Advanced Power Systems

Midi-J/Maxi-J

UPS – FROM 10 TO 60 KVA

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GENERAL DESCRIPTION

Midi-J/Maxi-J represents a new benchmark in the Uninterruptible Power Supply world its unique and innovative design is aimed to provide full outstanding protection to all sensitive equipment and to all mission critical applications such as computer networks, Internet, Telecom, medical control equipment, others.

Midi-J/Maxi-J is able to operate as both an On-line double conversion and an Eco Mode/Line Interactive UPS. Selection can be made manually or automatically.

In automatic mode **Midi-J/Maxi-J** uses the most efficient and cost-effective way to protect the load, in accordance with the real-time conditions of the mains.

When the mains is stable, thanks to its intelligent microprocessor, **Midi-J/Maxi-J** operates in Eco mode with the result of high energy savings and efficiency jumping to 98%.

However, when the mains voltage and frequency fluctuate outside some preset parameters, **Midi-J/Maxi-J** switches instantaneously to On-line operation to provide total protection not only from mains failures, brownouts, sags, spikes but also from more subtle problems such as electrical noise and frequency instability.

Users can modify these standard factory parameters to configure **Midi-J/Maxi-J** in order to deliver the power quality level they require for their application. Users can also select permanent On-line operation.

Midi-J/Maxi-J is also "friendly" to the mains because, thanks to its PFC (Power Factor Correction System), it absorbes mains current with almost 1 power factor and very low distortion.

OPERATOR PANEL

The Operator Panel (built-in or remote) includes a LCD display (2 rows of 40 characters), LED mimic diagram display and eight functions keys which provide clear and timely information on UPS operating status. Through specific command keys the user can:

- ➤ modify the value of some factory preset parameters such as: nominal output voltage, accepted voltage/frequency range on bypass line during the On-line operation and/or Eco Mode operation, battery capacity;
- ➤ forces **Midi-J/Maxi-J** to operate as frequency converter 50 Hz»60Hz or viceversa. In this case the static bypass is automatically disabled by the microprocessor.

Midi-J/Maxi-J Operator Panel

The **Midi-J/Maxi-J** diagnostics system includes a set of 128 system codes each corresponding to a specific condition, allowing a precise and detailed identification of any event.

FEATURES

- ➤ Multistandard capability: On-line double conversion or Eco Mode
- ➤ Full microprocessor control
- ➤ IGBT technology
- ➤ High efficiency
- ➤ PFC circuity: high Input Power Factor and low input current distortion
- ➤ Back feed protection
- ➤ Automatic static by-pass and manual maintenance by-pass
- ➤ Redundant and power parallel configurations (up to six units)
- ➤ Multilingual LCD front panel display
- ➤ Advanced autodiagnostics
- ➤ Wide input voltage tolerance
- ➤ Auto-learning frequency
- ➤ Adjustable output voltage
- ➤ Remote Operator Panel
- ➤ Expandable autonomy
- ➤ Remote and tele-control
- ➤ High communication capability: 2 RS 232 ports, 3 free voltage contacts, SNMP slots
- ➤ Advanced Battery Management
- ➤ 3-phase or 1-phase input choice at installation time

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TECHNICAL CHARACTERISTICS

INPUT	MIDI-J10	MIDI-J15	MIDI-J20	MAXI-J10	MAXI-J15	MAXI-J20	MAXI-J30	MAXI-J40	MAXI-J60
Nominal Voltage	3-phase+N 400V or 1-phase 230V			3-phase+N 400V					
Accepted Voltage range without passing to battery	Nominal voltage ±20%								
Frequency	45 – 65 Hz								
Power factor	1-phase input: 0.99 3-phase input: 0.96 3-phase input with active filter: 0.99								

AUSGANG	MIDI-J10	MIDI-J15	MIDI-J20	MAXI-J10	MAXI-J15	MAXI-J20	MAXI-J30	MAXI-J40	MAXI-J60
Power KVA/KW (3-phase input)	10/8	15/12	20/16	10/8	15/12	20/16	30/24	40/32	60/48
Power KVA/KW (1-phase input)	10/8	15/10,5	20/12						
Nominal Voltage	1-phase 230V			3-phase+N 400V					
Voltage regulation via operator panel	200 – 246V			346 – 422					
Voltage stability	Static ±1%, dynamic ±5% in 10 msec								
Voltage waveform and distortion	Sinusoidal, distortion: 2% with linear load; 5% with non-linear load								
Frequency	50 / 60 Hz selectable								
Frequency stability	±0.05% on battery; ±2% with mains synchronism selectable from ±1% to ±5%								
Crest factor	3:1								
Overload	110% for 300 min.; 125% for 10 min.; 150% for 1 min.								

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FEATURES

- ➤ Frequency converter capability as standard activated through operator panel
- ➤ "Watch & Save" monitoring and shutdown software as standard
- ➤ Compact, silent, ergonomic, reliable
- ➤ Wheels for easy installation and maintenance

OPTIONS

- ➤ **Wide selection of autonomy times and battery types:** Midi-J/ Maxi-J with its internal battery is able to provide the standard autonomy of about 10 minutes (depending from models). It is possible to extend the autonomy by means of additional Battery Cabinets having same or different look of the UPS (depending from the battery capacity). Batteries can be with 5-year or 10-year service lives.
- ➤ **Isolation Transformer:** Full galvanic isolation is achieved by using an external isolation transformer in its own cabinet.
- ➤ **Input active harmonic filter:** Midi-J/Maxi-J, if necessary, can be equipped with internal active filters which can be sized to reduce the input current distortion according to needs (no additional cabinet is needed).
- ➤ **Voltage adapting autotransformers:** In alternative to the harmonic filters it is possible to install into the Midi-J/Maxi-J the needed autotransformers to adjust the input voltage (from mains) or output voltage from UPS, if necessary.
- ➤ **Remote Operator Panel & LED Remote Panel:** First one allows to have access from remote to all functions and features available on the built-in Operator Panel. LED Remote Panel is suitable to monitor the status of most important UPS parameters through LEDs.
- ➤ **SNMP adapters:** Midi-J/Maxi-J is provided with a specific internal slot to install the SNMP adapter card. NETMAN SNMP adapter in its own box is also available.
- ➤ **TELEGUARD** software offers the possibility of monitoring and maintaining many UPSs from a remote Computer throug modem.

COMMUNICATION

Watch & Save software, supplied as standard (Windows environment) with Midi-J/Maxi-J, provides efficient and complete UPS management and orderly computer shutdown.

UPS status monitoring: Watch & save provides visual bar chart for most critical UPS parameters such as mains frequency/voltage, output frequency/voltage, load percentage, autonomy available, battery type and capacity.

Sequential and high-priority shutdown: Unattended and orderly shutdown of all the associated PCs. The current operations of typical Windows based applications can be saved.

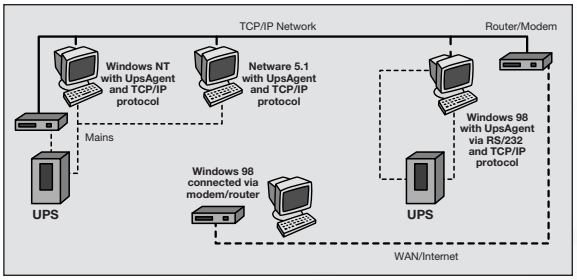
Multi-platform compatibility: Using the TCP/IP protocol, Watch & Save can monitor and control compatible UPS across different operating systems; for example it can monitor a UPS, which is supplying power to a UNIX server, from a Windows based PC across a network. It can also monitor a UPS located within different geographic areas via Internet or via dedicated Intranet.

Event schedule: Watch & Save can be configured to power off or power on the UPS at pre-set times.

Message management: Watch & Save can provide status information on both local and remote UPS. Information can be sent via e-Mail, fax or an SMS messaging service to a pre-defined adress list.

Integrated SNMP agent: The SNMP agent uses the RFC 1628 MIB to trap relevant UPS status information and is compatible with HP Open View, Novell Managewise and IBM NetView.

Supported operating systems: Windows 95,98 NT 4.0 and 2000. Novell Netware 3.x, 4.x, 5.x, IBM OS/2 Warp and Server, Mac OS 8.6 and 9.0. Typical UNIX operating systems: SCO Unix and OpenServer, HPUX, AIX, Solaris and SunOs, Linux, BSD, Digital Unix and Compaq True 64, Irix and Sinix.



BYPASS LINE	MIDI-J10	MIDI-J15	MIDI-J20	MAXI-J10	MAXI-J15	MAXI-J20	MAXI-J30	MAXI-J40	MAXI-J60
Voltage	1-phase 230V ±15% selectable from ±5% to ±25%			3-phase +N 400V ±15% selectable from ±5% to ±25%					
Frequency	50 / 60 Hz ±2% selectable from ±1% to ±5								

SYSTEM	MIDI-J10	MIDI-J15	MIDI-J20	MAXI-J10	MAXI-J15	MAXI-J20	MAXI-J30	MAXI-J40	MAXI-J60
Efficiency: On-line/Eco Mode	93% On-line / 98% Eco mode								
Operating altitude without derating	1000mt a.s.lm								
Noise in db (A) at 1 meter	54 to 60 depending on load and temperature								
Batteries: No./Volt	32/12	48/12	48/12	32/12	48/12	48/12	48/12	48/12	48/12
Operating temperature	0° – 40°C								
Humidity (non-condensing)	95%								
Standards	Safety EN 50091-1-1, EMC EN 50091-2 Lev. A								
Remote signalling	3 x free voltage contacts, 1 x auxiliary power supply 12 V dc 80 mA								
Computer interfaces	2 x RS232/C, 1 x SNMP adapter (option)								
Remote control commands	emergency power off (EPO), inverter power off								
Dimensions (mm) (W × D × H)	450 × 750 × 1200								
Weight without battery (kg)	112	122	123	114	122	124	140	160	180
Protection degree	IP 20								
Colour	RAL 7024 (dark grey)								

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Following the global trend of quality improvement, the prodution of the AdPoS UPS-Systems earned the Quality System Certificate from DNV (Det Norske Veritas) in its most complete form – the reference specifications are ISO 9001. They include design, production, sales and after-sale service. This certificate ensures a strict and constant control of all company procedures and is a guarantee of product quality and reliability.

DET NORSKE VERITAS

QUALITY SYSTEM CERTIFICATE

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SINCERT

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