

> **9700** UPS

UNINTERRUPTIBLE  
**POWER** SUPPLIES



9700

## Superior Performance, Reliability and Safety Come from Experience. Our Uninterruptible Power Supply Systems Ensure All Three.

Mitsubishi Electric has been developing and manufacturing Uninterruptible Power Supply (UPS) components and systems for more than three decades. That experience, and the continuous application of new power-device technologies to further improve products in the industry clearly explain why Mitsubishi Electric has dominated a large portion of the world UPS market for years.

When purchasing a UPS system, the key word is “dependability.” And there’s one company that many rely on. Uninterruptible Power Supply systems by Mitsubishi Electric.

### IGBT - Transistors with Excellent Performance Characteristics

Mitsubishi Electric is the leading manufacturer of Insulated Gate Bipolar Transistors (IGBTs), and now utilizes IGBTs in the converters and inverters of its 9700 Series UPS systems. These advanced, high-performance transistors provide a variety of intelligent features.

- High Ampacity Transistors (600A)
- High Speed Switching
- Low Control Power

### Low Input Current Harmonics (THD)

- 3% maximum (100% load)
  - 4% maximum (75% load)
  - 5% maximum (50% load)
- (No additional filtering required)

### Input Power Factor

- 0.99 typical (0~100%)
- 1:1 Ratio (No oversizing of generator)

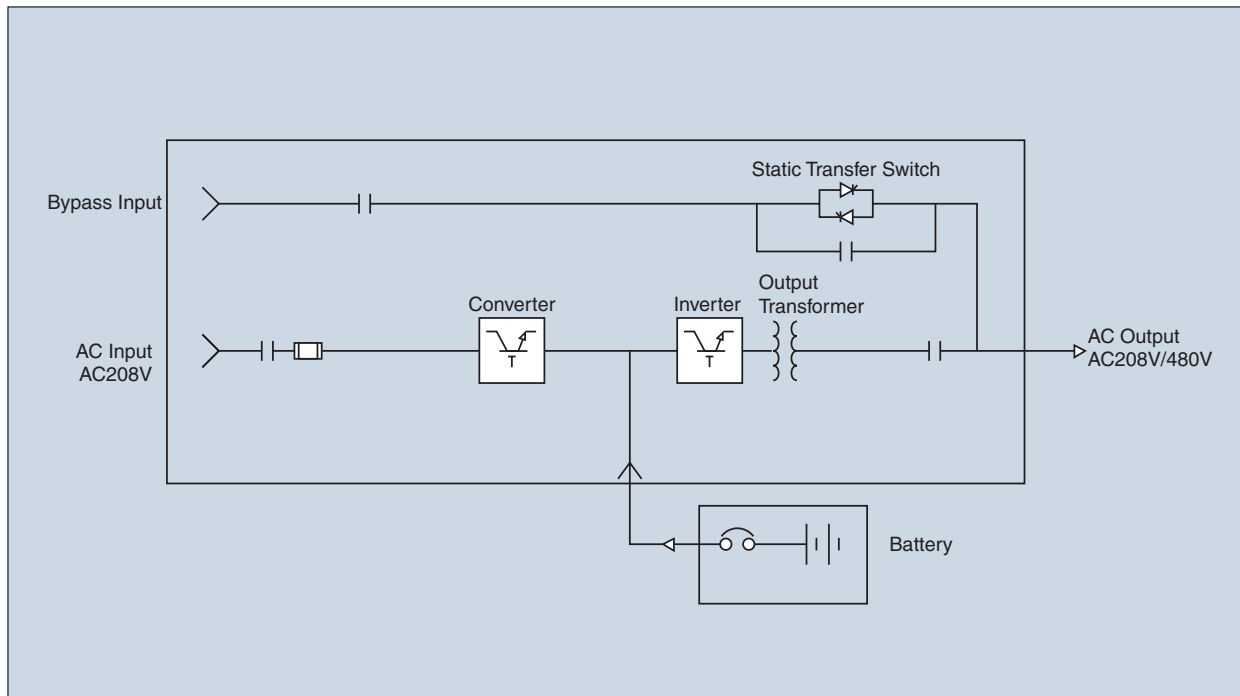
### Benefit of Lower Input Current

- Smaller upstream components (Transformers, Circuit Breakers and cable sizing)

### Low Heat Loss / High Efficiency

Use of IGBTs transistor enables efficient high-speed switching (6kHz), thus reducing heat dissipation in the UPS. (Higher efficiency means lower cost per kilowatt and lower cost of ownership.)

## ONE-LINE DIAGRAM



## S O F T W A R E

### What is DiamondLink™?

DiamondLink is user-customizable power monitoring, management and shutdown software, designed to provide information about the power condition of the UPS system.

### How does DiamondLink work?

DiamondLink is designed to run on network server or workstations in any office environment. The software will monitor the status of your UPS and, when critical events occur, will perform a graceful unattended shutdown.

### Features

- Automatic unattended shutdown
- Smart messages can be user-defined
- User-defined actions for a specific list of power-events
- Color coded power event logging
- Built-in graphing routines allow customized graphs to be created on-line
- DiamondLink can be used with all Mitsubishi single-phase and three-phase products

### Specifics

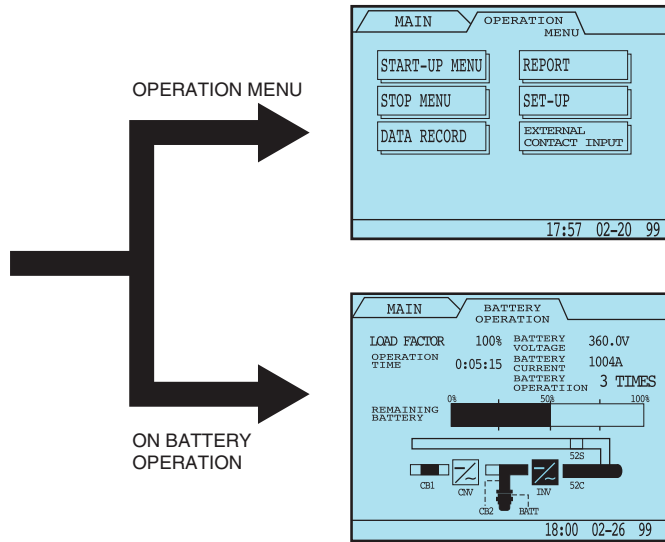
- Power history graphs
- Custom user defined events
- Data log viewer
- E-mail configurations
- E-mail options for power events
- Event action
- Events log file
- Modem alert notification
- Pager notification
- Paging option

### Supported Operating Systems

- Microsoft Windows®
- Microsoft Windows NT
- Microsoft Windows '95
- Microsoft Windows '98
- Microsoft Windows '00
- Microsoft Windows XP
- OS/2
- Novel NetWare®
- SVR4

- SCO UNIX
- SCO XENIX
- Solaris™
- IBM® AIX®-RS/6000™
- HP-UX
- SGI
- Digital UNIX
- Red Hat (LINUX)





## Extended Battery Life (0-100% Load Step)

- Supplemental current from the batteries is no longer required with the installation of IGBTs transistor in both the converter and inverter. Other UPS systems require assistance from the battery during step load conditions. The additional battery cycling results in decreased battery life.

## Isolated Redundant System Capability

- The 9700 Series is designed for isolated redundant applications.
- Lower cost to consumer, small footprint, less components.
- Different kVA sizes and different series can be used for greater flexibility of the overall system.

## Operator-Friendly Control Panel

### Features:

- Mimic bus diagram
- Operator's control station
- Touch panel input

## LCD monitor displays:

- System metering
- Menu-driven start-up procedures
- Menu-driven operation procedures
- History of events
- Trend graph

### Additional features:

- Password locked for start/stop operation
- Sealed EPO button

## Realtime Battery Monitoring

- Remaining time in battery charge displayed for operator
- Software algorithms continuously calculate and update actual remaining time in battery charge.

## Superior Functions

- Automatic restart
- Automatic retransfer
- Converter walk-in function
- Battery monitoring
- Ripple-free DC output (rectifier)
- 1-set "Form A" dry contracts of selectable items
- Large overload / overcurrent capacity
- Battery temperature compensation
- Adjustable DC cut-off

## Quiet Operation

- 100kVA → 63dB (A scale, 1m)
- 150 - 225kVA → 65dB (A scale, 1m)

## Software

- RS-232C parallel interface
- Multiple server shutdown software (V. 1.50)
- DiamondLink application software
- 90% of all operating systems are compatible with DiamondLink
- Multilingual
- Paging, E-mail capability during power events
- Auto-dial
- Ethernet LAN connection interface (optional)
- SNMP Interface

Standard warranty is two years, including parts and labor.

*(NOTE: All information subject to change without prior notice.)*

## GSA Contract Number

GS-07F-9526G



2008 Nemertes Award Winner for  
"Best Small Business Provider for Power Systems"

# SPECIFICATIONS

## UPS Cabinets

kVA/KW	208 V/208 V Dimensions (W x D x H) (inch)	Weight (lbs)
100/80	35.4 x 29.9 x 79.7	1,900
150/120	47.2 x 29.9 x 79.7	2,350
225/180	55.1 x 29.9 x 79.7	3,300

**Note:** Batteries not included.



## Specifications: 9700 Series 100kVA – 225kVA

Rated Output kVA	100	150	225
Rated Output kW	80	120	180
<b>AC INPUT CHARACTERISTICS</b>			
Configuration	3 phase, 3 wire		
Voltage	208V +10% ~ -15%		
Input Power Factor	0.98 Typical		
Frequency	60 Hz ±5%		
Reflected Current THD	3% max. at 100% load; 5% max. at 50% load		
<b>STATIC BYPASS INPUT</b>			
Configuration	3 phase, 3 or 4 wire		
Voltage	120/208V ±10%		
Frequency	60 Hz (±3% Tracking window)		
<b>BATTERY</b>			
Type	VRLA, Flooded Lead Acid, Nickel Cadmium		
Ride Through	Application specific		
Nominal Voltage	360 VDC		
Minimum Voltage	290 VDC		
Number of Cells	176 ~ 185		
<b>AC OUTPUT</b>			
Configuration	3 phase, 3 or 4 wire		
Voltage	120/208V		
Voltage Stability	±1%		
Frequency	60 Hz		
Frequency Stability	±0.01% in free running mode		
Power Factor	0.8 nominal		
Power Factor Range	0.8 ~ 1.0 lagging (within output kW rating)		
Voltage THD	2% maximum THD at 100% Linear Load; 5% maximum THD at 100% non-linear load		
Transient Response	±2% maximum at 100% load step; ±1% maximum at loss or return of AC power ±5% maximum at load transfer to/from static bypass		
Transient Recovery	Less than 1 line cycle		
Voltage Unbalance	1% maximum at 100% unbalanced load		
Phase Displacement	1% maximum at 100% unbalanced load		
Inverter Overload	125% for 10 minutes; 150% for 1 sec		
System Overload	500% for 2 cycle (with bypass available)		
Bypass Overload	125% for 10 minutes		
Withstand Rating	65kA; with optional fuses		
<b>ENVIRONMENTAL</b>			
Cooling	Forced air		
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C). Recommended 68°F ~ 86°F (20°C ~ 30°C)		
Relative Humidity	5% ~ 95% non-condensing		
Altitude	3300 feet (1000 meters); 5000 feet at 0.99 derating		

Consult Mitsubishi for Battery Cabinet Configurations.

UPS

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