

ECM SNMPIV

32 series

User's Guide

V1.01

EPOWER
POWER ON DEMAND

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1. Introduction

1-1. Features

SNMPIV is a new generation SNMP (Simple Network Management Protocol) monitoring product. Not only could remote control the RPM and get the current status of it, the SNMPIV also could provide other functions, ex. connect to Modem could make the monitoring possible when there is no permanent connection to Internet. The SNMPIV could also be used to connect to ENV to get the temperature, humidity information.

User only needs to install the software of the enclosure SNMPIV CD on a Windows environment to configure the IP address. All the other configurations can be accomplished in a Web browser.

Features:

1. Provide SNMP MIB to monitor & control various devices
2. Auto-sense 10M/100M Fast Ethernet
3. Manage and configure via Telnet, Web Browser or NMS (MIB)
4. Support TCP/IP, UDP, SNMP, Telnet, SNTP, PPP, HTTP, SMTP Protocol
5. Providing easy setup and upgrade tools via MS-Windows, just a few seconds to finish IP setting, about 1.5 minutes to upgrade firmware.
6. Sending both of SNMP TRAP and E-mail for events notification.
7. Auto email daily history report
8. SNMPIV – 3Ports : Environment Measurement (Optional Kits), External modem dial in/out via PPP protocol to control devices.

1-2. Applications

SNMPV makes your UPS on the Internet

An UPS can be configured with either an internal or an external SNMPV; it is then connected to the network. The SNMPV contains a MIB agent. The agent communicates both solicited and unsolicited messages to the Network Management Station (NMS). Unsolicited messages are defined by the MIB and are built into the agent for critical items such as AC power failure and low battery detection. The agent recognizes these critical events and immediately forwards them to the Network Management Station. The network manager will immediately notice the alarm and the flashing icon of the SNMPV. By clicking on the icon, you will be able to see the alarm messages. If nobody is present, the Network Management Station will shutdown the programs, the OS server and eventually the UPS safely.

SNMPV makes your RPM on the Internet

When the RPM are installed the SNMPV, the system manager could check each and every devices' condition by a computer with Browser installed. The manager could monitor and control the devices by simply input the IP address of the SNMPV. When there is a power abnormal condition happened, the SNMPV could also send the trap information to the system manager to take proper action.

SNMPV makes CPS (Current Probe Sensor) On the Internet

SNMPV could be used to be a current monitoring utility, to get the up to 16 location of the current information. The information could also be revealed on the SNMPV Web page.

SNMPV makes ATS (Automatic Transfer Switch) on the Internet

SNMPV could be used to be a transfer switch utility, to change the input source and monitor the two input power voltage information. The information could also be revealed on the SNMPV Web page.

SNMPV makes ENV (Environment Monitoring) on the Internet

3Port SNMPV could be used to connect the surrounding monitoring utility, to get the temperature/humidity information. The information could also be revealed on the SNMPV Web page. When there is an abnormal condition happened, it could also be sent as a trap to the system manager and activated some pre-set action set by administrator.

1-3. Package

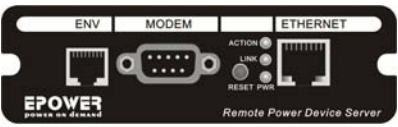
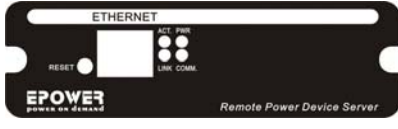
The Contents of SNMPIV are:

◆ CD-ROM

- SNMP Utility: Configure IP address and upgrade firmware.
- MIB: Management Information Base for Network. Support UPS, RPM, ENV, CPS and ATS.
dgpups.mib supports UPS, ENV.
dgprpm.mib supports RPM, CPS and ATS.
- User's Guide (PDF document)
- Adobe Acrobat Reader

1-4. Outlook

1. Model:

	ETHERNET	MODEM	ENV
 <p>Fig.1 SNMP 3201 Panel</p>	Yes	Yes	Yes
 <p>Fig.2 SNMP 3204 Panel</p>	Yes	n/a	n/a

2. LED Indication

3201 LED Table			
Yellow	Red	Green	Status
Solid Off	Solid Off	Solid ON	Power ON
Flashing	Solid ON	Solid ON	System initial
Solid ON	Solid Off	Solid ON	Normal operation
Solid ON	Flashing	Solid ON	Connecting to incorrect device
Flashing	Flashing	Solid ON	Writing data to flash memory

3204 LED Table		
Light color	Signal definition	Condition description
Green	Power state	On: Normal power
Red	Connection state with device	Flash: Connecting to incorrect device
Orange	Correspondence state	Light flashes when SNMP Utility transmits command to UPS

LAN Port LED	
Light color	Condition description
Green	On: Internet correspond speed is 100M Flash: Data transmitting
Yellow	On: Internet correspond speed is 10M Flash: Data transmitting

Reset key function:

1. Reset the SNMP card power to restart the card.
2. Pressing and hold the reset key, then turn on the power source of SNMP card, and then wait for 30 seconds. SNMP card will be back to factory default setting

2. Installing the Software

2-1. Install SNMP Utility

1. Load SNMP IV Utility CD to the CD-ROM driver and execute SNMP Utility.exe.
2. After complete installation, there will be a 'SNMP Utility' group in Windows 'Start' → 'Program Group'.
3. Click "SNMP Utility" could initiate the SNMP Utility and enter the main window for configuration.



Fig.3 SNMP Utility Group

2-2. Using SNMP Utility

In the right table of the main window of SNMP Utility is to show you all of SNMPIV be searched in LAN; left side is function selection menu.

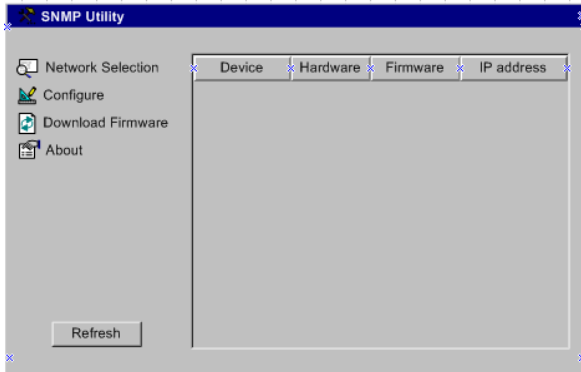


Fig.4 SNMP Utility Main Window

1. Network Selection

After execute SNMP Utility, SNMP Utility would search computer's network adapter automatically, or, click on Network Selection from the main page. The screen would show the network adapter that has been searched. Choose the network adapter that connects with LAN, for your PC, then press "OK" to return the main page of SNMP Utility. SNMP Utility would search the SNMPIV in the same LAN area and show all of the SNMPIV is found.

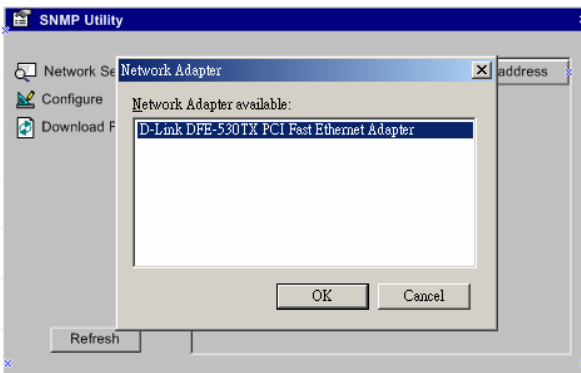


Fig.5 SNMP Utility: Network Selection

2. Configure

Choose one of the SNMPIV devices from the right of the screen, then click “Configure” or double click the items directly, it would jump out the following setting page.

1. IP Address: Set IP address for SNMPIV

Please set IP address; subnet mask; and gateway by manually or use DHCP or use BOOTP. After setting completely, enter IP address from Telnet or Browser to connect to SNMPIV’s website.

When using DHCP or BOOTP to set up IP address, IP address, Subnet Mask and Gateway would receive directly by the system.

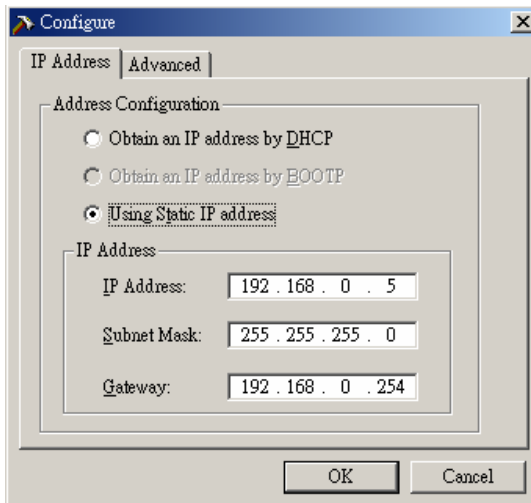


Fig.6 SNMP Utility: Set IP address for SNMPIV

2. Advanced: Advanced SNMPIV Setting

In order to ensure the secure management of devices, SNMP Utility provides two protecting function:

a. SNMP Utility Password

If you set the password here, there is no way to give any command to SNMPIV by SNMP Utility software without your password.

(Note: Please keep the password safely, if lose this password, SNMPIV will never be able to complete any upgrade process.)

b. Management Protocol

SNMPIV provides HTTP (WEB) and Telnet to reference any related parameter setting for the manager. Concerning with security, the manager could build to use openly or any advance port setting upon the above two methods. Followings are the description:

1. At advanced setting, two functions were set as activated by using port number 80 and 23.
2. Untick means not using the function.
3. When set to the other port number, full IP Address must be entered in order to login to the website and Telnet.

For example,

- Set 81 as HTTP port number, then `http://192.168.0.177:81` must be typed at the web address to proceed to SNMPIV website.
- Set 24 as Telnet port number, then "192.168.0.177 24" must be typed at Telnet to proceed to the Telnet screen of SNMPIV.

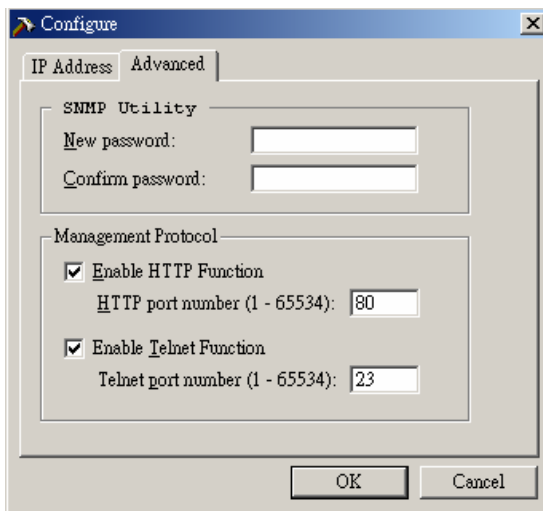



Fig.7 SNMP Utility: Advanced setting of SNMPIV

3. Download Firmware

SNMPIV offers convenient firmware upgrade function. When you are going to upgrade firmware, click **Download Firmware** from SNMPIV Utility, click  select new firmware file (*.bin) and press "Start". Thus, SNMPIV's Red LED and Yellow LED flashing alternative means the firmware is upgrading. After upgrade completed, SNMPIV will auto reboot.

Note: SNMPIV provided well-considerable protection function. If uploading was interrupted and raised data in incomplete, SNMPIV will keep its default to avoid of complete data loss. In the case, just repeat "firmware upload" as well.

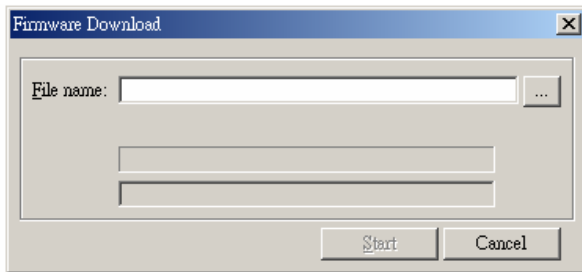


Fig.8 SNMP Utility: Update SNMPIV firmware

4. Search SNMPIV

SNMP Utility would search SNMPIV from LAN automatically, or search manually by clicking on "Refresh".

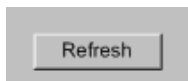


Fig.9 SNMP Utility: SNMPIV search manually

3. Web management interface

After finishing SNMPiV installation, including hardware installation and IP setting, you are now able to go to SNMPiV web to monitor and control the devices by inputting SNMPiV IP address in Browser.

1. Starting the Web Browser (Netscape or Internet Explore)
2. Enter the SNMPiV IP Address (Which is setting on SNMP Utility, e.g. 211.21.67.51).
3. On the first screen, enter the current password.

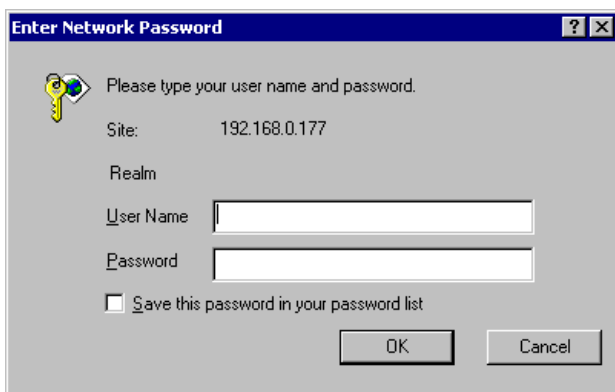


Fig.10 SNMPiV Login dialog

(Note1: When you log in the SNMPiV web management interface first time after configure the IP, just click [OK] to enter the web directly.)

(Note2: If you want set the user name and password, please go to the Configuration- WEB/Telnet to setup.)

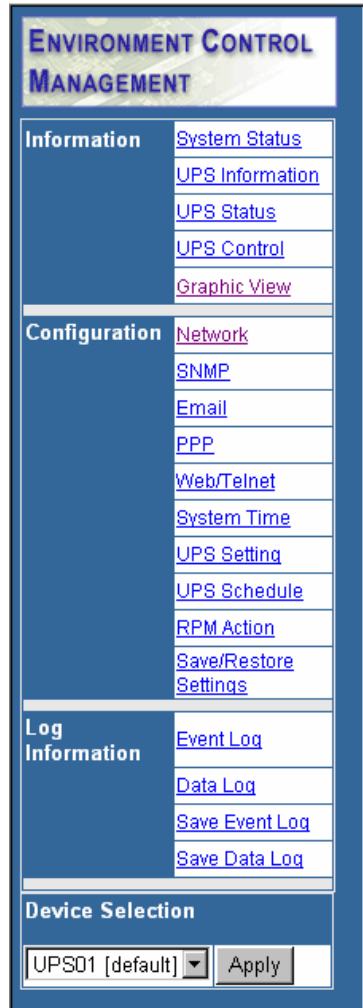
(Note3: SNMPiV only support the browser with HTTP 1.1 version or higher.

After enter to SNMPIV Management Web interface, there are 4 main function items in the Left Frame:

- 1. **Information:**
Provide the information for the connected Device.
- 2. **Configuration:**
Configure the network and devices setting.
- 3. **Log Information:**
Record the events and data that generate by devices.
- 4. **Device selection:**
Select the devices to monitor the status, including UPS, RPM, CPS, ATS.

Every main function has its own sub-menu,

Fig.11 Choose Device



3-1. Information: System Status

This page is to show SNMPIV system information and Network setting. Values shown here are either provided by SNMPIV itself or they are user settings from the Configuration pages.

1. System Information

This section shows SNMPIV system information. Values in Firmware Version, Serial Number and System Time, are provided by SNMPIV itself. Other values are user settings from the Configuration pages.

2. Network Status

This section is to show SNMPIV Network settings. The MAC address is provided by SNMPIV. All other values in this section are user settings from the Configuration pages.

System Status	
System Information	
Firmware Version	1.0 SMP
System Name	SNMPIV Agent
System Contact	Administrator
Location	Office
System Time	06/18/2003 16:42:34
Uptime	23 59 57
Network Status	
MAC Address	00:03:EA:00:1D:8A
Connection Type	Auto Sense
IP Address	192.168.0.5
Subnet Mask	255.255.255.0
Gateway	192.168.0.254
Email Server	
Primary DNS Server	
Secondary DNS Server	
Primary Time Server	128.118.46.3
Secondary Time Server	120.250.36.2
PPP Server	10.0.0.1
Login IP	10.0.0.2

Fig.12 System Status

3-2. Configuration: Network

This page is to set SNMPiV Network settings.

1. IP Address

This section is to set SNMPiV IP address.

2. Subnet Mask

This section is to set SNMPiV Subnet Mask.

3. Gateway

This section is to set SNMPiV Gateway.

4. Obtain an IP address

This section is to choose to set SNMPiV IP address manually or via DHCP.

The above 4 sections can be set in SNMP Utility as well. SNMPiV will reboot after any of the above are changed.

5. DNS Server IP

Primary DNS Server IP

This section is to set SNMPiV primary DNS Server IP address.

Secondary DNS Server IP

This section is to set SNMPiV secondary DNS Server IP address. SNMPiV will use the secondary DNS Server IP address when the Primary DNS Server IP address is not working.

6. Ethernet

Connection Type

This section is to set communication speed between SNMPiV and Network.

7. Dynamic DNS

Allow user to export host name to Internet through DDNS service provider. User on Internet can access the SNMP card behinds it through a predefined name registered in DDNS service provider.

Service Provider

This section is to select a DDNS service provider.

Domain Name

This section is to set the pre-defined name registered in DDNS provider.

8. PPPoE

PPP over Ethernet connection to Internet are supported.

SNMPV will reboot after Connection Type is changed.

Network	
IP Address *	
IP Address	211.22.00.59
Subnet Mask	255.255.255.240
Gateway	211.22.80.57
Obtain an IP Address*	By manual
DNS Server IP	
Primary DNS Server IP	168.95.1.1
Secondary DNS Server IP	
Ethernet	
Connection Type*	Auto Sense
Dynamic DNS	
Services Provider	None
Domain Name	
Login Name	
Login Password	
Use external STUN server to get Public IP to register	No
Primary STUN Server IP	
Secondary STUN Server IP	
PPPoE	
When Connection should be made	Disabled
Login Name	
Login Password	
* Modify the items will cause SNMPV to reboot.	
Apply Reset	

Fig.13 Network Setting

3-3. Configuration: SNMP

This page is to set SNMPIV SNMP settings so it can be used by a NMS (Network Management System). (Eg: SNMPC or HP Openview)

1. MIB System

System Name

This section is to give a name to a SNMPIV.

System Contact

This section is to give a name to the administrator.

System Location

This section is to set SNMPIV location.

2. Access Control

Manager IP Address

This section is to set the IP address that the administrator can manage SNMPIV from the specific IP address. It is valid for up to 8 IP addresses. *.*.*.* is the default setting without any access restriction for IP.

Community

This section is to set a Community name for NMS. The community name has to be as the same as the setting in NMS.

Permission

This section is to set authorities of administrators. Options are Read, Read/Write, and No Access.

Description

This section is for an administrator to make notes.

3. Trap Notification

Receiver IP Address

This section is to set receivers IP address for receiving traps sent by SNMPIV. It is valid for up to 8 IP Addresses.

Community

This section is to set a Community name for NMS. The community name has to be as the same as the setting in NMS.

Severity

This section is to set Trap receiver levels. There are three levels of Trap receiver:

- Information: To receive all traps.
- Warning: To receive only “warning” and “severe” traps.
- Severe: To receive only “severe” traps. (Please refer to NMS manual for Trap levels.)

Accept

This section is to set to receive a trap or not.

Description

This section is for an administrator to make notes.

Event

This section is to select events for SNMPIV to send traps. Clicking on Select will open a Select Events List. Event Traps may be selected from this list.

UPS Events	
<input checked="" type="checkbox"/>	Schedule Shutdown Event
<input checked="" type="checkbox"/>	UPS Load Overrun
<input checked="" type="checkbox"/>	UPS Communication Lost
<input checked="" type="checkbox"/>	Turn Off UPS
<input checked="" type="checkbox"/>	AC Power Failed
<input checked="" type="checkbox"/>	UPS Battery Low
ENV Events	
<input checked="" type="checkbox"/>	Smoke Alarm
<input checked="" type="checkbox"/>	DiDo Alarm
<input checked="" type="checkbox"/>	MIMo01 Alarm
<input checked="" type="checkbox"/>	Environmental Temperature Overrun
<input checked="" type="checkbox"/>	Environmental Temperature Underrun
<input checked="" type="checkbox"/>	Environmental Humidity Overrun
<input checked="" type="checkbox"/>	Environmental Humidity Underrun

Fig.14 UPS and ENV Events List

SNMP					
MIB System					
System Name		SNMP Agent			
System Contact		Administrator			
System Location		Office			
Access Control					
Manager IP Address	Community	Permission	Description		
..*.*	public	Read/Write			
..*.*	public	No Access			
..*.*	public	No Access			
..*.*	public	No Access			
..*.*	public	No Access			
..*.*	public	No Access			
..*.*	public	No Access			
..*.*	public	No Access			
Trap Notification					
Receiver IP Address	Community	Severity	Acceptance	Description	Events
	public	Information	No		Select
	public	Information	No		Select
	public	Information	No		Select
	public	Information	No		Select
	public	Information	No		Select
	public	Information	No		Select
	public	Information	No		Select
	public	Information	No		Select
<input type="button" value="Apply"/> <input type="button" value="Reset"/>					

Fig.15 SNMP Setting

3-4. Configuration: Email

This page is to set email details. You may set the specific mail receivers when the devices have something occur

1. Email Setting

This section is to set SNMPIV Email Server.

Email Server

This section is to set SNMPIV's Email server address.

Sender's Email Address

This section is to set SNMPIV's Email address.

Email Server Requires Authentication

This section is to set whether the Email Server requires authentication.

Account Name

This section is to set an Email account name when the email server requires authentication.

Password

This section is to set a password when the email server requires authentication.

Send Email When Event Occurs

This section is to set SNMPIV to send warning Email when an event occurs.

2. Recipient's Email Address (for Event Log)

This section is to set Email Addresses to receive warning email sent by SNMPIV when an event occurs. It is valid for up to 8 Email addresses.

Event

This section is to select events for SNMPIV to send warning email. Clicking on Select will open a Select Events List. Event email may be selected from this list.

3. Recipient's Email Address (for Daily Report)

This section is to set Email Addresses to receive Daily Report email sent by SNMPIV when an event occurs. It is valid for up to 4 Email addresses.

Send Email for Daily Report (hh.mm.ss)

This section is to set a particular time for SNMPIV to send Daily Report every day.

Email		
Email Setting		
Email Server	<input type="text"/>	
Sender's Email Address	<input type="text"/>	
Email Server Requires Authentication	NO <input type="button" value="v"/>	
Account Name	<input type="text"/>	
Password	<input type="text"/>	
Send Email When Event Occurs	NO <input type="button" value="v"/>	
Recipient's Email Address (for Event Log)		
No.	Email Address	Events Selection
Account 1	<input type="text"/>	<input type="button" value="Select"/>
Account 2	<input type="text"/>	<input type="button" value="Select"/>
Account 3	<input type="text"/>	<input type="button" value="Select"/>
Account 4	<input type="text"/>	<input type="button" value="Select"/>
Account 5	<input type="text"/>	<input type="button" value="Select"/>
Account 6	<input type="text"/>	<input type="button" value="Select"/>
Account 7	<input type="text"/>	<input type="button" value="Select"/>
Account 8	<input type="text"/>	<input type="button" value="Select"/>
Recipient's Email Address (for Daily Report)		
No.	Email Address	
Account 1	<input type="text"/>	
Account 2	<input type="text"/>	
Account 3	<input type="text"/>	
Account 4	<input type="text"/>	
Send Email for Daily Report (hh:mm:ss)	NO <input type="button" value="v"/>	at <input type="text"/>
<input type="button" value="Apply"/> <input type="button" value="Reset"/>		

Fig.16 Email Setting

3-5. Configuration: PPP

This page is to set PPP dial information for modem.

PPP	
PPP Dial-in	
Login Name	<input type="text"/>
Login Password	<input type="password"/>
PPP Server IP	<input type="text" value="10.0.0.1"/>
Login IP	<input type="text" value="10.0.0.2"/>
Modem Script	<input type="text" value="\N AT&kDM1S0=1 OK \N"/>

Fig.17 PPP Setting

3-6. Configuration: WEB/Telnet

This page is to set up the User Account in SNMPIV.

1. User Account

User Name

This section is to set a user name for SNMPIV web pages. It is valid for up to 8 users. Users have to input the user name to get access to SNMPIV web pages from a web browser.

Password

This section is to set a password for SNMPIV web pages. Users have to input the password to get access to SNMPIV web pages from a browser.

Permission

This section is to set user's authorizations of Read, or Read/Write.

IP Filter

This section is to set a particular IP address. Users can only gain access to SNMPIV web pages if they come from this IP address. If you want to manage SNMPIV from any IP address, you can set it as *.*.*.*.

Web/Telnet			
User Account			
User Name	Password	Permission	IP Filter
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****
<input type="text"/>	<input type="text"/>	Read/Write	****

Apply Reset

Fig.18 Web/Telnet Setting

3-7. Configuration: System Time

This page is to set SNMPIV system time. You can provide SNMPIV with up to 2 time servers or you can set a time zone.

1. Internet Time Setting

Time Between Automatic Updates

This section is to set an interval for time synchronization.

Primary Time Server / Secondary Time Server

This section is to set a Primary Time Server and a Secondary Time Server for SNMPIV.

Time Zone (Relative to GMT)

This section is to set a different time zone for different countries.

System Time (mm/dd/yyyy hh:mm:ss)

This section is to set SNMPIV system time manually.

2. System Time (manually)

Set this in the format: mm/dd/yyyy hh:mm:ss

System Time	
Internet Time Setting	
Time Between Automatic Updates	1 Hour ▾
Primary Time Server	128.118.46.3
Secondary Time Server	128.250.36.2
Time Zone (Relative to GMT)	GMT+8:00 ▾
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	
System Time	
System Time (mm/dd/yyyy hh:mm:ss)	09/30/2003 13:55:35
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

Fig.19 System Time

3-8. Configuration: Save/Restore Settings

This page is to provide user can save and restore the SNMPiV system setting.

Save current configuration

This section is to save the system configuration to desktop PC.

Restore previous configuration

This section is to restore the pre-saved configuration to SNMPiV.

Reset to factory default

This section is to reset system setting to factory default.

Save/Restore Settings	
Save current configuration	<input type="button" value="Save"/>
Restore previous configuration	<input type="text"/> <input type="button" value="瀏覽..."/> <input type="button" value="Restore"/>
Reset to factory default	<input type="button" value="Reset"/>

Fig.20 Save/Restore Settings

3-9. Log Information: Event

1. Event Log

This page is a device event log. It shows a record of all events, giving the Date/Time of the event and a detailed description of each. It can log up to 500 events. When this limit is reached SNMPv4 will delete the earliest event record and continue logging new events.

UPS Events List:

- Schedule Shutdown Event
- UPS Load Overrun
- UPS Communication Lost
- Turn Off UPS
- AC Power Failed
- UPS Battery Low

RPM Events List:

- RPM Communication Lost
- Outlet On
- Outlet Off
- Outlet Reboot
- Outlet Fault

ENV Events List:

- Environmental Temperature Overrun
- Environmental Temperature Underrun
- Environmental Humidity Overrun
- Environmental Humidity Underrun

CPS Events List:

- CPS Communication Lost
- Current Out of Threshold 1
- Current Out of Threshold 2

ATS Events List:

- Switch Input Power

Event Log		
Date/Time	Device	Event
10/06/2003 06:21:40	UPS	The UPS passed its internal self-test.

1

Fig.21 Event Log

2. Save Event Log

This function is to save current event log to another file for the other purpose to the manager.

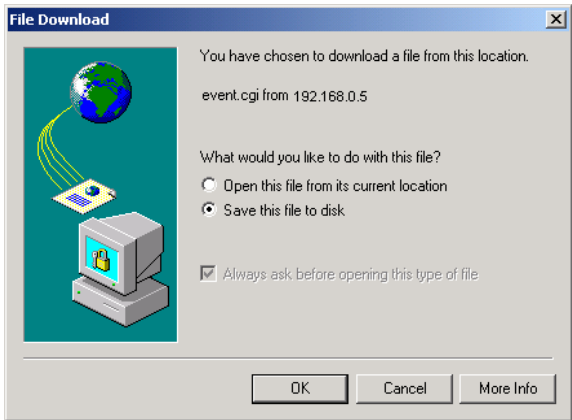


Fig.22 Save Event Log

3-10. Log Information: Data

1. Data Log

This page is a UPS data log. It shows a record of all data log in certain interval time, it includes Date/Time, Input Volt, Output Volt, Freq, Loading, Capacity, and Temp. When this limit is reached SNMPIV will delete the earliest data record and continue logging new data.



Data Log						
Date/Time	Input Volt.	Output Volt.	Freq. (Hz)	Loading	Capacity	Temp.
09/30/2003 08:26:45	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:27:36	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:26:32	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:25:35	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:24:19	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:23:12	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:22:06	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:21:00	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:19:53	113.0	113.0	60.0	21	100	29.0C 84.2F
09/30/2003 08:18:47	113.0	113.0	60.0	21	100	29.0C 84.2F
09/30/2003 08:17:40	113.0	113.0	60.0	21	100	29.0C 84.2F
09/30/2003 08:16:34	113.0	113.0	60.0	20	100	29.0C 84.2F
09/30/2003 08:15:27	113.0	113.0	60.0	22	100	29.0C 84.2F
09/30/2003 08:14:21	113.0	113.0	60.0	21	100	29.0C 84.2F
09/30/2003 08:13:15	113.0	113.0	60.0	20	100	29.0C 84.2F

Fig.23 UPS Data log

2. Save Data Log

This function is to record data log as another file for the other purpose to the manager.

4. Telnet (Remote Monitoring)

4-1. Introduction

SNMPv4 supports multiple Network Management systems and LAN protocols. After finishing hardware installation, you are now able to choose any utilities that provided by SNMPv4 to monitor and control RPM.

Here are introduction for using Telnet.

4-2. Telnet Configuration

1. Select "Start" from Windows, click "Run" to key-in SNMPIV IP Address

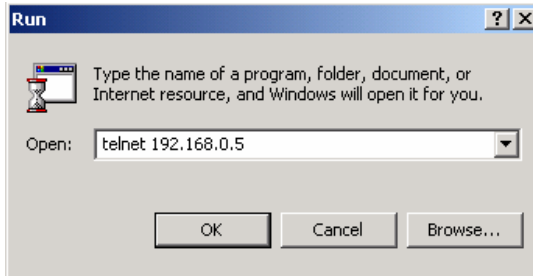


Fig.24 Telnet startup

2. Successful link-up display:

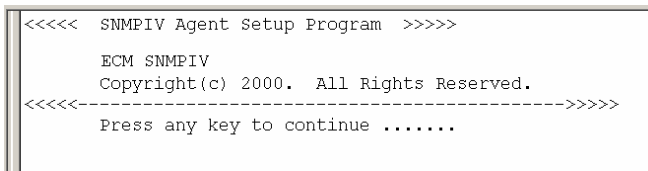


Fig.25 Telnet Connection

3. Initial to setup, please press "Enter" to enter telnet main screen. If the User Name and Password had been set before, please enter actual value to access.



Fig.26 Telnet: Input User Name / Password

4. Main screen is as follows:

```

<<<<          Main Menu          >>>>
<<<<----->>>>
1. Set IP Address.
2. Set SNMP MIB System.
3. Set SNMP Access Control.
4. Set SNMP Trap Notification.
5. Set UPS Properties.
6. Set UPS Devices Connected.
7. Set System Time & Time Server.
8. Set Web and Telnet User Account.
9. Set E-mail.
  a. Reset Configuration to Default.
  b. Set Environment Group.
  c. Save & Reboot.
0. Exit Without Saving.

Select => _

```

Fig.27 SNMPIV Telnet window

Set IP Address.

This function allows you to setup IP Address, Gateway Address, Subnet Mask parameters.

Set SNMP MIB System.

This function allows you to set the MIB system group parameters.

Set SNMP Access Control.

This function allows you to set the Manager IP, Community, Access Permission.

Note:The configuration of 'Set SNMP Access Control' is only used for SNMP Network Manager.

Set SNMP Trap Notification.

If you want to use a PC and perform the 'Trap' function of SNMP manager to manage RPM through SNMPIV, the IP address of the PC must be added in this list of SNMPIV.

Note:The configuration of 'Set SNMP Trap Receiver' is only used for SNMP Network Manager.

Set System Time & Time Server.

This allows you to setup the System date, time and two time servers.

Set Web and Telnet User Account.

This is allows to set users account's authority.

Set E-mail.

This is allows to set e-mail accounts to receive power event notification for emergency management.

Reset Configuration to Default.

Set all values to their default settings.

Save & Reboot.

Save the current configuration data, including any changes you have made, and reboot the SNMPiV.

Exit Without Saving.

Exit, all configuration changes will be lost.

5. Connected Device

5-1. UPS

1. UPS Information

This page is to show UPS basic information. Values here are either provided by the UPS or they are user settings from the Configuration pages.

UPS Information

Information about UPS Manufacturer, UPS Firmware Version, and UPS Model are provided by the UPS.

Battery Information

Values here are user settings from the Configuration pages.

Rating Information

Values here are user settings from the Configuration pages.

Basic Information	
UPS Information	
UPS Information	DGP
UPS Firmware Version	0.06B
Serial Model	Server1500
Battery Information	
Last Battery Replaced Date	11/23/1999
Rating Information	
Voltage Rating	100.0V
Frequency Rating	60.0Hz
Misc. Information	
UPS Next Self Test	--
UPS Last Self Test	--

Fig.28 Basic Information

2. UPS Status

This page is to show the UPS current status. Users can choose an interval from the drop-down box to refresh the status readings.

This section is to show the UPS power status. The abnormal status will be displayed in red when there is a power event.

Input Status

This section is to show the UPS input status, including AC Status/Input Voltage/Input Frequency. Values here will be shown in red when an abnormal status condition occurs.

Output Status

This section is to show the UPS output status, including Output Voltage/Output Status/UPS Loading. Values here will be shown in red when an abnormal status condition occurs.

Battery Status

This section is to show the UPS Battery Status, including Temperature/Battery Status/Battery Capacity/Battery Voltage/Time on Battery. Values here will be shown in red when an abnormal status condition occurs.

UPS Status	
UPS Status	UPS Normal
Refresh Status every	10 seconds ▾
Input Status	
AC Status	Unknown
Input Line Voltage	0.0 V
Input Max. Line Voltage	0.0 V
Input Min. Line Voltage	0.0 V
Input Frequency	0.0 Hz
Output Status	
Output Voltage	0.0 V
Output Status	Normal
UPS Loading	0 %
Battery Status	
Temperature	0.0C (32.0F)
Battery Status	Battery Normal
Battery Capacity	0 %
Battery Voltage	0.0 V
Time On Battery	00:00:00

Fig.29 UPS Status

3. Control UPS

This page is to provide remote UPS test functions. Choose the test item and click on 'Apply' to execute it. (Please refer to the UPS manual for individual UPS Test functions.)

Quick Battery Test

Quick battery function test for 5 seconds.

General System Test

General UPS and battery test for 15 seconds. Only when the battery fully charged can execute.

Deep Battery Calibration

This is to test battery function. When the command is executed, the UPS will transfer from AC to DC and keep running till the LBW.

Cancel Test

This function is to abort a test when it is executing.

Turn off UPS when AC failed/Reboot UPS

Selecting ' Turn off UPS when AC failed' will turn off the UPS. You can reboot the UPS by selecting ' Reboot UPS'.

Shutdown UPS (Battery mode only)

Shutdown UPS during the period of AC failure.

Put UPS in Sleep mode for __ minutes/Wake up UPS

When the UPS is put into Sleep mode, it will not provide power. The UPS will provide power again after Sleep mode time is complete.

Cancel Shutdown

This function is to abort a shutdown when it is executing.

Audible alarm

- Disabled: Turn off all sounds of warning alarm.
- Enabled: Turn on all sounds of warning alarm.
- Muted: Mute all sounds of warning alarm.
- Disabled Until Low Battery Warning: Turn off all sounds of warning, only Low Battery Warning will be listened

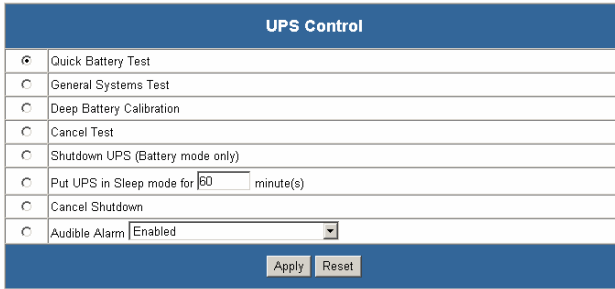


Fig.30 UPS Control

4. Graphic View

This page displays temperature, capacity, load, voltage, etc of the UPS. The three bar charts are output voltage, output load, and Input voltage.

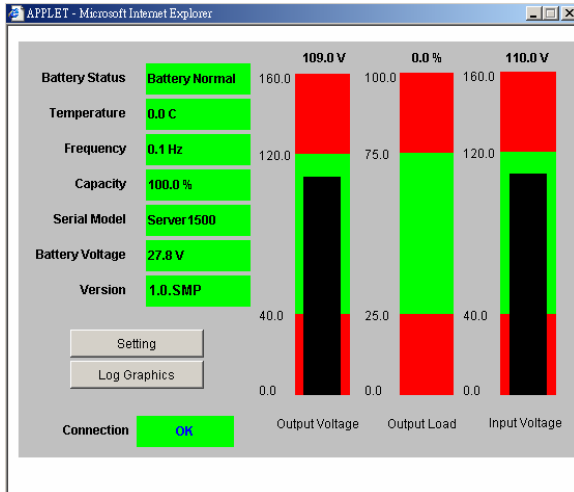


Fig.31 Graphic View

Click "Setting" button, you can set upper Threshold and lower Threshold of output voltage, output load, and Input voltage.

Set Thresholds		
	Upper Threshold	Lower Threshold
Output Voltage (V)	<input type="text" value="120.0"/>	<input type="text" value="40.0"/>
Output Load (%)	<input type="text" value="75.0"/>	<input type="text" value="35.0"/>
Input Voltage (V)	<input type="text" value="120.0"/>	<input type="text" value="40.0"/>

Fig.32 Setting

In “Log Graphics”, we can observe the change of “Input Voltage”, “Output Voltage”, “Frequency”, “Loading”, “Capacity”, and “Temperature” appearing with X-Y coordinate axis diagrams.

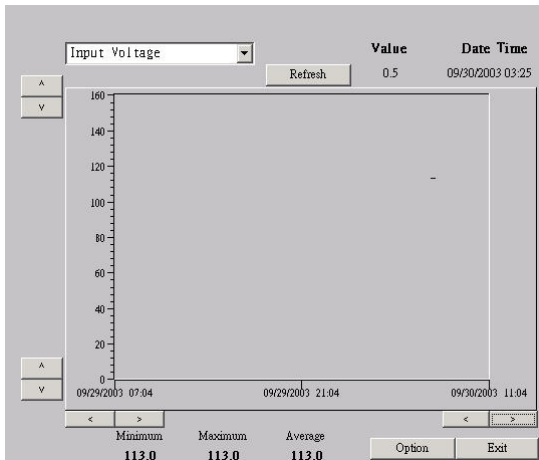


Fig.33 Log Graphics

5. UPS setting

UPS Properties

You can set the date of the last battery replaced.

UPS Recorded

Set the interval time of UPS Data Log recorded.

Test UPS

Set the interval time of test UPS (per week)

Warning Threshold Value

Time Out of Connection Lost

Critical Loading

Set the warning threshold of Output Load over-loading.

UPS Settings	
UPS Properties	
Last Battery Replaced Dated (mm/dd/yyyy)	<input type="text"/>
UPS Recorded	
UPS Data Log	1 minute
Test UPS	
Test UPS for every	None
Test UPS on Weekday	Monday
Time of UPS Testing (hh:mm)	<input type="text"/>
Warning Threshold Value	
Time Out of Connection Lost	30 seconds
Critical Loading (%)	80
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

Fig.34 UPS setting

6. UPS Schedule

The schedule page provides the interface for scheduling the date and time when the shutdown and restart UPS events should occur.

To add a new schedule, select the **New** button. To make changes to a current schedule, select **[Edit]**. And to remove a schedule, select **[Delete]**.

UPS Schedule				
Date	Time	Action	Modify	
Every Monday	15:00	Shutdown	[Edit]	[Delete]
<input type="button" value="New"/>				
Warning will be initiated 10 minutes before Schedule Shutdown Event				
<input type="button" value="Apply"/> <input type="button" value="Reset"/>				

Fig.35 UPS Schedule

After selecting the **New** button or **[Edit]**, the following page will be displayed. Select the desired shutdown and restart configuration and select the **Save** button.

New Schedule Event	
Date(mm/dd/yyyy)	<input checked="" type="radio"/> Once: <input type="text"/> <input type="radio"/> Every: <input type="text"/> <input type="text"/> <input type="text"/>
Time(hh:mm)	<input type="text"/>
UPS Action	<input checked="" type="radio"/> Shutdown <input type="radio"/> Shutdown with Restart Delay: <input type="text"/> <input type="text"/> Minutes
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

Fig.36 UPS new schedule

The following is a description of the fields contained on this page:

- **Date:** The date when the event should occur.
- **Time:** The time when the event should occur on the specified date.
- **UPS Action:** The UPS shutdown and restart settings. If **Shutdown with Restart** is selected, the UPS will shutdown and then restart after n number of delay seconds.

7. RPM Action

The page provides the interface to trigger RPM to do the specific action when one of the UPS and ENV specific events occur.

Note: This function only support when the UPS or ENV is connected with RPM.

RPM Action	
RPM Action Configuration	
Events Select	<input type="text" value="UPS"/>
Events Action	<input checked="" type="radio"/> Occur <input type="radio"/> Remove
RPM	<input type="text" value="RPM01"/>
Outlet	<input type="text" value="OutletA"/>
Outlet Action	<input checked="" type="radio"/> ON <input type="radio"/> OFF
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

Fig.37 RPM Action

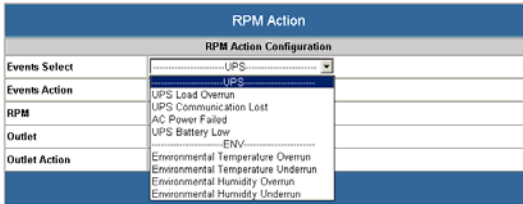
The executable environment

1. RPM power cord is plugged on the UPS.
2. SNMPIV is plugged on RPM

3. iLinkUPS card is plugged on UPS.
4. SNMPiV and iLinkUPS are connected with iLink cable.

Function

- Event Select: You can select the event as trigger event.
- Event Action: Choose trigger action occurs or remove.
- RPM: set which RPM to react with trigger event.
- Outlet: set which outlet of RPM to react with trigger event.
- Outlet Action: Power on or off the outlet.



The screenshot displays the 'RPM Action Configuration' window. It features a table with the following fields: 'Events Select', 'Events Action', 'RPM', 'Outlet', and 'Outlet Action'. The 'Events Action' field is currently open, showing a dropdown menu with the following options: 'UPS Load Overrun', 'UPS Communication Lost', 'AC Power Failed', and 'UPS Battery Low'. The 'Events Select' field is set to 'UPS', and the 'Outlet Action' field is set to 'ENV'. The 'RPM' and 'Outlet' fields are currently empty.

RPM Action Configuration	
Events Select	UPS
Events Action	UPS Load Overrun UPS Communication Lost AC Power Failed UPS Battery Low
RPM	
Outlet	ENV
Outlet Action	Environmental Temperature Overrun Environmental Temperature Underrun Environmental Humidity Overrun Environmental Humidity Underrun

Fig.38 RPM Action Selection

5-2. RPM

1. RPM Status

The status of outlet was shown in RPM status. You can select the RPM which you want to operate in "Select RPM " field.

1. Outlet process setting is under the name of outlet.
2. "non-internet" means you can't control the outlet via SNMPIV Web interface.
3. "instant shutdown" means turn on/off outlet immediately.
4. "safe shutdown" means shutdown the power will be delay n number seconds.
5. "safe reboot" means reboot the power will be delay n number seconds.
6. The outlet icon color: yellow color means the outlet is power on now and white color means the outlet is power off.

Note: The RPM default ID is RPM00. First, you must change ID number in the "RPM Setting" page to any number in the "Address Change" list, and then you just can control the RPM.











ISWITCH					
Click the icon to turn on or off the specific outlet					
Select RPM:			RPM04		
OutletA instantShutdown	ON		OutletE non-internet	OFF	
OutletB instantShutdown	ON		OutletF non-internet	OFF	
OutletC instantShutdown	ON		OutletG non-internet	OFF	
OutletD instantShutdown	ON		OutletH non-internet	OFF	
All On					
All Off					

Fig.39 RPM status

2. RPM setting

Select RPM

Select the ID of RPM which you want to configure.

Address Change

Change the RPM ID. The default number for the factory setting is 0 which is not controllable. It should be changed to any one of the numbers from 1 to 16.

Identification and Name

Rename the RPM and outlet

Phone controllable

Set the outlet can be controlled via telephone.

Control type

- instant shutdown:** When you turn off the outlet, the outlet will shutdown instantly
- safe shutdown:** When you choose this type, after you turn off the outlet, it will delay according to the value of “power off delay” field
- safe reboot:** When you turn off the outlet, it will reboot. Power on and power off according to your setting in “Power off Delay” and “Power Resume Delay” fields.

Power off Delay

The RPM will delay to turn off the outlet according to your setting time.

Power Resume Delay

The RPM will delay to turn on the outlet according to your setting time.

RPM Setting						
Select RPM	RPM02					
Address Change	RPM RPM02					
Identification	iSWITCH					
Outlet	Name	Phone Controllable	Control Type	Power Off Delay		Power Resume Delay
A	OutletA	YES	instant shutdown	2	sec	15
B	OutletB	YES	instant shutdown	2	sec	10
C	OutletC	YES	safe shutdown	30	sec	30
D	OutletD	YES	instant shutdown	2	sec	10
E	OutletE	YES	instant shutdown	2	sec	0
F	OutletF	YES	instant shutdown	2	sec	0
G	OutletG	YES	instant shutdown	2	sec	0
H	OutletH	YES	instant shutdown	2	sec	0
				Apply	Reset	

Fig.40 PRM Setting

3. RPM Schedule

The schedule page provides the interface for scheduling the date and time when the shutdown and restart RPM events should occur.

To add a new schedule, select the **New** button. To make changes to a current schedule, select **[Edit]**. And to remove a schedule, select **[Delete]**.

RPM Schedule					
Date	Time	RPM	Outlet	Action	Modify
Once 09/27/2003	14:00	RPM02	OutletA	ON	[Edit] [Delete]
<input type="button" value="New"/>					
<input type="button" value="Apply"/> <input type="button" value="Reset"/>					

Fig.41 PRM Schedule List

After selecting the **New** button or **[Edit]**, the following page will be displayed. Select the desired shutdown and restart configuration and select the **Save** button.

New Schedule Event	
RPM	<input type="text" value="RPM02"/>
Outlet	<input type="text" value="OutletA"/>
Outlet Action	<input checked="" type="radio"/> ON <input type="radio"/> OFF
Date(mm/dd/yyyy)	<input checked="" type="radio"/> Once: <input type="text" value="09/27/2003"/> <input type="radio"/> Every: <input type="text" value="Monday"/>
Time(hh:mm)	<input type="text" value="14:00"/>
<small>Please check the RPM configuration for the RPM outlet action type: 1. Instant shutdown, 2. Safe shutdown, 3. Safe reboot.</small>	
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

Fig.42 Setting new schedule event

The following is a description of the fields contained on this page:

- **RPM:** Select the ID number for RPM to control.
- **Outlet:** The specific outlet in the RPM you to control
- **Outlet Action:** Select the action if turn on or off.
- **Date:** The date when the event should occur.
- **Time:** The time when the event should occur on the specified date.

5-3. CPS

1. CPS Status

Display the electric current detected by Current Probe Sensor. (CPS) and indicate if the current is out of pre-set value.

CPS Status		
Item	value (amp)	status
CPS01	N/A	N/A
CPS02	N/A	N/A
CPS03	N/A	N/A
CPS04	N/A	N/A
CPS05	N/A	N/A
CPS06	N/A	N/A
CPS07	N/A	N/A
CPS08	N/A	N/A
CPS09	N/A	N/A
CPS10	N/A	N/A
CPS11	N/A	N/A
CPS12	N/A	N/A
CPS13	N/A	N/A
CPS14	N/A	N/A
CPS15	N/A	N/A
CPS16	N/A	N/A

Fig.43 CPS Current List

2. CPS Setting

Name

User defined the name of CPS

Threshold 1

User defined the limitation for first phase.

Threshold 2

User defined the limitation for second phase.

CPS Configuration			
Item	Name	Threshold 1 > 0.0 amp	Threshold 2 < 999.9 amp
CPS01	CPS01	600.0	999.9
CPS02	CPS02	600.0	999.9
CPS03	CPS03	600.0	999.9
CPS04	CPS04	600.0	999.9
CPS05	CPS05	600.0	999.9
CPS06	CPS06	600.0	999.9
CPS07	CPS07	600.0	999.9
CPS08	CPS08	600.0	999.9
CPS09	CPS09	600.0	999.9
CPS10	CPS10	600.0	999.9
CPS11	CPS11	600.0	999.9
CPS12	CPS12	600.0	999.9
CPS13	CPS13	600.0	999.9
CPS14	CPS14	600.0	999.9
CPS15	CPS15	600.0	999.9
CPS16	CPS16	600.0	999.9

Note: The value of threshold 1 must be less than threshold 2.

Apply Reset

Fig.44 CPS Current List

1. ENV Status

This page is to show details of the environment detected by ENV. Users can choose an interval from the drop-down box to refresh the status. All settings can be set in the Configuration/ENV page. The status will be displayed in red when ENV detects an abnormal status condition. In addition, ENV will also set off an alarm for notification.

ENV Status	
Refresh Status every	10 seconds ▾
Item	Status
Environment Temperature	31.6C
Environment Humidity	49 %

Fig.45 ENV Status

Environmental Temperature

This section is to show current temperature which is detected by ENV.

Environment Humidity

This section is to show current humidity which is detected by ENV. (Shown as %)

2. ENV Setting

You can define the limitation to temperature and humidity for environment. If the temperature or humidity goes out of threshold, system will be trigger to do some action, such as mail, sending traps, trig RPM to control power.

ENV Configuration		
Item	Critical Under Run	Critical Over Run
Humidity (%)	5	90
Temperature (c)	5.0	70.0

Fig.46 ENV Configuration

5-5. ATS

1. ATS Status

This page is to show which the current input power source is. Click the "ICON" can switch the input power source to another one.

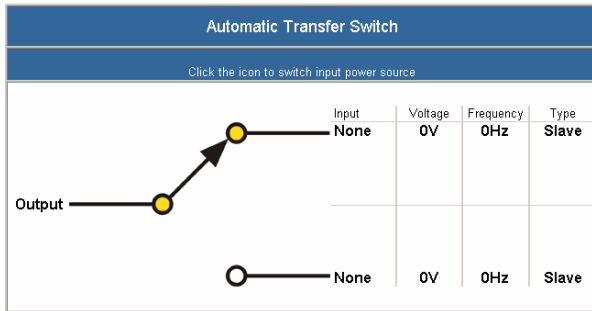


Fig.47 ATS status

2 ATS Setting

Identification

User defined the name of ATS.

Input Power Source A

User defined the name of Input Power Source A.

Input Power Source B

User defined the name of Input Power Source B.

The 'ATS Configuration' form contains three input fields for configuration:

- Identification
- Input Power Source A
- Input Power Source B

At the bottom of the form are two buttons: 'Apply' and 'Reset'.

Fig.48 ATS Setting