Powerware®

Environmental Monitoring Probe

USER'S GUIDE

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POWERWARE®

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Environmental Monitoring Probe

The Powerware® Environmental Monitoring Probe (EMP) is a connectivity device that allows you to remotely monitor the temperature, humidity, and status of two contact devices via a standard Web browser, providing greater power management control and flexible monitoring.

The EMP can be used with any Powerware UPS equipped with a 10/100 Mb ConnectUPS™ Web/SNMP Card (firmware v3.01 or higher).

NOTE *Firmware updates for the ConnectUPS Web/SNMP Card can be downloaded from www.powerware.com.*

When the EMP is plugged into the ConnectUPS Card communication port, temperature and humidity readings are automatically displayed on the ConnectUPS Card Summary page. If enabled, the status of the external contact devices is also displayed on the Summary page. To access the readings, you must run the Web browser and connect to the ConnectUPS Card IP address.

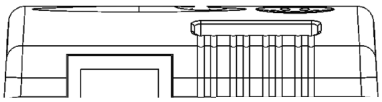


Figure 1. The Environmental Monitoring Probe

Features

The EMP has the following features:

- Hot-swappable feature simplifies installation by allowing you to install the probe safely without powering down the ConnectUPS Card or critical UPS load.
- Monitors temperature and humidity information of any desired environment to protect your critical equipment.

- Measures temperatures between 0 and 80°C with an accuracy of ±1°C.
- Measures relative humidity between 10 and 90% RH with an accuracy of ±5%.
- Can be located away from the ConnectUPS Web/SNMP Card with a straight-through CAT5 network cable up to 20m (65.6 ft) long.
- Monitors the status of two user-provided contact devices.
- Temperature, humidity and contact closure status may be displayed via HTTP Web browser, Internet-ready cell phone or PDA, or SNMP management software.
- User selectable alarm thresholds allow you to define acceptable temperature or humidity limits.
- Configurable operating system shutdowns (requires NetWatch client software) based on changes in contact closure status and/or unacceptable temperature or humidity values.
- E-mail notification through SMTP (simple mail transport protocol) via e-mail client software, a PCS (personal communication services) phone, or alphanumeric pager when acceptable alarm limits are exceeded or contacts status changes.
- Changes in contact closure status are logged in the ConnectUPS Card's Event History log.
- When temperature and humidity values exceed user-selectable limits, the event is logged in the ConnectUPS Card's Event History log.
- Compatible with any Powerware 10/100 Mb ConnectUPS Web/SNMP Card (ConnectUPS-X, ConnectUPS-BD, or ConnectUPS-E models).

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 EMP

Use the following steps to install the EMP:

1. If applicable, connect external contact closure inputs to the screw terminals on the EMP (see Figure 2 and Table 1).

NOTE *Contact closure device 1 is connected between Pins 1 and 2. Device 2 is connected between Pins 3 and 4 (as labeled to show device 1 and 2). Contact closure devices may be normally open or normally closed.*

2. Connect the supplied straight-through CAT5 network cable from the EMP's RJ45 connector labeled "010101" to the COM port on the ConnectUPS Web/SNMP card.

NOTE *If the configuration cable is still attached to the ConnectUPS Card, remove and store it for future use.*

NOTE *If the supplied straight-through CAT5 network cable is not long enough for your application, you may substitute a longer cable (not to exceed 20m/65.6 ft).*

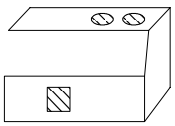


Table 1. EMP Screw Terminal Pin Assignment

Pin Number	Description	Normally-open/closed
1	Contact 1 Return	NC
2	Contact 1 Signal Input	NO
3	Contact 2 Return	NC
4	Contact 2 Signal Input	NO

3. Verify that the ConnectUPS Web/SNMP Card has a network connection, is installed in a UPS, and the UPS is plugged in and turned on. The EMP is automatically recognized by the ConnectUPS Card.
4. Run the Web browser and connect to the ConnectUPS Card IP address.

   The home page of the ConnectUPS Card appears. The temperature and humidity status is automatically displayed in the Current Status section (see Figure 3).

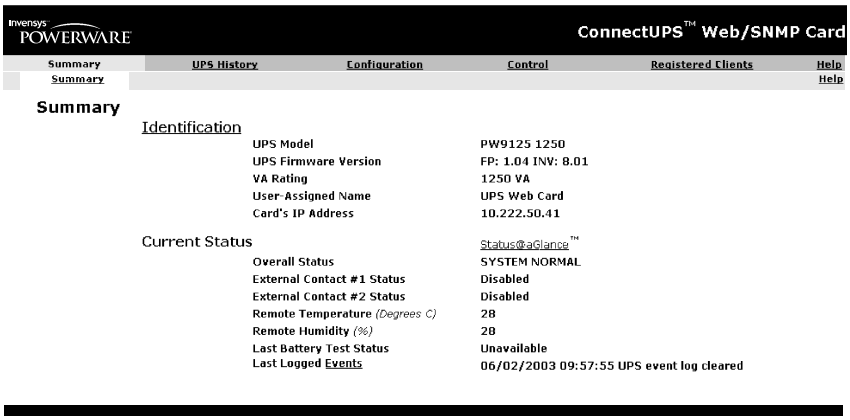
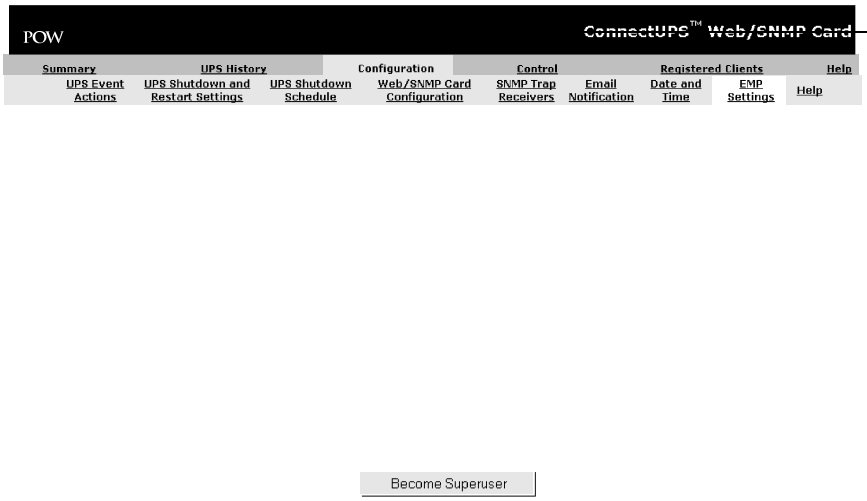


Figure 3. Sample ConnectUPS Card Home Page

5. Before the status of the contact closures is displayed, you must configure and enable this feature on the ConnectUPS Card.

   You can access this information via the ConnectUPS Card home page or Telnet (see the following section for Telnet configuration).

   To use the ConnectUPS Card home page, select the Configuration menu and then the EMP Settings link (see Figure 4).



Telnet Configuration

To configure the ConnectUPS Card via Telnet:

1. When the Main Menu screen appears, type **1** to enter the Web/SNMP Card Settings screen.
2. Type **12** to enter the Set External Contact Monitoring screen.

Service and Support

If you have any questions or problems with the UPS, call your **Local Distributor** or the **Help Desk** at one of the following telephone numbers and ask for a ConnectUPS Web/SNMP Card technical representative.

In the United States:	**1-800-356-5737** or **1-608-565-2100**
Europe, Middle East, Africa:	**+44-17 53 608 700**
Asia:	**+852-2830-3030**
Australia:	**+61-3-9706-5022**

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

- Model number and Serial number
- Version number (if available)
- 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 Environmental Monitoring Probe 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 that 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, NEGLECT, 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.