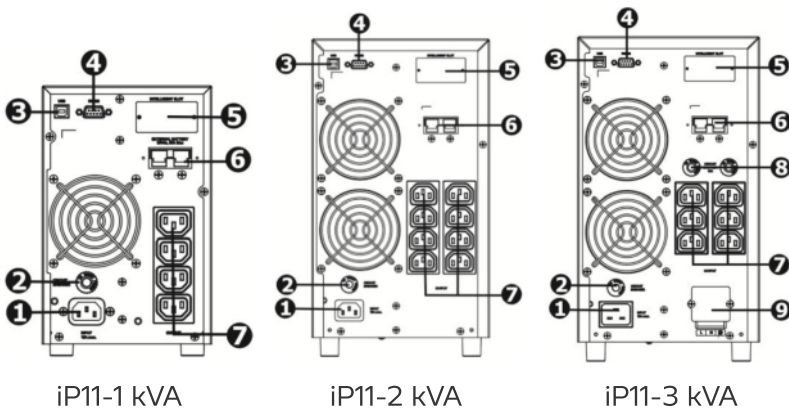


- ① RS-485 port
- ② Golden finger
- ③ Address switch
- ④ Communication setting

Control Panel



Connections



- ① AC input
- ② Input circuit breaker
- ③ USB communication port
- ④ RS-232 communication port
- ⑤ SNMP intelligent slot
- ⑥ External battery connection (only available for L model)
- ⑦ Output receptacles
- ⑧ Output circuit breaker
- ⑨ Output terminal

Technical Specifications

Model		IP11-1HB	IP11-2HB	IP11-3HB
Capacity		1000 VA / 800 W	2000 VA / 1600 W	3000 VA / 2400 W
Input				
Nominal Voltage		200 / 208 / 220 / 230 / 240VAC		
Input Voltage Range		110-280 VAC		
Frequency Range		40 Hz ~ 70 Hz		
Power Factor		≥ 0.95 @ Nominal Voltage (100% Load)		
Output				
Output Voltage		200 / 208 / 220 / 230 / 240 VAC		
AC Voltage Regulation		± 1% (Batt. Mode) (Synchronized Range)		
Frequency Range		47~ 53 Hz or 57 ~ 63 Hz		
Frequency Range (Batt. Mode)		50 Hz or 60 Hz ± 0.1 Hz		
Current Crest Ratio		3:1		
Harmonic Distortion		≤ 3 % THD (Linear Load); ≤ 6 % THD (Non-Linear Load)		
Transfer Time	AC Mode to Battery Model Inverter to Bypass	Zero 4 ms (Typical)		
Waveform (Batt. Mode)		Pure Sinewave		
Efficiency				
AC Mode (Overall)		88%	89%	90%
Battery Mode		85%	87%	88%
Battery				
Battery Voltage		36 VDC	72 VDC	
Charging Current		1.0A / 2.0A / 4.0A / 6.0 A (adjustable by internal jumper)		
Charging Voltage		41.0 VDC ±1%	82.1 VDC ±1%	
Solar Charger				
Solar Charger Type		MPPT		
Maximum PV Array Power		1000W	1500W	
Maximum PV Array Open Circuit Voltage		125 VDC		
MPPT Rang @ Operating Voltage		40 VDC ~ 115 VDC	90 VDC ~ 115 VDC	
Maximum Solar Charging Current	Battery Mode	20A		
	AC Mode	15A		
Physical				
Dimensions (WxDxH) (mm)		282 X 145 X 332	400 X 145 X 332	
Net Weight (kgs)		7.6	12	12.3
Environment				
Operation Humidity		20 - 90 % RH @ 0 - 40°C (Non-Condensing)		
Noise Level		Less than 50dBA @ 1 meter		
Management				
Smart RS-232/USB		Supports Windows 2000 / 2003 / XP / Vista / 2008 / 7 / 8, Linux, Unix and MAC		
Optional SNMP		Power Management from SNMP Manager and Web Browser		

*Derate capacity to 80% of capacity in Frequency converter mode.

** Product specifications are subject to change without further notice.

Hitachi Hi-Rel Power Electronics Pvt. Ltd.

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