



Minuteman Power Technologies by Para Systems, Inc. 1455 LeMay Drive Carrollton, TX 75007



## THE MINUTEMAN PROMISE

Peace of mind when power failure is not an option. We are backed by forty years of excellence and the industry's best warranty and support.

## About Us

For almost 40 years, Minuteman Power Technologies has partnered with businesses of all sizes to provide high quality, reliable power protection solutions. Minuteman strives to provide solutions for crucial systems that require constant power protection, as well as a full range of support products to facilitate the management of those systems.

Headquartered in Carrollton, Texas, Minuteman Power spans throughout two continents, engaging a variety of countries. Minuteman specializes in several specified markets: Government, Education, Point-of-Sale/ Hospitality, Small to Medium-sized Businesses, Gaming, and Security. Since its creation in 1982, the Minuteman brand has been synonymous with quality solutions; our products are designed to provide exceptional value, in terms of performance, reliability, and price. See for yourself why Minuteman is your partner in power protection.

## Our Mission:

Minuteman exists to provide power to people when they need it most.

#### Our Vision:

In a world where "power protection products" have become commoditized, the time has come for a leader to emerge. We want our clients to know Minuteman STANDS READY to protect & power mission-critical devices and is the clear choice for our excellent balance between value and reliability.

## Table of Contents

- 2 . . . . About Minuteman
- 3..... Benefits of Power Protection
- 4 . . . . UPS Types
- 5.... Sizing / Selection Guide
- 6 . . . . Endeavor 5-10kVA Rack / Tower UPS
- 7 . . . . Endeavor 6 and 10kVA Rack / Tower UPS
- 8 . . . . Endeavor LCD 1-3kVA Rack / Tower UPS
- 10 . . . Encompass 1-3kVA Rack / Tower UPS Options
- 12 . . . . PRO-RT 750-2000VA Rack / Tower UPS
- 14 . . . . EXR 750-3000VA UPS Series Rack / Tower UPS
- 16 . . . Entrust-LG 550-2000VA
  Tower UPS Series
- 17 . . . Enspire-G 450-900VA UPS Series
- 18 . . . . SentryHD Monitoring and Management Software
- 19 . . . . SNMP Network Communications Accessories
- 20 . . . . Remote Power Management (RPM)
- 22 . . . OEPD Power Distribution Units (PDUs)
- 23.... MMS Surge Protectors
- 24 . . . . Warranty Plans
- 25 . . . . Power Terminology Guide

# **Benefits of Power Protection**

No matter the size of your organization, the costs associated with the repair or replacement of equipment, or recovery of corrupted data files, can be substantial. In many cases, power protection devices pay for themselves the first time a power problem occurs.

## Single-Phase Uninterruptible Power Supplies

The full line of Minuteman uninterruptible power supply solutions provides maximum protection to shield your equipment from catastrophic damage while also providing battery backup during power outages.

- Complete protection from all power problems
- Provides backup power during outages and brownouts
- Three types: Standby, Line-Interactive, On-line

#### **Power Management and Distribution**

Power is nothing without control. Minuteman's power management and distribution products put a range of capabilities in technician and administrator hands to ensure efficient operations. Remote Power Managers (RPMs) offer the ability to control power to devices from anywhere an internet connection is available.

Power Distribution Units (PDUs) allow safe and organized means of delivering power to each device requiring it.

#### **Surge Suppressors**

If you are seeking basic power protection to prevent spikes and surges from causing catastrophic damage to circuit boards, power supplies, and other internal components, Minuteman has a diverse line of surge suppressors to meet your needs.

- Cost-effective protection for peripherals, printers, and other equipment which will not be required during a power event
- Safely and efficiently deliver power to multiple devices



# UPS Sizing and Selection



## **UPS** sizing made easy

Minuteman's SizeMyUPS.com was the industry's first user-friendly UPS selection guide. An extensive database of equipment, easy-to-navigate controls, and convenient specification sheets make it the go-to resource for both experts and newcomers in the power field.

#### **Equipment Databases**

Build your solutions using our extensive database of equipment load ratings

#### **Configuration Options**

Narrow your choices to your exact needs with the straightforward configuration interface

#### **Comprehensive Solutions**

Browse a complete list of solutions that meet your needs with estimated runtime and MSRP

#### **Email and Print Spec Sheets**

Send your solutions to interested parties with a single click



## Considerations to help determine your UPS needs

- What type of equipment is being backed up?
- 2 What are the power requirements?
- 3 Where is the unit being installed?
- 4 How much backup time is required?
- What are the input and output wiring configurations?
- 6 Monitoring & Management of UPS
- 7 Is there a back-up generator?



#### Take the Guesswork out of UPS Selection

With our simple-to-use sizing tool at your fingertips, Minuteman has made it easier than ever to find the right UPS for your specific system, eliminating excess cost and any confusion.

SizeMyUPS.com

## **Endeavor LCD 5-10kVA Series**

5-10kVA True On-line Double-Conversion Rack / Tower

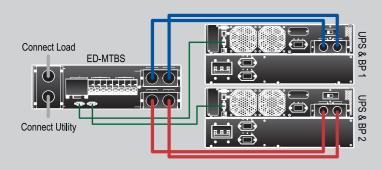
The Minuteman® Endeavor™ 5-10kVA Series UPS combines transient-free, pure sine wave output, extended runtime, generator compatibility, and redundant or parallel configurations for critical applications. A front panel LCD display provides visual notification of the UPS status, including AC input status, battery status, and UPS fault indication.

## Parallel / N+1 Redundancy

Expand for added capacity or reliability

In addition to stand-alone configurations, two Endeavor 5-10kVA rackmount UPS systems can be installed in parallel, automatically providing one of two added benefits depending on attached electrical load:

- 1. Less than 50% Load: N+1 Redundancy
- 2. More than 50% Load: Parallel for Capacity (up to 20kVA)



# Transformer Module UPS

Installation Example

**KEY PRODUCT LINE FEATURES** 

Double Conversion

Generator-friendly

**SNMP Option Slot** 

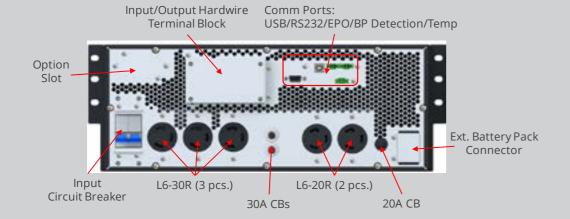
True Sine Wave Output

Extended Runtime Capable

3-yr Non-Prorated Warranty

120 / 208 / 240V Applications

Emergency Power-Off Port (EPO)



## Endeavor LCD 5-10kVA UPS Standard features include:

- Digital Signal Processor Design
- Higher Power Factor (0.9pf)
- 120VAC / 208VAC w/ Standard

Receptacles

- 240V Input / Output Optional\*
- Parallel 2 Units Up to 20kVA Capacity
- User-Friendly LCD Display
- 5 and 6kVA Include 10Ft. L6-30P Power Cord
- Automatic Internal Bypass
- Independent Battery Bypass
- Smart Fan Control
- Cold Start Function
- Simultaneous Communication Options
- SNMP Compatible
- RoHS 2 compliant

\*Additional charge for 240V configuration

## **Specifications**

Add "NC" to model numbers for pre-installed SNMP-NV6 card

UPS Model         ED5KRT         ED6KRT         ED8KRT         ED10KRT           VA/Watts         5,000VA / 4500W         6,000VA / 6000W         8,000VA / 7200W         10,000VA / 9000W           Voltage Range         156-280VAC         180-280VAC           Runtime (half/full)         3 Minutes / 11						
VA/Watts         4500W         6,000VA / 6000W         8,000VA / 7200W         10,000VA / 9000W           Voltage Range         156-280VAC         180-280VAC           Runtime (half/full)         3 Minutes / 11	UPS Model	ED5KRT	ED6KRT	ED8KRT	ED10KRT	
Runtime (half/full)         3 Minutes / 11 Minutes         2 Minutes / 7 Minutes         3 Minutes / 11 Minutes         2 Minutes / 7 Minutes           Input Plug Type         Hardwire w/optional NEMA L6-30P (6-ft.)         Hardwire only           Receptacles         "(3) L6-30R / (2)	VA/Watts	,	6,000VA / 6000W	8,000VA / 7200W	10,000VA / 9000W	
Minutes         Minutes         Minutes         Minutes           Input Plug Type         Hardwire w/optional NEMA L6-30P (6-ft.)         Hardwire only           Receptacles         "(3) L6-30R / (2) L6-20R / L6-20R	Voltage Range	156-	280VAC	180-2	80VAC	
Receptacles       "(3) L6-30R / (2)	Runtime (half/full)					
L6-20R / (1) 3-wire Termi- nal Block" (1) 3-wire Terminal nal Block" (1) 3-wire Terminal Block" (1) 3-	Input Plug Type	Hardwire w/optiona	al NEMA L6-30P (6-ft.)	Hardwire only		
Ports         USB/RS232 (Simultaneous access)           Dimensions         23.27" x 17.24" x 6.81"         28.74" x 17.24" x 8.54"           L x W x H (in / mm)         (591*438*173 mm)         (730*438*217 mm)	Receptacles	L6-20R / (1) 3-wire Termi-	L6-20R / (1) 3-wire Terminal	L6-20R / (1) 3-wire Terminal	L6-20R / (1) 3-wire Terminal	
L x W x H (in / mm) (591*438*173 mm) (730*438*217 mm)	_	USB/RS232 (Simultaneous access)				
M ' 1 ( // / / ) 400 00 II (FF F I / ) 470 04 II (77 F I / )						
Weight (lbs / kg) 122.32 lbs. (55.5 Kgs.) 170.81 lbs. (77.5 Kgs.)	Weight (lbs / kg)	122.32 lb	s. (55.5 Kgs.)	170.81 lbs. (77.5 Kgs.)		
Certifications cUL (UL1778), CE, FCC Class B, Energy Star 2.0, RoHS2	Certifications	cU	L (UL1778), CE, FCC CI	ass B, Energy Star 2.0,	RoHS2	



## **Endeavor 6 and 10kVA Tower UPS**

Extended Runtime Capable Tower

Endeavor™ 6/10kVA Tower Series UPS combines transient free pure sine wave output and extended runtime capability for critical applications. A front-panel LCD display provides visual notification of the UPS status, including AC input status, battery status, and UPS fault indication.



## **Specifications**

Model No.	ED6KTF	ED10KTF		
VA/Watts	6000/6000	10000/10000		
Output Voltage (VAC)				
Runtime (half/full)	4 / 12	3/9		
Input & Output Type	Hardwire Termi	nal Block (L-N-G)		
SNMP Manageable	NetAgent-SNMP-ED			
Dimensions L x W x H (in / mm)	22.1" x 9.8" x 32.5"	(561.1 x 250 x 826.5)		
Weight (lbs / kg)	237.0 (107.5)	274.5 (124.5)		
Extended Runtime	BP24	0TWR		



## Endeavor LCD 1-3kVA UPS

Standard features include:

- Compact case design (only 2U for all models), for high-density rack installations
- Flexible installation format: Rack/Tower or Wall (with an optional install kit)
- Easy-to-read LCD display
- 0.9 output power factor
- Highly-efficient, Economy Mode option
- Output receptacle control with three load banks
- Independent Battery Bypass
- Hot-swappable battery replacement
- Cold-start capable
- Temperature-compensated charging
- Compatible with Minuteman's SentryHD® software
- Dedicated EPO port
- RJ11/45 Network / Phone / Fax protection
- Green UPS design (RoHS2 and Energy Star compliant)
- SNMP Compatible
- \$200,000 Platinum Protection Plan® (US and Canada)



- 1 Unit status indicators
- 2 Load & battery meters
- 3 Power status, runtime
- 4 Scroll, mute, & power controls

## **Specifications**

Add "NC" to model numbers for pre-installed SNMP-NV6 card							
Model No. 120V (208V)	ED1000RTXL2U (ED1000RMT2U)	ED1500RTXL2U (ED1500RMT2U)	ED2000RTXL2U (ED2000RMT2U)	ED3000RTXL2U (ED3000RMT2U)			
VA/Watts	1000/900 (800)	1500/1350 (1200)	2000/1800 (1600)	3000/2700 (2100)			
Battery Module No.	BM0035	BM0036	BM0037	BM0032			
Runtime (min) Half/Full load	11/3	12/3	12 / 4	12 / 3.5			
UPS Receptacles Type x Qty (208V)	8 - 5· (4 - 6·		8 - 5-15/20R, 1 - L5-20R (4 - 6-15/20R, 1 - L6-20R)	7 - 5-15/20R, 1 - L5-30R (4 - 6-15/20R, 1-L6-30R)			
Input Plug	5-15P (6-15P)		5-20P (L6-20P)	L5-30P (L6-30P)			
Cord Length (ft)	10						
Communications Ports		RS-232,	USB, SNMP Option Slot				
Dimensions L x W x H (in / mm)	13.3 x 19 x 3.5 339 x 482.6 x 89		0 x 19 x 3.5 x 482.6 x 89	24.5 x 19 x 3.5 621 x 483 x 89			
Net Weight (lbs / kg)	29.3 / 13.3	45.9 / 20.8	47.6 / 21.6	70.5 / 32.0			
Approvals	cTUVus (Conforms to UL1778 5th Edition & CSA 22.2 no. 107.3-14 / R: 2014), FCC Class B (1K & 1.5K), FCC Class A (2K & 3K), CE certified, Energy Star certified, RoHS2 (EU Directive 2011/65/EU)						

Minuteman's Endeavor LCD Series is a premium-level, feature-rich product that provides complete protection for all power anomalies through on-line, doubleconversion UPS technology, and is backed by the industry's first standard 5-year warranty.

Delivering maximum protection for mission-critical loads, the Endeavor LCD Series allows the addition of external battery packs when longer runtimes are required, and all models are generator-friendly.



- 1 10 ft. Power Cord
- 2 Input Circuit Breaker
- 3 Cooling Fan
- 4 Load Bank 1
- 5 Load Bank 2
- 6 Load Bank 3 (always on)
- 7 Phone/Network Surge
- 8 Remote EPO Port
- 9 RS-232 Communications 10 USB Communications
- 11 External Battery Connection
- 12 SNMP Option Slot



## **Encompass 1-3kVA UPS**

Standard features include:

- Easy-to-read LCD display
- 0.9 output power factor
- Highly-efficient, economy mode option
- Output receptacle control
- Independent Battery Bypass
- Tool-less battery replacement
- Hot-swappable battery replacement
- Cold start capable
- Automatic internal bypass
- Simultaneous USB, RS232 and SNMP communications
- Compatible with Minuteman's SentryHD software
- Dedicated EPO port
- Site wiring fault indicator
- Full three-year warranty (including batteries)
- \$150,000 Platinum Protection Plan® (US and Canada)



- 1 ON / Alarm Silent 8 Save UPS settings Button
- 2 The Utility Power
- 3 The Load Bank 1 4 - The Load Bank 2
- 6 Weak/Bad Battery
- 7 Power Off
- Changes 9 Page Up / Change UPS
- settings.
- 4 The Load Bank 2 10 Page Down/Next Page 5 The Bypass Active 11 Function + Page Up
  - will initiate a
  - 10-second battery test

\*Now TAA Compliant.

## **Specifications**

Add "NC" to model numbers for pre-installed SNMP-NV6 card						
Model No.	EC1000RT2U EC1000LCD	EC1500RT2U EC1500LCD	EC2000RT2U EC2000LCD	EC3000RT2U EC3000LCD		
VA/Watts	1000/900	1500/1350	2000/1800	3000/2700		
Battery Module No.	BM0069 BM0076	BM0070 BM0077	BM0070 BM0077	BM0071 BM0078		
Runtime (min) Half/Full load	10/2	15/5	10/3	10/3		
UPS Receptacles	(6) 5-15R (6) 5-15R		(6) 5-15/20R (8) 5-15/20R	(6) 5-15/20R / (1) L5-30R (8) 5-15/20R / (1) L5-30R		
Input Plug	5-15P 5-20P L5-30P					
Cord Length (ft)	10-ft. Power Cord 6-ft. Power Cord					
Communications Ports		USB, RS23	2 (SNMP Option SI	ot)		
Approvals	cULus (UL1778		22.2 no. 107.3-14 /F (EU Directive 2015/	R: 2014) FCC Class A, CE 863/EU)		

Minuteman's Encompass Series delivers the comprehensive protection only offered by a true online UPS. By regenerating the incoming AC signal through double-conversion technology, an online UPS creates an impenetrable "electrical firewall," providing the most fail-safe power protection available.



## Specifications Cont.

Add "NC" to model numbers for pre-installed SNMP-NV6 card							
Model No.	EC1000RT2U	EC1500RT2U EC2000RT2U	EC3000RT2U				
Unit Size (L x W x H) (with rack ears installed)	16" x 18.9" x 3.5" 407 x 479 x 88mm	19.2" x 18.9" x 3.5" 487 x 479 x 88mm	23.7" x 18.9" x 3.5" 602 x 479 x 88mm				
Unit Weight	24.3 lbs. / 11 Kgs.	44.1 lbs. / 20 Kgs.	61.1 lbs. / 27.7 Kgs				
Model No.	EC1000LCD	EC1500LCD EC2000LCD	EC3000LCD				
Unit Size (L x W x H) (with rack ears installed)	15.9" x 6.1" x 10.2" 403 x 154 x 258mm	17.4" x 6.8" x 11.4" 440 x 171 x 288mm	22.4" x 7.6" x 12.6" 567 x 192 x 320mm				
Unit Weight	28.2 lbs. / 12.8 Kgs	48.1 lbs. / 21.8 Kgs.	73.0 lbs. / 33.1 Kgs				
Extended Battery Packs (For LCD models only)							
BP Part Number	BP24XL	BP48XL	BP72XL				



## PRO-RT2U UPS

Standard features include:

- Easy to Read LCD Display
- Flexibility in Installation Rack / tower configurable; wallmount kit optional
- Minuteman SentryHD Free download
- USB Communications
- SNMP Compatible
- Network / Fax / Phone/ Coax Protection
- Hot-Swappable Batteries
- Load Shedding
- All Metal Case
- Tool-less Battery Access
- Full three-year warranty (including batteries)
- \$150,000 Platinum Protection Plan® (US and Canada)



- 1 Unit Status Indicator
- 2 Load and Battery Meters
- 3 Numeric Display
- 4 Display Scroll Button
- 5 Alarm Silence Button 6 - On / Off / Test Button

**Specifications** 

Add "NC" to model num	Add "NC" to model numbers for pre-installed SNMP-NV6 card							
Model No.	PRO750RT2U	PRO1000RT2U	PRO1500RT2U	PRO2000RT2U				
VA/Watts	750/525 1000/700 1500/1050 2000/1400							
Battery Module No.	BM0072	BM0073	BM0074	BM0075				
Runtime at Half-Full-Rated Load	15 (5) Minutes		14 (4) Minutes					
Receptacles (Qty and Power)		(8) NEMA 5-15R		(6) NEMA 5-15/20R / (1) L5-20R				
Input Plug	NEMA 5-15P NEMA 5-20P							
Cord Length (ft)	10							
Status Display Type	LCD							
Communications Ports	USB, SNMP Option Slot							
Dimensions LxWxH (in / mm)	16.1 x 18.9 x 3.4 inches (409 x 480 x 86 mm) 20.1 x 18.9 x 3.4 inches (510 x 480 x 86 mm)							
Net Weight (lbs / kg)	31.3 / 14.2	35.7 / 16.2	48.7 / 22.1	62.8 / 28.5				
Operating Temperature	0° to +40°C / +32° to +104°F							
Warranty	3-year including batteries							
Approvals	,		on & CSA 22.2 no. 10 2 (EU Directive 2015	07.3-14 /R: 2014) FCC 5/863/EU)				

The PRO-RT2U Series is a value-priced, yet feature-rich UPS incorporating lineinteractive technology which preserves battery power by providing voltage regulation during voltage sags and surges. The PRO-RT2U Series is a great option for entry level network protection used to support servers, telecom or VoIP systems, security systems, plus many other applications.

The LCD display provides visual notification of power status, including input voltage, frequency, percent of battery charge, estimated runtime, plus many other conditions.



- 1 Input Circuit Breaker
- 2 Input Power Cord
- 3 Coax Surge Protection
- 4 Emergency Power Off
- 5 Fan
- 6 USB Port
- 7 RJ11/RJ45/Fax/Modem Network Protection
- 9 Always On Receptacles (2)
- (Only one L5-20R on PRO2000RT2U)
- 10 Option Card Slot
- 8 Controllable Output Receptacles (3) (Load Bank 1) 11 Controllable Output Receptacles (3) (Load Bank 2)

Minuteman Power Technologies



## EXR UPS

Standard features include:

- UPS configuration options via front panel
- Auto-recognition of external battery packs
- Unlimited runtime capability with external battery packs
- Flexible installation Rack / tower configurable; wallmount kit optional
- Simultaneous USB, RS232, and SNMP communications
- Minuteman® SentryHD™
- Dedicated remote Emergency Power Off (EPO) port
- 208V models available (1500 & 3000VA models)
- cULus certification NOM certification (Mexico)
- RoHS 2 compliant
- Energy Star 2.0 certification
- Full three-year warranty (including batteries)
- \$150,000 Platinum Protection Plan® (US and Canada)



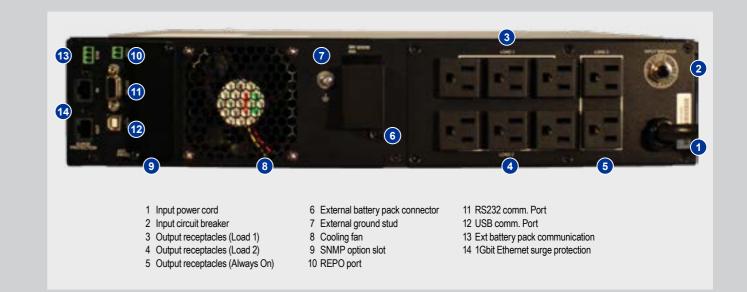
- 1 UPS Status Icon
- 2 Alphanumeric Dot-Matrix LCD Display
- 3 Menu Control Buttons
- 4 Display Scroll Button
- 5 On / Off / Test Button

## **Specifications**

Add "NC" to model numbers for pre-installed SNMP-NV6 card								
Model No.	EXR750RT2U	EXR1000RT2U	EXR1500RT2U (EXR1500RTHV)	EXR2000RT2U	EXR3000RT2U (EXR3000RTHV)			
VA/Watts	750/675	1000/900	1500/1350	2000/1800	3000/2700			
Battery Module No.	BM0086	BM0086	BM0087	BM088	BM0089			
Runtime (min) Half/Full load	7 / 19	4 / 13	2.5/9	4.5 / 13	2.5 / 10			
UPS Receptacles (120V)	(8) 5-15R	(8) 5-15R	(8) 5-15R	(8) 5-20R (1) L5-20R	(6) 5-20R (1) L5-30R			
UPS Receptacles (208V)	-	-	(6) 5-15R	-	(6) 6-15/20R (1) L6-30R			
Input Plug	5-15P	5-15P	5-15P (6-15P)	5-20P	L5-30P (L6-30P)			
Cord Length (ft)	10-ft.	10-ft.	10-ft.	10-ft.	10-ft.			
Communications Ports		USB, RS232, Option card slot						
Approvals	,			/ R: 2014), FCC Class I e 2011/65/EU & 2015/8				

The EXR Series offers users a robust and advanced line interactive UPS offering. New features include a higher power factor for improved UPS efficiency, auto-recognition of external battery packs for a smarter extended run-time solutions, tool-less battery connection and replacement, and so much more!

EXR Series UPSs offer complete protection from all electrical problems, including spikes, surges, sags, brownouts, and blackouts, in a versatile rack/tower convertible format. True sine wave electrical output ensures the best power for sensitive electronic equipment.



## **Entrust-LG Series UPS** 550-2000VA Line-Interactive AVR Tower

## **KEY PRODUCT LINE FEATURES**

- Compact Form Factor
- Tool-less Battery Access
- Easy to Read LCD Display
- Total Control of Your Power
- Hot-Swapppable Batteries
- **Independent Battery Bypass**
- **USB Communications**

# Enspire-G Series UPS 450-900VA Standby Low-Profite UPS

## **KEY PRODUCT LINE FEATURES**

## **ALL Enspire Models:**

- Versatile Connection Options 8 (450 and 550) or 10 (750 and 900) outlets
- Compact, Wall-Mountable Case
- USB Communications (HID Compliant) not included in the 350 model
- Tool-less Battery Access
- Independent Battery Bypass
- 3-yr (2-yr battery) Non-Prorated Warranty

## Features on 750 and 900VA LCD Models:

- Easy to Read LCD Display
- Green Mode
- Coax Protection





## **Specifications**

Model No.	ETR550LG	ETR850LG	ETR1000L- GU	ETR1300L- GU	ETR1500L- GU	ETR2000LGU
VA/Watts	550/330	850/510	1000/600	1350/810	1500/900	2000/1200
Battery Module	BM0063	BM0064	BM0065	BM0066	BM0066	BM0094
Runtime (min) Half/Full load	13.7 / 3.9	11.1 / 3.6	11.7 / 3.7	13.4 / 4.6	12.6 / 3.5	10.9 / 3.4
Receptacles (Qty and Power)	5-15R (4 UPS,	4 Surge-only)	5-15R	(5 UPS, 5 Surge	e-only)	15/20P(4 UPS, 4 Surge-Only)
Input Plug			5-15P			NEMA 5-20R
Cord Length (ft)				6		
Communications Port			U	SB		
Dimensions LxWxH	11.4" x 3.9" x 11.0"	11.4" x 3.9" x 11.0"	16.1" x 3.9" x 11.0"			
Net Weight (lbs/kg)	13.7 / (6.2)	17.9 / (8.1)	20.9 / (9.5)	25.3 / (11.5)	26.4 / (12.0)	28.7 / (13.0)

The Entrust-LG Series UPS provides users all the features usually available in higherpriced UPS products to protect your valuable equipment: automatic voltage regulation, spike and surge protection, and battery backup, all in a surprisingly compact package. Entrust-LG compact footprint makes it an ideal solution for cramped spaces including network and security closets.

## **Specifications**

Model No.	EN450G	EN600GU	EN750G	EN900LGU
VA/Watts	450/250	600/330	750/450	900/500
Battery Module No.	BM	0067	BM	0068
Runtime (Half/Full) min.	12/3	11/3	11/3	11/3
Receptacles (Qty and Power)	5-15R (4 UPS	, 4 Surge-only)	5-15R (5 UPS	, 5 Surge-only)
Input Plug		5-1	15P	
Cord Length (ft)		4		6
LCD Display	No	No	Yes	Yes
Communications Ports		USB (exce	ept EN350)	
Dimensions LxWxH	12.8" x 5	5.7" x 4.1"	12.8" x 7	7.8" x 4.1"
Net Weight	7.3	Blbs	9.9	lbs.

The Minuteman Enspire Series UPS is a low-cost, high performance UPS ideally suited for desktop PCs, small network devices, security system components, and much more. Enspire provides complete power protection in a compact, wall-mountable package suitable for installation in even the tighest spaces and budgets.

# SentryHD Power Manager

Monitoring and Management Software

SentryHD is the latest update to Minuteman's popular Sentry monitoring and management software. This powerful tool provides users and network managers a range of monitoring and management tools for their power, allowing total control before, during, and after power problems.

With a simple connection to the UPS via USB or RS-232, SentryHD provides the capability to configure UPSs, monitor power, and diagnose utility or UPS issues, all from secure connections on the network. SentryHD allows administrators to eliminate wasteful service calls around the facility, saving signficant time and money.



## **Features**

- Versatile Communications SNMP/Ethernet compatibility
- Wide-Reaching Management Capability

Concurrent monitoring through single or multiple computers via RS-232 and USB

- NMS Integration
   Supports SNMP v1, v2c, and v3 traps for integration into Network Management
   Systems
- Secure Connection HTTPs and SSL support
- TCP / IP Network
   Remote monitoring, control, multicomputer shutdown/restart and configuration through TCP/IP network
- Multiple Device Management
   Monitor and control multiple UPS devices
   from a single application session

## Ultimate Control and Knowledge of Your Devices:

- Real-time graphical displays of user-defined UPS and utility conditions
- Record and save graphical event and history logs for future analysis
- Device control restart, test UPS and control receptacles
- Powerful reporting full diagnostic and event reporting, printable history, event logs and security measures
- Real-time monitoring displays UPS data (voltage, frequency, load percentage, etc.)

## SentryHD Compatibility:

- Compatible with most new generation Minuteman UPS products; older products use previous versions, see product user manual for details on compatibility
- Windows Server 2003, 2008, 2012, 2016, 2019 (32-bit / 64-bit)
- Unix and Linux

## **SNMP Monitoring Accessories**

Monitor and Manage Power via Network Access

## KEY PRODUCT LINE FEATURES

- Connect the UPS Directly to a Network Utilizes a standard RJ45 Ethernet connection
- Network UPS Management Monitor and manage the UPS over web browser
- Integrate UPS into Network Management System (NMS)
- Schedule Events
   Shutdown or restart connected equipment using the integrated scheduler
- Track Utility Problems via Event Logs
  History of power events on the UPS
- Multiple Server Shutdown
   SNMP management software allows the UPS to shutdown multiple devices sequentially when a power event occurs
- Event Notification
   Notify multiple IT personnel via SNMP traps or email when a power event occurs
- Telnet Support
   For flexible configuration of the SNMP card



## **Specifications**

Model No.	SNMP-NV6
Network Connection	RJ-45 Connection
Operating Temperature	0~40°C
Operating Humidity	10 ~ 80 %
Power Input	9 ~ 24V DC
Power Conusmption	2 Watt Maximum
Dimensions (in/mm) LxW	5.12 x 2.36 / 130 x 60
IPv6 Compatible	✓
SYSLOG Support	✓
Batch Configurable	✓
SNMP Compatibility	v1, v2C, v3
Configurable Event Alarms	✓

## **Accessories** Add monitoring devices for total installation awareness

Add an ENV-PROBE to your SNMP card for a complete monitoring solution.

Temperature and Humidity Monitoring Measures the ambient environmental conditions where the UPS is installed and receive warnings of any abnormalities. Optional contact closures for smoke, fire, water, and intrusion are also available.

Model No.	ENV-PROBE
Size (in / mm)	2.6 x 2.0 x 1.4 / 66 x 50.8 x 35.5
Temperature Measurement	0 ~ 65° C 32 ~ 149° F
Humidity Measurement	20 ~ 90 %
Power Input	12V DC

Minuteman SNMP cards are an interface between the UPS and the network. Cards can communicate the status of, and issue commands to, the UPS. All Minuteman SNMP cards support SNMP and HTTP protocols for user access. Through an industry standard NMS and/or web browser, users can monitor the UPS status, issue commands, and configure the SNMP card via a network connection. A full line of monitoring accessories are also available. With these additional modules, admins can monitor temperature and humidity, detect smoke, fire, or water, sense vibration, and monitor the status of server rack or cabinet doors. Each of these modules can send an alert via SNMP trap or email, ensuring problems can be rapidly resolved without the need for a 24-hour presence at a facility.

## Remote Power Management (RPM)

2, 8, 16, and 24-port Remote Management Solutions

## **KEY PRODUCT LINE FEATURES**

- 3-Year Warranty
- **Ultimate Power Control**
- Secure Management
- Schedule Around Your Needs
- Auto Ping Function
- Multiple Account Capability
- Choose Alert Status Features
- Powerful Logging
- *8, 16 and 24-Port Models also Feature:*
- Enterprise Management Utility Manage multiple RPM units from a single consolidated interface



## **Specifications**

Model No.	RPM1521E	RPM1581EV6	RPM30241EV6	RPM30242EV6	RPM1581HVN	RPM20161VN	RPM2082HVI	RPM20162VI
Input and Output Voltage	120	120	120	208	1	20	2	108
Number of Outlets	2	8	24	24	8	16	8	16
Install Format	Free/1U optional	1U / 0U	0U	0U	1U / 0U	0U	1U/0U	0U
Dimensions L x W x H (in / mm)	7.2 x 4.9 x 1.7 182 x 125 x 44	17.0 x 8.5 x 1.8 432 / 216 / 44.5	70 x 2.2 x 3.2 1778 x 56 x 80	70 x 2.2 x 3.2 1778 x 56 x 80	17. x 3.5 x 1.7 432 x 90 x 44	49.0 x 2.2 x 1.7 1245 x 56 x 44	17.x 3.5 x 1.7 432 x 90 x 44	49.0 x 2.2 x 1.7 1245 x 56 x 44
Input Power Cord	IEC320 C13 to 5-15P	5-15P	L5-30P	L6-30P	5-15P	5-20P	6-	20P
Cord Length (ft)	6		10		1	0		10
Output Receptacles (Qty - Type)	<b>2</b> - 5-15R	8 - 5-15/20R	<b>24</b> -5-15/20R	<b>3</b> -IEC320 C19 <b>21</b> -IEC320 C13	8 - 5-15/20R	<b>16</b> - 5-15/20R	8 - IEC320 C13	2 - IEC320 C19 14 - IEC320 C13
Input Circuit Breaker	15A	15A	30A	30A	15A	20A	20A	20A
Maximum Capacity	12A	12A	24A	24A	12A	16A	16A	16A
Display Type	LED - Unit/Equipment Status		LCD + Status LED		LCD + Status LED		LCD +Status LED	
Net Weight (lbs / kgs)	1.78 / 0.806	7.94 / 3.6	18.52 / 8.4	18.74 / 8.5	4.85 / 2.2	8.82 / 4.0	4.63 / 2.1	8.15 / 3.7
Power On/Off Sequencing	✓	✓	✓	✓	✓	✓	✓	✓
Event Alert Types	Email / Trap / SMS	Email / Trap / Audible		Email / Trap / Audible		Email / Trap / Audible		
SYSLOG Support	Yes		Yes		Yes (w/S	SW Utility)	Yes (w/S	SW Utility)
Safety Certification	cTUVus, CE Certified	cUl	_, UL60950-1, CE Ce	rtified	IEC 62368-1	, CE Certified	cETLus, 0	CE Certified

## 2-Port Remote Power Manager (RPM1521E)

Standard features include:

- IP-Addressable PDU Built-in web server and 2 power
- Manual Power ON / OFF Switch
- Independent Outlet Control Switch on / off, power cycle, schedule startup/shutdown
- Supports Power Start Sequencing Startup equipment in specific order based on need
- Auto Ping Feature Monitor and auto-detect any failed network equipment and perform a timed reboot

- IP Filter / Mask Function Manage user privileges and prevent unauthorized access to the control
- Optional Temperature Probe
- Power Status and Control Mode LED Indicators
- Instant Notification of Alarms Receive email, SMS text messages or SNMP trap notification of events
- Surge-Protected Outlets Eliminate potentially damaging voltage spikes

- Circuit Breaker Overload and connected equipment
- Rack-Mountable Design optional rack-mounting kit (BRKT RM





RPM1521E

## 8, 16 and 24-Port Remote Power Manager

Standard features include:

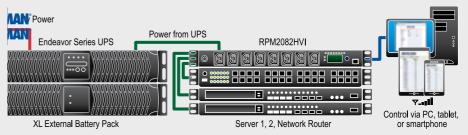
- Access from Anywhere Allows rebooting from any internetenabled device via a secure connection
- · Conserve Energy and Prevent Lockups Allows scheduling of tasks
- Secure Management Password-protected security levels
- No Special Apps or Installs Configure and control RPM units worldwide through most standard web browsers using a single network IP address
- Versatile Installations 10-ft power cord and rack-mount hardware for a wide range of installations

- · Power for All of Your Devices 15, 20 and 30-amp capacities, 120 and 208VAC
- True RMS Load Meter and LCD Display
- 1U / 0U Convertible or 0U Vertical-Only
- Optional Temperature & Humidity Probe Available for all EV6 models
- SNMP and DNS Support

RPM1581HVN 8-port Remote Power Manager (front) RPM2082HVI 8-port 208V Remote Power Manager (front)

> RPM20161VN and RPM20162VI 16-Port Remote Power Manager

## **Example RPM System Integration**



Utilize a Minuteman RPM unit in conjunction with a UPS to ensure fail-safe, controllable power. In this example, conditioned and backed up power from the UPS is provided to multiple servers and a router from the RPM2082HVI.

Control of power to these devices is accessed from the web browser of PCs, smartphones, or tablets located both within the network and abroad thanks to the RPM's secure webserver functionality.

Minuteman Power Technologies

minutemanups.com | sizemyups.com

## **OEPD Power Distribution Units (PDUs)**

6-24 Outlet Solutions for Safely Distributing Power to Equipment

Complete your power system installation with high quality PDU solutions from Minuteman. OEPD series PDUs feature lengthy power cords, versatile configuration options, and a host of premium features, all at an incredible value.

Minuteman's robust PDU line offers products ranging in capacity from 15 to 30 Amps/120 and 208v, in both vertical and horizontal orientations with select models featuring surge suppression. OEPD power cords are strain-relieved with molded plugs using heavy-gauged cables and hard wired options on select models. All models have an external ground stud.



## **Models**

Model	Outlet Type	Qty (f/r)	Mounting Format	Locking	Surge			
Generic PDU w/o Minuteman Label: 120VAC Input/Output								
OEPD615HV	NEMA 5-15R	6/0	1U Horiz. / 0U Vert.	-	-			
OEPD815HV	NEMA 5-15R	2/6	1U Horiz. / 0U Vert.	-	-			
OEPD1415HV	NEMA 5-15R	6/8	1U Horiz. / 0U Vert.	-	-			
OEPD1815V48	NEMA 5-15R	18/0	0U Vert.	-	-			
OEPD2415V62	NEMA 5-15R	24/0	0U Vert.	-	-			
OEPD1020HV	NEMA 5-15/20R	2/8	1U Horiz. / 0U Vert.	-	-			
OEPD1420HV	NEMA 5-15/20R	6/8	1U Horiz. / 0U Vert.	-	-			
OEPD2420V62	NEMA 5-15/20R	24/0	0U Vert.	-	-			
OEPD2420V62L	NEMA 5-15/20R	24 / 0	0U Vert.	✓	-			
OES620V16PC6	NEMA 5-15/20R	6 / 10	0U Vertical	-	✓			
Generic Surge-protected PDU w/o Minuteman Label: 120VAC Input/Output								
OES1015HV	NEMA 5-15R	2/8	1U Horiz. / 0U Vert.	-	✓			
OES1020HV	NEMA 5-15/20R	2/8	1U Horiz. / 0U Vert.	-	✓			
Generic PDU w/o Minuteman Label: 208VAC Input/Output								
OEPD1220C13HVLT <sup>1</sup>	IEC320 C13	12/0	1U Horiz. / 0U Vert.	✓	-			

## **Features**

- Longer Power Cords
   Most PDU units have 15-ft power cords, eliminating
  the need for 6-, 8-, or 10-ft alternatives
- More Standard Outlets
   6, 8, 10, 12, 14, 18, or 24 outlets. Most have additional front outlets for improved access.
- Configuration Versatility
   Multi-form factor with 1U and 0U configurations
   allowing for either horizontal or vertical placement.
   1U products ship with a stand-off mounting bracket,
   at no additional cost, that allows for vertical
   installation on most racks and enclosures.
- Locking Input Plugs (L)
   Select models (L) feature locking input plugs for added security.
- Surge Protection (OES)
   OES models provide surge protection for connected devices
- High Standards
   PDUs are listed with higher 62368-1 safety standards.
   All PDUs are compatible with any data center or network installation.
- Cost Effective
   More outlets, longer cords and more features are
   what make the OEPD Series the best value today. The
   features are all standard with the series.
- Higher Reliability
   Designed to provide maximum uptime, Minuteman
   PDUs' switchless design and on/off LEDs provide
   greater MTBF (Mean Time Between Failure).
- Protected Investment
   Minuteman surge-protected (OES) PDUs carry a
   limited lifetime warranty and \$50,000 Minuteman
   Platinum Protection Plan (US and Canada only).

MMS Surge Protectors

Protect non-critical equipment from spikes and surges

Minuteman's MMS Series surge protection products are perfect for protecting devices which will not be required during an outage. Models ranging from travel friendly, single-outlet wall taps to feature-rich rotating outlet strips are available, and each provides exceptional protection at a



## Models

tremendous value

Model	Joule Rating	Outlet Qty	Rotating Outlets	Phone/ Fax	Coax	Dimensions (in.)	Cord Length	Protect. Indicator
MMS110	540	1	-	-	-	2.13 x 2 x 2.38	-	✓
MMS362P	241	6	-	-	-	10.79 x 3.27 x 3.15	3 ft.	-
MMS370	1080	7	-	-	-	12.76 x 4.25 x 1.77	6 ft.	✓
MMS780R	2160	8	6	-	-	14.02 x 3.54 x 2.28	7 ft.	✓
MMS7100RT	2880	10	5	✓	-	12.52 x 4.41 x 1.89	7 ft.	✓
MMS660S	540	6	-	-	-	9.1 x 5.95 x 1.07	-	✓
MMS664S	1080	6	-	-	-	16.0 x 5 x 1.5	4 ft.	✓
MMS-DSK6U3	1080J	6	-	-	-	5.3 x 2.7 x 5.2	6 ft.	✓
MMS-POD4U4	1080J	4	-	-	-	7.83 x 7.17 x 2.36	6 ft.	✓
MMS-STP8U3	1080J	8	-	-	-	11.22 x 3.54 x1.44	6 ft.	✓
MMS-WAL6U3	1080J	6	-	-	-	5.43 x 3.86 x2.23	-	✓

## MMS Features

- Substantial Surge Ratings
   Ratings up to 4320J ensure maximum
  protection
- X3 MOV Safety
  Advanced technology prevents fire from
- Versatile Solutions
   Rotating outlet and slimline products provide innovative solutions for powering your
- Phone / Fax/ Network (T) and Coax (C) Protection

Protect from damaging spikes and surges over data lines

- UL1449, UL1363 and cUL Certified
   Select models also UL452 certified
- Worry-Free Protection
   Limited lifetime warranty on properly connected equipment protection up to \$200,000
   (US and Canada only)

23



# Minuteman Standard & Extended Warranty Plans

## Uninterruptible Power Supplies (UPS)

Minuteman provides three years of coverage on most UPS products (see individual product pages for details)

Minuteman's 2- and 3-year UPS warranties include non-prorated battery coverage; if a battery failure occurs during the warranty period, the customer will not be charged a prorated cost for replacements.

## Surge Protection / Power Management

Limited lifetime warranties are provided on most MMS Series surge protectors and OEPD power distribution units.

All RPM Series products include a 3-year parts and labor warranty.

## **Extended Warranty Options**

Two levels of 5-year warranties are also available for most UPS products, including the Premier Zero-ownership cost option which includes automatic battery replacement. Includes freight for all service issues.

## Standard Extended or Premier? Two Plans to Fit Your Needs

## Standard Extended Warranty Plan Highlights

- Provides a full 5-year product warranty coverage
- Includes replacement of defective batteries for the entire warranty term at no additional charge (not pro-rated)
- Provides total warranty coverage on UPS for most business lease terms and/or depreciation terms
- If returned, Minuteman will properly recycle the old batteries

## Premier Zero-Ownership Cost Extended Warranty Plan Highlights

- Includes all the benefits listed in the Standard Extended Warranty, plus...
- Minuteman will cover all ground freight charges to repair/ replace defective products and include packaging and return shipping of old batteries so that they can be properly recycled.
- Even if batteries are operating normally throughout the warranty period, Minuteman will contact the customer after four-years to offer guaranteed battery replacement.
- Ensures that there are absolutely no additional costs to the end-user for maintaining the UPS for five years
- All warranty claims will be given priority status upon arrival.

					1
L	-	Erlenholleren		- 401	3
ı	Mark Control	THE STATE OF		M SECTION-	d
		_	-	-	-

Learn more about both plans at: minutemanups.com/extendedwarranty

	Standard Warranty	Standard Extended Warranty	Premier Warranty
Warranty Term	3 Years	5 Years	5 Years
Battery Warranty (Not pro-rated)	Yes	Yes	Yes
Free Battery Recycling	Upon request	Upon request	Automatic
Warranty Policy	Repair or replace	Repair or replace	Repair or replace
Free Ground Freight	Return Only	Return Only	All Included
Special Product Offers	-	Yes	Yes
Unique Warranty ID Labels	-	Yes	Yes
Batteries Warranted for 5 Years	-	Yes	Yes
Battery Replacement Notification	-	-	Yes
Priority Repair Response	-	-	Yes

For more infomation on eligible Minuteman products, please visit minutemanups.com/warranty

# **Power Terminology**

## Alternating Current (AC)

The form in which power is delivered from utility sources; electrical charge periodically reverses direction, and is delivered in a true sine wave form

## Amperes (Amps)

Measure of the amount of electric charge or current

## Direct Current (DC)

The form of power typically provided by batteries and transformer blocks for small equipment; electrical charge is unidirectional

## Frequency (Hz)

Measure of the power cycles in AC voltage in Hertz (typically 50 or 60)

## Joule

A unit of work or energy equal to the work done by a force of one newton acting through a distance of one meter

## Measured Load

Electrical load as determined by physically placing a true RMS power meter on the input cord of a device to determine its actual power draw

## Rated Load

Electrical load as stated in the specifications documentation of a device (typically a maximum value that the device will use during operation)

## Volt / Voltage (V)

Measure of electrical potential between two points

## Volt Amps (VA)

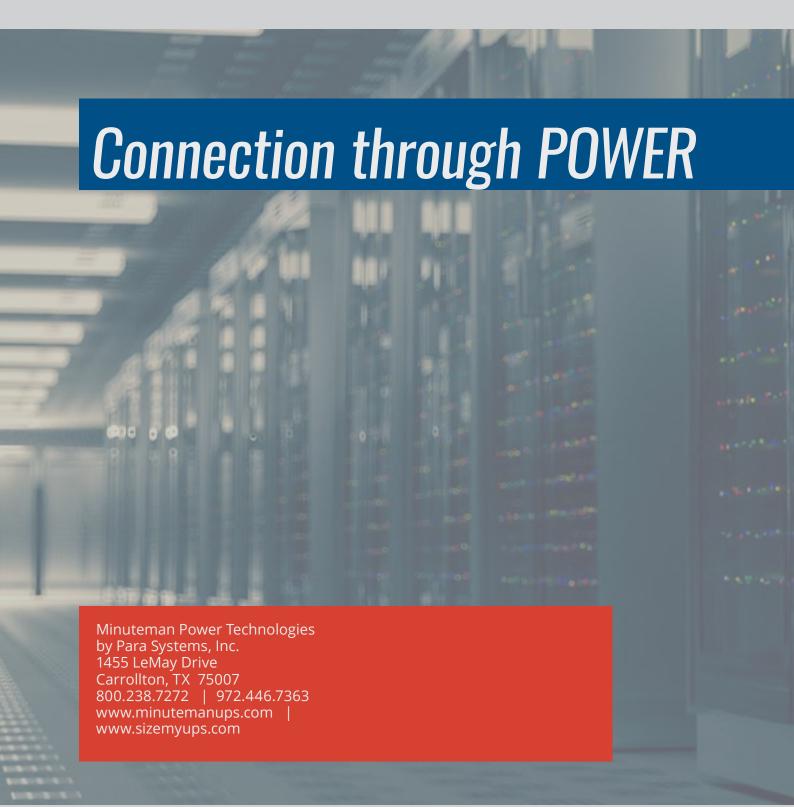
Measurement of apparent power and the measurement used to determine UPS capacity

#### Watt (W)

Unit of power representing actual power consumption over a given amount of time

Understanding
these key
terms is a
critical step in
determining the
proper power
protection
devices for any
type of system.





© Copyright 2021, Para Systems, Inc. Product specifications are subject to change without notice. Minuteman, EXR, PRO-RT, Endeavor, Enspire, Encompass, Platinum Protection Plan, are registered trademarks of Para Systems, Inc. Entrust LCD, SentryPlus, and SentryHD are trademarks of Para Systems, Inc. All other trademarks are the property of their respective holders.

All rights reserved.



These products can expose you to chemicals, including lead compounds or nickel, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65warnings.ca.gov/product

