



MULTI-PORT MODULE

User's Guide

Requesting a Declaration of Conformity

Units that are labeled with a CE mark comply with the following harmonic standards and EU directives:

- Harmonic Standards: EN 50091-1-1 and EN 50091-2
- EU Directives: 73/23/EEC, Council Directive on equipment designed for use within certain voltage limits
93/68/EEC, Amending Directive 73/23/EEC
89/336/EEC, Council Directive relating to electromagnetic compatibility
92/31/EEC, Amending Directive 89/336/EEC relating to EMC

The EC Declaration of Conformity is available upon request for products with a CE mark. For copies of the EC Declaration of Conformity, contact:

Powerware Corporation
Koskelontie 13
FIN-02920 Espoo
Finland
Phone: +358-9-452 661
Fax: +358-9-452 665 68

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HyperTerminal is a registered trademark of Hilgraeve.

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Class A EMC Statements

FCC Part 15

NOTE 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.

ICES-003

This Class A Interference Causing Equipment meets all requirements of the Canadian Interference Causing Equipment Regulations ICES-003.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

EN50091-2

Some configurations are classified under EN50091-2 as “Class-A UPS for Unrestricted Sales Distribution.” For these configurations, the following applies:

WARNING This is a Class A-UPS Product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take additional measures.

Class B EMC Statements

FCC Part 15

NOTE This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ICES-003

This Class B Interference Causing Equipment meets all requirements of the Canadian Interference Causing Equipment Regulations ICES-003.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



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CHAPTER 1

INSTALLATION

The Powerware® Multi-Port Module is an X-Slot™ connectivity device that supports six serial ports, providing greater power management control and flexible monitoring.

The module can communicate with other UPSs, computers, and modems. With the Plug and Play (PnP) protocol, the Multi-Port Module automatically identifies the type of PnP device attached to any of the serial ports.

Port 1 supports dry contacts with relays for Low Battery, On Bypass, or Utility Failure. Modem support is available with Ports 2 through 6. The Modem feature is helpful if you want to be notified when a problem occurs or to monitor the UPS status from an unattended computer using UPSdial.

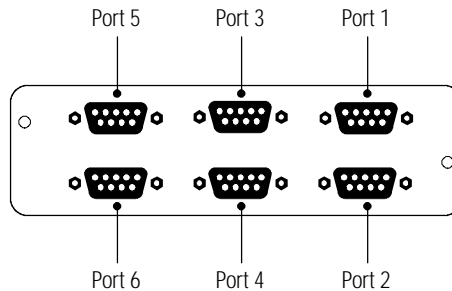


Figure 1. The Multi-Port Module

Inspecting the Equipment

If any equipment has been damaged during shipment, keep the shipping cartons and packing materials for the carrier or place of purchase and file a claim for shipping damage. If you discover damage after acceptance, file a claim for concealed damage.

To file a claim for shipping damage or concealed damage: 1) File with the carrier within 15 days of receipt of the equipment; 2) Send a copy of the damage claim within 15 days to your service representative.

Installing the Multi-Port Module

The Multi-Port Module can be installed with any Powerware UPS that has an X-Slot. To install the module, perform the following steps:

1. For On-Bypass relay only. If you plan to use the On-Bypass relay available on Port 1, verify that the jumper is in the Enabled position (see Figure 2).

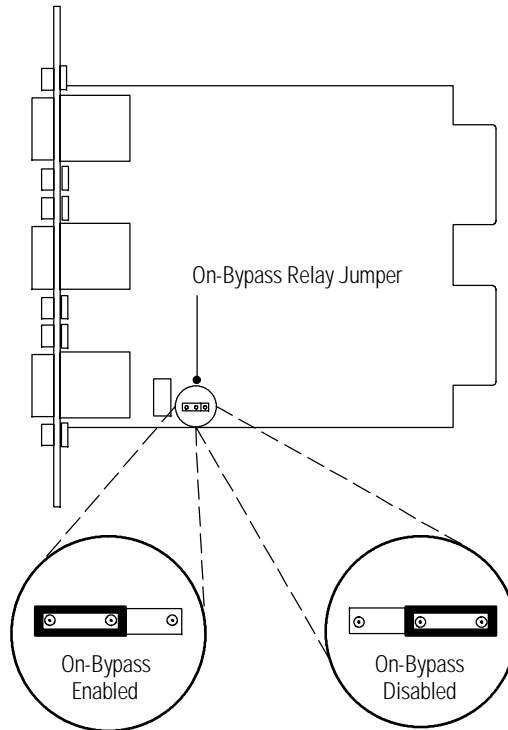


Figure 2. On-Bypass Relay Jumper

2. Remove the X-Slot cover (or existing X-Slot module) on the UPS rear panel. Retain the screws (see Figure 3).



NOTE UPSs with a single X-Slot may have another X-Slot module already installed (such as the Powerware 9125 UPS). If there is a communication cable attached to this module, disconnect the cable and then remove the X-Slot module.

3. To prevent electrostatic discharge (ESD), place one hand on a metal surface such as the UPS rear panel.

Align the Multi-Port Module with the slot guides and slide the module into the slot until it is firmly seated.

4. Secure the Multi-Port Module with the screws removed in Step 2.

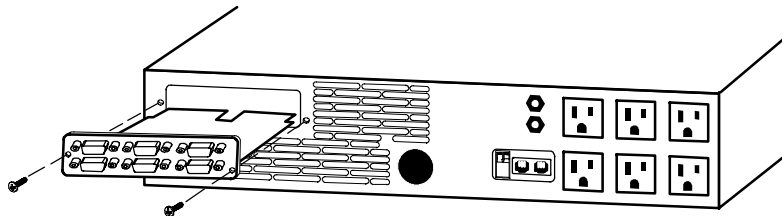


Figure 3. Installing the Multi-Port Module (Powerware 9125 UPS Shown)

5. Continue to Chapter 2, “Configuration” on page 5 to set up the Multi-Port Module for communication with your serial devices.



CHAPTER 2

CONFIGURATION

The Multi-Port Module has a configuration program that you can access by connecting the module to a terminal or a computer with a terminal emulation program.

To use the configuration screens for the Multi-Port Module, you need:

- The serial configuration cable included in the module package.
- A terminal with a serial communication port, or a PC with a terminal emulation program such as HyperTerminal®.

The serial line should be set to 9600 baud, No parity, 8 bits, and 1 stop bit. The configuration program always runs at these settings.

Connecting the Multi-Port Module

To connect the module to the terminal and start the configuration program:

1. Connect the serial cable (supplied) to Port 1 on the Multi-Port Module.
2. Connect the other end of the cable to the communication port on your computer or terminal.
3. Press [Enter]. The Main Configuration screen appears (see Figure 4).

If the Main Configuration screen does not appear, type **CF** and press [Enter].

If you still do not see the Main Configuration screen, check the following conditions:

- The communication settings of the terminal should be 9600 baud, No parity, 8 bits, and 1 stop bit.
- If the serial configuration is correct, check the cabling to be sure all connections are secure.
- Verify that your terminal program is on the correct communication port for the serial connection.
- Verify that the UPS has input power and is turned on.

Main Configuration Screen

The Main Configuration screen displays some of the current configuration settings for your Multi-Port Module. Type CF and press [Enter] to redisplay the Main Configuration screen or to return to this screen from any subscreen.

```

----- Multi Port Main Configuration Screen -----
Serial  Service      Serial      Baud      Custom Modem
Port    Type             Number      Rate      Initialization
-----  -
  1     terminal         . . . . .  9600     ""
  2     server          . . . . .  4800     ""
  3     UPS             0000000000000006  9600     ""
  4     server         . . . . .  4800     ""
  5     server         . . . . .  9600     ""
  6     modem          . . . . .  9600     "ATZ"

IDn Service Type (ups server modem)           Example: id2 modem
MIn set Custom Modem Initialization String     Example: mi3 "ATZ"

SA Save Configuration                         PS Phone Numbers Screen
CF Main Configuration Screen                   MS Modem Configuration Screen

For help enter just the command, for example the two characters, "id".
-----

```

Figure 4. Main Configuration Screen

When you press [Enter] after a command, the module saves the new value; however, the module does not permanently save the change until you use the **SA** command. You can save from any screen. Use the following sequence for configuring the module:

1. Configure the service type for each device that will be connected to the ports (see “Service Type”).
2. Optional: If connecting to a modem, set the modem initialization string (see “Custom Modem Initialization”).

Use the **MS** command to access the Modem Configuration screen for configuring the module to communicate with modems.

When complete, use the **PS** command to enter the phone number parameters.

3. Exit the configuration program (see page 14).

The configuration settings that can be changed are described in the following sections.

Service Type (ID)

To identify the type of device connected to a particular serial port, type: **ID n xxxxxx**, where n equals the port number (2–6) and **xxxxxx** equals one of the following unquoted text strings:

- **server** - this is the default for Ports 2–6; use this service type when connecting the module to a computer
- **terminal** - this is the default for Port 1 and cannot be changed
- **UPS**
- **modem**

For example, **ID4 UPS** configures Port 4 to communicate with a UPS. The Multi-Port Module automatically identifies Plug and Play devices on Ports 2–6.

Custom Modem Initialization (MI)

To customize the modem initialization string, type **MI n** “*string*,” where n equals the port number (2–6). The modem string must be enclosed in quotes. The custom string overrides the default (AT&F) and initializes the modem whenever the Multi-Port Module is powered on or reset. For example, **MI3** “ATL2” turns up the modem speaker volume for the modem on Port 3.

Modem Configuration Screen

To access this screen from the Main Configuration screen, type **MS** and press [Enter]. The Modem Configuration screen appears (see Figure 5).

```

----- Multi Port Modem Configuration Screen -----
Port Number (External)           2     3     4     5     6
MT Modem Type (1-7)              2     2     2     2     2
MA Modem Active (Y/N)            no    no    no    no    no
NR Number of Rings (0-15)        0     0     0     0     0
BD Baud Rate (300-19200)         4800  9600  4800  9600  4800
PT Phone Type (P/T)              tone  tone  tone  tone  tone
CA Cancel Alarm (Y/N)            no    no    no    no    no
CI Call Interval (0-255 min)     0     0     0     0     0
SU Status Interval (0-1524 min)  0     0     0     0     0

SA SAve Configuration            PS  Phone Numbers Screen
CF Main Configuration Screen     for help, enter just command (eg, BD)

Modem Type List: 1=US Robotics 2=Hayes/Generic 3=Motorola 4=MultiTech
                  5=Boca 6=Practical Peripherals 7=GVC
-----

```

Figure 5. Modem Configuration Screen

To change the value for a modem field, type the two-letter command for a specific port number. For example, to change the baud rate to 19200, type: **BD n 19200**, where n equals the port number (2–6). Press [Enter] after each command to save the new setting and return to the Modem Configuration screen.

The following commands can be used to configure the module for specific modem parameters. Press [Enter] after each command to save the new setting and return to the modem screen.

After completing the modem settings, type **PS** and press [Enter] to configure the Phone Numbers screen.

Modem Type (MT)

The **MT** command identifies the specific modem type. Type **MTn** followed by a space and the selection number for the specific modem type, where *n* equals the port number (2–6). The Multi-Port Module supports:

- 1 US Robotics
- 2 Hayes/Generic
- 3 Motorola
- 4 MultiTech
- 5 Boca
- 6 Practical Peripherals
- 7 GVC

For example, **MT5 3** selects a Motorola modem type for Port 5. The default is Hayes. Enter 0 to indicate that no modem is selected; this automatically changes the Modem Active field to inactive (N).

Modem Active (MA)

To activate the modem feature, type **MA n Y** followed by a space and **Y** (for Yes), where *n* equals the port number (2–6). To deactivate the modem feature, type **MA n N** (for No). The default is inactive.

Number of Rings (NR)

Type **NR n** followed by a space and the number of times the modem should ring before answering an outside call, where *n* equals the port number (2–6). You can specify between 0 and 15 rings.

For network security, you can set this value to zero and the modem will never answer a call. The default value is 3 rings.

Baud Rate (BD)

Type **BD n** followed by a space and the baud rate (300, 600, 1200, 2400, 4800, 9600, or 19200), where *n* equals the port number (2–6). The default is 9600 baud.

Phone Type (PT)

Type **PTn** followed by a space and **P** for a pulse-dial phone or **T** for a touch-tone phone, where *n* equals the port number (2–6). The default is tone.

Cancel Alarm (CA)

The Cancel Alarm feature allows you to call the modem to stop the repeated pages determined by the Call Interval. To enable the Cancel Alarm feature, type **CA n Y**, where *n* equals the port number (2–6).

If configured with **Y**, when the modem receives the incoming call, the module stops redialing the pager even if the alarm is still active. If a new alarm occurs, the module restarts the paging process.

To disable this feature, type **CA n N**, where *n* equals the port number (2–6). When set to **N**, the module does not allow alarms to be canceled, even if the modem answers your call.



NOTE If the Number of Rings is set to 0, the Cancel Alarm feature is ignored because the modem does not answer any incoming calls (see “Number of Rings” on page 9).

Call Interval (CI)

The **CI** command allows you to specify the number of minutes the module should wait before paging you again for the same alarm condition. Type **CI n x**, where *n* equals the port number (2–6) and *x* equals 0 to 255 minutes. For example, if you enter **CI2 5**, the module notifies you every 5 minutes while the alarm is active on Port 2. The default is 0 (you only receive the first page for an active alarm).

Status Interval (SU)

The Status Interval is used for dialing computers only (see “Service” on page 12). The **SU** command configures the module to send status information to a computer with **UPSdial** within a specified time period (0 to 1524 minutes).

Type **SU n x**, where *n* equals the port number (2–6) and *x* equals 0 to 1524 minutes. For example, if you enter **SU3 11**, the module sends a status report to the computer on Port 3 every 11 minutes. The default is 0, which disables the Status Interval.

Phone Number Screen

The Phone Number screen allows you to enter the phone number(s) that the modem should dial. The phone numbers can be to a pager or a computer with monitoring software, such as UPSdial.

To access this screen from the Modem Configuration screen, type **PS** and press [Enter]. The Phone Number screen appears (see Figure 6).

```

----- Multi Port Phone Numbers, Options, & IDs -----
                          Alert  Pager  Pager
Cmd  Phone Numbers  SerVice Level  Display  Pause
-----
PH1  . . . . .    2      0
PH2  . . . . .    2      1
PH3  . . . . .    2      4
PH4  . . . . .    2      3
PH5  . . . . .    3      2
PH6  . . . . .    1      1
AP  Alphanumeric Pager ID(s): "0123456 1234567"

AP  Alphanumeric Pager ID (1 or 2 PINs) up to 7 digits each (all in quotes)
PDn Pager Display Value (Numeric pagers) 0 to 8 digits
PPn Pager Pause (wait or pauses) up to 8 characters inside double quotes
SVn Service (1=Computer 2=Standard (Digital) Pager 3=Alphanumeric Pager)
ALn Alert Level (1=Critical 2=Major 3=Minor 4=Informational All Levels)

SA  SAve Configuration          MS  Modem Configuration Screen
CF  Main Configuration Screen   for help, enter just command (eg, PD)
-----

```

Figure 6. Phone Number Screen

The following commands can be used to configure specific dialing parameters. Press [Enter] after each command to save the new setting and return to the Phone Number screen.

Phone Numbers (PH)

Use the **PH** command to enter the phone number(s) that the modem should dial. You can enter up to six different phone numbers. The numbers are dialed in sequential order.

Type **PH n** “**xxxxxxx**,” where n equals the order sequence for the phone number (1–6) and x equals characters for the phone number. The phone number must be enclosed in quotes. You can type up to 15 characters including dialing commands, such as a comma (,) for pause and **W** for wait.

To delete a phone number from the list, enter a **0** for the phone number. For example, enter **PH1 0** to remove the first phone number entry.

Service (SV)

The **SV** command is required and identifies the type of service the phone number dials. Type **SV n** followed by a space and the selection number for the service type, where n equals the phone number entry (1–6). The service types are:

- **0** for none or to inactivate a previous selection
- **1** for computer - If you specify computer, it is recommended that computer numbers are dialed last. When the modem connects to the computer, the module communicates with the monitoring software until the software ends the call.
- **2** for standard digital pager
- **3** for alphanumeric pager - only one entry in the phone list can be alphanumeric

For example, **SV3 2** defines a standard digital pager for the third phone number.

Alert (AL)

Use the **AL** command to specify whether or not you want to be notified when the module receives alarms. Type **ALn** followed by a space and the selection number for the trap level, where *n* equals the phone number entry (1–6). The trap levels are:

- **0** (None), pagers/computers are not notified of any alarms
- **1** (Critical), to be notified of only severe alarms
- **2** (Major), to be notified of both severe and serious alarms
- **3** (Minor), to be notified of minor, serious, and severe alarms
- **4** (All), to be notified of all alarms, including informational alarms and when alarms clear

When the module receives an alarm with the specified trap level, the modem dials all phone numbers with the corresponding trap level. For example, **AL1 3** notifies the first phone number whenever there is a minor, serious, or severe alarm. The default is **0** (None).

Pager Display (PD)

To set the message that appears on the pager, type **PDn “xxxxxxx,”** where *n* equals the phone number entry (1–6) and *x* equals the numeric message. The message must be enclosed in quotes and usually identifies the ID of the UPS or module. Valid characters are 0 through 9 with a maximum length of 8 digits.

Pager Pause (PP)

To adjust the time delay before the modem transmits the numeric message (alarm or status), type **PPn “pause symbols,”** where *n* equals the phone number entry (1–6). The pause symbols must be enclosed in quotes. A comma (,) represents a two-second delay and the @ symbol signals the modem to wait for silence. For example: type **PP2 “,,,”** for the modem to wait six seconds before sending the alarm or status to the second phone number. The default is “,@” for a two-second delay and silence.

Alphanumeric Pager ID (AP)

An alphanumeric pager can have one or two different pagers at the same phone number. Type AP “*pager ID or PIN*” to identify the pager. The ID or PIN must be enclosed in quotes. Valid characters are 0 through 9 with a total maximum length of 15 digits. If more than one ID is used, include both IDs (or PINs) in the same command separated by a space. For example: type AP “5551212” for one ID, or type AP “5551212 5551234” for two IDs.

Exiting the Configuration Program

To activate the new configuration:

1. Type SA and press [Enter] to permanently save the new configuration changes.
2. The module is now configured. Disconnect the Multi-Port Module from your terminal.
3. Connect the serial cable to one of the communication ports on the Multi-Port Module.

If you are using a modem, connect the modem cable to the port that was configured for the modem service type.



NOTE The modem cable is not supplied (see page 16).

4. Connect the other end of the cable to the appropriate port on your serial device.

Pin Assignments

The Multi-Port Module cable pins are identified in Figure 7 and the pin functions are described in Table 1 and Table 2.

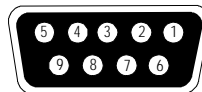


Figure 7. Communication Port

Table 1. Communication Port 1 Pin Assignments

Pin Number	Signal Name	Function	Direction from the Multi-Port Module
1	Low Batt	Low Battery relay contact	Out
2	RxD	Transmit to external device	Out
3	TxD	Receive from external device	In
4	DTR	PnP from external device	In
5	GND	Signal common	—
6	DSR	“Module Ready” to external device	Out
7	RTS	PnP from external device (default) or On Bypass relay contact (jumper-selectable)	In / Out
8	AC Fail	AC Fail relay contact	Out
9	Power Source	+V (8 to 24 volts DC power)	Out

Table 2. Communication Port 2–Port 6 Pin Assignments

Pin Number	Signal Name	Function	Direction from the Multi-Port Module
1	DCD	DCD input	In
2	RxD	Transmit to external device	Out
3	TxD	Receive from external device	In
4	DTR	PnP from external device	In
5	GND	Signal common	—
6	DSR	“Module Ready” to external device	Out
7	RTS	From external device	In
8	CTS	To external device	Out
9	Power Source	+V (8 to 24 volts DC power)	Out

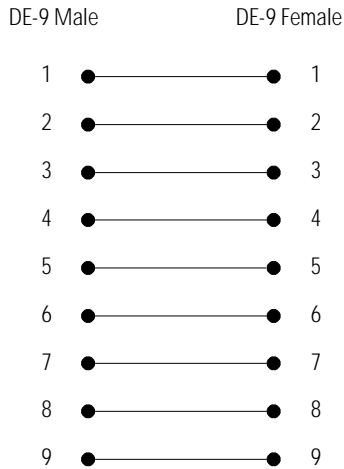


Figure 8. Serial Cable

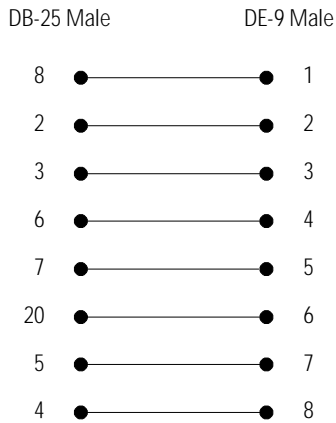


Figure 9. Modem Cable



NOTE The modem cable is not supplied with the Multi-Port Module. It can be ordered from Powerware by calling the **Help Desk** at one of the telephone numbers on page 17. The Powerware part number is 124102027-002.



CHAPTER 3

SERVICE AND SUPPORT

If you have any questions or problems with the Multi-Port Module, call your **Local Distributor** or the **Help Desk** at one of the following telephone numbers and ask for a Multi-Port Module technical representative.

In the United States	1-800-365-4892
In Canada	1-800-461-9166
All other countries	1-919-870-3149

Please have the following information ready when you call the Help Desk:

- Date of failure or problem
- Symptoms of failure or problem
- Customer return address and contact information

If repair is required, you will be given a Returned Material Authorization (RMA) Number. This number must appear on the outside of the package and on the Bill Of Lading (if applicable). Use the original packaging or request packaging from the Help Desk or distributor. Units damaged in shipment as a result of improper packaging are not covered under warranty. A replacement or repair unit will be shipped, freight prepaid for all warrantied units.



NOTE For critical applications, immediate replacement may be available. Call the **Help Desk** for the dealer or distributor nearest you.

Two-Year Limited Warranty (US and Canada Only)

Powerware Corporation warrants the electronics of the Multi-Port Module to be free from defects in material and workmanship for a period of two years from Date of Purchase. If, in Powerware Corporation's opinion, the electronics fails to meet its published specifications due to a defect in material and workmanship covered by this warranty, Powerware Corporation will repair or replace the warranted Unit at no cost to the customer for parts and labor.

Equipment supplied by Powerware Corporation, but not manufactured by Powerware Corporation, is warranted solely by the manufacturer of such equipment. Powerware Corporation does not warrant equipment not manufactured by Powerware Corporation.

This warranty does not apply to any Unit that has been subject to neglect, accident, abuse, misuse, misapplication, incorrect connection or that has been subject to repair or alteration not authorized in writing by Powerware Corporation's personnel. THIS WARRANTY IS THE PURCHASER'S (USER'S) SOLE REMEDY AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTY, AND THERE ARE NO OTHER EXPRESSED OR IMPLIED GUARANTEES OR WARRANTIES (INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE). In no case will Powerware Corporation's liability under this contract exceed the value of the Unit furnished.

In no event shall Powerware Corporation be liable for any indirect, incidental, special or consequential damages. Powerware Corporation shall not be responsible for failure to provide service or parts due to causes beyond Powerware Corporation's reasonable control. THIS LIMITED WARRANTY IS VOID UNLESS USER RETURNS TO POWERWARE CORPORATION THE INCLUDED WARRANTY REGISTRATION CARD WITHIN THIRTY (30) DAYS OF DELIVERY.

Any advice furnished the Purchaser (User) before or after delivery in regard to use or application of Powerware Corporation equipment is furnished without charges and on the basis that it represents Powerware Corporation's best judgement under the circumstances. The use of any such advice by the Purchaser (User) is solely and entirely at his or her own risk.

This limited warranty applies only to equipment installed in the fifty United States of America and Canada. In other countries, consult your local distributor.

Extended Service Coverage

A full complement of warranty extensions and enhancements are available from Powerware Corporation for your UPS. Information pertaining to these services should be available in the shipping container along with this manual. If not, or if you would like more information, call the Powerware Corporation **Help Desk** and ask about warranty services.

International Limited Warranty

Powerware Corporation warrants the electronics modules manufactured by Powerware Corporation ("Unit") and batteries originally packaged in the Unit or in battery packs manufactured by Powerware Corporation against defect in material or workmanship until the earlier of: (1) 18 months from date of shipment or (2) 12 months from date of initial start-up is performed by Powerware Corporation field personnel or field personnel authorized by Powerware Corporation to carry out such service efforts on its behalf and provided that, startup occurs no later than 6 months after shipment. If the unit does not function in accordance with its published specification, the user should give Powerware Corporation prompt notice thereof and if requested by Powerware Corporation, the user shall return the warranted Unit or parts thereof to the plant or service station designated by Powerware Corporation for inspection by Powerware Corporation. Any Unit which may require repair and/or replacement of parts as the result of defects in workmanship or material within the stated warranty period, will be replaced or repaired at Powerware Corporation's option without charge for replacement parts. The cost of shipment, duties or all other expenses associated with shipment of repaired or replaced items is for the account of the user.

Powerware Corporation will not be responsible or liable for work done or expense incurred in connection with repair or replacement except as expressly authorized by Powerware Corporation, Raleigh, NC, USA in writing. If a service engineer is required, labor, at current published rates, and all travel and living expenses are for the account of the user.

Powerware Corporation does not warrant equipment not manufactured by Powerware Corporation including any battery not originally packaged with the Unit or in battery packs manufactured by Powerware Corporation. The manufacturer of all such equipment shall solely warrant that equipment and Powerware Corporation shall have no responsibility or liability thereof.

IT IS AGREED THAT POWERWARE CORPORATION, ITS PARENT COMPANY, OR ANY OF THEIR AFFILIATES, SHALL HAVE NO LIABILITY FOR INDIRECT, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES, AND THAT THERE IS NO WARRANTY, EITHER EXPRESSED OR IMPLIED BY LAW OR THE PARTIES HERETO, OTHER THAN THOSE EXPRESSLY SET FORTH HEREIN. THIS WARRANTY DOES NOT COVER DAMAGE TO THE UNIT CAUSED BY MISUSE, ABUSE, NEGLIGENCE, UNAUTHORIZED MODIFICATIONS, IMPROPER MAINTENANCE, ACCIDENTS OR OTHER ABNORMAL CONDITIONS.

Force Majeure

Powerware Corporation shall not be liable for any delays or defaults hereunder by reason of fire, floods, acts of God, labor troubles, accidents to machinery, delays of carriers or suppliers, inability of suppliers to supply, the impositions of priorities, restrictions or other acts of government, or other causes beyond its reasonable control.

This Warranty shall be governed by the laws of the State of North Carolina, USA in all respects.



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