



MITSUBISHI ELECTRIC POWER PRODUCTS, INC.

THORN HILL INDUSTRIAL PARK
530 Keystone Drive, Warrendale, PA 15086
Phone 724-772-2555
Website: www.meppi.com

GENERAL SERVICES ADMINISTRATION FEDERAL SUPPLY SERVICE AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICELIST

SCHEDULE SCHEDULE 056 - BUILDINGS, BUILDING MATERIALS/INDUSTRIAL SERVICES AND SUPPLIES

FSC Class(s): 6115
Business Size: Large

Contract Number: GS-07F-9526G
Contract Expires February 28, 2017

CONTRACTOR:

Mitsubishi Electric Power Products
530 Keystone Drive
Warrendale, PA 15086
724-778-3189
724-778-3146 - fax
Ms. Carla Collier

Special Item Numbers:

383-5: Batteries and Battery Chargers
412-14: Uninterruptible Power Supplies
412-17: Switchgear, Panel boards, Switchboards, and Load Centers
412-50: Ancillary Services

1. **HOURLY RATES:** N/A
2. **MAXIMUM ORDER GUIDELINE:** \$1,000,000 per SIN 412-14; \$1,000,000 per SIN 383-5; \$500,000 per SIN 412-17; \$200,000 per SIN 412-50. Orders above this amount may be accepted in accordance with the Maximum Order provisions contained in the Schedule.
3. **MINIMUM ORDER LIMITATION:** Minimum order limitation is \$25.00
4. **GEOGRAPHIC COVERAGE:** 50 States, Washington DC & US Territories
5. **POINTS OF PRODUCTION:** 412-14: Japan. All other SINs: Warrendale, Pennsylvania
6. **BASIC DISCOUNT:** Prices shown are Net GSA, discounts have been deducted
7. **QUANTITY DISCOUNT:** N/A
8. **PROMPT PAYMENT TERMS:** Net 30



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- 9.a Government Purchase Cards must be accepted at or below the micro-purchase threshold.
- 9. b Government Purchase Cards are accepted above the micro-purchase threshold subject to possible additional service fees.
- 10. **FOREIGN ITEMS:** None
- 11a. **TIME OF DELIVERY:** 45 Days after Receipt of Order (ARO)
- 11b. **EXPEDITED DELIVERY:** ARO-determined at order level
- 11c. **OVERNIGHT/2-DAY DELIVERY:** Consult with Contractor
- 12. **FOB POINT:** FOB Origin, prepay and add
- 13a. **ORDERING ADDRESS:** Same as Contractor's address above
- 13b. **ORDERING PROCEDURES:** For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) are found in Federal Acquisition Regulation (FAR) 8.405-3.
- 14. **PAYMENT ADDRESS:** Same as Contractor's address above
- 15. **WARRANTY PROVISIONS:** Manufacturer's Standard Commercial Warranty
- 16. Export Packing Charges: Not Applicable
- 17. Terms And Conditions Of Government Purchase Card Acceptance: (Any Thresholds Above The Micro-Purchase Level) Same as with purchase order
- 18. Terms And Conditions Of Rental, Maintenance, And Repair (If Applicable): N/A
- 19. Terms And Conditions Of Installation (If Applicable): N/A
- 20. Terms And Conditions Of Repair Parts Indicating Date Of Parts Price Lists And Any Discounts From List Prices (If Available): N/A
- 20a. Terms And Conditions For Any Other Services (If Applicable): N/A
- 21. List Of Service And Distribution Points (If Applicable): N/A
- 22. List Of Participating Dealers (If Applicable): N/A
- 23. Preventive Maintenance (If Applicable): N/A



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24a. Special Attributes Such As Environmental Attributes (E.G. Recycled Content, Energy Efficiency, And/or Reduced Pollutants):

24b. Section 508 Compliance for EIT: N/A

25. **DUNS NUMBER 153747456**

26. **SAM Registration Completed. Registration is valid through 01/13/16**

02/17/15

Through Modification No PO-0025

Effective 02/17/15



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Sales Contacts:

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TERMS AND CONDITIONS OF SALE

1. GENERAL These terms and conditions of sale ("T&C") shall govern the sale of all products (the "Products") from Mitsubishi Electric Power Products, Inc. ("MEPPI") to the purchaser ("Customer"). These T&C supersede all different or additional terms submitted by Customer, whether in any order, contract or other document, and such different or additional terms and conditions are hereby rejected and shall have no force and effect. The sale of the Products is expressly conditioned upon Customer's assent to these T&C. Customer shall be deemed to have expressly accepted these T&C if Customer expressly so agrees in writing or accepts any shipment of Products subsequent to receipt of these T&C. Failure of MEPPI to object to provisions contained in any order or other writing of Customer shall not be construed as a waiver of these T&C or acceptance of any terms and conditions of Customer. No sales or other independent representative of MEPPI shall have any authority to vary these T&C in any respect or to agree to any different or additional terms and conditions.

2. PRICES Prices for the Products shall be as specified in MEPPI's applicable price schedule or other written price quotation. Customer's orders are subject to acceptance by MEPPI. Prices are F.O.B. MEPPI warehouse or other location in the US designated by MEPPI (the "Shipment Point"). All price quotations issued by MEPPI are firm for a period of 30 days unless otherwise indicated therein by MEPPI. MEPPI's prices do not include any applicable sales, use or other taxes, and the amount of any such taxes which MEPPI may be required to pay or collect shall be added to each invoice or separately invoiced by MEPPI to Customer, and Customer shall promptly pay such invoices.

3. PAYMENT

A. Payment Terms. Each shipment of Products shall be considered a separate transaction and payment shall be made accordingly. Unless otherwise agreed in writing by MEPPI, payment for Products shall be made net 30 days from date of MEPPI's invoice. An invoice will be issued upon delivery of the Products to the common carrier at the FOB Shipment Point.

B. Advance Payments/Suspension. If MEPPI reasonably believes that the financial condition of the Customer is impaired or otherwise has a reasonable basis for insecurity as to Customer's ability or intention to comply with these T&C, MEPPI may require full or partial payment in advance, suspend its performance or revoke its acceptance of Customer's order. If shipments are delayed by Customer, MEPPI shall have the right to demand payment 30 days from the date MEPPI is prepared to make shipment. Products held for Customer because of such delay in delivery shall be held at the risk and expense of Customer.

C. Overdue Invoices. Past due invoices shall bear interest at the rate of 1.5% per month, but not in excess of the maximum lawful rate, until paid in full.

D. Collection Costs. Customer shall be responsible for all costs and expenses incurred by MEPPI, including attorneys' fees and costs, in connection with pursuit of collection of, or seeking advice with respect to, amounts due from Customer and enforcement of any provision of these T&C.

4. DELIVERY, RISK OF LOSS AND TITLE Risk of loss shall pass to the Customer at MEPPI's point of shipment, F.O.B. Origin, pre-pay and add. Notwithstanding any request by Customer, MEPPI shall, without incurring any liability, exercise its own discretion in selecting the method of shipment and the carrier. MEPPI shall retain title to all Products and parts sold to Customer until fully paid for by Customer. In furtherance of the foregoing, Customer hereby grants to MEPPI a security interest in the Products and parts purchased by Customer from MEPPI and all proceeds thereof to secure the performance of all obligations of whatever kind or nature due by Customer to MEPPI under these T&C. Customer authorizes MEPPI to file such financing statement(s), including any necessary or required amendments thereto, describing the Products and parts as MEPPI shall deem necessary to confirm, perfect and maintain its retained ownership thereof or the security interest granted under these T&C.



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5. LIMITED WARRANTY Products sold by MEPPPI are warranted to conform to the specifications therefor at the time of delivery to Customer and remain free from defects in workmanship and material for the period specified on the written warranty that accompanies the Products. MEPPPI will include a copy of its limited warranty with each Product packaging. Customer shall not remove MEPPPI's limited warranty from any Product packaging. Customer shall have no right to make any warranties on behalf of MEPPPI with respect to the Products. Customer shall be solely responsible for any and all warranties, claims, representations or other statements made by Customer to any end user or other third party with respect to the Products and for any repair, service or replacement of any Products pursuant to any warranty provided by Customer. Any Product or components thereof which, in MEPPPI's judgment, fails to meet its limited warranty shall be repaired or replaced, at MEPPPI's option, by MEPPPI at no charge to Customer. MEPPPI's obligation shall be limited solely to repair or replacement of the Products or components thereof. Such obligation shall be conditioned upon receipt by MEPPPI of notice of any alleged nonconformance to specifications within 30 days after delivery to Customer and of any alleged defect in material or workmanship within 30 days after discovery. Products which MEPPPI consents or directs in writing to be returned shall be returned to MEPPPI, freight prepaid, F.O.B. MEPPPI's warehouse, or other US location designated by MEPPPI in accordance with MEPPPI's standard return policy. THE FOREGOING WARRANTY IS EXCLUSIVE AND MEPPPI MAKES NO OTHER WARRANTIES OF ANY KIND WHATSOEVER TO CUSTOMER OR ANY THIRD PARTY WITH RESPECT TO THE PRODUCTS AND HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE. MEPPPI SHALL HAVE NO RESPONSIBILITY FOR ANY PARTICULAR APPLICATION MADE OF ANY PRODUCT.

6. DELIVERIES MEPPPI will use reasonable efforts to fill customer's orders in a timely manner. It is understood, however, that lead time requirements and delivery dates will vary according to manufacturing and other conditions and that all delivery dates are only estimates. Delay in delivery of any shipment shall not relieve Customer of its obligations to accept such shipment or any other shipment.

7. FORCE MAJEURE MEPPPI shall not be liable to Customer for any failure to perform or delay or failure of delivery due to any cause beyond MEPPPI's control, including, without limitation, act of God, act of Customer or any of its representatives, embargo, act of governmental authority, or other government act, regulation or order, fire, accident, strike, slow down, other labor difficulty, war, riot, delay in transportation or delay in inability to obtain necessary labor, materials, fuel, or manufacturing facilities from usual sources or energy shortages. In the event of any such delay, the date of delivery shall be extended for a period reasonably necessary to overcome the effect of such delay, and, if such delay is caused by act of Customer or any of its representatives, MEPPPI shall be reimbursed for any additional costs arising from such delay.

8. CANCELLATION Customer's wrongful non-acceptance of Products or cancellation or repudiation of its order shall entitle MEPPPI to recover cancellation charges in the amount of either (i) in the case of Products the risk of loss of which has passed to Customer, the price of such Products or (ii) in the case of Products which have not been shipped, 20% of the order price as liquidated damages.

9. REGULATORY LAWS AND STANDARDS MEPPPI makes no promise or representation that the Products will conform to any federal, state or local laws, ordinances, regulations, codes or standards, except as particularly specified and agreed upon in writing by a duly authorized officer of MEPPPI. Prices do not include the cost of any inspection or permits.



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10. CHANGES AND DRAWINGS MEPPI reserves the right to change or modify the specifications, design, drawings and construction of any Products and to substitute other suitable material. If drawings are furnished, they are submitted only to show general style and arrangement of the Products except as otherwise agreed to by Customer and MEPPI in writing.

11. INTELLECTUAL PROPERTY Subject to the conditions set forth in this section, MEPPI shall, at its own expense, defend or, at its option, settle any claim, suit or proceeding brought against Customer alleging that the Products or any part thereof furnished by MEPPI infringes any US patent, copyright or trademark. MEPPI shall pay, subject to the limitations of this section, all damages and costs awarded in such claim, suit or proceeding. MEPPI's obligations under this section shall be effective only if Customer shall have made all payments due MEPPI and gives MEPPI prompt notice and full authority, information and assistance for the defense of such claim, suit or proceeding. If a Product or any part thereof becomes the subject of such claim, suit or proceeding, MEPPI may at any time thereafter, at its option and expense: (1) procure for Customer the right to continue use of such Product or part thereof; (2) replace such Product with a non-infringing product or part; (3) modify such Product to eliminate the alleged infringement; or (4) accept the return of such Product and give Customer a full refund of the price of the affected Products in lieu of any other obligations or responsibilities. MEPPI shall have no liability for any infringement arising out of; (i) the combination of any Product with any other product whether or not furnished to Customer by MEPPI; (ii) the modification of any Product unless such modification was made by MEPPI; or (iii) any information, data, service or application assistance furnished to Customer by MEPPI. MEPPI shall not be liable for any costs or expenses incurred without MEPPI's written authorization, including settlement of any such claim, proceeding or suit. The foregoing states the entire responsibility of MEPPI and the exclusive remedy of Customer, with respect to any alleged intellectual property right infringement or violation by a Product. No sale under these T&C shall convey any license by implication, estoppel or otherwise under any proprietary or patent right of MEPPI.

12. LIMITATION OF LIABILITY NEITHER MEPPI NOR ANY OF ITS CONTRACTORS AND SUPPLIERS OF ANY TIER SHALL BE LIABLE IN CONTRACT, IN TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR OTHERWISE FOR DAMAGE OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, LOSS OF USE OF EQUIPMENT, COST OF CAPITAL, LOSS OF DATA, COST OF TEMPORARY EQUIPMENT (INCLUDING ADDITIONAL EXPENSES INCURRED IN USING EXISTING FACILITIES), CLAIMS OF CUSTOMER'S END-USERS, LOST GOODWILL, LOST RESALE PROFITS OR FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER. The remedies of Customer set forth in these T&C are exclusive, and the total cumulative liability of MEPPI with respect to any order or anything done in connection therewith such as the performance or breach thereof, or from the manufacture, sale, delivery, resale, or use of any Product, whether in contract, in tort (including negligence or strict liability) or otherwise shall in no event exceed the price of the Product on which such liability is based.

13. PRODUCT LIABILITY INSURANCE Product liability insurance written by an insurance company licensed to do business in the United States in the amount not less than \$2,000,000 combined single limit is maintained with respect to the Products. Except to the extent of the applicable coverage under such product liability insurance, Customer shall have no claim or right against MEPPI with respect to any suit or claims against Customer by any third persons resulting from the occurrence of an event within the scope of the coverage of such insurance (without reference to the dollar amount of coverage), and MEPPI shall bear no responsibility or liability to Customer with respect to any such suits or claims by any third persons or any liabilities, expenses or damages incurred or suffered by Customer as a result thereof.



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14. GOVERNING LAW; JURISDICTION These T&C shall not be governed by, and the parties hereby disclaim the effect of, the United Nations Convention on Contracts for the International Sale of Goods, as amended, the United Nations Convention on the Limitation Period in the International Sale of Goods, as amended, and the Uniform Computer Information Transactions Act. The sale of Products by MEPPi to Customer and these T&C shall be governed by and interpreted in accordance with the law of the Commonwealth of Pennsylvania without regard to the principles of conflicts of law, provided that any question regarding copyright, trademark, patent or intellectual property or trade secret matters shall be determined in accordance with federal law. Any litigation arising in connection with the Order shall be brought exclusively in a court of competent jurisdiction in the Commonwealth of Pennsylvania, and the parties hereby consent to the jurisdiction of such court.

15. EXPORT CONTROLS MEPPi is selling the Products to Customer for resale and use within the United States. If Customer chooses to export any Product (or any technology related thereto), Customer shall be responsible for complying with all applicable US export laws and regulations and all amendments, modifications or additions thereto, including the United States Export Administration Act, as amended, the Export Administration Regulations, as amended, and all laws and regulations related to re-export. Customer shall indemnify and hold MEPPi harmless from all liabilities, damages, costs and expenses arising from or connected with any breach of Customer's obligations under this section.

16. NO-WAIVER No waiver of, or the failure of MEPPi to require strict compliance with or enforce any provision of these T&C shall be deemed to be a waiver of MEPPi's right to insist upon strict compliance or to enforce any or all provisions of these T&C. No waiver by MEPPi of any breach or default of these T&C shall constitute a waiver of any other or subsequent breach or default. No waiver shall be binding unless executed in writing.

17. NOTICES All notices and other written communications in connection with these T&C or any order shall be in writing and shall be sent by certified or registered mail, return receipt requested, with all postage prepaid in the case of MEPPi to 530 Keystone Drive, Warrendale, PA 15086 to the attention of its President and, in the case of Customer, to the address set forth on its order, or to such other address as may be specified by such party by notice in accordance with this section.

18. NON-ASSIGNMENT Customer may not assign any of its rights or interest under these T&C of sale without the prior written consent of MEPPi and any such attempted assignment shall be void.

19. TERMINATION MEPPi may terminate any obligation to Customer with respect to the sale of Products as set forth in these T&C immediately by notice to Customer if: (a) Customer shall fail to make any payment on the date due or to accept delivery of any shipment; (b) Customer shall make an assignment for the benefit of creditors; (c) Customer shall admit in writing inability to pay its debts as they mature; (d) a trustee or receiver or all or a substantial part of Customer's assets shall be appointed by any court; (e) any bankruptcy or reorganization proceedings shall be instituted by or against Customer; (f) Customer becomes insolvent or unable to pay its debts as they mature; or (g) MEPPi has reasonable basis for insecurity with respect to Customer's performance of its obligations to MEPPi, and Customer fails to provide to MEPPi adequate assurance of Customer's performance within 10 days of MEPPi's demand for assurance. MEPPi may also terminate any such obligation to Customer on 30 day's notice for failure of Customer to comply with any other of its obligations contained in these T&C of sale; provided that such failure shall not have been corrected during such 30-day period.



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20. CONFIDENTIALITY “Confidential Information” shall mean any information or materials which Customer receives from MEPPi in connection with these T&C and which is marked “Confidential” or “Proprietary” or is of such a nature as should reasonably be expected to be confidential or proprietary. Customer shall have a duty of confidentiality with respect to the Confidential Information. Except as expressly provided in these T&C, Customer shall not disclose and shall take all necessary or appropriate efforts to prevent the inadvertent disclosure of the Confidential Information to any third party. Customer shall use the Confidential Information only in connection with the purchase of the Products under these T&C. Customer shall have no duty of confidentiality with respect to any information Customer receives in connection with these T&C and which: (1) at the time of its disclosure, is in the public domain; (2) is independently developed by Customer; (3) is expressly approved for release by MEPPi; or (4) is required to be disclosed by law or an order of any court or other governmental authority with proper jurisdiction, provided Customer promptly notifies MEPPi before disclosing such information so as to permit MEPPi a reasonable opportunity to secure a protective order. Customer’s duty of confidentiality under this Section shall continue for a period of three years after any termination or cancellation of the order to which these T&C relate.

21. ENTIRE AGREEMENT These T&C contain all of the terms and conditions governing the sale of the Products as set forth in these T&C and may not be modified or amended except by an agreement duly executed by the parties.

22. HEADINGS The headings contained in these T&C are included for convenience only and shall not be considered in any question of construction or interpretation of these T&C.

23. SEVERABILITY If any provision of these T&C shall be adjudged by any court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, such adjudication shall not affect or modify any other provision of this agreement but the effect shall be confined to the provision as to which such adjudication is made.

> **7011A** UPS
UNINTERRUPTIBLE
POWER SUPPLIES



7011A

Power Failures Strike at the Heart of Critical Operations

7011A Series Product Line • True On-Line, Double Conversion UPS

Mitsubishi Electric is the world's leading manufacturer of power transistors and is at the leading edge of technology in designing UPS systems. Coupled with its experience in bringing you the latest technological advances and innovative products, Mitsubishi Electric breeds confidence with its renowned quality and reliability.

The 7011A Series UPS system is a true on-line, double conversion UPS system that will protect your equipment against any power problem. An unparalleled single-phase UPS system that was developed to protect the most critical of applications.

Rely on Mitsubishi Electric to give you the confidence you need to protect all of your critical data equipment. Mitsubishi Electric understands the importance of protecting your equipment and data from undesired power problems and failures.

Mitsubishi Electric – your power protection solution provider.



IGBT Technology in the 7011A Series

Mitsubishi Electric is the world's leading manufacturer of advanced, high performance Insulated Gate Bipolar Transistors (IGBT). Mitsubishi utilized their IGBT market expertise by incorporating IGBT technology in the converter and inverter sections of the 7011A Series. These advanced, high performance transistors provide a variety of intelligent features, including:

- Large power capabilities
- High speed switching
- Low input current THD
- Low control power consumption
- Generator compatible
- Low audible noise



Low Heat Loss/High Efficiency

Use of IGBTs permits efficient high speed switching, thus reducing heat dissipation in the UPS system. (Higher efficiency means lower cost per kilowatt and lower total cost of ownership.)

On-Line Double Conversion UPS System

Mitsubishi Electric's 7011A systems are true on-line double conversion UPS systems that protect your equipment from any power problem. Whether power failures, power sags, power surges, undervoltage, electrical line noise, overvoltage, frequency variation, switching transients, or harmonic distortion attack your equipment, a 7011A UPS system will provide the most complete level of power protection and reliability available. The 7011A Series UPS system does more than just provide battery backup, it enhances the existing power. This dual conversion topology delivers many advantages for critical load applications:

- Wide input voltage window
- Wide input frequency window
- Input power factor correction
- 99.9% power protection
- Low input THD
- Low output THD
- Continuous regulated Output: frequency & voltage

Hot-Swappable Batteries

Replacement of batteries is made safe and easy with the hot-swap feature. There is no need to turn the UPS system off; battery change-out is performed while the system is running connected to AC power.



Rely on Mitsubishi's 7011A Series to Protect Your Critical Equipment

The 7011A Series ranges from 6kVA to 12kVA systems covering a wide spectrum of applications. From individual computers, to network server farms, to LAN gateways, bridges, routers, telecommunications systems, security systems, process control units, banking systems, or point of sales, the 7011A Series provides the most complete protection for voltage-sensitive equipment.

2-Year Warranty

Mitsubishi Electric continues to provide unprecedented product warranty with the 7011A Series. Every 7011A Series UPS comes standard with a two-year product warranty. This warranty includes the batteries, making a bold statement regarding the technology and reliability of our UPS system.

7011A Series has UL924 Listed Products

UL924 listing is the standard for emergency lighting and critical equipment to operate continuously for at least 90 minutes in the event of a power outage.



Hardwire Input / Output & Receptacle Panels

To meet diverse electrical requirements, input line cords and output load receptacle panels are offered for Plug & Play applications. Output load receptacle boxes are offered for quick and easy on-site connections. Standard receptacle panels are in stock, or contact Mitsubishi Electric for custom configurations.

Smart Battery Charger

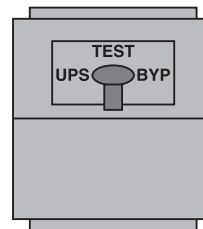
Every 7011A UPS system has a large, Smart 3-Step battery charger inside. The 7011A battery chargers are designed to prolong the life of the batteries and recharge the UPS system quicker than standard one-step chargers. A quicker recharge time means that the 7011A system will be ready for the next power outage.

Extended Runtimes Available

Where longer runtimes are in demand, the 7011A Series accommodates a variety of applications and needs. By simply adding external battery cabinets, your runtime will be considerably increased to meet those specific needs.

Maintenance Bypass Switch

Each 7011A Series UPS system includes a static Maintenance Bypass Switch (MBS). For applications where you need to isolate the input and output power from the UPS system, to allow service personnel to perform routine maintenance and testing without interrupting power to the connected critical loads, Mitsubishi Electric offers an external MBS system. This 3-position make-before-break MBS is available for all 7011A Series (6kVA to 12kVA) UPS systems in a wall mounted NEMA 1 enclosure.



System Dimensions: (6kVA – 12.0kVA)*

	7011A-60	7011A-80	7011A-100	7011A-12.0
Width (in.)	13.8	13.8	13.8	13.8
Depth (in.)	29.9	29.9	29.9	29.9
Height (in.)	27.8	40.6	40.6	40.6
Weight (lbs)	307	507	507	507

*Matching battery cabinets are available for extend runtime applications.

UPS Monitoring Equipment & Software



The Netcom2 works with all major NMS systems on Ethernet –

Netcom2 works with the most widely used Network Management Systems: HP OpenView, Novell ManageWise, Sun NetManager, IBM NetView, and many more.

The **Netcom2** hardware SNMP/Web adapter runs an embedded Simple Network Management Protocol (SNMP) software agent. This powerful and intelligent unit is designed for the rigorous task of managing the UPS systems that protect equipment and the critical data residing throughout the network.

Netcom2 Features:

Remote UPS status monitoring – Monitor a remote UPS system using an RS-232 Cable to the Netcom2 for one UPS system to a remote workstation (NMS) through an Ethernet connection

Web Card – Assign an IP address to your UPS system to monitor the UPS system from anywhere around the world

SNMP Adapter – Turn the UPS system's protocol into an SNMP software agent and enable SNMP traps

SNMP Viewer – Unique Mitsubishi design that color coordinates SNMP messages that inform the NMS about all current UPS alarms

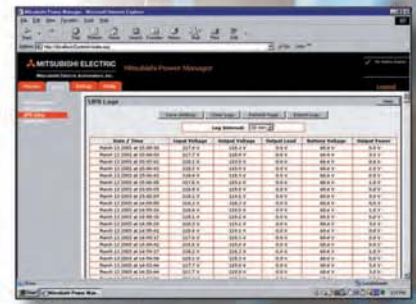
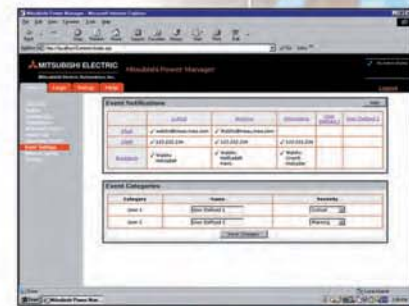
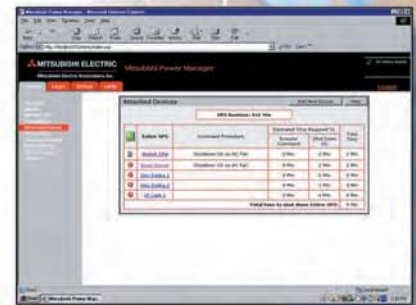
Send Shutdown Signal to Networked Servers – Send a shutdown signal to servers connected via the Ethernet network

Battery and Service Monitoring – Monitor the battery life and servicing details of the UPS

E-mail – Send the Administrator an e-mail when an event occurs

ModBus Communications for Building Management Systems

The MUCM card allows the customer to integrate Mitsubishi Electric UPS systems into their current Building Management Solution. The MUCM is a user-programmable protocol converter, or data concentrator, that is DIN-rail mountable, with 2 serial ports: One RS-232, one RS-485, and over 2,048 internal mailbox registers. Through the ModBus protocol converter, the UPS system's variables can be monitored through various Building Management System vendors' software.



7011A Series (6kVA to 12.0kVA) Advantages

- Advanced IGBT technology in both the rectifier and inverter
- True double conversion UPS system
- Extra wide input and frequency range for complete generator compatibility
- 2-year warranty
- Front LCD display for diagnostics of the UPS system
- UL924 listed
- Custom output receptacle panels available
- Internal Maintenance Bypass Switch
- Auto-restart standard

Specifications: 7011A Series 6kVA – 12.0kVA

Model Type	7011A-60	7011A-80	7011A-100	7011A-12.0	
Topology	Single Phase, True On-Line, Double Conversion				
Certifications	UL924, UL1778, cUL, FCC Class B, ISO9001, IEEEC62-41-1991, NEC (NFPA-70)				
Input	Voltage	240/120V (1 Phase), 208/120V (2 Phase)			
	Frequency	50/60 Hz \pm 5%			
	Capacity (Max)	6.0kVA 4.2kW	8.0kVA 5.6kW	10.0kVA 7.0kW	12.0kVA 8.4kW
	Input	Terminal Block	Terminal Block	Terminal Block	Terminal Block
	Reflected Current THD	< 4% at 100% load			
	Circuit Protection	35A	45A	60A	70A
Output	Voltage	240/120V or 208/120V or 120/120V			
	Frequency	50/60Hz \pm 0.01%			
	Output Waveform	Sine wave			
	Transfer Time	Zero transfer time			
	Capacity	6.0kVA 4.2kW 50A	8.0kVA 5.6kW 66.7A	10.0kVA 7.0kW 83.3A	12.0kVA 8.4kW 100A
	Rated Load Power Factor	0.7			
	Crest Factor Capabilities	300% of rated current effective value (crest factor is 3:1)			
	Transient Response	\pm 3% typical load \pm 1% at loss/return of AC power			
	Harmonic Distortion	2% or less (linear load) 1% (typical)			
	System Overload	150% for 1 minute, 1000% for 1 cycle (with bypass available)			
	Bypass Overload	150% for 1 minute, 1000% for 1 cycle			
	Receptacles	Terminal Block (optional receptacle panels available)			
	Battery	Size of Battery Charger	5A (max.)	5A (max.)	5A (max.)
Type (Life)		Sealed lead-acid battery (5 years)			
Quantity		12V 7Ah x 18	12V 7Ah x 36	12V 7Ah x 36	12V 7Ah x 36
Backup Time @ 100% Load		10 minutes	15 minutes	12 minutes	10 minutes
Recharge Time		90% after 8 hours, 100% after 24 hours			
Nominal Voltage		216Vdc			
Design Environment	Operating Temperature	0 to 40°C (32 to 104°F) optimal at 25°C			
	Operating Humidity	5 to 95% (no condensation)			
	Audible Noise	45db at 1m (3.3 ft) from front panel			
	Altitude	Less than 4000m (12000 ft)			
Design	Enclosure	Enclosure of unit is metal meeting NEMA 1 and UL Type 1			
	Emergency Power Off	Standard (Terminal Contacts)			



The quality management system of Mitsubishi Electric Corporation Kobe Works has been approved to ISO9001:2000.

The quality management system is applicable to design, development and manufacturing of the UPS.

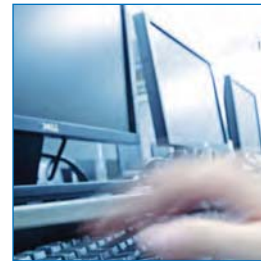
Mitsubishi Electric Power Products, Inc.
Uninterruptible Power Supplies (UPS) Division
547 Keystone Drive • Warrendale, PA 15086
Phone: 724-772-2555 • Fax: 724-778-3146

www.meppi.com

MK00005R-Rev#2 • February 2011



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A large, low-angle photograph of a server room with multiple rows of server racks stretching into the distance. The racks are illuminated with blue light, and the perspective is looking down a central aisle.

DiamondPlus™ 1100 Series

Mission Critical Uninterruptible Power Supplies



Since 1986, Mitsubishi Electric Power Products, Inc. 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 and efficiency. We are dedicated to developing the best UPS systems on the market, and provide unrivaled service for the lifetime of your UPS.

The DiamondPlus™ 1100: UPS Superior Technology

The DiamondPlus 1100 UPS Series is the latest generation UPS system offered by Mitsubishi Electric. With efficiencies up to 93.4%, a high 0.9 output power factor, and lightweight, compact design, the DiamondPlus 1100 is both green and smart. It gives energy conscious users an alternative UPS solution to meet their needs. Upgradeable in 10 kVA

increments up to 50 kVA, the DiamondPlus 1100 can be arranged in an N+1 configuration, increasing the system's availability and reliability.

Reduced Cost of Ownership

The DiamondPlus 1100 is designed to protect your data and equipment while minimizing downtime that may arise due to power irregularities or failures. If left unprotected, these irregularities such as surges, spikes, and sags can shorten the life of mission critical equipment. Additionally, the negative impact caused by an unplanned power outage can be huge: lost productivity, lost revenue, lost records, damaged equipment and / or products, safety concerns, and unhappy customers are just a few of the possible undesirable outcomes of an unexpected disruption in power. Generally speaking, the life expectancy of a UPS is 15-20 years, and spreading the cost of the unit over its lifetime reduces the cost of ownership. Furthermore, balancing

its purchase cost against the potential costs of lost data can often easily justify its purchase.

Small Footprint / High Efficiency

The compact DiamondPlus 1100 is available in a variety of power ratings ranging from 10 – 50kVA. Its impressive efficiency exceeds 93% at a nominal operating range. Additionally, it has a fully-digital screen and front access, which allows for easy monitoring and faster repair times.

Flexible / Hot Swappable

As with every Mitsubishi Electric UPS system, the DiamondPlus 1100 series is designed with serviceability in mind. The DiamondPlus 1100's power and battery modules are "hot swappable" for maximum flexibility and rapid mean-time-to-repair (MTTR). The DiamondPlus 1100 series is fully supported by Mitsubishi Electric Power Products' 7x24x365 preventive and corrective services, training and application expertise.

Standard Features

- Fully-digital IGBT converter and inverter
- Hot swappable modules
- Pulse Width Modulation (PWM) controls
- On-line upgradable
- Front access UPS
- Small footprint and lightweight. Dimensions: 55.1" H x 19.7" W x 27.0" D
- UL 1778 listed

AC Input

- 208V/120V, 3P, 4W, 60 Hz
- +15%, -30% voltage range
- Reflected Current Harmonic Distortion (THD) 4% @ 100% load, 7% @ 50% load (Typical)
- Power factor: 0.98 at 50% and 100% load
- Surge withstand meets IEEE 587, ANS/IEEE C62.41, Category B

AC Output

- 208V/120V, 4W, 60 Hz
- Power factor: 0.9
- Voltage Regulation: +/-1% Balanced, +/-2% Unbalanced loads
- Frequency Regulation 60 Hz +/-0.01%
- Step Load (100%) +/- 3% variation, recovery less than one cycle
- Voltage THD: 2% Maximum @ 100% Linear Load; 5% @ Nonlinear Load
- Overload: 105-125% -60 sec; 126-150% -30 sec
- EMI Compatibility: FCC Article 47, Part 15 Subpart B, Class A

Operating Environment

- Audible Noise 58 dB @ 1 Meter
- Temperature: 0-40 degrees C
- Relative Humidity: 5-95% (Non-condensing)
- Altitude: 0-5,000 ft.

World-Class Service and Support

Mitsubishi Electric Power Products, Inc. is dedicated to the post sales support of our customers. To this end, Mitsubishi Electric offers a wide array of choices for service of the UPS Systems products. These choices range from on-site field services to factory performance testing services to 7x24x365 product technical support. Working in partnership with Mitsubishi Electric for the service needs of your product will ensure that you receive the best value for your service dollar. In addition, you can be assured that you are working with a premier organization which has the resources to provide the solutions necessary to maximize your system reliability.

Mitsubishi Electric is dedicated to providing the most efficient and reliable UPS's available today. Contact us to discuss your specific requirements at 724.772.2555, or visit our website at www.meppi.com.





MITSUBISHI ELECTRIC POWER PRODUCTS, INC.

Uninterruptible Power Supplies Division

Thorn Hill Industrial Park

547 Keystone Drive

Warrendale, PA 15086

Phone: (724) 772-2555

Facsimile: (724) 772-2146

9900A

9900A UPS

UNINTERRUPTIBLE
POWER SUPPLIES

80KVA - 225KVA

Efficiency & FLEXIBILITY

EXCEPTIONAL EFFICIENCY

The 9900A Series UPS delivers as much as 96.3% system efficiency, which reduces operating and cooling costs significantly, when compared to its competitors. The 9900A Series UPS has efficiency ratings as high as 94% with loads as low as 20%. The result: reduced cost of ownership and improved power usage effectiveness (PUE) compared to conventional UPS.

COMPACT LIGHTWEIGHT DESIGN

The small footprint and lightweight design of the 9900A Series saves on precious datacenter floor space. This system not only saves on floor space, it offers the flexibility of adding or removing modules with minimal cost. As a result, system options are enhanced.

100kVA
Model

The 9900A UPS system uses the most advanced Insulated Gate Bipolar Transistors (IGBT) in its fully digital IGBT converter and inverter. This unique combination simply means our 9900A UPS offers superior reliability, performance, and is the most efficient true on-line double conversion UPS in the industry at all load levels.



9900 UPSeries 

9900A

The 9900A UPS system uses the most advanced Insulated Gate Bipolar Transistors (IGBT) in both the converter and inverter. This unique combination simply means our 9900A UPS offers superior reliability and the most efficient system in the industry.



SERIES >9900A UPS

Mitsubishi Electric raises the bar with the introduction of the 9900A Series Uninterruptible Power Supply (UPS). Its inverter design produces the highest efficiency in the industry to go along with the quality and reliability that users are accustomed to when specifying Mitsubishi. Let's explore the benefits that you can expect.

EXCEPTIONAL EFFICIENCY

The 9900A Series UPS, with a very flat efficiency curve, delivers efficiency rates as high as 96.2% at 100% load, 96.3% at 50 – 75% loads, and 95.6% at 25% load. Even at 10%, load efficiency ratings greater than 90% are seen. This system efficiency substantially reduces operating and cooling costs. The result, reduced cost of ownership and improved power usage effectiveness (PUE) compared to conventional UPS.

RELIABILITY AND ADAPTABILITY

No organization in the UPS industry offers the in-depth experience and unparalleled quality as Mitsubishi Electric. Precision engineering and years of experience pioneering cutting edge inverter and converter design gives the users the best performing, most reliable UPS in market.

Because each module features its own static bypass and control circuitry, the 9900A UPS can be utilized in single module (SMS) or multi-module (MMS) configurations. This allows for a highly reliable and flexible system approach. If loads on a MMS decrease, a module or modules can be removed and used elsewhere in a single module application. Likewise, an existing SMS can be paralleled for capacity or redundancy at a later date.

SCALABILITY

The small footprint and lightweight design of the 9900A Series takes up less room and saves on precious datacenter floor space. This system not only saves on floor space, it offers the extraordinary option of adding or removing modules with minimal cost. As a result, system availability is enhanced.

OPEN ARCHITECTURE

The 9900A Series UPS provides for a variety of communication methods with features that make the product inherently easy to use and maintain.

SUPERIOR PERFORMANCE

Mitsubishi pioneered the use of the IGBT in the inverter and converter sections of the UPS. Many UPS systems on the market today have followed suit. It is not enough to merely provide IGBT technology. How the IGBT is controlled is the key.

Mitsubishi has incorporated its Digital Signal Processor and Direct Digital Control (DDC) to gain the full benefits of the most advanced generation IGBT that is utilized in the 9900A Series UPS. The combination means superior performance characteristics under all load conditions.

KVA	INPUT	OUTPUT	OUTPUT PF	DIMENSIONS (WXDXH)	LBS	PARALLEL CAPABILITIES	DC
80	480 VAC	480 VAC	0.9	27.6" X 32.8" X 80.6"	855	UP TO 4 MODULES	480 VDC
100	480 VAC	480 VAC	0.9	27.6" X 32.8" X 80.6"	855	UP TO 4 MODULES	480 VDC
150	480 VAC	480 VAC	0.9	35.4" X 32.8" X 80.6"	1,160	UP TO 4 MODULES	480 VDC
225	480 VAC	480 VAC	0.9	35.4" X 32.8" X 80.6"	1,230	UP TO 4 MODULES	480 VDC

RELIABILITY

3-year-warranty*

*3-year warranty standard. New low cost no worry 5-year warranty available. Please contact MEPP1 at 724-778-3134 for details.

EFFICIENT

up to **96.3%** system efficiency



Mitsubishi Electric Customized IGBT Module

Mitsubishi Electric is the leading manufacturer of Insulated Gate Bipolar Transistors (IGBT). Customized IGBT modules are utilized in the 9900A Series UPS Systems. These advanced, high-performance transistors provide a variety of intelligent features:

- > Large Power Capabilities
- > High Speed Switching
- > Low Control Power Consumption
- > Low Switching Loss

IGBT has become the preferred power device for UPS systems, but it is how the IGBT power device is controlled that is key to achieving optimum UPS performance.



At Mitsubishi Electric Power Products, Inc., we understand that in today's high-speed, digital world, critical load downtime can cost your company millions of dollars. That is why we have developed the 9900A UPS – our most innovative and efficient UPS.

STANDARD FEATURES

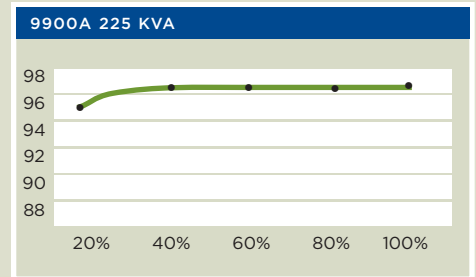
- > Fully Digital, IGBT Converter and Inverter
- > Advanced 3-Level Circuit Topology and Pulse Width Modulation (PWM)
- > Parallel up to Four (4) Modules
- > Front Access UPS
- > Small Footprint and Weight
- > UL 1778 Listed

AC INPUT

- > 480VAC 3P, 3W, 60 Hz
- > +15%, -20% Voltage Range
- > <3% THD @ 100% Load
- > Power Factor: .99
- > Surge Withstand: meets IEEE, 587. ANSI C62.41-1991

DC LINK VOLTAGE

- > 480VAC



TYPICAL TEST RESULTS

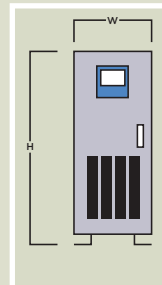
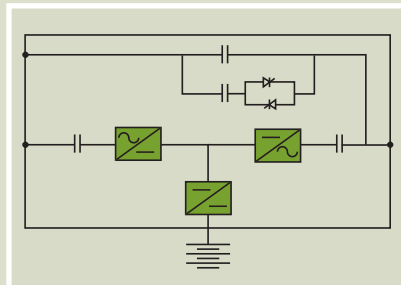
AC OUTPUT

- > 480 VAC 3P, 3W, 60 Hz
- > Power Factor: 0.9
- > Voltage Accuracy: $\pm 1\%$
- > Transient Recovery Time: 20 Milliseconds
- > Step Load (100%): $\pm 2\%$
- > Voltage THD: 2% Maximum @ 100% Linear Load
- > Overload: 125% for 2 Minutes, 150% for 1 Minute
- > EMI Compatibility: FCC Article 47, Part 15 Subpart B

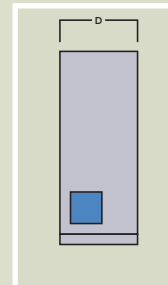
OPERATING ENVIRONMENT

- > Audible Noise: 70dB @ 1 Meter
- > Temperature: 0–40°C
- > Relative Humidity: 5–95% (Noncondensing)
- > Altitude: 0–7,400 ft.

9900A ONE LINE DIAGRAM



9900A UPS Module front view



9900A UPS Module side view

FLEXIBLE

system flexibility

9900A UPS MULTI-MODULE SYSTEM (MMS) LINE UP

The Mitsubishi 9900A Multi-Module System (MMS) incorporates individual parallel control and static bypass circuitry in each independent UPS Module. Our 9900A MMS therefore offers complete system redundancy, reliability and flexibility with cost saving scalability and a reduced footprint.

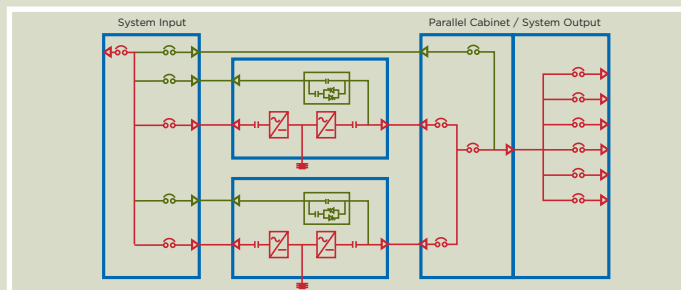
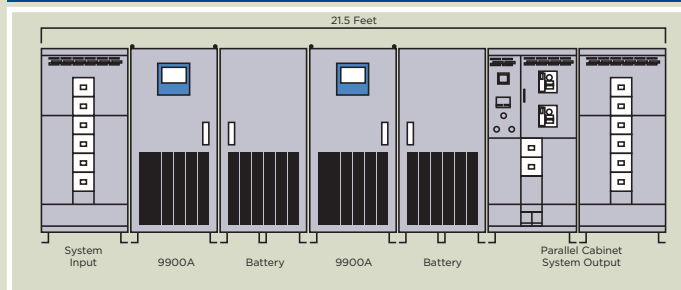
MITSUBISHI 9900A MMS FEATURES INCLUDE:

- > Up to 4 UPS Modules in Parallel
- > Cross Current Sensorless Control
- > System Operation and Monitoring from any UPS Module
- > UPS Module Adaptable for MMS or SMS Operation
- > Customizable Input and Output Distribution
- > System Load Bank Test Circuit (Optional)
- > Parallel for Redundant or Capacity System Configuration

SYSTEM INPUT



TYPICAL 2 X MMS CONFIGURATION



Note: Dimensions dependent on system design and configuration.

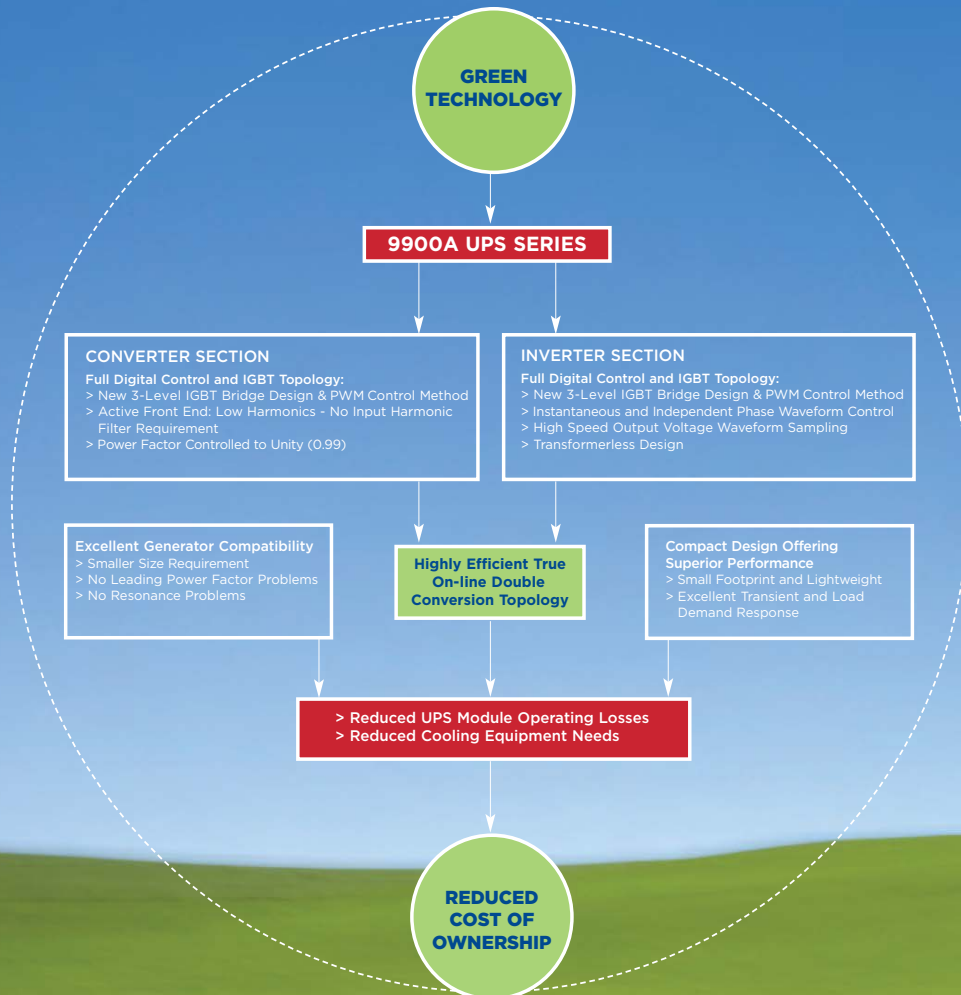
> HIGH EFFICIENCY without compromise

True, on-line, double conversion UPS systems have always been the preferred topology for mission critical applications because they offer lower risk of load loss. In the past, however, these systems offered lower efficiency when compared to off-line, delta conversion, economy mode and other standby type UPS systems. That was until now!

Mitsubishi's technology provides for a true on-line UPS system that offers high efficiencies no matter what the load. There is no longer a need to compromise system availability by using risky topologies to achieve high efficiency.

The Power of Green

The vision of Mitsubishi is to continuously produce value add products instilled with ingenuity and breakthrough technologies. This vision brings you the 9900A Series, our most efficient, smallest footprint and lightweight UPS product series.





The quality management system of Mitsubishi Electric Corporation Kobe Works has been approved to ISO9001:2000.

The quality management system is applicable to design, development and manufacturing of the UPS.

Mitsubishi Electric Power Products, Inc.
Uninterruptible Power Supplies (UPS) Division
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www.meppi.com

MK00012R-Rev#3 • February 2011



**MITSUBISHI
ELECTRIC**

UNINTERRUPTIBLE POWER SUPPLIES



Contract Holder
Contract GS-07F-9526G



Official Sponsor



9900B UPS

UNINTERRUPTIBLE POWER SUPPLIES

300 kVA / 300KW
500 kVA / 500KW
750 kVA / 750KW

The POWER of Green

EXCEPTIONAL EFFICIENCY

The NEW 9900B Series UPS will deliver as much as 97% system efficiency at unity power factor. This substantially reduces operating and cooling costs by several thousands of dollars annually when compared to its competitors. Efficiency ratings of 96.2% are possible with loads as low as 25%. The result: reduced cost of ownership and improved power usage effectiveness (PUE) compared to conventional UPS.

COMPACT LIGHTWEIGHT DESIGN AND FLEXIBILITY

The small footprint and lightweight design of the 9900B Series saves on precious floor space. This system not only saves on floor space, it offers the flexibility of adding or removing UPS modules with minimal cost. As a result, system options are enhanced.

*The 9900B UPS system uses the most advanced IGBT (CSTBT) modules within its fully digital, three-level converter and inverter. This unique combination means that the 9900B UPS offers superior reliability, performance, and is **the most efficient true on-line double conversion UPS in the industry at all load levels.***



750 kVA

9900B

The modular architecture and the most advanced fully digital three-level IGBT converter and inverter in the industry makes the 9900B UPS the best choice for your critical facility.



SERIES 9900B UPS

At Mitsubishi Electric Power Products, Inc., we understand that in today's high-speed, digital world, critical load downtime can cost your company millions of dollars. That is why we have developed the 9900B UPS – the most innovative and efficient true on-line, double conversion UPS.

EXCEPTIONAL EFFICIENCY

The 9900B Series 750 kVA UPS, with a very flat efficiency curve, delivers efficiency ratings of 96.3% at 100% load, 96.5 at 50 – 75% loads, and 95.7% at 25% load. Even at 10%, load efficiency ratings of 93% are seen. This system efficiency substantially reduces operating and cooling costs by several thousands of dollars annually. The result: reduced cost of ownership and improved power usage effectiveness (PUE) compared to conventional UPS.

RELIABILITY AND ADAPTABILITY

No organization in the UPS industry offers the in-depth experience and unparalleled quality of Mitsubishi Electric. Mitsubishi manufactures most of the components that make up its UPS, rather than sourcing the components elsewhere and merely assembling the product. In that way, Mitsubishi has better control over the quality of the product, hence its reliability when installed at your site. In fact, Mitsubishi is one of the largest manufacturers of IGBTs in the world!

The 9900B UPS can be utilized in Single-module (SMS) or Multi-module (MMS) configurations. This allows for a modular system architecture, offering a highly reliable and flexible approach. If loads on an MMS decrease, a module or modules can be removed and used elsewhere in a single module application.

Likewise, an existing SMS can be paralleled for capacity or redundancy at a later date.

SCALABILITY

The small footprint and lightweight design of the 9900B Series takes up less room and saves on precious datacenter floor space. With a modular system architecture, this not only saves on floor space, it offers the extraordinary option of adding or removing modules with minimal cost.

OPEN ARCHITECTURE

The 9900B Series UPS provides for a variety of communication methods with features that make the product inherently easy to use and maintain.

SUPERIOR PERFORMANCE

Mitsubishi pioneered the use of the IGBT in the inverter and converter sections of the UPS. Many UPS systems on the market today have followed suit. It is not enough to merely provide IGBT technology. How the IGBT is controlled is the key.

Mitsubishi has incorporated its Digital Signal Processor and Direct Digital Control (DDC) to gain the full benefits of the most advanced generation IGBT that is utilized in the 9900B Series UPS. The combination means superior performance characteristics under all load conditions.

kVA / KW	INPUT/ OUTPUT VAC	UNIT CONFIGURATIONS	OUTPUT PF	DIMENSIONS† (WXDXH)	LBS	PARALLEL CAPABILITIES	DC
300/300	480/480	Standard unit-(2 Pieces)*	1.0	55.1" X 32.7" X 80.7"	2360	UP TO 8 MODULES	480 VDC
500/500	480/480	Standard unit (3 Pieces)**	1.0	88.3" X 32.7" X 80.7"	3975	UP TO 8 MODULES	480 VDC
750/750	480/480	Standard unit (3 Pieces)**	1.0	106.9" X 32.7" X 80.7"	4775	UP TO 8 MODULES	480 VDC

* 300 kVA standard unit does not require a 16.3" cable entry cabinet.

** 500 & 750 kVA standard units require a 16.3" cable entry cabinet.

Contact MEPPi for maintenance panel and cable entry cabinet options.

† Dimensions and weights are estimated.

RELIABILITY

3-year warranty*

*3-year warranty standard. New low cost no worry 5-year warranty available.

Please contact MEPPi at 724-778-3134 for details.

EFFICIENT

up to 97% system efficiency



Mitsubishi Electric Carrier Stored Trench-Gate Bipolar Transistor (CSTBT) Module

Mitsubishi Electric is the leading manufacturer of Insulated Gate Bipolar Transistors (IGBT).

Carrier Stored Trench-Gate Bipolar Transistors – CSTBT (A 5th Generation IGBT Device) are utilized in the 9900B Series UPS Systems. These advanced, high-performance transistors provide a variety of intelligent features:

- > Large Power Capabilities
- > High Speed Switching
- > Low Control Power Consumption
- > Low Switching Loss

IGBT has become the preferred power device for UPS systems, but it is how the IGBT power device is controlled that is key to achieving optimum UPS performance.

STANDARD FEATURES

- > Fully Digital, 3 Level IGBT Converter and Inverter
- > Double Conversion Topology
- > Advanced Circuit Topology and Pulse Width Modulation (PWM)
- > Parallel up to Eight (8) Modules
- > Front Access UPS
- > Small Footprint and Weight
- > Top or Bottom Cable Entry
- > UL 1778 Listed
- > Load P.F. Leading and Lagging Display

DC LINK VOLTAGE

- > 480 V

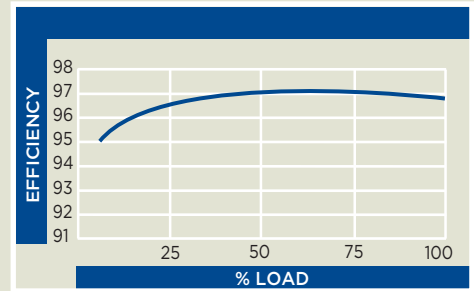
AC INPUT

- > 480VAC 3P, 3W+G, 60 Hz
- > +15%, -20% Voltage Range
- > <3% THD @ 100% Load
- > Power Factor: >0.99
- > Surge Withstand: Meets IEEE587, ANSI C62.41-1991

OPERATING ENVIRONMENT

- > Audible Noise: 73dB @ 1 Meter
- > Temperature: 0–40°C
- > Relative Humidity: 5–95% (Noncondensing)
- > Altitude: 0–7,400 ft.

The 9900B Series 750 kVA UPS, with its very flat efficiency curve, provides efficiency ratings of 95.7% at load levels as low as 25%.



TYPICAL TEST RESULTS

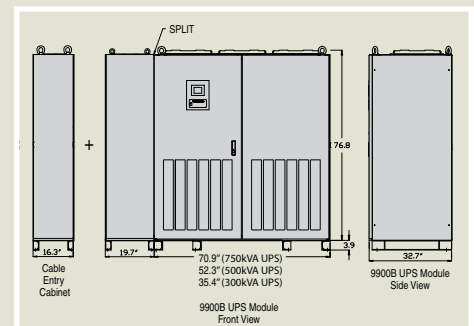
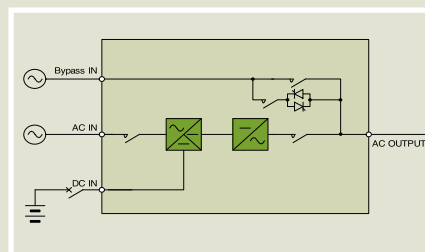
UPS Module Capacity (kVA)	AC to AC Load			
	100%	75%	50%	25%
300	96.9	97.0	96.8	95.7
500	97.0	97.2	97.1	96.1
750	96.8	97.0	97.1	96.2

EFFICIENCY RATING %

AC OUTPUT

- > 480 VAC 3P, 3W+G, 60 Hz
- > Power Factor: 1.0
- > Voltage Accuracy: $\pm 1\%$
- > Transient Recovery Time: 20 Milliseconds
- > Step Load (100%): $\pm 2\%$
- > Voltage THD: 2% Maximum @ 100% Linear Load
- > Overload: 125% for 10 Minutes, 150% for 1 Minute

9900B ONE LINE DIAGRAM



The 300 kVA standard unit does not require a 16.3" cable entry cabinet. The 500 & 750 kVA standard units require a 16.3" cable entry cabinet. The 36" MP can be purchased as substitution for the 16.3" cable entry cabinet. Contact MEPPI for maintenance panel and cable entry cabinet options. Dimensions and weights are estimated.

FLEXIBLE

system flexibility

9900B MODULE FLEXIBILITY

The 9900B UPS, with its modular system architecture, can be utilized in Single-module (SMS) or an Multi-module (MMS) configurations. If loads on an MMS decrease, a module or modules can be removed and used elsewhere in a single module application. Likewise, an existing SMS can be paralleled for capacity or redundancy at a later date.

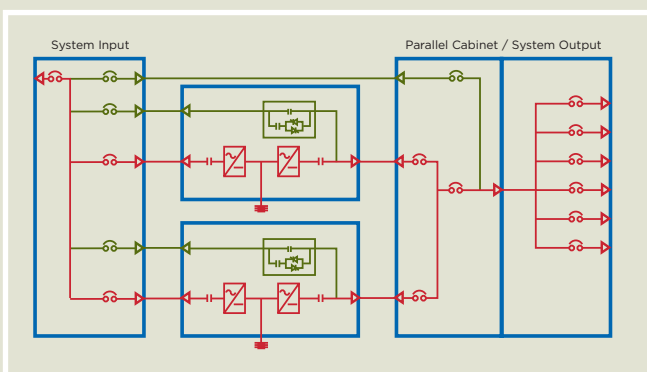
MMS FEATURES INCLUDE:

- > Up to 8 UPS Modules in Parallel
- > Cross Current Sensorless Control
- > System Operation and Monitoring from any UPS Module
- > Adaptable for MMS or SMS Operation
- > Customizable Input/Output Distribution
- > System Load Bank Test Circuit (Optional)
- > Parallel for Redundant or Capacity System Configuration

SYSTEM INPUTS



TYPICAL 2 X MMS CONFIGURATION



Note: Configurable up to 8 modules.

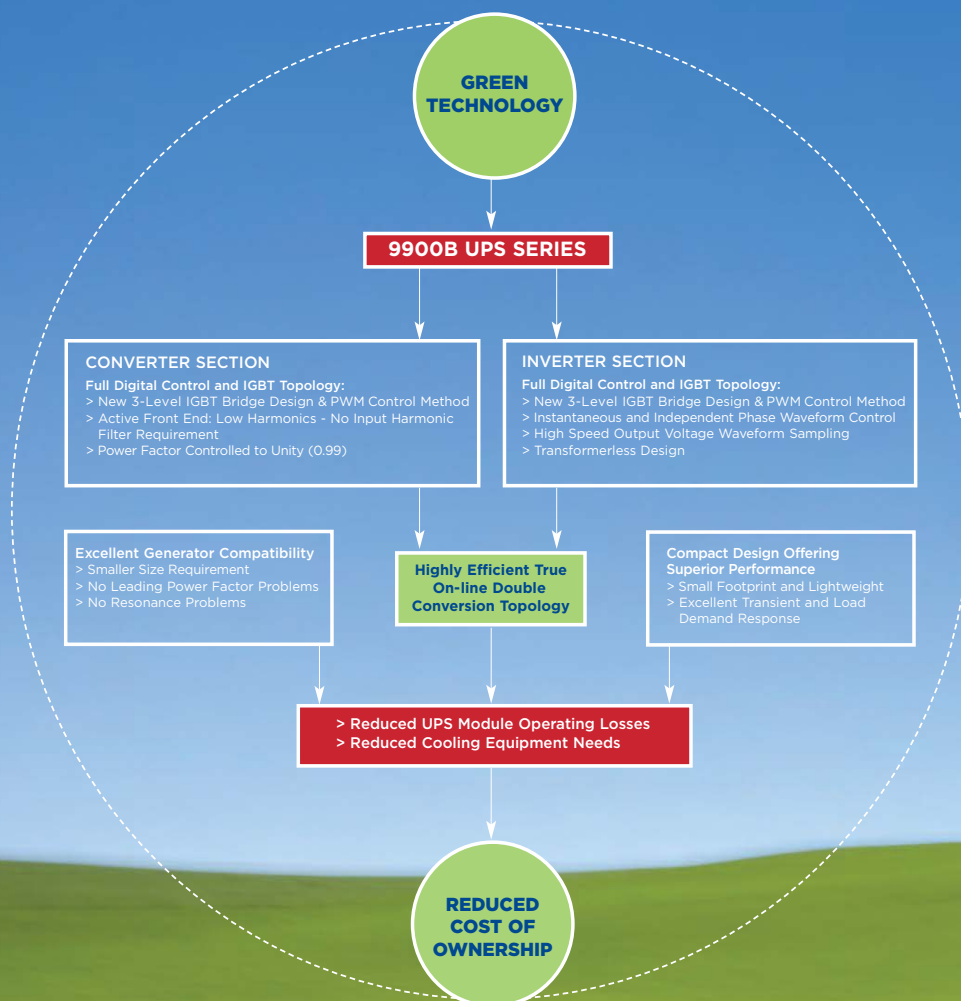
> HIGH EFFICIENCY without compromise

True, on-line, double conversion UPS systems have always been the preferred topology for mission critical applications because they offer lower risk of load loss. In the past, however, these systems offered lower efficiency when compared to off-line, delta conversion, economy mode and other standby type UPS systems. That was until now!

Mitsubishi's technology provides for a true on-line UPS system that offers high efficiencies no matter what the load. There is no longer a need to compromise system availability by using risky topologies to achieve high efficiency.

The Power of Green

The vision of Mitsubishi is to continuously produce value add products instilled with ingenuity and breakthrough technologies. This vision brings you the 9900B series, our most efficient, smallest footprint and lightweight UPS product series.



GSA

Contract Holder
Contract GS-07-0202



Official Sponsor



The quality management system of Mitsubishi Electric Corporation Kobe Works has been approved to ISO9001:2000.

The quality management system is applicable to design, development and manufacturing of the UPS.

Mitsubishi Electric Power Products, Inc.
Uninterruptible Power Supplies (UPS) Division
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