

HM33 Series

Modular IT & Infra UPS Systems

Range: 60 kVA to 500 kVA (3:3)



HITACHI

About HM33 Series IT & Infra UPS

HM33 Series modular UPS provides the most compact footprint of less than 2m² with maximum capacity of 900kVA. With best reliability and high performance, it has been leading the domestic market for years. HM33 series UPS is considered to be the best power protection solution for large data centres, as well as for sensitive electronics. The HM33 series UPS having user friendly LCD touch screen display. This display provides graphical and text information of alarms, status data, instructions and faults. User can have friendlier and safer operation.

The HM33 series UPS keeps your network protected while saving on cost and data centre space. With best in class true online double conversion technology, redundancy options and flexible battery configurations and provides best reliability. This UPS is the Next Generation of true online, double conversion digital modular UPS.

Designed to meet the high availability power for wide variety of applications (IT, non-IT & medical), HM33 series combines innovation and simplicity and low total cost of ownership. The result is a power system that delivers both reliability and a return on investment.



Total Solution for

- ISP (Internet Service Provider)
- IDC (Internet Data Center)
- Computer room, service center
- Intelligent equipment
- Corporate office

Features

- User friendly LCD display provides graphical and text based information
- Modular design of subsystem, convenient for field maintenance
- All components are in module so less fault point and higher reliability
- The hot-swappable power modules take unique structure design
- Alarms data store in system (890 alarms)
- Less space needed Inherently N+X redundant
- Smart sleep function can intelligently make some power modules go to sleep, when load is relatively low to increase efficiency
- Only front access up to 120 kVA UPS and front and rare access for higher ratings UPS
- On site setting supported, easy for factory testing
- Can be paralleled up to 30 modules
- Wide voltage and frequency range for input supply
- Available in 30 kVA and 50 kVA module for multiple available options
- Programmable dry contacts are available in HM series UPS

Optional Features

- Isolation transformer
- SNMP card
- Capacity enhancement at site

Technology

- Fully DSP controlled IGBT based

Configuration

- Hot swappable modular concept
- Can be paralleled up to 30 modules

Certification



Control Panel

Friendly interface 7" LCD touch screen display provides graphical and text based information of alarms, status data, instructions for more friendly and safer operation.



(a) Interface of Main



(b) Interface of Output



(d) Interface of Load

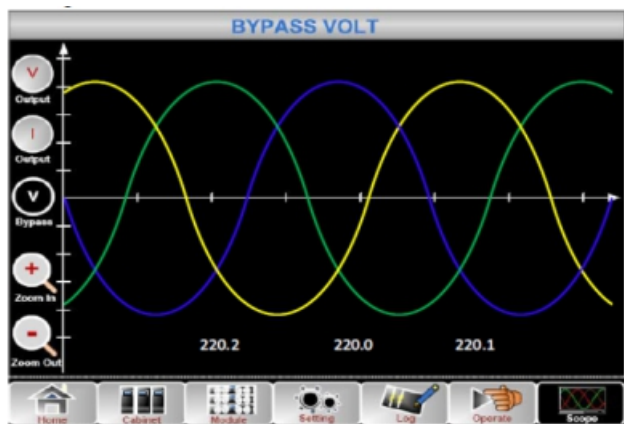


(a) Interface of Battery

Smart Sleep Function

Smart sleep function can intelligently make some power modules go to sleep. When load is relatively low, improves the total system efficiency and save by using power and cooling cost. It offers easy setting with just two steps sleep mode and rotation period, power modules works in rotation, prolong the life time.

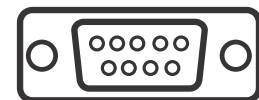
Output V/C waveforms on display



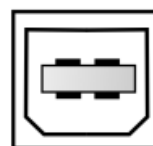
Communication Connection



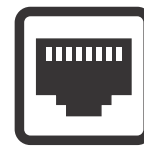
RS-232 Port



RS-485 Port



USB Port



SNMP

Technical Specifications

Model	HM33-60 -3X	HM33-80 -3X	HM33-90 -3X	HM33-100 -5X	HM33-120 -3X	HM33-150 -5X	HM33-200 -5X	HM33-250 -5X	HM33-300 -5X	HM33-400 -5X	HM33-500 -5X	
POWER RATING	60 kVA	80 kVA	90 kVA	100 kVA	120 kVA	150 kVA	200 kVA	250 kVA	300 kVA	400 kVA	500 kVA	
Main Input												
Grid System	3 Phases + Neutral + Ground											
Rated Input Voltage	380/400/415 VAC											
Rated Frequency	50/60 Hz											
Input Voltage Range	304~478 VAC (Line-Line), Full Load 228V~304 VAC (Line-Line), Load Decrease Linearly According to the Min Phase Voltage											
Input Frequency Range	42-60 Hz (Adjustable)											
Input Power Factor	>0.99											
Input Current THDi	<3% (Full Linear Load)											
Bypass Input												
Rated Bypass Voltage	380 V / 400 V / 415 V (Line to Line)											
Rated Frequency	±2%											
Bypass Voltage Range	Selectable, Default -20%~+15% Up Limited: +10%, +15%, +20%, +25% Down Limited: -10%, -15%, -20%, -30%, -40%											
Bypass Frequency Range	Selectable, ±1Hz, ±3Hz, ±5Hz											
Bypass Overload	125%, Long Time Operation 125%< Load <130%, Last for more than 10 min 130%<Load<150%, Last for more than 1 min >150%, Last for more than 300 ms						110% long term operation 110%~125% last for more than 5 min 125%~150% last for more than 1 min >150% last for more than 1 s					
Output												
Rated Inverter Voltage	380/400/415 VAC (Line-Line)											
Rated Frequency	50/60 Hz											
Output Power Factor	1 (unity)											
Voltage Precision	±1%											
Transient Response	<5% for Step Load (20% - 80% - 20%)											
Transient Recovery	< 30 ms for Step Load (0% - 100% - 0%)											
Output Voltage THDu	<1.5% from 0% to 100% Linear Load <6% Full Non-Linear Load According to IEC/EN62040-3											
Inverter Overload	<110%, 60 min; 110%~125%,10 min; 125%~150%,1 min; >150%, 200 ms											
Frequency Regulation	50/60 Hz±0.01%											
Synchronized Range	Settable, ±0.5 Hz ~ ±5 Hz, Default ±3 Hz											
Synchronized Slew Rate	Settable, 0.5 Hz/s ~ 3 Hz/s, Default 0.5 Hz/s											
Battery and Charger												
Battery Rate Voltage	±240 VDC (Battery Settable at 34 to 44 Nos. Even Numbers)											
Type Of Battery	12V / 2V / Li-Ion Battery											
Charger Voltage Precision	1%											
Charger Power	max=20% *Output Power											
Efficiency												
AC Mode (Overall)	>95%	>96%	>95%	>96%	>95%					>96%		
Battery Mode (Inverter)	>95%	>96%	>95%	>96%	>95%					>96%		
System												
Display	LED + LCD + Touch Screen											
Interface	RS232, RS485, USB, Programmable Dry Contact						RS232, RS485, USB, Programmable Dry Contact, Battery Cold Start					
Option	Battery Cold Start, SNMP, Parallel Kit, Lightning Protection Components, Dust Filter, LBS						SNMP, AS400, Parallel Kit, Lightning Protection Components, Dust Filter, LBS					
Environmental												
Operation Temperature	0 ~ 40°C											
Storage Temperature	-40 ~ 70°C											
Relative Humidity	0 ~ 95% Non Condensing											
Noise (1 meter)	65dB @ 100% Load, 62dB @ 45% Load											
Altitude	<1000 m, Load Derated 1% per 100 m from 1000 ~ 2000 m											
Ingress Protection	IP 20											
Physical Data												
Cabinet Dimensions (WxDxH) (mm)	600 x 980 x 950	600 x 980 x 1400	600 x 980 x 1150	600 x 980 x 1400	650 x 960 x 1400	650 x 960 x 2000	650 x 960 x 2000	1300 x 1100 x 2000				
Cabinet Weight (kgs)	170	210	231	210	266	305	350	445	490	810	900	

Hitachi Hi-Rel Power Electronics Pvt. Ltd.

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

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