

## FCC Part 68

This product complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the case of this product is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

This product may use one or more of the following Universal Service Order Code ("USOC") jacks: RJ11, RJ14, RJ45, RJ48C, RJ48S, or RJ61. The particular USOC jack for each model is listed in the supplied instruction manual.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug may also be provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advanced notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this telephone equipment, please contact POWERVAR at (800) 369 7179 for information on obtaining service or repair. If the equipment is causing harm to the telephone network, the Telephone Company may request that you disconnect the equipment until the problem is resolved.

There are no user serviceable parts in this equipment.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this product does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

## WARRANTY

POWERVAR warrants its product to be free from defects in material and workmanship for a period of five years.

This warranty is limited to repairing or replacing, at POWERVAR's option, any defective component, circuit board or module contained within the product only when it is returned with a POWERVAR Return Material Authorization (RMA) number to POWERVAR or to a POWERVAR-designated repair facility. In all cases, shipping charges to and from POWERVAR or the POWERVAR-designated repair facility are at the customer's expense.

Certain modules or peripherals included with the product but not manufactured by POWERVAR, including but not limited to fuses, batteries and other user-replaceable components, are war-ranted for ninety days or to the extent of the manufacturer's warranty, whichever is longer.

Certain products, including POWERVAR communication line protectors, are intended to operate as fuses or fail-safe mechanisms to protect connected equipment. Failure of these products due to extreme conditions constitutes normal operation and replacement under these conditions is not covered by this warranty.

This limited warranty does not cover any losses or damage resulting from shipment to or from the customer, or from improper installation, environment or abuse, or from any modifications, adjustments or repair by other than POWERVAR-authorized personnel.

NOTE: EXCEPT AS SET FORTH HEREIN AND EXCEPT AS TO TITLE, THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, OR ANY AFFIRMATIONS OF FACT OR PROMISES MADE BY POWERVAR WITH REFERENCE TO THE PRODUCTS OR THEIR MER-CHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT SHALL POWERVAR BE LIABLE FOR LOST PROFITS, GOODWILL OR ANY OTHER SPECIAL OR CON-SEQUENTIAL DAMAGES.

ONEAC, and Environmental Reference Ground are registered trademarks of POWERVAR, Inc. All other trademarks are the property of their respective owners.

NOTICE: This product may have been manufactured under one or more U.S. or foreign patents, including but not limited to the following: 4,352,055; 4,455,586; 4,758,920; 4,916,438; 4,941,063; 5,357,568; 5,410,443; 5,359,657; 5,490,215; 5,677,820; 5,696,820; 5,671,110; 6,639,779; D339,101; D337,987; D335,863.

## Instruction Manual

# Communication Line Protectors



Model #	DC Breakdown Voltage	REN
<b>N6-27</b>	<b>270-350 V</b>	<b>0.0B</b>
<b>N6-03</b>	<b>25-40 V</b>	<b>N/A</b>

*Thank you for purchasing this product.*



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# SAVE THESE INSTRUCTIONS

## GENERAL REQUIREMENTS

- These protector modules provide primary and secondary protection.
- When employed for primary protection, the protector modules must be enclosed in a listed type 1 NEMA enclosure and must be used with 22 AWG or physically larger building wire or interconnect wire. The protector modules shall be coordinated with 24 AWG or physically smaller hook up wire.
- Installation and grounding of protector modules must be in accordance with Local Codes and Article 800 of the National Electrical Code, ANSI/NFPA 70.
- Intended for indoor use only.
- Never install protectors or wiring during a lightning storm.
- No installation is safe from phone line transient damage, unless protector modules are installed on all phone lines.
- Install these protector modules on a standard 66 block in place of bridging clips.
- Do not install protector modules on the telco demarcation point block.
- One protector module is required for each pair.
- One Ground Bar (Part No. 350-032) is required for each 66 block on which protector modules are to be installed.
- Prior to installing protector modules, disconnect the telephone line at the network interface.
- Avoid bundling phone line cables with inside wiring, power and ground conductors.
- All protector modules must be properly grounded for effective operation. In order to achieve Total Protection, POWERVAR power conditioners or power conditioned UPSs are recommended for protecting the phone system's AC power input and provide the best grounding.

## TOOLS AND MATERIALS FOR INSTALLATION

66 block M1-50	6 gauge (AWG) wire
Phillips or Straight blade screwdriver	Ground Bar (Part No. 350-032)

## INSTALLATION USING 66 BLOCK

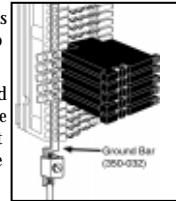
1. Locate or install one or more 66 block(s) M1-50 with the pairs requiring protection.
2. Start at the top of the block, and locate the first pair: A) Remove the two bridging clips, and place them aside. B) Align the protector module over the pins where the bridging clips were removed. Verify that the protected side "P" is facing towards the equipment being protected and that the ground tab is on the opposite side. C) Fully insert the protector module into the block until the unit makes contact with the fanning strip on both sides.

Repeat steps 2A through 2C for each pair on the block and for each of the blocks.

Check the ground bar to ensure the ground clip is attached. The set screw should face towards you with the tab bending away from you.

Align the ground bar behind the screws on the ground tabs of each protector. Fasten the bar by tightening the grounding screw on each protector module. **CAUTION:** Do not exceed 21 inch lbs. of torque pressure when tightening the grounding screw.

5. Attach a 6 AWG ground wire to the ground bar clip and tighten the set screw.

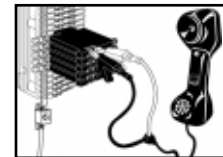


6. When wiring, take the shortest and most direct path to ground. Avoid sharp turns and kinks in ground wires.

There are two options for grounding the protector modules:

A. If your system is protected by a

*Power Protection Device:* Run a 6 AWG ground wire from the ground bar to the Single Point Ground. Next, run a 6 AWG ground wire from the Environmental Reference Ground® screw of the Power Protection Device to the Single Point Ground. Then, complete the installation by running a 6 AWG ground wire from the Single Point Ground to the nearest qualified ground.



B. If your system is **not** protected by a Power Protection Device: Run a 6 AWG ground wire from the ground bar to the nearest qualified ground.

7. Check operation of phone lines. If any test fails, recheck to ensure the protector modules are:  
A) Properly seated in the block.  
B) Not bridging between two adjacent pairs.

**LINE TESTING:** The protector enables line testing without removing the modules from the block. POWERVAR's design provides easy access on the input side that will enable the technician to clip their Test Set directly to the protector module. Therefore, there is no need to interrupt service while performing tests.

