


**UNINTERRUPTIBLE POWER SUPPLIES**

**UNINTERRUPTED** Peace of Mind

**9950A UPS SERIES**  
500 kVA | 450 kW

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 **MITSUBISHI  
ELECTRIC**  
UNINTERRUPTIBLE POWER SUPPLIES

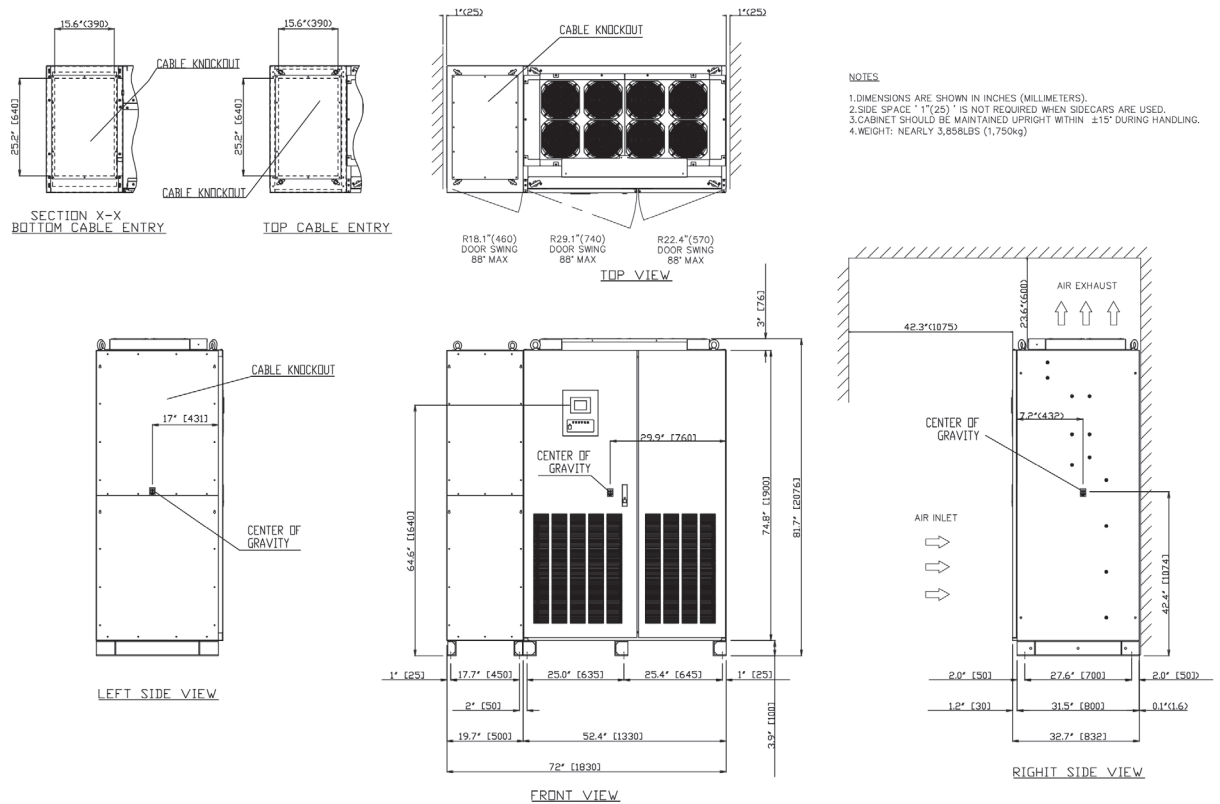
# NEW UPS DESIGN IDEAL FOR HIGH-DENSITY DATA CENTERS

The newly introduced 9950A UPS available from Mitsubishi Electric provides mission critical operations an efficient UPS designed for 400 volt power distribution infrastructures. Widely adopted in Europe and Asia, the 230/400V electrical distribution infrastructure eliminates the need for expensive, heavy transformers and extra circuit breakers required for 120/208V power distribution. The higher 230/400V power scheme offers the inherent advantages of eliminating possible failure points (circuit breakers), occupying less overall floor space (no transformers required), and increasing efficiency through increased power delivery. Due to significant increases in energy efficiencies, the 230/400 volt power distribution approach has gained traction in high-density data centers.

## FEATURES

- Specifically for systems incorporating 380VAC, 400VAC and 415VAC four-wire installations at 50 or 60 Hz.
- Can be paralleled with up to eight units for N+1 redundancy.
- User-friendly LCD touch panel for fast access to system status, monitoring and control.
- Application for domestic data centers reduces costs, weight, & floor space while increasing efficiency.

## DRAWING



# Reliable Backup Power

## SPECIFICATIONS

AC INPUT	Configuration	3 phase, 3 wire
	Voltage	380V, 400V, 415V
	Frequency	50 / 60 Hz (+/-10%)
	Power Factor	>.99 Lagging
	Input kVA	474 kVA Max (500 kVA chg)
	Walk-in Function	1 –30 Seconds (in 1 second increments)
	Input Current (Max)	720 A (760 A) @ 380V, 684A (722A) @ 400V, 659A (696A) @ 415V
	Input Current Limiter	~105% Full Load Input Current
	Reflected Current THDi	5% max 100% load (no input filter required)
	STATIC BYPASS INPUT	Configuration
Voltage		380V, 400V, 415V
Frequency		50/60 Hz ±5%
Bypass Overload		500% for 1 cycle
BATTERY	Nominal Voltage	480 Vdc
	Minimum Voltage	400 Vdc
	Float Voltage	Up to 545 Vdc
	Max DC Charging Current	125 A (MAX) Charging current based on load capacity.
	Max. Discharge Current	1172 A
	Batt. Capacity Required at Full Load Output	469 kWb
	Number of Cells	240
	ENVIRONMENTAL	Protection Class
Cooling		Forced Air
Operating Temperature		32° F to 104° F (0° C to 40° C) Recommended : 68° F to 86° F (20° C to 30° C)
Relative Humidity		30% – 90% Non-Condensing
Altitude		0 to 3281 feet (1000 m) No Derating at 104° F (40° C)
Clearance Required		Top: 23.6 in. (600 mm) Front: 42.3 in. (1075 mm) Rear: 0 in. (0 mm) Sides: 0 in. (0 mm) if sidecars used, 1 in. (25 mm) if no sidecars used.
Enclosure		IEC 62040
Audible Noise		71dB @ 1m 50Hz 73 dB @ 1 m 60Hz
Listings/Standards		UL1778 4th, EN 62040-1:2008
Emergency Power Off		Included

AC OUTPUT	Configuration	3 phase, 4 wire	
	Voltage	380V, 400V, 415V	
	Voltage Regulation	±1% (0 – 100% balanced load); ±2% (0 – 100% unbalanced load)	
	Voltage Unbalance	2% maximum at 100% unbalanced load	
	THD (VOUT)	< 2% THD at 100% linear load; < 5% THD at 100% nonlinear load	
	Crest Factor	2.3	
	Efficiency (AC/AC)	up to 96%	
	Transient Response		±2% maximum at 100% load step ±1% maximum at loss/return of AC power (more than DC nominal voltage) ±5% maximum at load transfer to/from static bypass
		Transient Recovery Time	Less than 20ms
	Frequency	50 / 60 Hz (Note: no frequency converter)	
Frequency Sync. Range	±1% to ± 5% (selectable in 1% increments)		
Frequency Slew Rate	1 Hz/s to 5 Hz/s (selectable in 1 Hz/s increments)		
Frequency Regulation	±0.01% in free running mode		
Phase Displacement	±1° @ 100% Balanced Load, ±3° @ 100% Unbalanced Load		
Output Current	759 A @ 380V / 722A @ 400V / 696A @ 415V		
Power Factor	0.9		
OVERLOAD CAPACITY	Overload Capacity	125% for 10 minutes; 150% for 60 seconds	
	Withstand Rating	100,000 A (with optional fuses)	
	MONITORING	Dry Contacts Included	Yes, for Input and Output Signals
RS232 Port		Netcom2 & ModBus RTU are optional	
DISPLAY	Display	LCD Touch Panel for Local Monitoring, Operation, Control and TCP/IP	
	GENERAL	EMC	EN 62040-2:2006
Parallel Capability		8 units	
Cable Entry		Bottom/Top	
Weight		3858 lb. (1750 kg)	
Dimensions (WxDxH)		≤ 70.9 x 32.8 x 78.7 in (1800 x 832 x 2000mm)	





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Like all other Mitsubishi Electric UPS systems, the 9950A is an online double-conversion system and features Mitsubishi Electric's world-renowned Insulated Gate Bipolar Transistor (IGBT) technology for enhanced UPS performance and reliability. Offering efficiencies up to 96%, the 500kVA UPS supplies clean, continuous power to data centers and other mission critical equipment while reducing a facility's operating costs and carbon footprint.



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Since 1964, Mitsubishi Electric has manufactured precision-engineered Uninterruptible Power Supplies (UPS) to protect our customers' investments in their mission critical equipment. Mitsubishi Electric's UPS systems are unsurpassed in reliability, quality and efficiency. We are dedicated to developing the best UPS systems on the market, and provide unrivaled service for lifetime of your UPS.

The 9950A UPS is fully supported by Mitsubishi Electric Asia Pte Ltd, including customer training and application expertise.



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