



Endeavor Series

Transformer User's Manual Endeavor Series

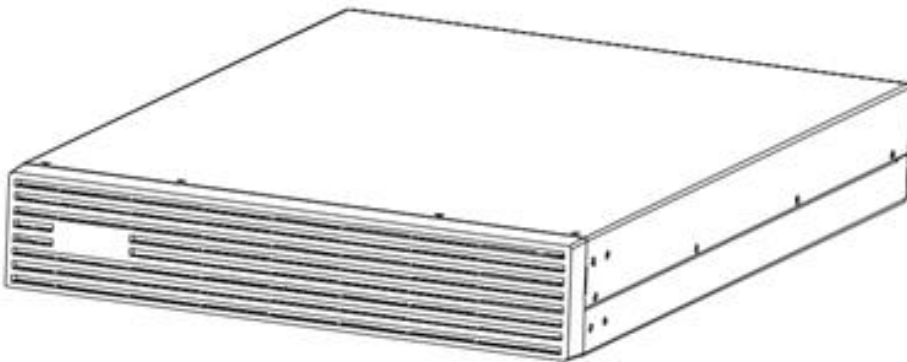


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Introduction



Thank you for purchasing a MINUTEMAN power protection product. It has been designed and manufactured to provide many years of trouble-free service.


**IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS!
CONSIGNES DE SECURITE IMPORTANTES
SAUVEGARDEZ CES CONSIGNES!**

Please read this manual and comply with all warnings and instructions before installing your Endeavor Series Transformer module as it provides important information that should be followed during installation and maintenance, allowing you to correctly set up your installation for the maximum safety and performance.


Veuillez lire ce manuel et conformer à tous avertissements et instructions avant d'installer votre module Transformateur Endeavor Series, car il fournit des informations importantes qui doivent être suivies lors de l'installation et de la maintenance, vous permettant de configurer correctement votre installation pour une sécurité et des performances maximales.


WARNINGS AND CAUTION STATEMENTS:


	DANGER! This symbol indicates a hazardous situation that could result in severe electrical shock or death. All precautions must be taken.
	WARNING! This symbol indicates a hazardous situation that could result in injury or harm. Necessary precautions must be taken

 Risk of Electrical Shock. There are hazardous live parts inside these products that can be energized from the internal batteries of a bundled UPS, even when the AC input of the UPS is disconnected. Before installation, ensure the following:

- The Main Input Circuit Breaker of the connected UPS is in the OFF position
- The internal battery module(s) of the UPS are disconnected and removed
- The UPS AC Breaker of the UPS is in the OFF position
- The connected UPS is properly grounded to an earth ground conductor.
- The transformer module is disconnected from the UPS.

 To reduce the risk of electrical shock from the leakage current of the UPS and its connected devices, this transformer must be installed using a protected earth ground.

 Installation, repairs and battery replacement must be performed by QUALIFIED SERVICE PERSONNEL ONLY and must adhere to all local electrical codes. Any changes or modifications made to this unit, without expressed written permission from Para Systems, Inc. will void the warranty of the product.

 This transformer module is only intended to be installed in an indoor, temperature-controlled environment that is free of conductive contaminants, dust or direct sunlight. Never install this device near liquids, damp locations or where there is potential for contact with liquids. The ambient operating



temperature range for this device is 32° ~ 104°F (0° ~ 40°C). To ensure the proper ventilation and cooling of the UPS, do not block any of the ventilation cutouts in the case.

Adequate space must be provided around all sides of the transformer to allow for proper air flow. Do not mount the device with its front or rear panel facing down at any angle.



This transformer series is installed using an attached, strain-relief input power cord. Connect the transformer to a UPS using a NEMA L6-30. Do not plug the transformer into itself or use extension cords, adapter plugs, or surge strips as it may damage the transformer or connected devices.

FCC Class A Radio Frequency Warning:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Safety Details:

General:

- The transformer must be installed according to all national and local electrical codes and be performed only by a qualified electrician.
- Install this transformer in an environmentally controlled, indoor location away from any heat source, excessive moisture, direct sunlight or conductive materials.
- Before usage, you must allow the transformer module to adjust to room temperature; (20°C~25°C or 68°F~77°F) for at least one hour to avoid moisture condensing inside the device.
- Adequate airflow around the transformer is required to prevent overheating. Do not block any open vents on the device or its connected equipment.
- This transformer module is extremely heavy. Handling and installation requires at least two individuals. Take special care to practice safe lifting practices.
- This transformer is not intended for use in medical applications where failure of the unit can reasonably be expected to affect the performance of life support or critical treatment devices.

Connections:

- When using the attached power cord, plug the transformer directly into a properly wired NEMA UPS outlet. Do not plug into a surge protector or extension cord.
- This transformer must be properly connected to a ground conductor. If powered by a source, other than utility power, the transformer must be properly grounded to the supply source.
- All input and output connections from the transformer must be performed by a qualified electrician.

Maintenance:

- There are no user serviceable parts in the transformer. Any maintenance or service must be performed by qualified personnel only.
- The transformer may contain parts that are energized if plugged into a UPS or utility service. Before any service, verify all input connections are disconnected.



Life Support Policy:

As a general policy, Para Systems does not recommend the use of any of our products in life support applications where failure or malfunction of the product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness. We do not recommend the use of any of our products in direct patient care. We will not knowingly sell our products for use in such applications unless it receives in writing assurances satisfactory to us that (a) the risks of injury or damage have been minimized, (b) the customer assumes all such risks, and (c) our liability is adequately protected under the circumstances.

Installation

There are multiple models and configurations when this transformer is bundled with base models of the Endeavor line. The table below outlines the available configurations:

Models	Rating	
	VA	WATTS
ED5KRT	5,000	4,500
ED5KRT-3KTF	5,000	4,365
ED5KRT-5KTF	5,000	4,275
ED6KRT	6,000	5,400
ED6KRT-3KTF	6,000	5,265
ED6KRT-5KTF	6,000	5,175
ED6KRT-6KTF2	6,000	5,130
ED8KRT	8,000	7,200
ED8KRT-3KTF	8,000	7,065
ED8KRT-5KTF	8,000	6,975
ED8KRT-6KTF2	8,000	6,930
ED8KRT-8KTF2	8,000	6,840
ED10KRT	10,000	9,000
ED10KRT-3KTF	10,000	8,865
ED10KRT-5KTF	10,000	8,775
ED10KRT-6KTF2	10,000	8,730
ED10KRT-8KTF2	10,000	8,640
ED10KRT-10KTF2	10,000	8,550

Package Contents:

Prior to installing the UPS, inspect all contents and notify the manufacturer immediately if the unit is damaged or parts are missing. Save the original packing materials in a safe location for future use.

- Transformer module
- 4-post rail kit
- Tower Feet Extension (Set of 2)
- 19" Rack mount brackets with retaining screws, (Set of 2), installed
- User Manual
- Lifting Straps

Receiving Inspection:

Once the product arrives, it should be visually inspected for any damage that may have occurred in shipping. Immediately notify the carrier and place of purchase if any damage is found. Warranty claims for damage caused by the carrier are the responsibility of the purchaser. The product packing materials were carefully designed to meet ISTA 1A and minimize any potential shipping damage. Please save the packing materials in the unlikely event that the product needs to be returned to the manufacturer. The manufacturer is not responsible for shipping damage incurred when the product is returned and is not properly packaged. Keep all invoices and packing materials to ensure the relevant version for installation.

Utility Connections:

- Use only qualified, licensed electricians for the installation
- Follow all national and local electrical codes for the installation
- Ensure that all Utility and UPS input circuit breakers are in the OFF position prior to the connection of the transformer module.
- Connect all the devices to be protected into the desired receptacles/terminal block on the back panel of the transformer module.
- Use a recommended screw torque of 11.5kgf.cm for output terminal block connections.

Commented [白颖文(Baiyw1)]: 11.5kgf.cm

Rack/Cabinet Installation:

Use caution as the transformer is very heavy. Two or more individuals are recommended for installation.

Locate and attach the rack/cabinet mounting rails (FIG. 1). Rest the transformer on the front of the rack/cabinet mounting rails. Slide the transformer into the rack until the ears contact the front posts and anchor the unit using the included mounting screws. (FIG. 2)

Repeat this same process for any additional transformer modules.

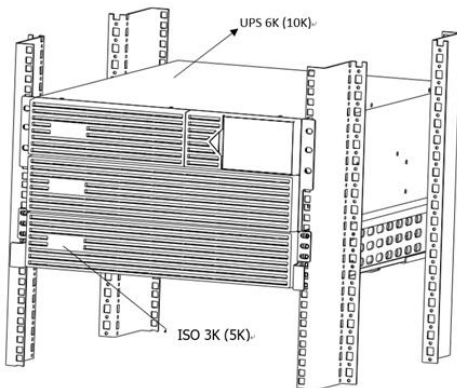


Figure 1

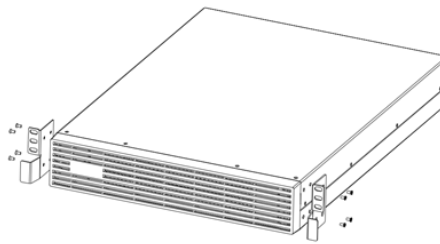


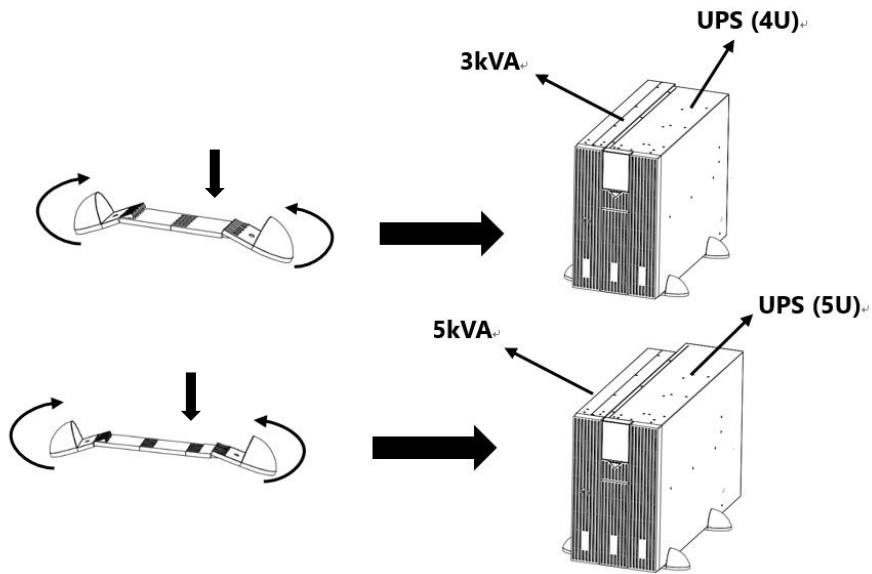
Figure 2

Tower Installation:

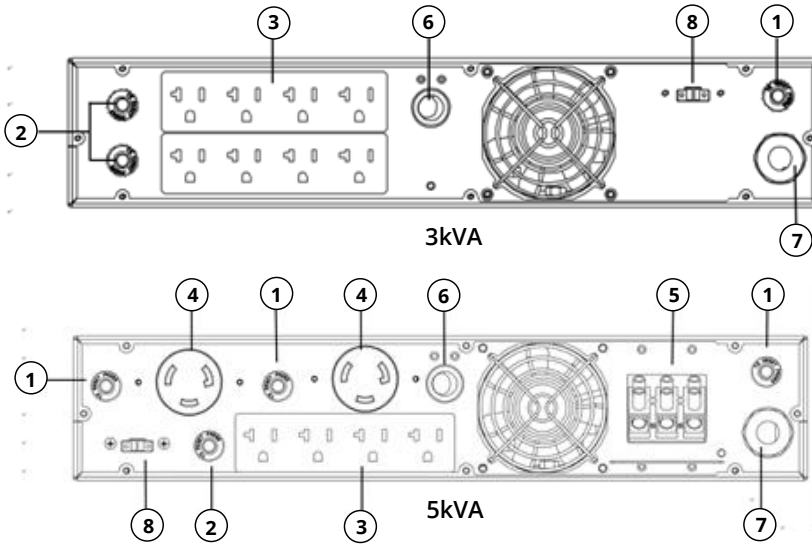
Use caution as the transformer is very heavy. Two or more individuals are recommended for installation.

1. Locate the UPS to its final installation location.
2. Orient the transformer vertically with the nameplate in line with the UPS.
3. Insert the required quantity of Transformer Module tower extensions into center of current UPS tower stand (front and back).

NOTE: Lifting the UPS and Battery Pack modules are extremely heavy. Two individuals are recommended to remove from packaging.



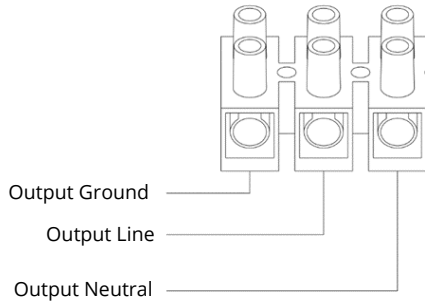
Transformer Rear Panels:



1	30A AC Circuit Breakers	5	Output Hardwire Terminal
2	20A AC Circuit Breakers	6	208/240VAC Voltage Selector
3	NEMA 5-15/20R Receptacles	7	Input Power Cord
4	NEMA L5-30R Receptacles	8	(EBMS) Ambient Temperature Port

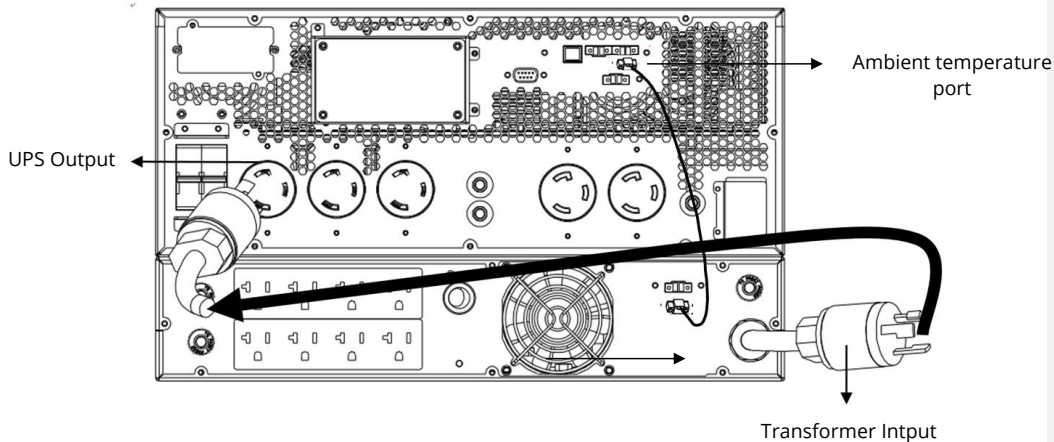
Terminal Block Wiring Diagram

1. Remove the terminal block cover box from the rear panel of the Transformer module (requires a Phillips screwdriver). Refer to the figure below for the output connections.
2. Before connecting to the output terminals read all of the Cautions and Warning, then observe the following:
 - a) Ensure that the connected UPS is turned off or the transformer is disconnected from the UPS before any connections are made.
 - b) Calculate the power consumption of the connected loads to ensure that an overload condition does not occur.
 - c) Ensure that the terminal block screws are secured after connecting the output wires. The terminal block screws should be torqued to 18±2Kgf.cm (requires a 3/16" flat-head screwdriver).
3. Re-install the terminal block cover box.



Connecting to a UPS

All wiring used for the installation of the UPS must be in accordance with the local electrical codes and regulations and performed using the following instructions by a licensed electrician.



Obtaining Service:

If the Transformer Requires Service:

- 1) Use the Troubleshooting section of the UPS user's manual to eliminate obvious causes.
- 2) Verify there are no tripped circuit breakers and that the batteries are good. A tripped circuit breaker and defective batteries are the most common issues.
- 3) Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the issue call or fax the Technical Support department at the following numbers: Voice phone (972) 446-7363, FAX line (972) 446-9011 or visit the customer support page on our Web site at www.minutemanups.com/contact. Before contacting the Technical Support Department have the following information available:
 - a) Contact name and address.
 - b) Where and when the unit was purchased.
 - c) All of the model information about your unit.
 - d) The serial number of your unit.
 - e) Any information on the failure, including LEDs that may be illuminated or error codes displayed.
 - f) A description of the protected equipment including model numbers, if possible.
 - g) A technician will ask you for the above information, and if possible, help solve the issue over the phone. In the event that the unit requires factory service, the technician will issue you a Return Material Authorization Number (RMA #). **NOTE: We must have the model number and the serial number of the product to issue an RMA #.**
 - h) If the unit is under warranty, the repairs will be done at no charge. If the unit is not under warranty there will be a charge for the repair.
- 4) Pack the unit in its original packaging. If the original packaging is no longer available, ask the Technical Support Technician about obtaining a new set. It is important to pack the unit properly in order to avoid damage in transit. Never use Styrofoam beads for a packing material.
 - a) Include a letter with your name, address, daytime phone number, RMA number, a copy of your original sales receipt, and a brief description of the problem.
- 5) Mark the RMA # on the outside of all packages. The factory cannot accept any package without the RMA # marked on the outside.
- 6) Return the unit by insured, prepaid carrier to:

Para Systems Inc.
MINUTEMAN UPS
2425 Technical Drive
Miamisburg, OH 45342
ATTN: RMA #

Specifications:

Transformer Model	ED-3KTF	ED-5KTF
General Features		
Topology	Isolation Step-down Transformer	
Number of Phases	Single (1 ϕ 2W + G)	
VA Rating	3,000VA	5,000VA
Load Capacity	2,565 Watts	4,275 Watts
Output Receptacles	(8) 5-15/20R	(2) L5-30R / (4) L5-15/20R (1) 3-wire Terminal Block
Installation Format(s)	Rack or Tower	
Input		
Nominal Voltages (Selectable)	208 (Default), 240VAC	
Frequency Range	50/60Hz	
Input Plug Type (Cord Length)	NEMA L6-30P (2-ft.)	
Input Surge Protection	Resettable Circuit Breaker	
Maximum Input Current	15A (208V) / 13A (240V)	24A (208V) / 21A (240V)
Output (AC Normal)		
Nominal Voltage	110/120VAC (Default)	
Voltage Regulation	Nominal \pm 2% (until Low Battery warning of UPS)	
Frequency Range	50/60Hz, \pm 0.1Hz	
Output Waveform	True Sine Wave	
Voltage T.H.D.	\leq 4% (Linear Load)	
Environmental		
Operating Temperature Range	+32° to +104°F (0° to +40°C)	
Storage Temperature Range	+5° to +131°F (-15° to +55°C)	
Operating (Storage) Humidity Range	0 to 95%, non-condensing	
Operating Elevation	0 to +15,000 ft. (0 to +3,000m)	
Storage Elevation	0 to +50,000 ft. (0 to +15,000m)	
Physical		
Unit Dimensions (L x W x H)	23.82" x 17.24" x 3.41" (605*438*86.5 mm)	23.82" x 17.24" x 3.41" (605*438*86.5 mm)
Shipping Dimensions (L x W x H)	32.68" x 23.43" x 9.45" (830*595*240 mm)	32.68" x 23.43" x 9.45" (830*595*240 mm)
Unit Weight	88.16 lbs. (40.0 Kgs.)	121.22 lbs. (55.0 Kgs.)
Shipping Weight	101.38 lbs. (46.0 Kgs.)	134.44 lbs. (61.0 Kgs.)
Warranty & Certifications		
Standard Warranty	3 Years (Electronics and Batteries)	
Safety Agency Approvals	cUL (UL1778)	
Certifications and Compliancy	CE, FCC Class A, RoHS2	

NOTE: Specifications are subject to change without notice.

Warranty:

Para Systems, Inc. (Para Systems) warrants this equipment, when properly applied and operated within specified conditions, against faulty materials or workmanship for a period of three years from the date of purchase. For equipment sites within the United States and Canada, this warranty covers depot repair or replacement of defective equipment at the discretion of Para Systems. Depot repair will be from the nearest authorized service center. The customer pays for shipping the product to Para Systems. Para Systems pays ground freight to ship the product back to the customer. Replacement parts and warranty labor will be borne by Para Systems. For equipment located outside of the United States and Canada, Para Systems only covers faulty parts. Para Systems

products that are depot repaired or replaced pursuant to this warranty shall only be warranted for the unexpired portion of the warranty applying to the original product. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

The warranty shall be void if (a) the equipment is damaged by the customer, is improperly used, is subjected to an adverse operating environment, or is operated outside the limits of its electrical specifications; (b) the equipment is repaired or modified by anyone other than Para Systems or Para Systems approved personnel; or (c) has been used in a manner contrary to the product's User's Manual or other written instructions.

Any technical advice furnished before or after delivery in regard to use or application of Para Systems' equipment is furnished without charge and on the basis that it represents Para Systems' best judgment under the circumstances, but it is used at the recipient's sole risk.

EXCEPT AS PROVIDED HEREIN, PARA SYSTEMS MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation of implied warranties; therefore, the aforesaid limitation(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL PARA SYSTEMS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, Para Systems is not liable for any costs, such as; labor for on-site installation, on-site maintenance or on-site service, lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, cost of substitutes, claims by third parties, or otherwise. The sole and exclusive remedy for breach of any warranty, expressed or implied, concerning Para Systems' products and the only obligation of Para Systems hereunder, shall be depot repair or replacement of defective equipment, components, or parts; or, at Para Systems' option, refund of the purchase price or substitution with an equivalent replacement product. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

No employee, salesman, or agent of Para Systems is authorized to add to or vary the terms of this warranty.

Please go to our website at www.minutemanups.com/warranty/ to fill out the Warranty Registration.



Additional Notices:

NOTICE: This product complies with the rules for Class A device, pursuant to Part 15 of the FCC rules for radio noise emissions from a digital apparatus.

These limits are designed to provide reasonable protection against such interference in a residential installation.

This equipment generates and uses radio frequency and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. If this device does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.
- Shielded communications interface cables must be used with this product.

Life Support Policy

Para Systems does not support the use of any of its products in life support applications where the failure or malfunction of the product can be reasonably expected to cause failure to life support devices or to significantly affect their safety or effectiveness. Furthermore, Para Systems does not recommend the use of any of its products in direct patient care.

RoHS2
FCC Class A
cULus (UL1778 5th Edition)
CE Compliant

Para Systems, Inc.
1455 LeMay Drive
Carrollton, TX 75007
800.238.7272
www.minutemanups.com

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Rev. B 20240530



A1. Declaration of Conformity

Application of Council Directive(s): 2014/30/EU

Standard(s) to which Conformity is declared: EN 50091-2:1995 Class A, IEC61000-4-2: level4, IEC61000-4-3: level3, IEC61000-4-4: level4, IEC61000-4-5: level4, IEC61000-4-6: level3, IEC61000-4-8: level3, IEC 62040-2: 2005, IEEE C62.41 Category A1

Manufacturer's Name: Para Systems, Inc. (MINUTEMAN UPS)

Manufacturer's Address: 1455 LeMay Drive, Carrollton, Texas 75007 (USA)

Type of Equipment: Uninterruptible Power Supplies (UPS)

Model No: ED-3KTF, ED-5KTF

Year of Manufacture: Beginning December 2023

I hereby declare that the equipment specified above conforms to the above Directive(s).

Kevin Canole
Director of New Business Development

Place: Carrollton, Texas, USA
Date: December 1, 2023