UPS / Lighting Inverter Communication Products Brochure

Rev 7
12-20-2016

UPS / Lighting Inverter Communication Products

NetMinder CS141 Series Of Communication Adapters

The **NetMinder CS141** series of adapters integrate a Controlled Power Company UPS or lighting inverter into an Ethernet TCP/IP, MODBUS TCP, or MODBUS RS485 network. The NetMinder CS141 adapters provide remote monitoring of UPS / Inverter status, alarm conditions and electrical measurements via a web browser, without the need for any external software. Remote notification of alarms, battery tests and status are available via SNMP and e-mail. Network broadcast messaging is also available with the installation of the NetMinder RCCMD client loaded on a network computer. The CS141 series of adapters also perform an unattended graceful shutdown of critical servers when used in conjunction with the NetMinder RCCMD client.

When used in a lighting inverter application, the NetMinder CS141B will report inverter battery test pass/fail results for NFPA life safety system requirements. The NetMinder CS141L advanced version provides a temperature and humidity sensing interface.

BACnet Communications

BACnet compatibility is available with certain Controlled Power UPS and lighting inverter products ... consult factory for specific products and details. When used with these products, the NetMinder CS141 series of adapters are able to communicate over a BACnet/IP or MS/TP network with the addition of customized hardware provided by Controlled Power Company. All objects including: parameters, alarms, status, and test results can be monitored and stored by building management systems, improving connectivity and simplifying maintenance.

The **NetMinder CS141** series of adapters are available in three different versions:

NetMinder CS141B – Basic Ethernet / SNMP / TCP/IP/ MODBUS TCP communications used in UPS and lighting inverter applications. The CS141B also provides battery test pass/fail reporting via TCP/IP, e-mail and MODBUS TCP for lighting inverters to satisfy NFPA requirements for life safety.

NetMinder CS141L – Advanced version, includes all functionality of the basic version, plus the addition of temperature and humidity sensing capability, and 4 auxiliary contact closure inputs.

NetMinder CS141L-485 – Adds MODBUS RS485 communications to the advanced version of the Netminder CS121L. However, temperature and humidity sensing is not available in this version.

The following is a list of all alarms, status indications and electrical parameters sorted by UPS / Inverter type:

Inverter Models: eLITE ELE
UPS Models: HV

Available Alarms and Status Indications

CS141L / CS141B Alarms
Powerfail / On Battery
UPS OK
Power Restored
CS141 UPSMAN Started
UPS Connection Lost
UPS Connection Restored
UPS Battery Old
Bypass On
Bypass Off
Battery Low
Battery Time Remaining
General Alarm
General Alarm Cancelled

CS141L Only Alarms
Battery Test Pass (eLITE only)
Battery Test Fail (eLITE only)
AUX Port 1 High
AUX Port 2 High
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature High)
SM_T_COM Sensor Low (Temperature Low)

UPS / Lighting Inverter Communication Products

Inverter Models: UltraLITE ELC, ELU
UPS Models: ES, ESV

Available Alarms and Status Indications

CS141L / CS141B Alarms
On Battery
Loss of AC Input Power
UPS OK
Power Restored
CS141 UPSMAN Started
UPS Connection Lost
UPS Connection Restored
UPS Battery Old
Overload
Load Normal
Bypass On
Bypass Off
Battery Low

Device Functions
Manual Battery Test (Web Interface Only)
Battery Test Cancel (Web Interface Only)

* May not be available on UPS models

Load >80%
Load >90%
Battery Time Remaining
Battery Test Running
*Battery Test Pass
*Battery Test Fail
*Battery Test Cancelled

CS121L Only Alarms
AUX Port 1 High
AUX Port 2 High
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature High)
SM_T_COM Sensor Low (Temperature Low)

Electrical Parameters Displayed

Input Voltage
Output Voltage
Output Frequency
% Load
% Battery Capacity
Charger Current

Battery Voltage
Output VA
Output Watts
Output Current
+/- DC Bus Voltage (Web Interface Only)

UPS Models: LT, LT/M, LTN, LTR, MD
Inverter Models: ELN

Available Alarms and Status Indications

CS141L / CS141B Alarms
Powerfail / On Battery
UPS OK
Power Restored
CS121 UPSMAN Started
UPS Connection Lost
UPS Connection Restored
UPS Battery Old
Overload
Load Normal
Battery Low
Scheduler Shutdown
Load >80%

Load >90%
Battery Time Remaining

CS141L Only Alarms
AUX Port 1 High
AUX Port 2 High
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature High)
SM_T_COM Sensor Low (Temperature Low)

Electrical Parameters Displayed (CS141L & CS141B)

Input Voltage
Output Voltage
Input Frequency
Output Frequency

% Load
% Battery Capacity
Output VA

UPS / Lighting Inverter Communication Products

Inverter Model: EON

Available Alarms and Status Indications

CS141L / CS141B Alarms
Powerfail / On Battery
UPS OK
Power Restored
UPS Connection Lost
UPS Connection Restored
Overload
General Alarm
Load Normal
Bypass On
Bypass Off
Battery Low
Low Battery Shutdown
Input Bad
Output Bad
System Off
System Shutdown
Charger Failure
Manual Restart Required
Output Circuit Breaker Open
Remote Emergency Power Off Activated
Shutdown Imminent (Battery Low)
Load >80%
Load >90%
Battery Time Remaining
Seconds on Battery
Battery Test Pass
Battery Test Fail
Battery Test In Progress
Battery Condition (good, weak)
Battery Old
Overtemperature

CS141L Only Alarms
AUX Port 1 High
AUX Port 2 High
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature/Humidity High)
SM_T_COM Sensor Low (Temperature/Humidity Low)

Device Functions
Manual Battery Test (Web Interface Only)
Battery Test Cancel (Web Interface Only)

Electrical Parameters Displayed

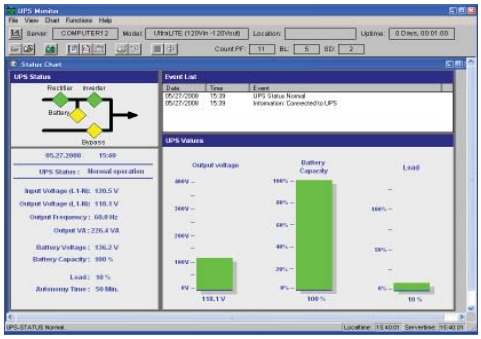
Input Voltage
Input Frequency
Input Current
Input Power

Output Voltage
Output Frequency
Output Power
% Load

Battery Voltage
Battery Temperature
% Battery Capacity
Charger Current

UPS / Lighting Inverter Communication Products

NetMinder UPSMAN UPS Management & Monitoring Suite



The NetMinder UPS Management & Monitoring Suite is a real-time software package that includes 4 different programs that monitor the status and operation of the UPS, as well as provide remote monitoring, alarm notification, and unattended server shutdown. In the event of a system problem, power problem or power failure, NetMinder will send e-mails, SNMP traps, or a network broadcast message notifying key personnel of the condition. If power is not restored or the system problem has not subsided, NetMinder can be instructed to shutdown computers which are connected to the network. NetMinder is network and Internet compatible, which enables key personnel to check the status of the UPS and/or view the electrical measurements of the system, e.g. voltage, % battery, % load, etc from anywhere on the network, or from anywhere in the world over the internet! NetMinder is easy to install and runs on over 31 different operating systems. NetMinder can run locally on a single server connected to a UPS, or over the network with an Ethernet adapter.

NetMinder UPSMAN UPS Management & Monitoring Suite consists of the following programs:

NetMinder UPSMAN – Communicates with the UPS via serial, USB or TCP/IP in order to receive UPS status information and electrical measurement data. UPSMAN notifies authorized personnel of UPS status and alarm conditions via e-mail, SNMP, and text messaging. UPSMAN records all events into a log-file to provide the data to applications on the network, or for viewing by authorized personnel. During a power failure, the UPSMAN monitors the remaining battery time of a UPS and if necessary, initiates local or network shutdowns of protected computers.

Electrical Parameters Measured (LT, LT/M, LTR, LTN, and MD and only.)

Input Voltage
Output Voltage (L1-N, L2-N, L1-L2)
Output Frequency
% Load
% Battery Capacity
Battery Voltage (UltraUPS Only)
Output VA
Battery Time Remaining

Available Alarms

Powerfail / On Battery
Power Restored
UPSMAN Started
UPS Connection Lost
UPS Connection Restored
UPS Battery Old
Overload
Bypass On
Bypass Off
Battery Low
General Alarm (HV Series Only)

NetMinder UPSMON – UPSMON is a GUI application program that communicates with UPSMAN to retrieve UPS information for viewing. With UPSMON, personnel can view UPS status, alarms, electrical parameter data and event logs.

NetMinder RCCMD – Program for graceful unattended shutdown of servers. Must be used in conjunction with UPSMAN or a NetMinder CS141 Ethernet adapter.

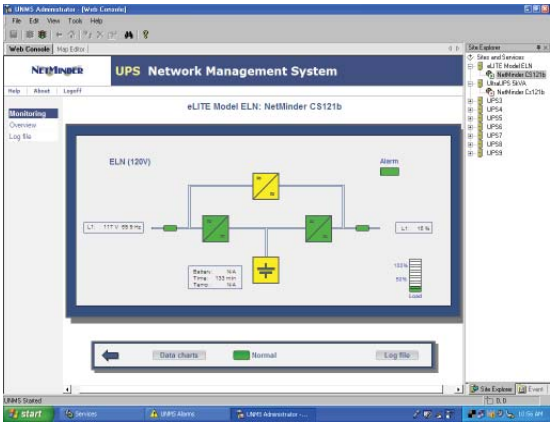
NetMinder UNMS II (Basic version) – Program for monitoring multiple (up to 9) Controlled Power Company UPS's and/or lighting inverters running UPSMAN or a CS141 from one terminal. The user can monitor the status, electrical measurements and alarms via a workstation running Windows. A user can be notified of all alarms and status conditions via e-mail or network broadcast message without having to manually check each unit. A full, customizable alarm and event log is available as well.

NetMinder UNMS II (Advanced version) – The Advanced version of UNMS II has all of the features of the Basic version, plus the monitoring of an unlimited number of UPS's and lighting inverters, as well as SNMP notification. One of the key features of the Advanced version of UNMS II is the ability to monitor multiple UPS's from different manufacturers. UNMS II will monitor not only Controlled Power Company UPS's and lighting inverters, but nearly all other manufacturers' units which a have a network card installed in them.

For more information on UNMS II see description on the next page.

UPS / Lighting Inverter Communication Products

NetMinder UNMS II (UPS Network Management System)

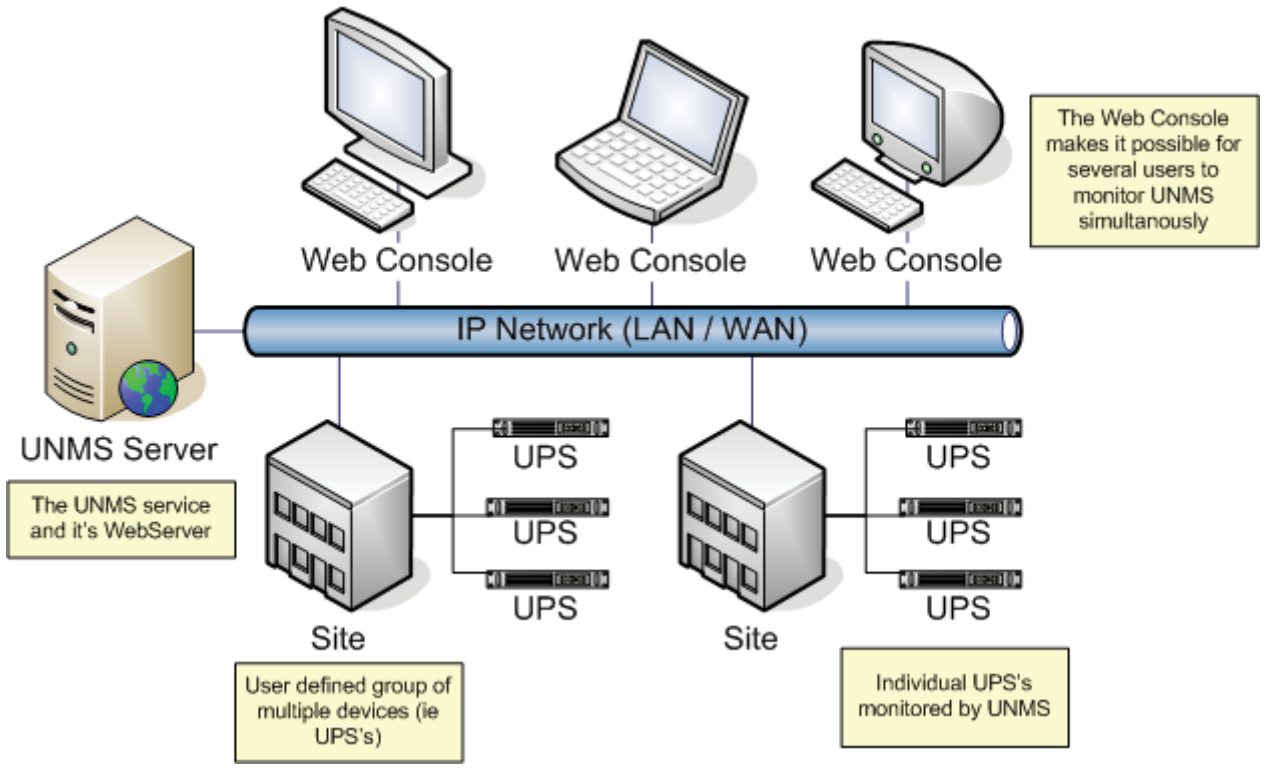


NetMinder UNMS II is a centralized monitoring software package which provides users with the ability to monitor multiple UPS's and/or lighting inverters from a single computer terminal. If a company has multiple Controlled Power Company UPS's or lighting inverters with a NetMinder Ethernet adapter, or has any systems running NetMinder UPS Management Suite on the same network or over the Internet, NetMinder UNMS II provides system status and full monitoring of all available UPS and/or inverter parameters from one workstation. In addition to CPC products, if a facility has other manufacturers' UPS's or inverters with network capability utilizing the RFC1628 protocol, these can be monitored as well from the same terminal, eliminating the need for multiple monitoring systems and software solutions. In addition to UPS's and inverter systems, NetMinder UNMS II can also be configured to provide monitoring support for facilities' monitoring equipment, generators, and network devices.

In the event of an alarm or change in status condition of the device, UNMS II will display on the home screen the device which has the alarm condition. The user can click on the device, and the real-time status of the device will be displayed on the screen. UNMS II can also be programmed to send an e-mail or SNMP message to key personnel, reporting the alarm or the status condition. If a detailed analysis of events are required over a specific time period, UNMS II keeps a log of all alarms and system events which are classified according to severity. These logs can be charted locally using the UNMS II software or can be exported to a CSV file for further trending and data analysis.

UNMS II Advanced version has a customizable interface screen which can be modified to reflect the devices that are being monitored, as well as the facility itself. UNMS II is configured and priced according to the number of UPS's, inverters and other devices which are being monitored. UNMS II runs on Windows 2000 / 2003 / XP / VISTA / 7 / 8 / 10, and incorporates SSL technology for enhanced security.

Below is a drawing of a typical UNMS application:



UPS / Lighting Inverter Communication Products

Peripherals and Accessories

Multifunction Communication Modem (MCM)

Meeting NFPA standards for system testing is critical in today's business infrastructure. To assist in meeting these standards, Controlled Power Company is offering the Multifunction Communications Modem (MCM). The Multifunction Communications Modem can send a fax, an e-mail, dial a phone number and play a prerecorded message, or report system test results to a web page. On inverters with system test pass/fail contacts, the Multifunction Communications Modem records system test results and automatically sends a written test report which satisfies NFPA guidelines for stored energy emergency lighting system testing. The Multifunction Communications Modem comes standard with 2 contact inputs for battery test pass/fail results, plus options for up to 8 different devices.

Automatic Message Dialer

System monitoring is critical. In some cases where e-mail or a computer network is not available, the Automatic Message Dialer fills the gap. The automatic message dialer is an optional device available on our UPS/lighting inverter product lines that provides 24/7 monitoring via a telephone line. In the event there is an alarm condition with the UPS or lighting inverter, the Automatic Message Dialer dials up to 4 numbers and plays a customizable pre-recorded voice message.

USB Adapter

The USB adapter allows for flexible connectivity from a server running NetMinder UPSMAN to any Controlled Power Company UPS, without the need of a serial port.
Note: Size and color of adapter may vary from one shown. Not available on HV UPS's.

Temperature Sensor & Temperature / Humidity Sensor

Temperature and Temperature/Humidity sensors are available as options on the NetMinder CS141L. Both of these sensors measure either the ambient temperature and/or humidity, and display the results on a network computer. If the temperature or humidity exceeds the predefined, programmable threshholds, the CS141L will send an e-mail, SNMP trap, or RCCMD command for shutting down servers. This keeps personnel informed and critical equipment protected.

MIU4 (4X Port Expander)

The MIU 4 is available with the CPC line of UPS's and lighting inverters. The MIU 4 gives you the flexibility to use the NetMinder UPSMAN or CS141, an Automatic Message Dialer, plus 2 other ports for a remote annunciator or another alarm monitoring device from one UPS. With the MIU4, there are no worries about running out of status signals.