

# > 2033A UPS

UNINTERRUPTIBLE  
**POWER** SUPPLIES

2033A



## 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.



### Intelligent Power Module (IPM) Transistors with Excellent Performance Characteristics

Mitsubishi Electric is the leading manufacturer of Intelligent Power Modules (IPMs), and now utilizes Intelligent Power Module transistors in the converters and inverters of its 2033A Series UPS systems. These advanced, high-performance transistors provide a variety of intelligent features.

- Drive Circuitry
- Overcurrent Protection
- Over Temperature Protection
- Control Voltage Drop Protection
- Short-Circuit Protection

### Low Input Current Harmonics (THD)

- 3% typical (100% load)
  - 4% typical (75% load)
  - 6% typical (50% load)
- (No additional filtering required)

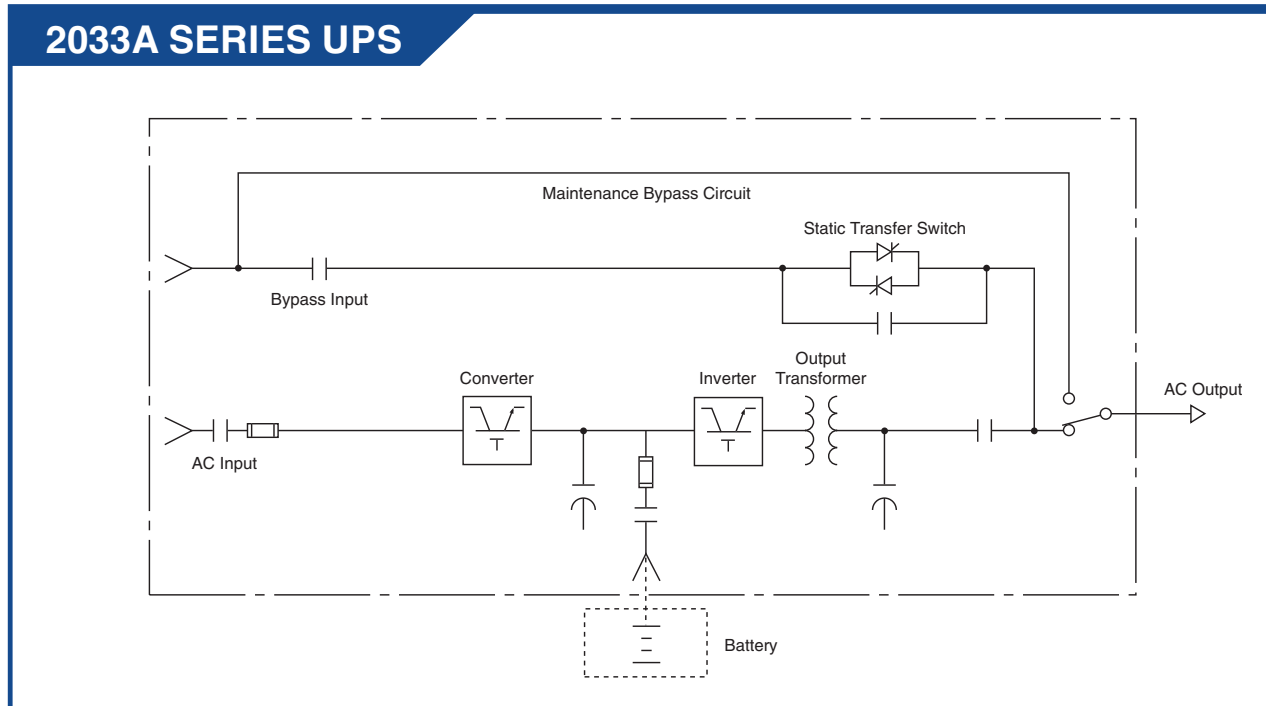
### Generator Sizing Ratio (UPS)

- 1:1 ratio (UPS kVA/  
Generator kW)

### Low Heat Loss/High Efficiency

Use of Intelligent Power Module transistors enables efficient high-speed switching, thus reducing heat dissipation in the UPS. (Higher efficiency means lower cost per kilowatt to the customer.)

## 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

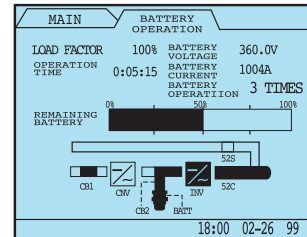
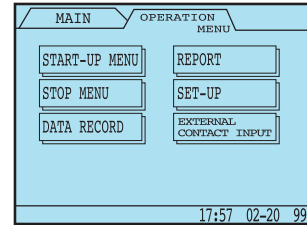
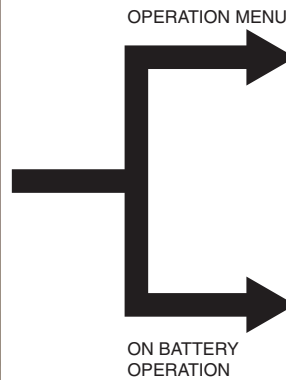
- Power history graphs
- Custom user defined events
- Data log viewer
- E-mail configurations
- E-mail options for power events
- Event action
- Events log file
- Modem alert notification
- Pager notification
- Paging option

### 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

- Current source from batteries for step loads is no longer required with the installation of Intelligent Power Module transistors in both the converter and the inverter. Previous UPS systems required assistance from batteries when the converter was unable to supply the required current. This cycling of batteries caused shorter life.
- Mitsubishi Electric Intelligent Power Modules incorporate the latest technologies and provide step load applications (0-100%) without the use of batteries, thus ensuring maximum battery service life (i.e., lower cost of ownership).

### Internal Maintenance Bypass

All 2033A Series UPS systems are equipped with an internal wrap around maintenance bypass system for greater maintenance flexibility.

- UL 1778 approved

### Superior Control

All 2033A Series UPS systems use pulse width modulation (PWM) for superior control and performance. A digital signal processor (DSP) ensures precise control of all input/output parameters.

### Operator-Friendly Control Panel

#### Features:

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

#### LCD Monitor Displays:

- System metering
- Menu-driven start-up procedures
- Menu-driven operating procedures
- History of events
- Trend graph
- Load true power factor

#### Additional Features:

- Password lock out for start/stop operation
- EPO button

### Real-Time Battery Monitoring

- Remaining battery time displayed for operator
- Integrated "DiamondSense" system automatically detects weak cells

### Superior Functions

- Automatic restart
- Automatic retransfer
- Converter walk-in function
- Battery monitoring
- Ripple-free DC output (converter)
- 1 set "Form A" dry contacts of selectable items
- Large overload/overcurrent capacity

- Battery temperature compensation
- Adjustable DC cut-off

### Quiet Operation

- 30, 50kVA→60dB (A scale, 1m)
- 75kVA→65dB (A scale, 1m)

### Software

- RS232C serial interface
- DiamondLink application software
- 90% of all operating systems are compatible with DiamondLink
- Multilingual
- Paging, E-mail capability during power events
- Auto-dial
- Multiple server shutdown capabilities

### Warranty

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	208 V/ 208 V Dimensions (W x D x H) (inch)	Weight (lbs)
30	35.4 × 29.5 × 70.9	1,050
50	43.3 × 29.5 × 70.9	1,500
75	43.3 × 29.5 × 70.9	1,700

**Notes:**

1. All 2033A Series UPS Systems include a “zero energy” maintenance bypass.
2. Batteries not included.

## Specifications: 2033A Series 30kVA – 75kVA

Rated Output kVA	30	50	75
Rated Output kW	24	40	60
<b>AC INPUT CHARACTERISTICS</b>			
Configuration	3 phase, 3 wire		
Voltage	208V, 480V, 600V +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	120V/208V, 277V/480V, 346V/600V ±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	300 VDC		
Number of Cells	176 ~ 185		
<b>AC OUTPUT</b>			
Configuration	3 phase, 3 or 4 wire		
Voltage	120V/208V, 277V/480V, 346V/600V		
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 4% maximum THD at 100% non-linear load		
Transient Response	±3% maximum at 100% load step; ±1% maximum at loss or return of AC power; ±3% maximum at load transfer to / from static bypass		
Transient Recovery	Less than 1 line cycle		
Voltage Unbalance	2% maximum at 100% unbalanced load		
Phase Displacement	1% maximum at 100% unbalanced load		
Inverter Overload	125% for 10 minutes; 150% for 10 seconds		
System Overload	1000% for 1 cycle (with bypass available)		
Bypass Overload	125% for 10 minutes		
Withstand Rating	65kA; with optional fuses (only 208V model)		
<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	3,300 Feet (1000 meters); 9,000 feet @ 0.99 derating		

Consult Mitsubishi for Battery Cabinet Configurations.



MEPS

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