IP11 Series (Li-ion Battery)

Single Phase IT & Infra UPS Systems

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

HITACHI

About IP11 Series UPS with Li ion Battery

In the ever-evolving landscape of technology and infrastructure, ensuring a reliable power supply is paramount. Hitachi, a leader in technological innovation, offers advanced solutions to address power-related challenges. One such offering is the IP11 UPS system with a Li-ion battery solution. This state-of-the-art product is designed to provide extended backup time, compactness, and cost efficiency, making it an ideal choice for modern enterprises.

Hitachi's IP11 UPS system is a cutting-edge solution that integrates lithium-ion (Li-ion) battery technology. This combination offers several advantages over traditional UPS systems that use sealed maintenance-free (SMF) batteries.

Advantages

- **Extended Backup Time:** The IP11 UPS system with Li-ion 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.
- **Cost Savings on Operation and Maintenance:** Li-ion batteries have a longer lifespan than traditional SMF batteries. This translates to reduced frequency of battery replacements and lower maintenance costs over the system's lifecycle. Customers can achieve substantial savings on operational expenses.
- **Enhanced Efficiency and Performance:** The IP11 UPS system is designed to deliver high efficiency and performance. The integration of Li-ion batteries ensures stable and reliable power supply, minimizing the risk of downtime and enhancing overall system resilience.

Features

- Compatible with Li-ion Battery
- Smart BMS with cell and battery pack monitoring, including communication mode RS485 & Blue-tooth.
- Minimum 5000 cycles at 80% DoD
- Charging Temperature: 0°C to 45°C
- Discharging Temperature: -20°C to 60°C

Optional Features

- Extended battery pack
- SNMP card
- Internal isolation transformer
- Remote monitoring service through SNMP
- Modbus card
- AS-400
- 6A extra charger card

Technology

- Advanced PFC & IGBT technology

The Solution For

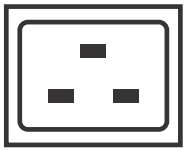
- Small range server and corporate network
- Routers, switches and hubs
- Personal workstation
- Security system
- Service sector, Wi-Fi application
- Infrastructure, small office network
- Health sector, medical equipments
- Banks and ATMs
- Sensitive electronics equipments
- Process automation equipments

Configuration

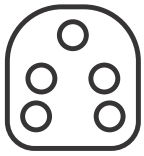
- Standalone UPS
- Standalone with inbuilt isolation transformer
- In-built battery

Certification

Input / Output Connection

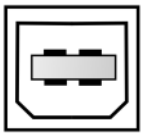


AC Input

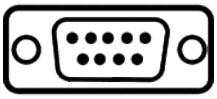


Output Receptacle

Communication Connection



USB Port



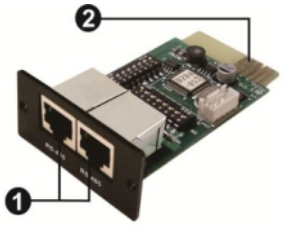
RS-232 Port

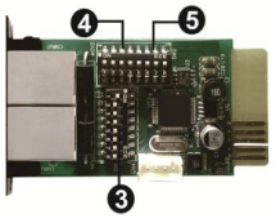
Intelligent Slot

SNMP

AS-400 Remote shutdown

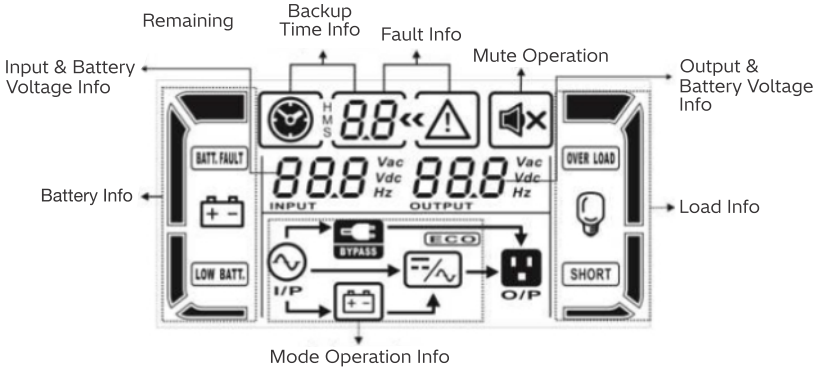
MODbus



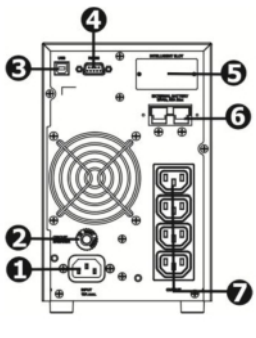


❶ RS-485 port ❷ Golden finger
❸ Address switch ❹ Communication setting

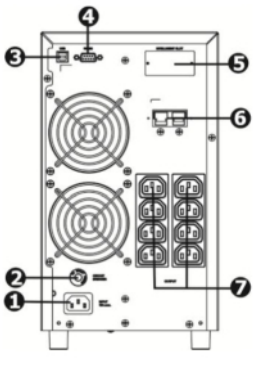
Control Panel



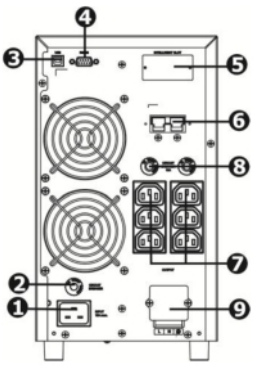
Connections



iP11-1 kVA



iP11-2 kVA



iP11-3 kVA

❶ AC input
❷ Input circuit breaker
❸ USB communication port
❹ RS-232 communication port
❺ SNMP intelligent slot
❻ External battery connection (only available for L model)
❼ Output receptacles
❽ Output circuit breaker
❾ Output terminal

Technical Specifications

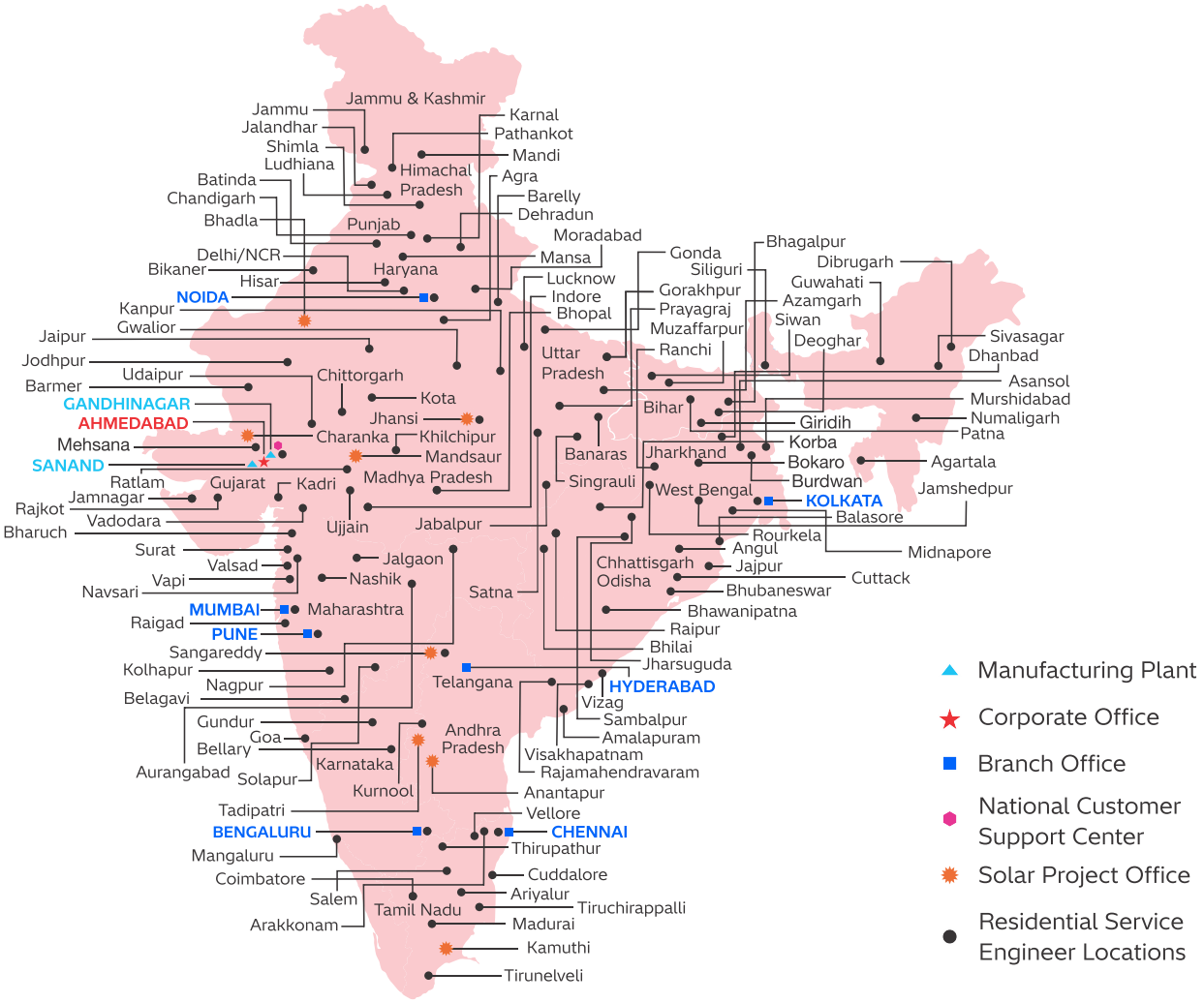
Model		IP11-1/IP11H-1	IP11-2/IP11H-2		IP11-3/IP11H-3	
Phase		Single Phase with Ground				
Capacity		1000 VA / 800 W	2000 VA / 1600 W		3000 VA / 2400 W	
Input						
Nominal Voltage		100 / 110 / 115 / 120 / 127 VAC or 200 / 208 / 220 / 230 / 240 VAC				
Input Voltage Range		55 - 150 VAC or 110 - 300 VAC (Based on Load at 50%) 85 - 140 VAC or 160 - 280 VAC (Based on Load at 100%)				
Frequency Range		40 Hz ~ 70 Hz				
Power Factor		≥ 0.99 @ Nominal Voltage (100% Load)				
Output						
Output Voltage		100 / 110 / 115 / 120 / 127 VAC or 200 / 208 / 220 / 230 / 240 VAC				
Voltage Regulation		± 1%				
Frequency Range (Synchronized Range)		47~ 53 Hz or 57 ~ 63 Hz				
Frequency Range (Batt. Mode)		50 Hz ± 0.25 Hz or 60 Hz ± 0.3 Hz				
Overload		Ambient Temp <30°C 105% - 110% UPS Shut Down After 10 min. at Battery Mode or Transfer to Bypass When Utility is Normal 110% - 130% UPS Shut Down After 1 min. at Battery Mode or Transfer to Bypass When Utility is Normal >130% UPS Shut Down After 3 sec. at Battery Mode or Transfer to Bypass When Utility is Normal				
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%	88%		90%	
Battery						
Standard Model	Battery Type	12 V SMFB /2 V VRLA/LI-ION				
	Numbers	3	8			
	Typical Recharge Time	4 Hours Recover to 90% Capacity				
	Charging Current (max.)	6A / 12A				
	Charging Voltage	41.0 VDC ± 1%	109.4 VDC ±1%			
Long-run Model*	Battery Type	Depending on the Capacity of External Batteries				
	Numbers	3	6	8	6	8
	Charging Current (max.)	1A / 2A / 4A / 6A (Adjustable)				
	Charging Voltage	41.0 VDC ± 1%	82.1 VDC ±1%	109.4 VDC ±1%	82.1 VDC ±1%	109.4 VDC ±1%
Indicators						
LCD		Load Level, Battery Level, AC Mode, Battery Mode, Bypass Mode and Fault Indicators				
Alarm						
Battery Mode		Sounding Every 4 Seconds				
Low Battery		Sounding Every Second				
Overload		Sounding Twice Every Second				
Fault		Continuously Sounding				
Physical						
Standard Model	Dimensions (WxDxH) (mm)	397 x 145 x 220	419 x 190 x 318			
	Net Weight (kgs)	13	26	30.5	28	33
Long-run Model**	Dimensions (WxDxH) (mm)	397 x 145 x 220				
	Net Weight (kgs)	7	13		13	
Environment						
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				

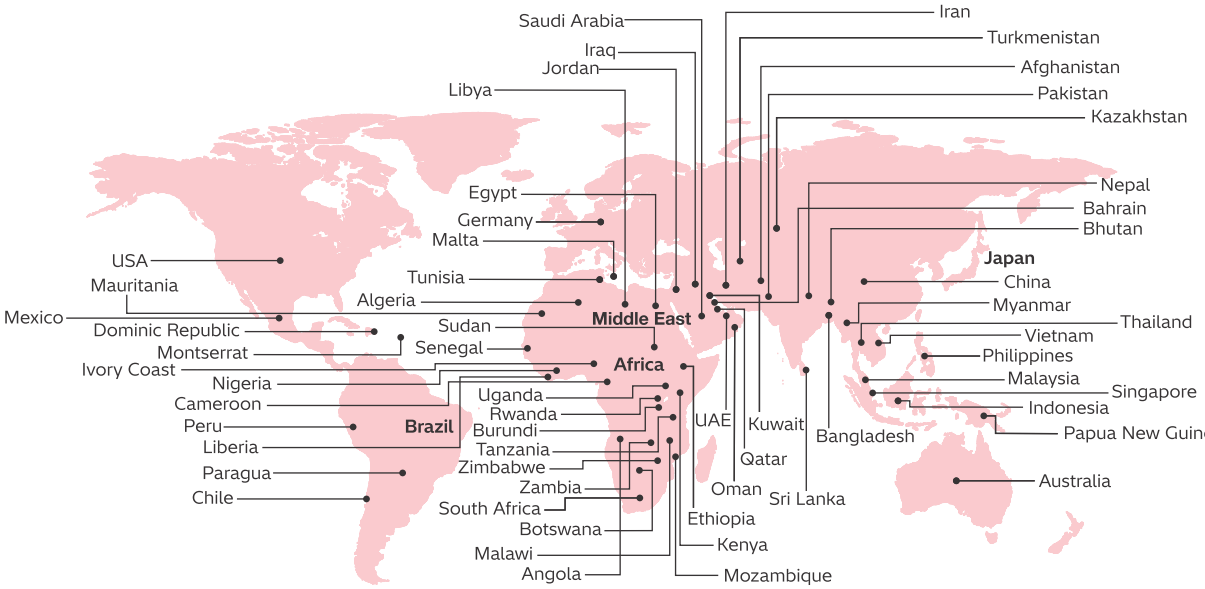
* 1 - 3 kVA: Derate to 80% of capacity in frequency converter mode and to 80% when the output voltage is adjusted to 100 / 200 / 208 VAC
** Long-run model is only available in 200 / 208 / 220 / 230 / 240 VAC systems (200 VAC system only available for 1-3 kVA)
* Product specifications are subject to change without further notice

Global Footprint and Reach

Delivering Critical Power Solutions Worldwide

We are a key manufacturing hub for global power electronics solutions, capable of meeting diverse international requirements. Our ability to supply specialized, high-reliability products to various industries across international territories reinforces our commitment to serve critical loads globally.





Hitachi Hi-Rel Power Electronics Pvt. Ltd.

Delivering Advanced Power Electronics Solutions that empower Industries and sustain Progress.

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