

# Pulsar EX

700-3000 VA

Smart Protection for Critical Equipment



**MGE UPS SYSTEMS'** Pulsar EX models work around the clock to improve hardware reliability and to **maximize the availability of critical systems.**

True On Line Double Conversion technology assures **highest quality AC output.** Input AC is converted to DC and converted back to AC for high isolation from AC utility noise. All transfers to or from battery back up mode are completely undetectable and uninterrupted. An automatic failsafe and overload bypass is provided during extreme conditions if the UPS outputs fall outside regulation limits.

Form factor versatility, optional **direct network connection,** extended back-up time and environment monitoring modules provide flexibility now and into the future for maximum uptime of your most critical equipment.

## Advanced Features (most models):

- ▶ "True" On Line Double Conversion technology
- ▶ Free-standing or rack-mounted models
- ▶ Lightest & smallest rack-mounted UPS available
- ▶ Direct Ethernet connection option
- ▶ TCP/IP-based power management software
- ▶ Smart battery management
- ▶ Sine wave output
- ▶ Input power factor correction
- ▶ Fault tolerant mode
- ▶ Up to 4 hours of battery runtime
- ▶ Optional maintenance bypass and output step-up transformer

**M G E**  
UPS SYSTEMS

# Increased Critical Device Uptime

## All the Technical Features You're Looking For

Features	Benefits
▶ Smart battery management	The built-in microprocessor optimizes the charging sequence to prolong battery life and reduce charging time to only 3 hours, 80% capacity
▶ Sine wave output	Total compatibility with sensitive power supplies
▶ Extended back-up time (EX 10 & above)	Up to 4 hours of battery runtime for Internet servers or Telecom applications by adding hot-swappable modules to the UPS

## On-Line Technology Delivers More Than Traditional Line-Interactive UPSs

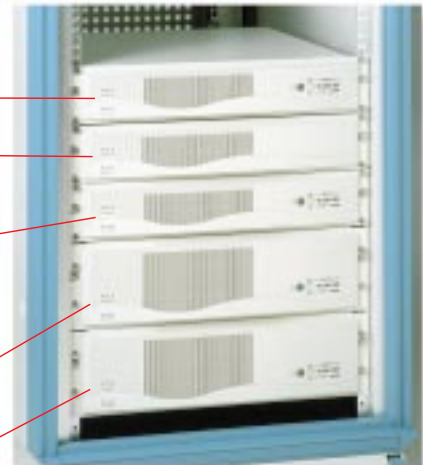
Features	Benefits
▶ Continuous voltage regulation	Longer life for your computer hardware. Continuous voltage regulation prevents output voltage disturbances typical of line-interactive UPSs
▶ Input power factor correction	Reduces harmonics. Increases UPS output power
▶ Wider input operating range	In extreme brownout conditions (down to 70 volts at 1/3 load), the UPS continues to operate without switching to batteries
▶ Light weight	Heavy 60 Hz magnetics eliminated
▶ Low profile rack-mounted unit	Saves valuable space in rack enclosure

## For Any Network Application

Whatever your need is, there is an EX waiting for you, in two convenient form factors, Tower or Rack-mount.



- Pulsar EX 7** (700 VA)  
For high-end workstations or PABXs
- Pulsar EX 10** (1000 VA)  
For workgroup servers
- Pulsar EXB** — **2U**  
Battery extension for EX models (1000-3000 VA)
- Pulsar EX 15** (1500 VA)  
For departmental servers
- Pulsar EX 20** (2000 VA)  
For up to 4 servers
- Pulsar EX 30** (3000 VA)  
For up to 6 servers



## Convenient Installation



Integrated handles make it easy to slide UPS out of any enclosure

Up to two outlet types to fit all needs



Expansion slot for optional communication cards. Choose between:  
▶ Ethernet/SNMP  
▶ Contact closure card

Facility wiring fault indicator



Guides for mounting rails



Includes universal rail system to install the UPS in any enclosure

Input circuit breaker

Battery connector for optional extended runtimes (up to 4 hours)

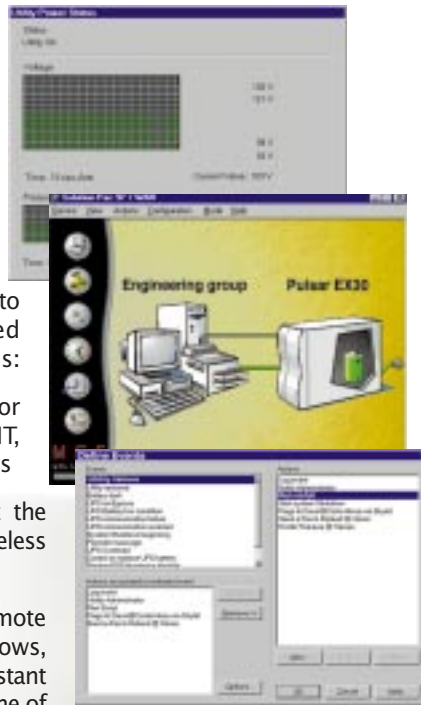
Smart communication port to interface with Solution-Pac power management software

# Perfect Network Integration

## Solution-Pac Power Management Software

All EX models are supplied with MGE's **Solution-Pac software**. This is the most comprehensive tool available for power management, UPS remote control, automation of everyday tasks (e.g. server startup & shutdown) and for setup of proactive measures during emergencies (orderly system shutdown, paging, etc.). Solution-Pac/WAN uses a TCP/IP-based, distributed architecture to take advantage of unmatched network communication capabilities:

- ▶ Cross-platform compatibility for a combination of Windows NT, NetWare, Unix, OS/2 and VAX systems
- ▶ Multiple server shutdown, without the use of bulky, expensive and featureless external splitter boxes
- ▶ Built-in SNMP capabilities for remote management from Solution-Pac Windows, Unix-based consoles or from a distant network management system using one of the snap-in applications for CA Unicenter TNG, HP OpenView, IBM NetView or SunNetManager included in the Management-Pac CD-ROM (optional)



## Direct Network Connection

In addition to the convenient proxy agents provided with Solution-Pac, the optional Ethernet/SNMP card provides direct network connection. The UPS will have its own IP address and ability to remotely control the server it protects. The optional status card is used for telecom applications where only basic information such as "UPS on battery" or "low battery" is required. It is also used to interface Pulsar EX with an IBM AS/400.

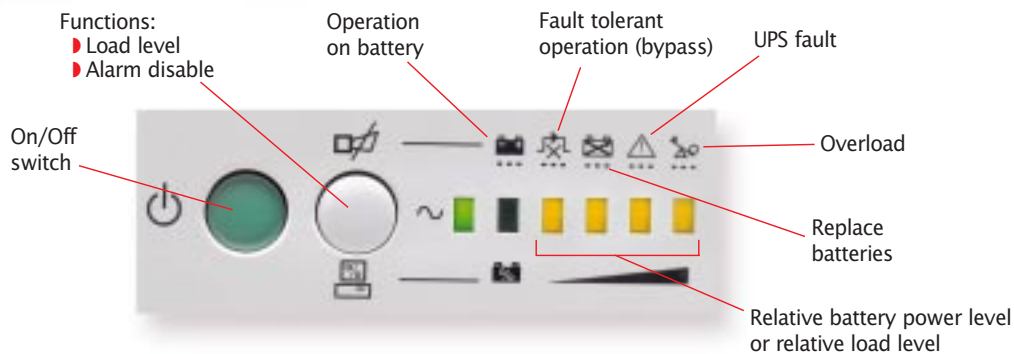


## Environment Monitoring

The optional UM Sensor monitors the temperature and humidity of the network room where UPS is installed. Eight external alarms including access control or smoke detection can also be managed. UM Sensor interfaces with Solution-Pac power management software.



## Comprehensive Display and Controls



# Pulsar EX Specifications

## Dimensions and Weights



EX7 shown



EX10 Rack shown

Model No.	Part No.	Dimensions WxHxD (in.)	Weight (lbs.)	Part No.	Dimensions WxHxD (in.)	Weight (lbs.)
<b>EX 7</b> (700VA/490W)	89007	5.7x8.7x15.8	27			
<b>EX 10</b> (1000VA/700W)	89010	5.7x8.7x15.8	31	89010R	2U-19x3.5x16.3	38
<b>EX 15</b> (1500VA/1050W)	89015	5.7x8.7x15.8	43	89015R	2U-19x3.5x19.5	51
<b>EX 20</b> (2000VA/1400W)	89021	7.6x13x17	77	89021R	3U-19x5.3x21.8	88
<b>EX 30</b> (3000VA/2100W)	89030	7.6x13x17	77	89030R	3U-19x5.3x21.8	92
<b>EXB 10</b> battery extension	89011	5.7x8.7x15.8	42	89011R	2U-19x3.5x16.25	49
<b>EXB 15</b> battery extension	89016	5.7x8.7x15.8	56			
<b>EXB 20/30</b> battery extension	89031	7.6x13x17	110			
<b>Rack Kit EXB 10/15</b>	8806U	6U-19x10.5x19	20			
<b>Rack Kit EXB 20/30</b>	8807U	5U-19x8.8x19	20			
<b>EX 20</b> maintenance bypass	89020MBP	7.6x13x17	15			
<b>EX 30</b> maintenance bypass	89030MBP	7.6x13x17	15			
<b>EX 30</b> 208 or 240 VAC step-up transformer	89032	7.6x13x17	65			

## Sizing Guide and Battery Runtimes

	Sm. Business Server	Work-group Server	Departmental Server	2 Each PC Servers	Enterprise PC Server	RISC Server	5 Each PC Servers	6 Each PC Servers
<b>Power (VA)</b>	<b>300</b>	<b>700</b>	<b>1000</b>	<b>1250</b>	<b>1500</b>	<b>2000</b>	<b>2500</b>	<b>3000</b>
<b>EX 7</b>	23	8						
<b>EX 10</b>	50	16	9					
<b>EX 15</b>	60	18	10	8	5			
<b>EX 20</b>	130	45	23	19	17	10		
<b>EX 30</b>	130	45	23	19	17	10	8	5

Eg. 2 PC servers are protected for 8 minutes with an EX15, or 19 minutes with an EX20/30.

## Characteristics

	EX7	EX10	EX15	EX20	EX30
<b>Electrical</b>					
Input voltage range			70-138 VAC		
Output power (VA/W)	700/490	1000/700	1500/1050	2000/1400	3000/2100
Output voltage			120 VAC ±3%		
Technology	True on-line double conversion				
Input frequency range	47-53 Hz or 57-63 Hz, auto-select				
Input power factor	>0.95				
Input plug	NEMA 5-15 w/6' cord	NEMA 5-15 w/6' cord	NEMA 5-15 w/6' cord	NEMA L5-20 w/6' cord	NEMA L5-30 w/6' cord
Output receptacles	3, NEMA 5-15	3, NEMA 5-15	3, NEMA 5-15	NEMA L5-20, 3, NEMA 5-15	NEMA L5-30, 3, NEMA 5-15
Crest factor	3:1				
Cold start	Yes				
<b>Batteries</b>					
Back-up time (100% load)	8 min.	9 min.	5 min.	10 min.	5 min.
Back-up time with extension module(s):					
One/two, EXB modules, (100% load)	N/A	33/60 min.	30/55 min.	40/90 min.	30/60 min.
Recharge time (internal battery, 80%)	3 hours				
	Periodic automatic self-test (frequency adjustable using EX Driver), protection against deep discharges.				
	Safety: UL, CUL, FCC A. Surge: ANSI/IEEE C62.41 Cat. A. Design, production, logistics and service: ISO 9001.				
<b>Fault Tolerance</b>					
Automatic bypass	Standard				
<b>Communications</b>					
User interface	6 LEDs + bar graphs + audible alarms				
Diagnostics	Complete self-diagnostics on start-up, weekly self-test				
Communication	True RS232 port				
Software provided	EX Driver and Solution Pac				
Platforms supported	Novell, Windows NT, Windows 95/98, OS/2, SCO UNIX, HP/UX, IBM AIX, DEC UNIX, SUN Solaris, Linux, Mac/OS and others				
Network boards (optional)	SNMP/Ethernet, status information/AS/400				
<b>Environment</b>					
Noise level	<41 dBA				
Environmentally friendly	Energy-saving function (sleep mode). Recyclable components. Packaging and documents made of recycled paper. Recovery of used batteries.				
<b>Warranty (U.S. &amp; Canada)</b>					
Parts and labor	2 years, inc. batteries				
P3 equipment protection warranty	\$35,000				

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