Installation Guide

Digital Energy™

SNMP / WEB ADAPTER

P/N 1018959 3-ph SNMP/Web plug-in adapter
P/N 1019070 1-ph SNMP/Web plug-in adapter
P/N 23954 SP SNMP/Web plug-in adapter
P/N 1019071 1-ph SNMP/Web external adapter

GE imagination at work

CE   c UL us LISTED

Certified
Quality System
ISO 9001
Reg.No.CSQ 9130.GELE

Model:	3-ph SNMP/Web plug-in adapter 1-ph SNMP/Web plug-in adapter SP SNMP/Web plug-in adapter 1-ph SNMP/Web external adapter
Date of issue:	13.05.2008
File name:	ISG_CNT_SNM_BAS_CRD_V012
Revision:	1.2
Identification No.	P/N 1018959 P/N 1019070 P/N 23954 P/N 1019071

Up-dating		
Revision	Concerns	Date
1.0	First Issue	20.12.2007
1.1	First RELEASED Issued	15.02.2008
1.2	Updated for the 3-ph and SP SNMP/Web plug-in adapters	13.05.2008

Dear Customer,

We thank you for selecting our products and are pleased to count you amongst our very valued customers at *GE*.

We trust that the use of the *SNMP/Web adapters* for our Uninterruptible Power Supply systems, developed and produced to the highest standards of quality, will give you complete satisfaction.

Please read carefully the Installation Manual, which contains all the necessary information about the installation of the adapters.

Thank you for choosing *GE* !

	Distributed by:	Your service contact:
GE Digital Energy General Electric Company CH – 6595 Riazzino (Locarno) Switzerland		

Table of contents

1   SAFETY RULES

With this document, *GE* gives to the user all the necessary information about the correct installation of the SNMP/Web adapters.

Please read carefully this **Installation Manual** before installing or operating the adapters.
We recommend that this manual be kept next to the UPS for future references.

If any problems are encountered with the procedures contained in this manual, please contact the nearest **Service Centre** before you proceed.

For more information on the **UPS** system, please refer to the applicable Installation and User Manual.

All maintenance and service work should be performed by qualified service personnel only.

The KNOWLEDGE of (and FULL compliance to) the safety instructions and the warning contained in this manual are

THE ONLY CONDITION

to avoid any dangerous situations during installation, operation, maintenance work, and to preserve the maximum reliability of the UPS system.

NOTE !

While every care has been taken to ensure the completeness and accuracy of this manual, *GE* assumes no responsibility or liability for any losses or damages resulting from the use of the information contained in this document.

GE

Refuses any responsibility in case of non-observance, unauthorised alterations or improper use of the delivered equipment.

1.1   WARNINGS AND CAUTIONS

GENERAL

- Always strictly observe the *"UPS Safety Rules"*

- Check carefully the integrity of the equipment.
  In case you note some visible damage, do not install the equipment but contact the nearest *Service Centre.*

- WARNING: RISK OF ELECTRICAL SHOCK.
  Do not remove any UPS covers; there are no user serviceable parts inside.

- After switching off, it takes up to 5 minutes for the DC capacitors to discharge because a lethally high voltage remains at the terminals of the electrolytic capacitors.

- All maintenance and service work should be performed by qualified service personnel.

- The outlet-bars may be electrically live, even when the UPS is disconnected from the mains.

STORAGE

- Store the SNMP/Web adapters in a dry location; storage temperature must be within -25°C to 55°C (-13°F to 131°F).

HANDLING

- The SNMP/Web adapters are ESD sensitive devices. When handling the adapters, only touch the front panel / external cover and use suitable ESD protection (e.g. wrist straps).

- The SNMP/Web adapters contain a removable, lithium coin-cell battery.
  Perchlorate Material - special handling may apply.
  See www.dtsc.ca.gov/hazardouswaste/perchlorate

INSTALLATION

- Switching OFF the unit does not isolate the UPS from the mains.

- Do not install the equipment in an excessively humid environment or near water.

- Avoid spilling liquids on or dropping any foreign object onto the equipment.

- The equipment should be placed in a sufficiently ventilated area; the ambient temperature should not exceed 35°C (95°F).

BATTERY

- The SNMP/Web adapters contain a removable, lithium coin-cell battery. The battery has been selected in order to power to the relevant devices for over 10 years, therefore battery replacement should not be necessary and it is not recommended. In any case, replace only with batteries of the same type, and properly dispose or recycle used batteries.

- Never dispose of battery in a fire: they may explode.

- Do not try to open or mutilate battery: their contents may be toxic.

- Never short-circuit the battery.

ENVIRONMENT

- Please take care of packaging material: either save it for later use or recycle/dispose in compliance with local and other applicable regulations.

- The SNMP/Web adapters contain a removable, Lithium coin-cell battery. Dispose of used batteries in compliance with local and other applicable regulations.

	WARNING ! **The UPS contains hazardous voltages.** **Observe carefully the safety instructions to prevent risk of electrical shock.**

	CAUTION ! **The SNMP/Web adapter contains a lithium coin-cell battery.** **RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE** **DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS** **Perchlorate Material - special handling may apply See www.dtsc.ca.gov/hazardouswaste/perchlorate**

1.2 EMC COMPATIBILITY

1-ph SNMP/Web plug-in adapter (P/N 1019070)
1-ph SNMP/Web external adapter (P/N 1019071)

This device has been tested for compliance with the following standards:
- EN 61000-6-2
- EN 61000-6-3

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 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

3-ph SNMP/Web plug-in adapter (P/N 1018959)
SP SNMP/Web plug-in adapter (P/N 23954)

These devices have been tested for compliance with the following standards:
- EN 61000-6-2
- EN 61000-6-4

WARNING:
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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.

2   INTRODUCTION

2.1   CHECKING PACKAGE CONTENTS

The SNMP/Web adapters are delivered in different kits according to the model.

3-ph SNMP/Web plug-in adapter (P/N 1018959)
- 3-ph SNMP/Web plug-in adapter, with pre-installed standard front panel
- A front panel designed for LP33 Series UPSs
- Square plates for older SitePro UPSs
- Mounting screws
- Installation manual
- Third Party License ReadMe
- CD-ROM
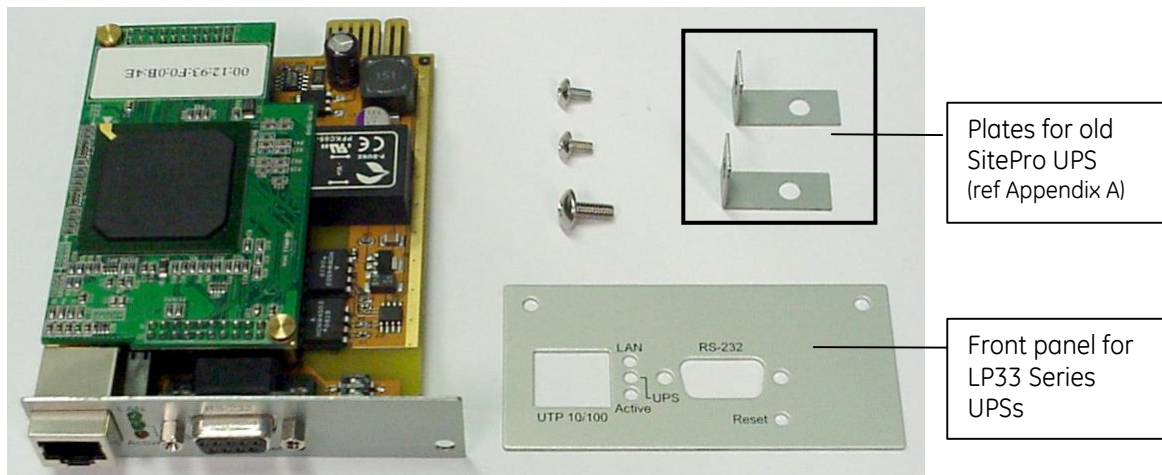
Plates for old SitePro UPS (ref Appendix A)

Front panel for LP33 Series UPSs

1-ph SNMP/Web plug-in adapter (P/N 1019070)
- 1-ph SNMP/Web plug-in adapter
- Installation manual
- Third Party License ReadMe
- CD-ROM

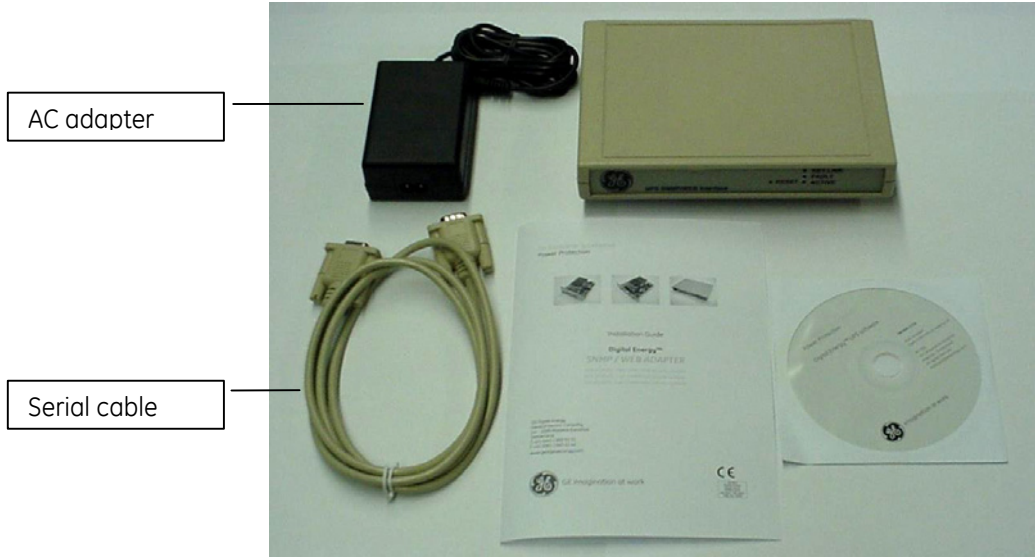**SP SNMP/Web plug-in adapter (P/N 23954)**

SP SNMP/Web plug-in adapter (P/N 23954)
- SP SNMP/Web plug-in adapter
- Installation manual
- Third Party License ReadMe
- CD-ROM

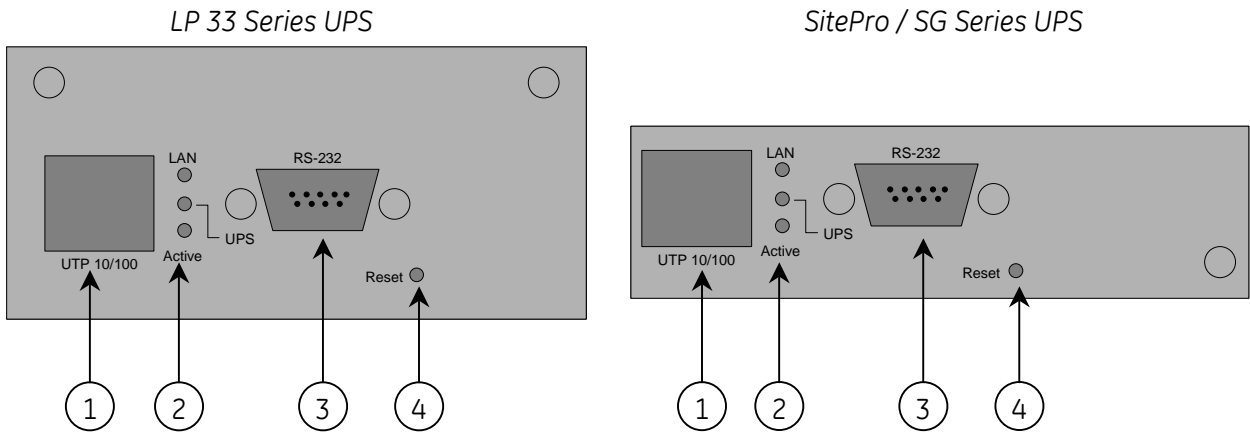**1-ph SNMP/Web external adapter (P/N 1019071)**
- 1-ph SNMP/Web external adapter
- AC adapter
- Serial communication cable
- Installation Manual
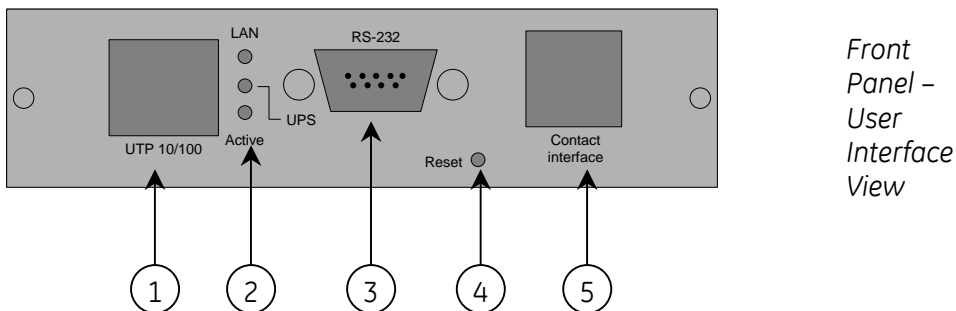
- Third Party License ReadMe
- CD-ROM

AC adapter

Serial cable

2.2 OVERVIEW

3-ph SNMP/Web plug-in adapter (P/N 1018959)

LP 33 Series UPS

SitePro / SG Series UPS

- 1 – *RJ45 Connector*   Ethernet connection, 10Base-T or 100Base-TX
- 2 – *LEDs*   Ref. specific section
- 3 – *RS-232 port*   Local console connection (115200-N-8-1)
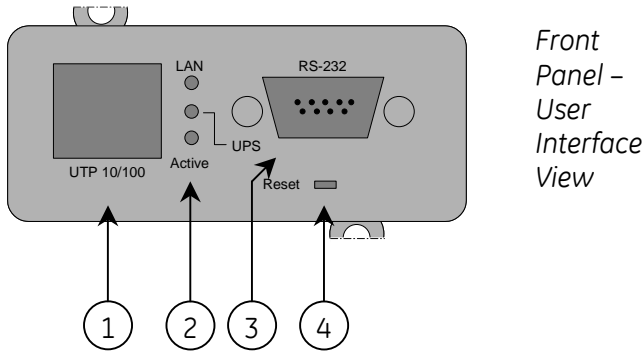- 4 – *Reset button*   HW reset

1-ph SNMP/Web plug-in adapter (P/N 1019070)
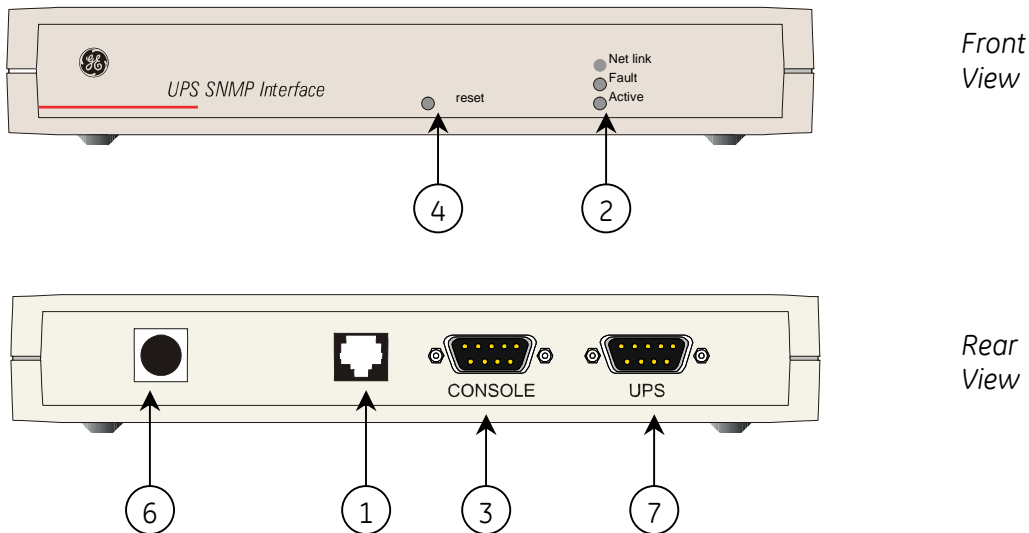

Front Panel – User Interface View

- 1 – *RJ45 Connector*   Ethernet connection, 10Base-T or 100Base-TX
- 2 – *LEDs*   Ref. specific section
- 3 – *RS-232 port*   Local console connection (115200-N-8-1)
- 4 – *Reset button*   HW reset
- 5 – *RJ11 Connector*   Contact interface, open-collector output

SP SNMP/Web plug-in adapter (P/N 23954)

Front Panel – User Interface View

- 1 – *RJ45 Connector*   Ethernet connection, 10Base-T or 100Base-TX
- 2 – *LEDs*   Ref. specific section
- 3 – *RS-232 port*   Local console connection (115200-N-8-1)
- 4 – *Reset button*   HW reset

1-ph SNMP/Web external adapter (P/N 1019071)

Front View

Rear View

- 1 – *RJ45 Connector*   Ethernet connection, 10Base-T or 100Base-TX
- 2 – *LEDs*   Ref. specific section
- 3 – *RS-232 port*   Local console connection (115200-N-8-1)
- 4 – *Reset button*   HW reset
- 6 – *Power-in*   AC adapter connection
- 7 – *UPS port*   RS-232 connection to the UPS

LEDs

The various front panel LEDs have the following meaning:

- LAN / Netlink

Status	Meaning
Off	No LAN connection detected
On	LAN connection established, no communication
Blink	LAN connection established, receive or transmit active

- UPS / Fail

Status	Meaning
Off	OK / No Fault
On	No UPS Connection

- Active

Status	Meaning
Off	Fault of device
Blink	Device OK / No fault

2.3   FEATURES

Each SNMP/Web adapter provides the following features:

- 10/100 Mpbs connection speed
- Use of DHCP / BOOTP or manual configuration for the TCP/IP network settings
- SNMP Agent
- Web server
- Console interface
- UPS status / alarms / readings, event logging over different interfaces
- Digital outputs (open-collector outputs for relay drive) – *1-ph plug-in version only*
- SNMP Traps and E-mail notification upon UPS event
- Advanced security features

2.4   ARCHITECTURE
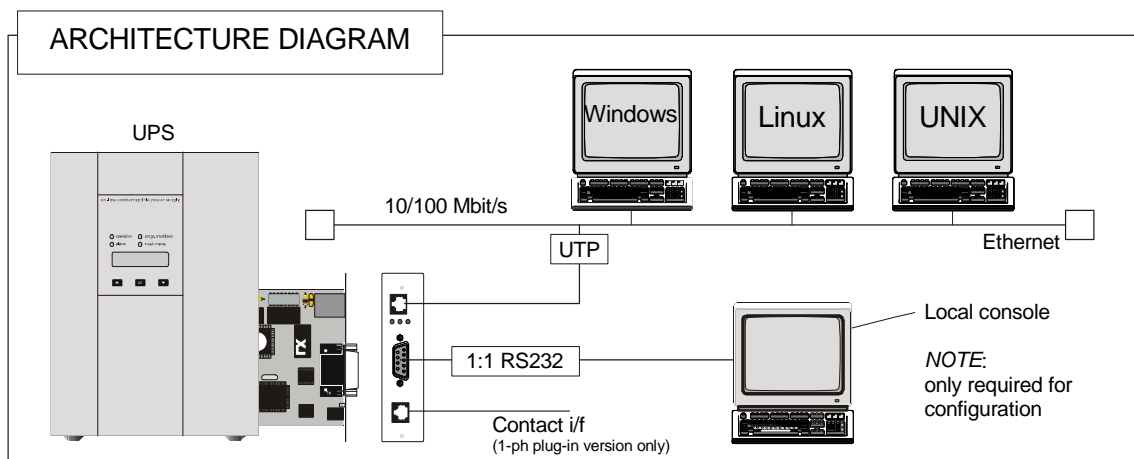
2.5 ADDITIONAL DOCUMENTS

The SNMP/Web adapter is provided with a CD-ROM containing the following documentation:

- Installation Manual

- Operating Manual

- SNMP Management Information Base (MIB)

- Release notes and other instructions, as applicable

3   INSTALLATION

|	
⚠️	**NOTE !** Strictly observe the '*UPS Safety Rules*'. Read carefully the UPS '*Operating Manual & Installation Guide*' before installing or operating the equipment. If any problems are encountered with the installation procedure here described, please contact the nearest *Service Centre* before proceeding.

3.1   3-PH SNMP/WEB PLUG-IN ADAPTER (P/N 1018959)

⚠️	**NOTE ! SitePro customers only** SitePro units produced before 2003 require an additional protective ground connection – refer to APPENDIX A.

3.1.1   Setting the logical address

The logical address is configured through dip-switch *SW1* in the following way:

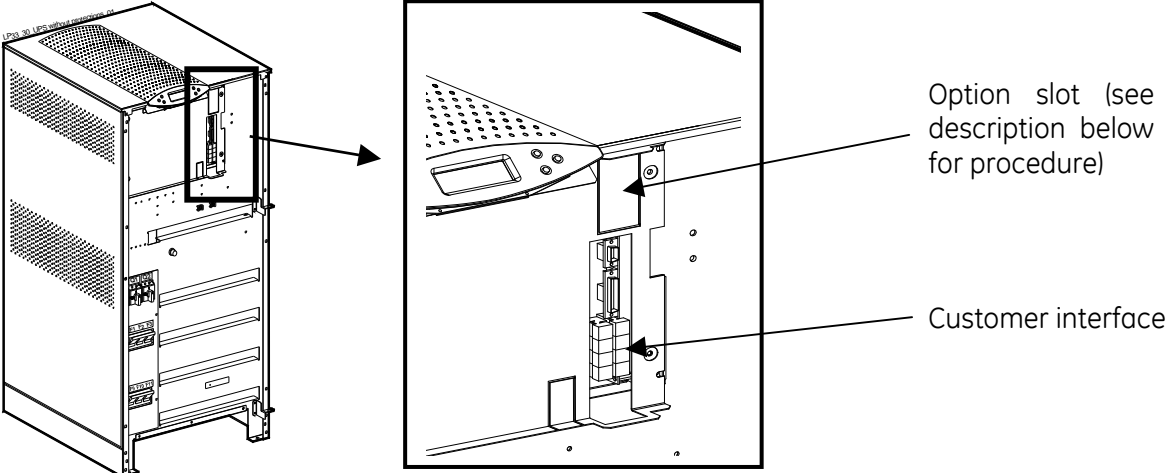|	Logical Address		Dip 1	Dip 2
SNMP Card 0 [1]	84	(54h)	ON	ON
SNMP Card 1	85	(55h)	ON	OFF
SNMP Card 2	86	(56h)	OFF	ON
SNMP Card 3	87	(57h)	OFF	OFF

(1) Default setup
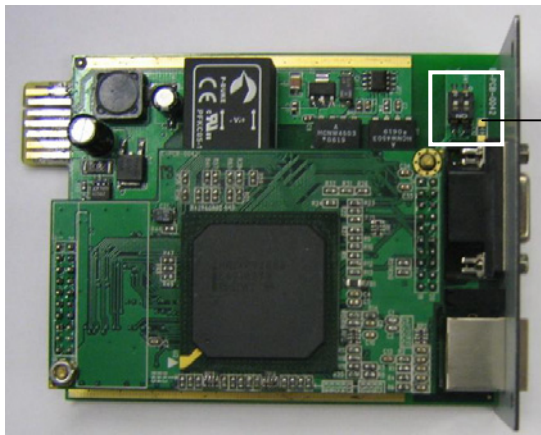
Dip-switch SW1

NOTE: The logical address is a critical setting when more than one *SNMP Card* is installed in the same UPS system.

3.1.2 Installing the SNMP Card in option slot

IMPORTANT: Switch off the UPS, and wait approx. 2 minutes or switch the UPS to the manual bypass. In the latter case, please ensure that the mains input is reliable during this period. All cables must be disconnected from the card during the installation.

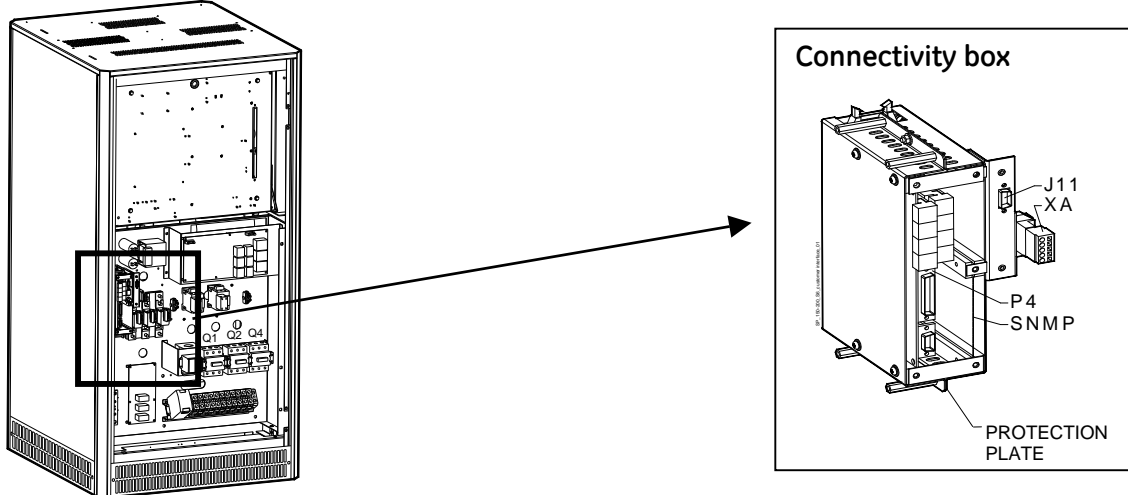**Install procedure for *LANPRO 33 / LP 33 Series***

Option slot (see description below for procedure)

Customer interface

1. Remove the plate that covers the Option slot by cutting the edges which are holding the plate. **Take care the plate does not fall inside the UPS!**
2. Slide carefully the *SNMP adapter* into the Options slot.
3. Fix the front plate of the *SNMP adapter* to the UPS, using the screw included in the *SNMP/Web adapter* kit.

Install procedure *for SitePro* S6

Connectivity box

J 11
X A

P 4
S N M P

PROTECTION PLATE

1. Change the front plate with the smaller one delivered with the Kit.
2. Insert the *SNMP adapter* in the options slot.
3. Fix the front plate of the *SNMP adapter* to the connectivity box, using the screw included in the *SNMP/Web adapter* kit.

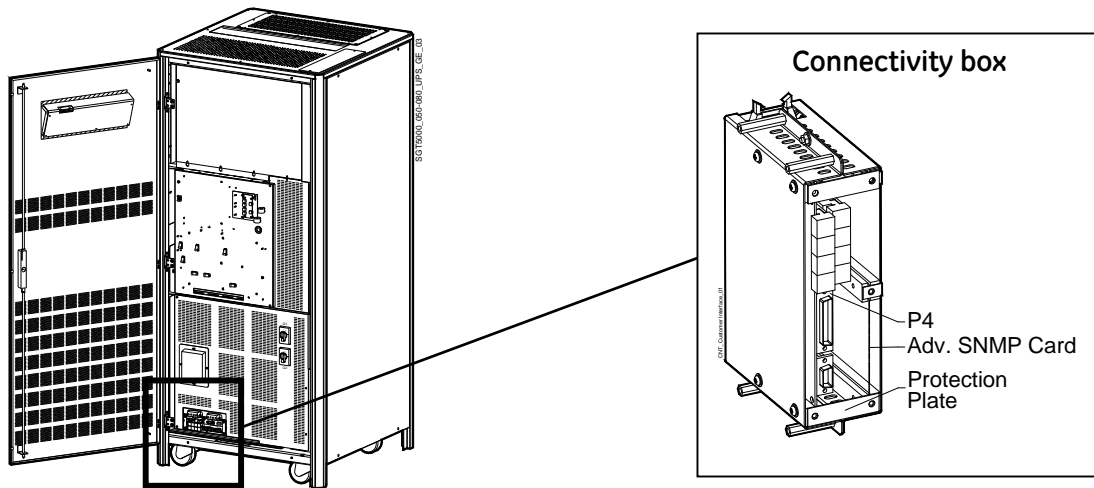**Install procedure** *for SG Series*

Connectivity box

P4
Adv. SNMP Card
Protection Plate

1. Change the front plate with the smaller one delivered with the Kit.
2. Insert the *SNMP adapter* in the options slot.
3. Fix the front plate of the *SNMP adapter* to the connectivity box, using the screw included in the *SNMP/Web adapter* kit.
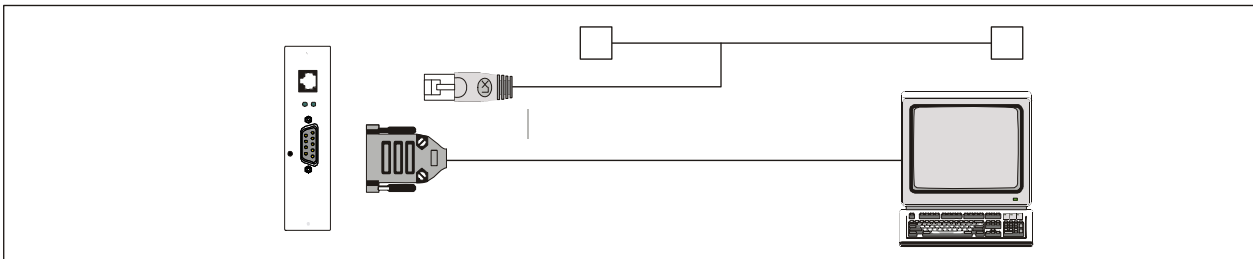
3.1.3   Connecting the card

Refer to the architecture detailed in Section 2.4.

Now, the UPS may be switched on (or back to normal mode from manual bypass).

3.2   1-PH SNMP/WEB PLUG-IN ADAPTER (P/N 1019070)

- Switch off the UPS, and wait approx. 2 minutes or switch the UPS to the manual bypass. In the latter case, please ensure that the mains input is reliable during this period.

- Install the SNMP/WEB Interface card in the RS232 option slot. For more details about the slot please read the UPS user manual.

- Make all necessary connections (see architecture diagram in section 2.4).

Contact i/f
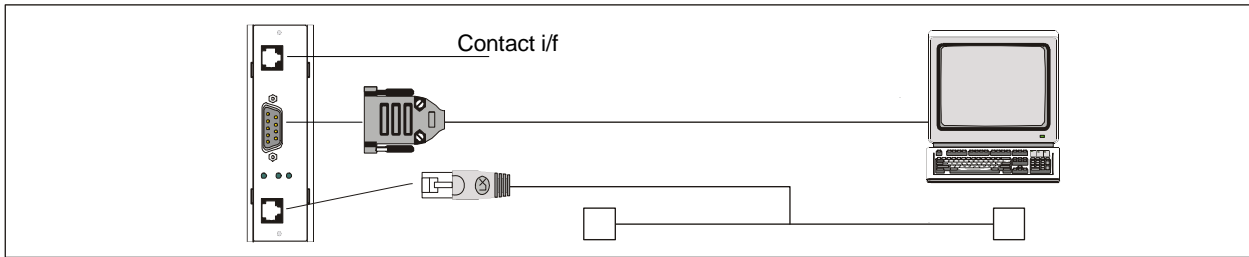
- Switch on the UPS or go back to normal mode from bypass.

3.3 SP SNMP/WEB PLUG-IN ADAPTER (P/N 1019070)

- Switch off the UPS, and wait approx. 2 minutes or switch the UPS to the manual bypass. In the latter case, please ensure that the mains input is reliable during this period.

- Install the SNMP/WEB Interface card in the option slot. For more details about the slot please read the UPS user manual.
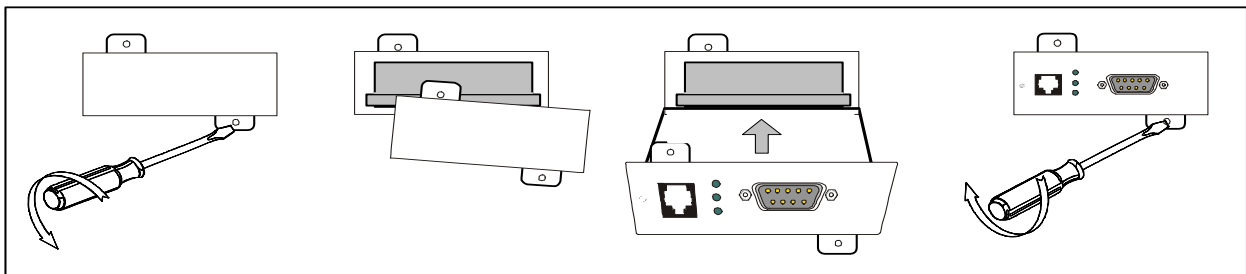

- Make all necessary connections (see architecture diagram in section 2.4).
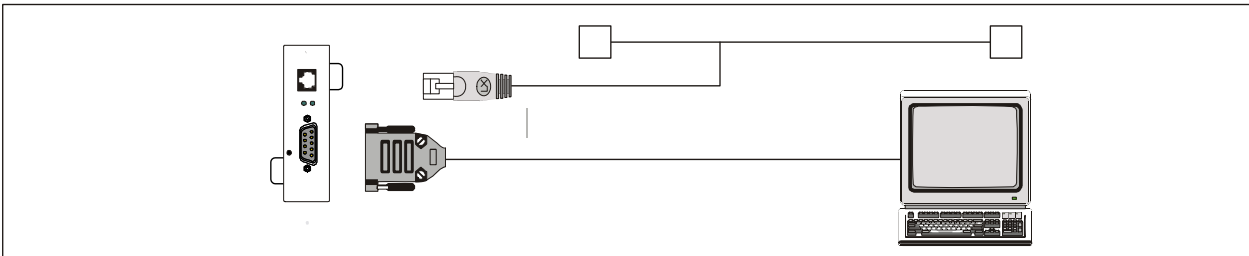
- Switch on the UPS or go back to normal mode from bypass.

3.4   1-PH SNMP/WEB EXTERNAL ADAPTER (P/N 1019071)

CONSOLE   UPS
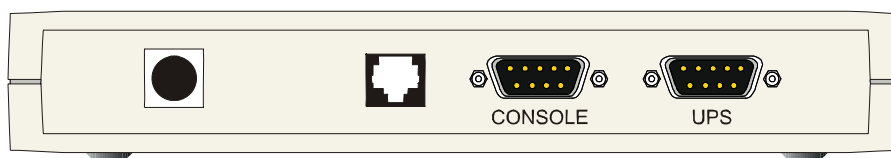
- Connect the network cable to the box

- Connect the UPS to the SNMP/WEB Interface box (Sub-D connector "UPS") using the cable provided with the UPS (VIC/23 or IMV-I or 1:1 straight cable) for intelligent communication.

  Note: when using the Contact Interface communication on GE Digital Energy™ UPS, a VIC-25 or IMV-C cable kit is required.

- Connect the power to the box (left-most connector in the picture above). Make sure that the SNMP/WEB Interface box is powered by the UPS output!

- The UPS / Fail LED will switch OFF once the connection to the UPS is established. If the LED remains continuously on, check the UPS connection and related cabling.

3.5   INTERFACES

UTP 10/100 – RJ45 port
Connection to an Ethernet 10/100 Mbits/s networks, using an UTP cable.

RS-232 – DB9 port
Serial communication, connection to a local console.
Use a straigh (1:1) serial cable for connection to a PC.

Connector pin-out as follows:
Pin #   Function
2   TD – Transmit Data
3   RD – Receive Data
5   GND
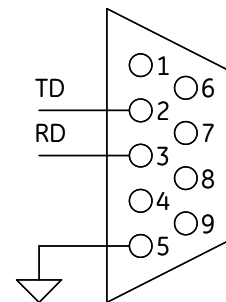
Contact interface – RJ11 port (1-ph plug-in version only)
Plug-in contact interface port.

Connector pin-out as follows:
Pin #   Function
1   Mains failure
2   General alarm *
3   Battery low
4   On bypass
5   N.C.
6   GND
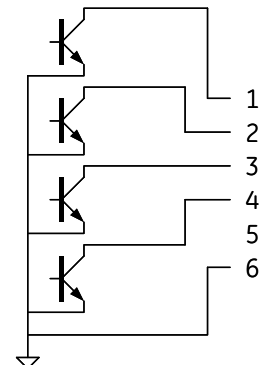
(*) Active if the output voltage of the UPS is no longer guaranteed due to other circumstances than already indicated by pin 1-3-4.

CAUTION !

**The DB9 and RJ11 port share the same GND signal.
Exercise caution when both interfaces are used at the same time, particularly when connecting these interfaces to non-floating ground systems.**

4   CONFIGURATION

4.1   CONFIGURATION METHODS

The SNMP/Web plug-in adapters can be configured using different interfaces.

4.1.1   Configuration via serial connection

- Connect the SNMP adapter to a computer using a standard 1:1 serial communication cable.

- Run a terminal simulator (e.g. *HyperTerminal* on a PC running Windows)

- Configure the terminal simulator as follows:
  115,200bps,   8 data bits,   1 stop bit,   parity none,   flow control none
  Terminal emulation VT-100
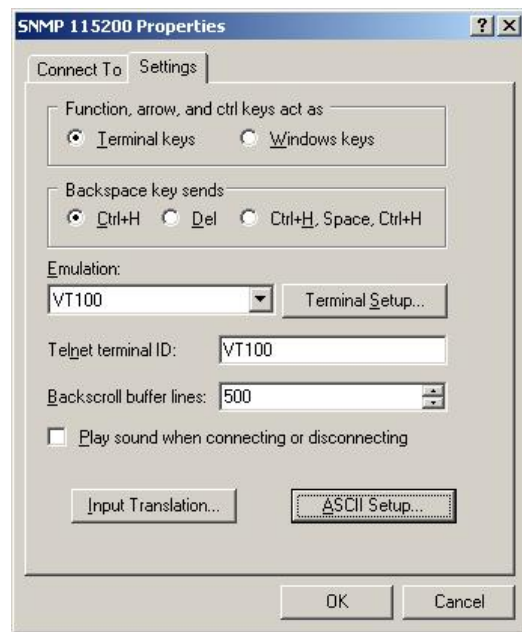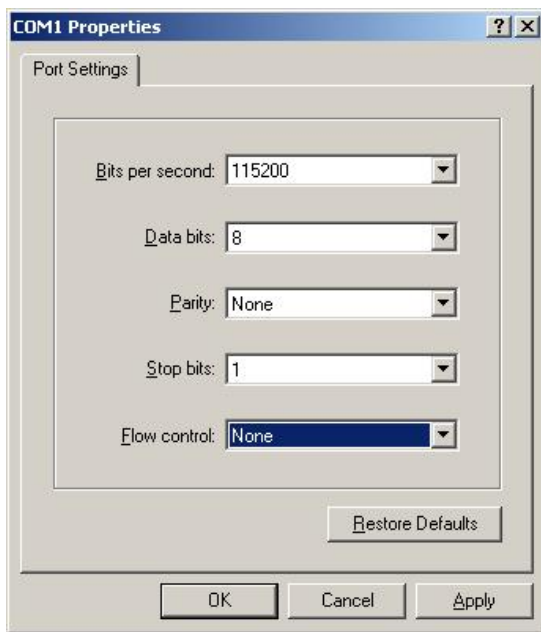
- Establish the connection and press **<enter>**

- The default username (login) and password are *ge* and *ge*

- A command-line configuration interface is entered. Type *menu* to enter the quick network configuration menu:
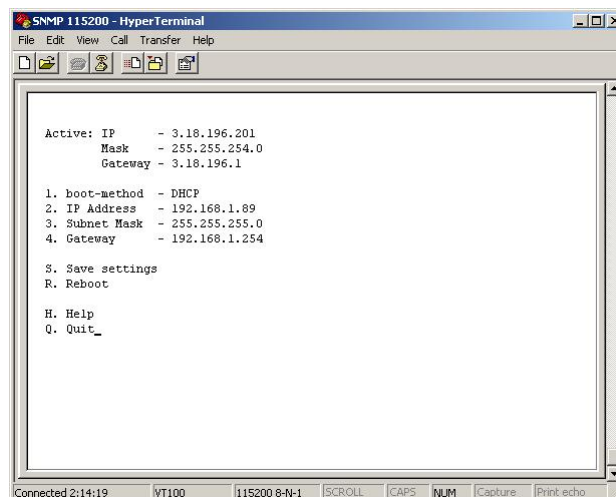
NOTE: Although the console interface provides a full set of commands, access using the serial connection is only needed for initial configuration when no DHCP server is available, or the IP-address is unknown. The quick network configuration menu provides a simple interface for basic network configuration. For all other settings the user-friendly web interface is recommended.

NOTE: **Save the settings !**
Apart from some network parameters, most setting are immediately active. However, the adapter will revert to the last saved settings at reboot. Therefore, in order to permanently modify the SNMP/Web adapter setting, remember to save the configuration after every change. This can be done:
- Pressing *S* on the quick configuration menu
- Entering *nvsave* at the command interface prompt

4.1.2   Configuration via the network

TELNET

- Launch a telnet client (e.g. on a PC running Windows, select *Run* from the *Start* menu and type **telnet <IP>**)

- The default username (login) and password are *ge* and *ge*

- A command-line configuration interface is entered

WEB BROWSER

- Launch a web browser

- Enter the URL of the SNMP/Web adapter: **http://<IP>/**

- The default username and password are *ge* and *ge*

- Navigate the pages using the menu bar

NOTE: **Save the settings !**
Apart from some network parameters, most setting are immediately active. However, the adapter will revert to the last saved settings at reboot. Therefore, in order to permanently modify the SNMP/Web adapter setting, remember to save the configuration after every change.

4.2   NETWORK PARAMETERS

The SNMP/Web adapter connects to the network using the following parameters:

- **IP address**   identifies the adapter on the network.

- **Subnet mask**   defines a range of addresses within the organisation.

- **Gateway**   the node used for connection to addresses outside the subnet.

The adapter can be configured to obtain these settings automatically using DHCP or BOOTP protocols, or to use static addresses (manual configuration).

4.2.1   Default configuration

The SNMP/Web adapter comes with a pre-configured **MAC address**, with the following format:
00:12:93:Fx:xx:xx   00:12:93 identifies the manufacturer.
                                          x:xx:xx is a unique code for every adapter.
The MAC address is written on a label sticker on the SNMP/Web adapter.

The factory default configuration for the SNMP/Web adapter is using DHCP. Assign the IP address to the adapter MAC address in your DHCP server. Then reboot the adapter in order to have it retrieve the IP address. The adapter is now accessible and configurable over the network.

4.2.2   Reboot

Every time the network settings are changed, these become effective only after a reboot. The adapter can be rebooted:

- Manually, pressing the reset button on the front of the adapter

- Using the console interface (either serial connection or telnet) by injecting the ***reboot*** command

- Using a web browser, selecting '***Reboot***' in the menu

4.3   FURTHER INFORMATION

For more information, and in order to make full use of all advanced functionalities provided by the SNMP/Web adapter, refer to the *Operating Manual* available on the CD-ROM

5   ACCESS

5.1   WEB INTERFACE

After the installation and configuration of the SNMP/Web adapter, the connection can be tested with a web browser.

- Launch the browser

- Enter the URL of the SNMP/Web adapter: **http://<IP>/** (e.g. http://192.168.24.14/)

- When prompted, enter username and password (by default, these are set to *ge* and *ge*)

- The SNMP/Web adapter home page will be shown

5.2   TROUBLESHOOTING

If no answer is received from the adapter, verify the adapter installation, cabling and network configuration. Check the Ethernet connection to the adapter by launching a *ping* command from a workstation in the same subnet.
E.g. in a Windows system:

- Select *Run* from the *Start* menu

- Enter **ping <IP>** (e.g. ping 192.168.24.14)

- Verify that the SNMP Card adapter is correctly replying

5.3   FURTHER INFORMATION

For more information, and in order to make full use of all advanced functionalities provided by the SNMP/Web adapter, refer to the *Operating Manual* available on the CD-ROM

6 CUSTOMER SUPPORT

6.1 FIRST LINE SUPPORT

Please contact your local GE distributor for problems with the installation of the product or its use.

6.2 INTERNET

On-line support available on request (Internet access required).

6.3 WWW SERVER

We have a WWW server running at

www.gedigitalenergy.com

With your favourite web browser you can access the latest information from GE, and download updates and manuals for this product.

7   APPENDIX A

SitePro EARTH CONNECTION

In order to guarantee correct functional behaviour, the SNMP/Web plug-in adapter must be connected to protective earth (UPS chassis). On SitePro UPSs manufactured before 2003 the square plates (delivered with the 3-ph adapter kit) must be mounted – refer to the pictures below for the installation details.
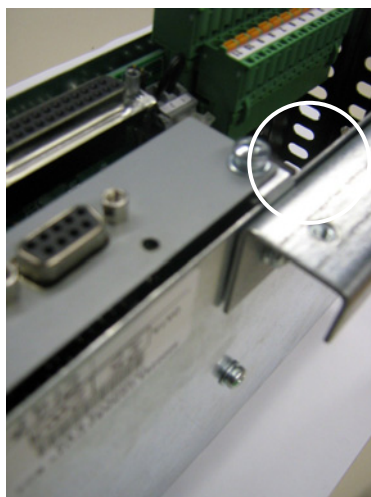
Note: Should the UPS be already equipped with the plates, please ignore this step.
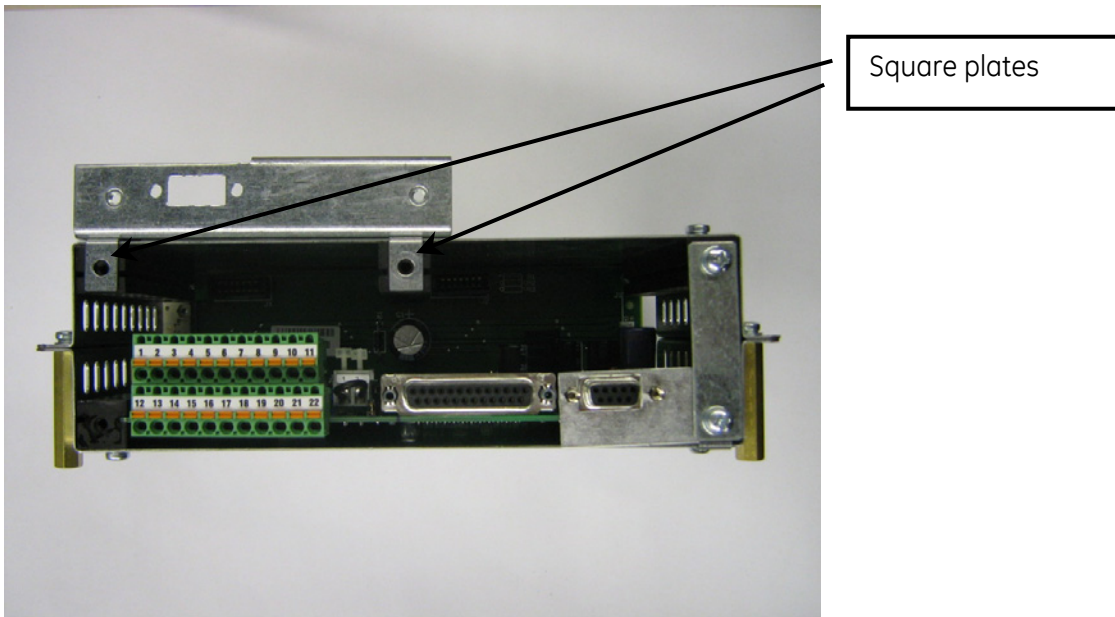
Square plates

Square plates mounting position
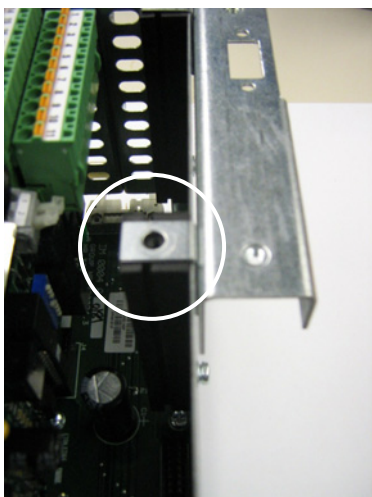
Square plate mounting – detail

Plug-in adapter earth connection