M0012026

SANUPS

UPS OPTION

LAN

INTERFACE CARD

Instruction Manual

SANYO DENKI

Preface

Thank you very much for purchasing our SANUPS LAN Interface Card. This manual describes important information on installing and operating the LAN Interface Card for the safety of our customers and service personnel*.
Be sure to read this manual before using the product. Afterwards, keep this manual at hand.

Table of Contents

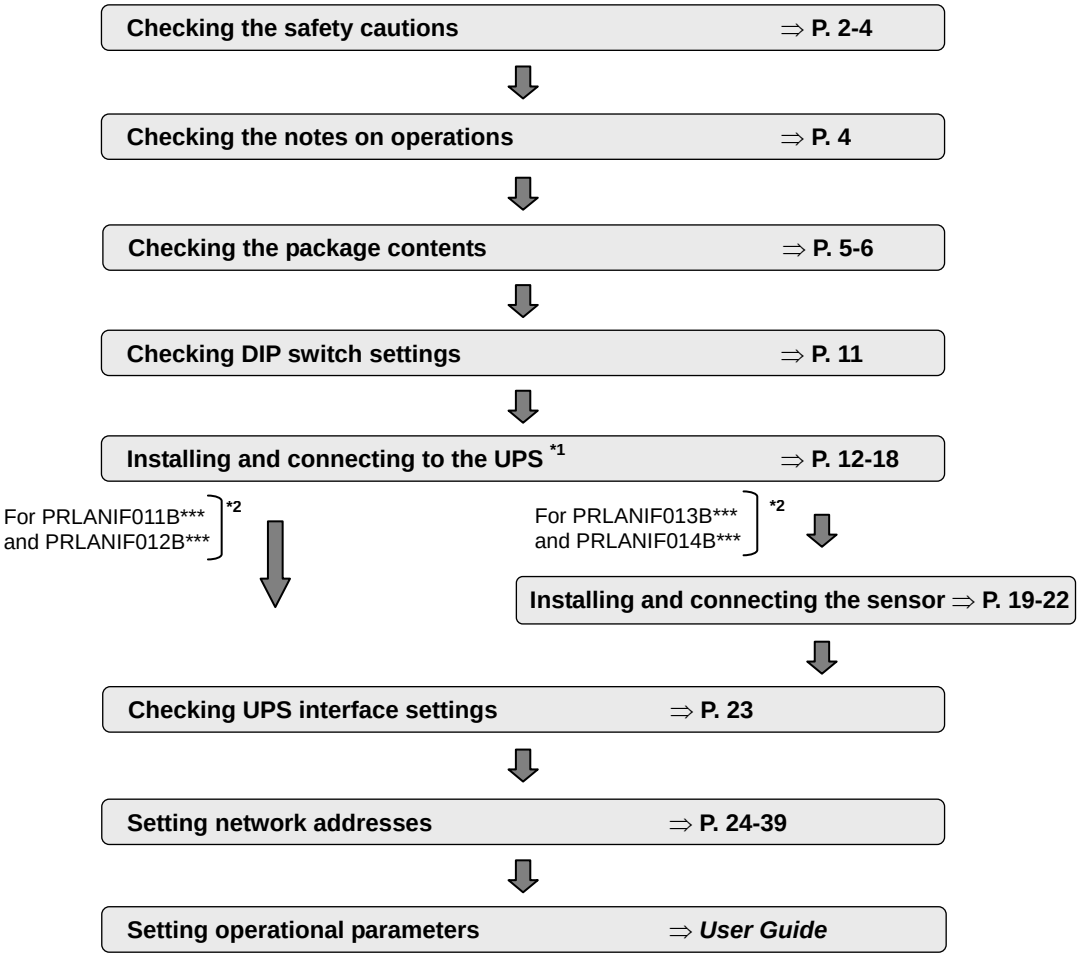
*****Service personnel

Technicians who are employees of our company or contracted to our company, and have knowledge of servicing this product. Maintenance tasks should not be carried out by anyone except these technicians.

1. BEFORE USING THE PRODUCT

1.1. Procedures

This manual describes how to install, connect, and configure the LAN interface card and sensor. Follow the procedure to install them safely and properly.



*1. UPS is the abbreviation of Uninterruptible Power Supply.
*2. The end of the model names of the LAN interface card and sensor vary depending on the type. Therefore in this manual, the model names of the LAN interface card are abbreviated to PRLANIF011B, 012B, 013B, or 014B. Also the model names of the sensor are abbreviated to PRLANSN001 or 002.

1.2 About the *User Guide*

Since the User Guide and MIB files are not supplied with the LAN interface card, you can download them from the download-page of our homepage. It is recommended to have your environment ready for viewing the User Guide since you will need it for installing and configuring the LAN interface card.

About our homepage

See the end of this booklet for our homepage URL.
You can access download page from "Download" in our homepage.

2. SAFETY PRECAUTIONS

This manual describes important information for safety of our customers and service personnel.
Read this manual carefully before using the product and be sure that you understand how to use it safely.
Safety cautions are categorized into "Warning" and "Caution" in this manual.

Display	Meaning
⚠ Warning	**Indicating that you may be seriously injured or even killed if handled incorrectly.**
⚠ Caution	**Indicating that you may be injured or some other physical damage may be caused if handled incorrectly.**

However, items marked as ⚠ **Caution** can cause a serious result depending on the situation. Nevertheless they are both important. Be sure to observe them.

The following shows the meaning of symbols used in this manual.

Symbol	Meaning
⃠	Indicates **Prohibited action**.
●	Indicates **Mandatory action**. Specific descriptions of the action are added in the symbol or near the symbol. ❗: Indicates what you must do. ⏚: Indicates you must earth it.
△	Indicates **Caution (including Warning)**. Specific descriptions of the action are added in the symbol or near the symbol. ⚠: Indicates a general caution. : Indicates that you may get an electric shock. : Indicates that it may cause a fire or emit smoke.

1. Notes on Storage and Installation

Caution

- Install as it is instructed in the manual. Improper installation may cause an electric shock, injury, or a fire.

- Never store or use this product in the following environments. The product may be broken, damaged, or deteriorated and may cause a fire.
  a. A place that does not comply with the temperature and humidity criteria specified in the catalog and manual.
  See "17. SPECIFICATIONS" for the appropriate installation environment.
  b. A place that is exposed in direct sunlight.
  c. A place that is directly exposed a heat source such as a stove.
  d. A place that is exposed to vibration and shocks.
  e. A place that is near a device that gives out sparks.
  f. An atmosphere that contains dust, corrosive gas, salt, or flammable gas.
  g. A place that may be wet or condensation may occur.
  h. Outdoors

- Store the packaging plastic bags and plastic sheets, and other attachments away from children. Children may suffocate if they put the plastic bag over their heads or swallow the plastic sheet.

2. Notes on Connection

Caution

- Connect as it is instructed in the manual. Improper connection may cause an electric shock or fire.

3. Notes on Operations

Warning

- Stop immediately if you detect an unpleasant smell or hear a strange noise. Otherwise, it may cause a fire.

- Do not remove the cover from the LAN interface card and the sensor. It may cause an electric shock or accident.

Prohibited

- Never use this product for the following purposes.
  a. Medical devices that directly affect human lives.
  b. Control devices for trains and elevators that can result in injury.
  c. Computer systems that are socially or publically critical.
  d. Any other devices that are equivalent to the above.
- Contact your supplier or us in advance if your device is applicable to one of the above. Devices that affect human safety or public functions require special considerations for operations, maintenance, and management such as system redundancy and emergency power supply.
- Do not insert a metal stick or your finger into the connector. It may cause an electric shock.

- Do not operate the product with a wet hand. It may cause an electric shock.

- Do not remodel, disassemble, or repair the product. It may cause an accident such as an electric shock when the service personnel open the cover, or carry out maintenance work such as parts replacement. The warranty will be void if you do.

4. Notes on Maintenance and Checks

Caution	
	• Checking and repairing the LAN interface card and inside the sensor should only be carried out by the service personnel. Otherwise, it may cause an electric shock, injury, burn, smoke emission, or a fire. • Do not remove the cover from the LAN interface card and the sensor. It may cause an electric shock or accident.
	• Contact your supplier or service provider for repair and parts replacement. It may case an electric shock or burn if you open the cover.
	• Do not insert a metal stick or your finger into the connector. It may cause an electric shock. • Do not touch the internal parts even when the power is turned off. It may cause an electric shock because there are parts on which a voltage is applied.

3. NOTES ON CORRECT OPERATIONS

3.1 Notes on Installation

The LAN interface card and sensor are manufactured specially for SANYO DENKI SANUPS Series UPS. Do not install them on any other devices. Also, do not use them for any purposes not described in this manual or the *User Guide*.
Contact your supplier or us for details on combinations of the UPS and accessories.

3.2 Notes on Handling the Product

The LAN interface card and the UPS installed with the LAN interface card are applicable to row 16 of appended table 1 of Export Trade Control Order. We recommend you to consider "inform condition" or "objective condition", and carry out the procedure concerning the security trade to the competent authorities if you are exporting them or exporting them embedded in other goods.
(These notes apply when exporting from Japan.)

4. PRODUCT OVERVIEW

This LAN interface card is manufactured to be installed in our SANUPS Series UPS to safely shut down computers via the network and shut down the UPS in the event of a power failure. This also allows you to remotely monitor and control the UPS.
You can also connect the sensor to measure and monitor the surrounding temperature and humidity if your product is PRLANIF013B or PRLANIF014B.

5. CHECKING CONTENTS

Check the contents when you have opened the package.
Contents vary depending on the model. Check the model of your LAN interface card and sensor to find the contents.

Check if you have the LAN interface card and all accessories.
Also check if there is any external damage or anomaly.

☑ Use checkboxes to confirm.

Contact your supplier or us if there is a problem.

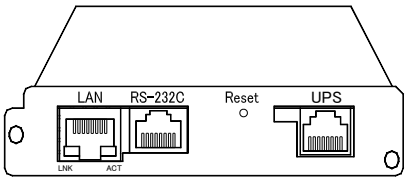
Notes on transferring or selling the product

If you are transferring or selling your LAN interface card and sensor to a third party, transfer or sell all supplied accessories together.

Illustrations in this manual may differ from the actual goods.

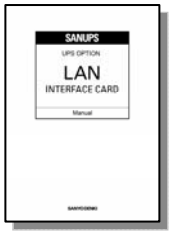
PRLANIF011B and PRLANIF012B

☐ LAN interface card x 1



The above illustration shows PRLANIF011B.
The shape varies depending on the model.

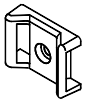
☐ Manual x 1



☐ Serial communication cable x 1

00830882-01

☐ Cable tie mount x 1

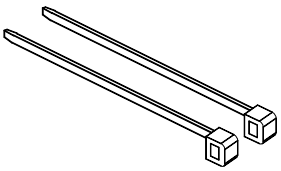


☐ UPS connection cable x 1

00829938-01

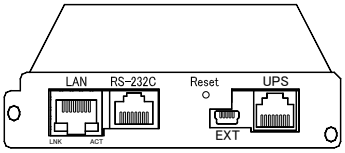
☐ Cable tie mount screw x 1
M3*L6

☐ Cable tie x 2



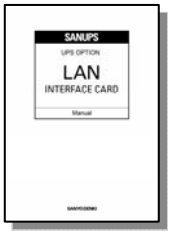
PRLANIF013B and PRLANIF014B

☐ LAN interface card x 1



The above illustration shows PRLANIF013B.
The shape varies depending on the model.

☐ Manual x 1



☐ Serial communication cable x 1

00830882-01

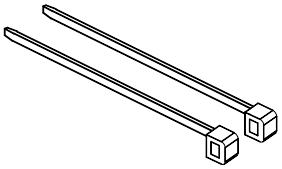
☐ Cable tie mount x 1

☐ Cable tie mount screw x 1
M3*L6

☐ UPS connection cable x 1

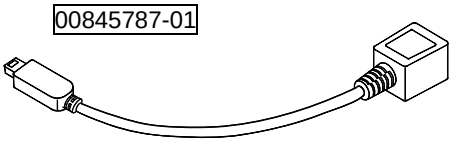
00829938-01

☐ Cable tie x 2



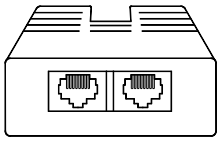
☐ Sensor connection cable x 1

00845787-01



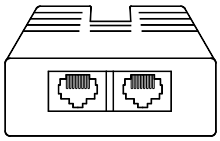
PRLANSN001

☐ Temperature sensor



PRLANSN002

☐ Humidity sensor



The temperature sensor and humidity sensor are in a separate package.

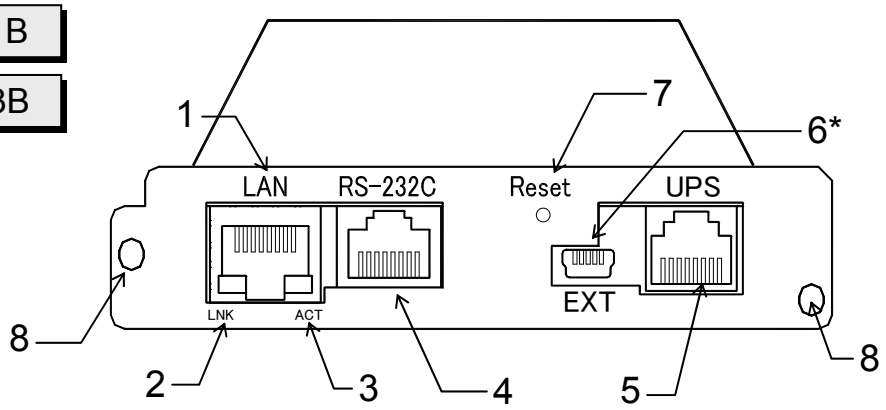
6. PART NAMES

6.1 LAN Interface Card

PRLANIF011B

PRLANIF013B

Front view

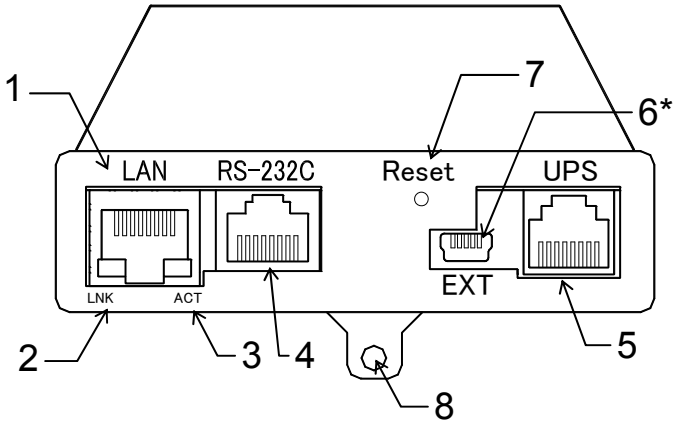


* Not present on PRLANIF011B and PRLANIF012B.

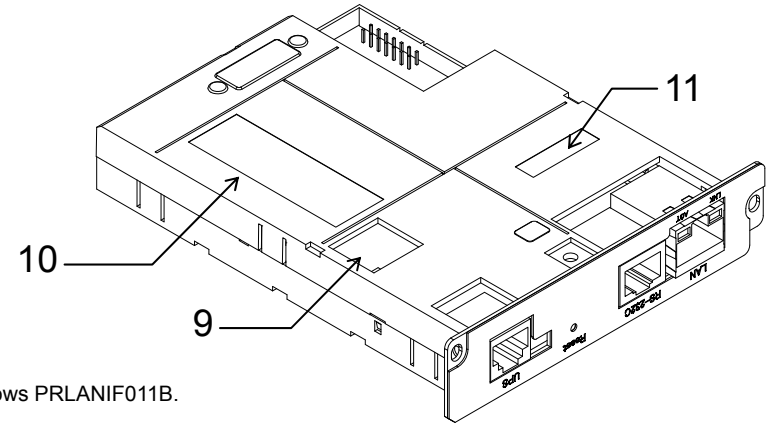
PRLANIF012B

PRLANIF014B

Front view



Bottom view

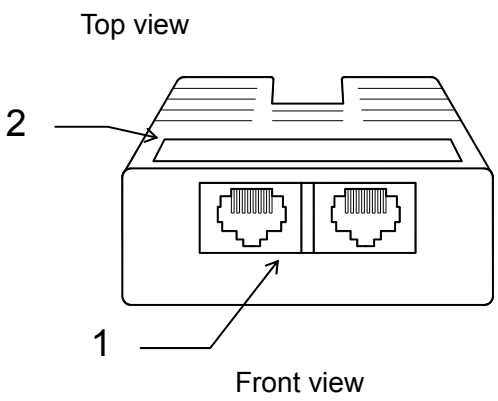


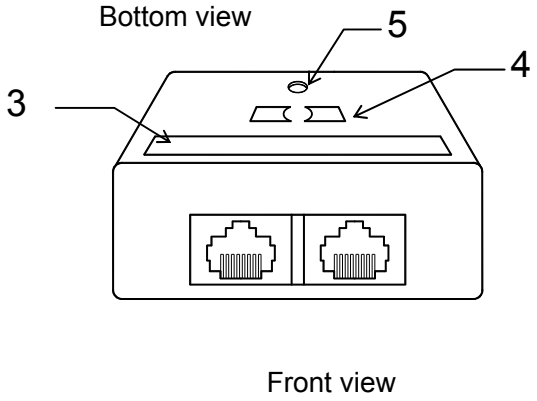
The bottom view illustration shows PRLANIF011B.

No.	Label	Name	Description
1	LAN	LAN interface connector (RJ45)	A LAN interface modular jack. Use this to connect a network cable. You can automatically detect the transfer speed (100 Mbps/10 Mbps). The transmission method (full-duplex/half-duplex) is set to auto. Set the port setting for the connected network cable (on the network device) to auto. This does not come with an AUTO-MDIX function.
2	LNK	Connection status LED	A LED to display the network connection status. The LED is lit in green when connected to the network.
3	ACT	Data LED	A LED to display the data transmission and receipt status. The LED is lit in green when data is being transmitted or received.
4	RS-232C	Serial interface connector (RJ45)	A connector for RS-232C signals. (1) Use this when configuring the LAN interface card from a serial terminal. (2) Use this when shutting down the computer from the serial port. Connect the serial communication cable supplied with this product.
5	UPS	UPS communication connector (RJ11)	A connector to communicate with the UPS. Connect the UPS connection cable supplied with this product.
6	EXT	Sensor communication connector (mini-USB)	A connector to communicate with the sensor. Connect the sensor connection cable supplied with this product. * Not present on PRLANIF011B and PRLANIF012B.
7	Reset	Hard reset button	Restarts the program of the LAN interface card. Restarting the program does not affect UPS output. Press the button for at least one second to initiate a reset.
8	-	Fixing screw hole	A screw hole to fix the card to the UPS.
9	-	DIP switch	DIP switches to configure functions and operations of the LAN interface card. DIP switches 1 to 4 are all set to OFF as the factory setting. Refer to "7.2 Checking DIP Switch Settings" for details.
10	-	Product label	A label to show the model and serial number.
11	-	MAC address	A label to show the MAC address.

6.2 Sensor

External views of the temperature sensor and humidity sensor are the same.
Distinguish them by the product name written on the product label 1.





No.	Name	Description
1	Connector (RJ45)	A connector to communicate with the LAN interface card. Use this to connect the LAN interface card and sensor. Both connectors can be used for input and output.
2	Product label 1	A label to show the product name and sensor ID.
3	Product label 2	A label to show the model and serial number.
4	Magnet	A magnet to mount the sensor on a metal surface.
5	Fixing hole	A hole (φ5.8) to mount the sensor.

7. PREPARING FOR THE INSTALLATION

7.1 Checking the LAN Interface Card

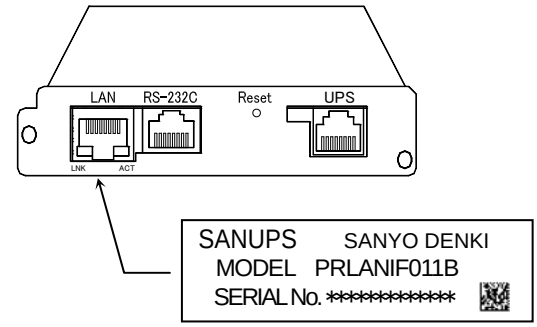
You need the LAN interface card, and the supplied UPS connection cable 00829938-01 . Check that the model of the LAN interface card and the label on the UPS connection cable were correct, and they have no external damage.

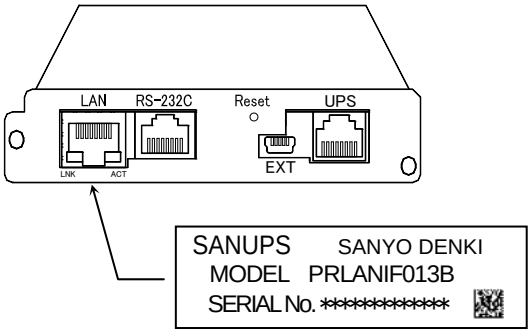
UPS connection cable with the 00829938-01 label x 1

LAN interface card* x 1

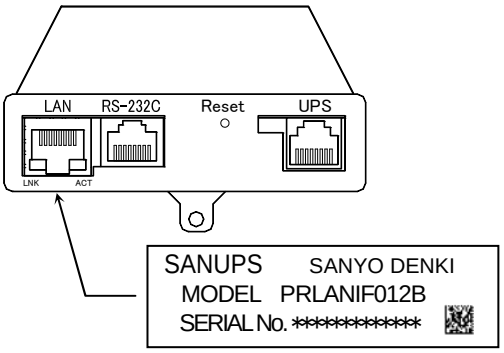
*Caution

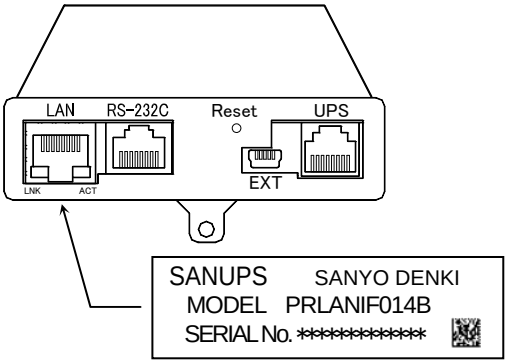
The shape of LAN interface cards varies depending on the model and the intended UPS.
Check that you have the correct LAN interface card for your UPS.





See "8.1 Installing PRLANIF011B or PRLANIF013B" for how to install the card.



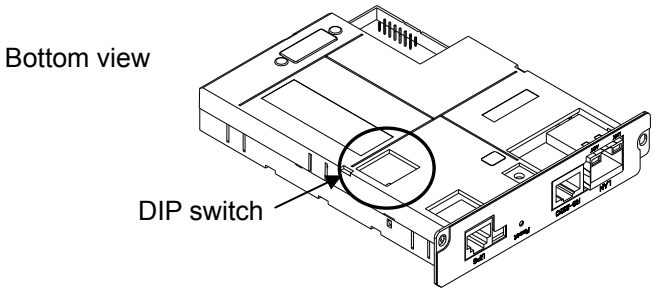


See "8.2 Installing PRLANIF012B or PRLANIF014B" for how to install the card.

7.2 Checking DIP Switch Settings

Caution	Use a tool that is **NOT METAL** to set DIP switches ON or OFF. Using a metal tool may cause an electric shock.

Check the DIP switch setting before installing the LAN interface card.
The following table shows the functions and operations for DIP switch settings.
Set the DIP switches to suit your purpose.



Switch No.	Setting	Functions and operations	Setting
1	OFF	• Using the serial interface connector for configuration. • Shutting down computers by the contact signals.	Factory setting ON 1 2 3 4
	ON	• Connecting to the serial port of Unix or Linux to log in and shut it down.	ON 1 2 3 4
2	OFF	Not used. Leave them to OFF.	
3	OFF		
4	OFF		

Caution

Set the DIP switches before installing the LAN interface card to the UPS.
If you need to change the DIP switch setting after installing the LAN interface card to the UPS and starting the UPS, stop the UPS, remove all cables connected to the LAN interface card, and remove the LAN interface card before changing the DIP switch setting.

7.3 Shutting Down the UPS

If the UPS is running, shut it down completely and turn off the power supply.
Refer to the UPS manual for how to shut down the UPS.

8. INSTALLING THE LAN INTERFACE CARD

⚠ **Caution**	⚠	Install the LAN interface card while the UPS is completely shut down. You may have an electric shock or the device may break down if you install while the UPS is not shut down.

Install the LAN interface card into the UPS.

This section describes the difference in the installation position and procedure. Check your UPS and see the corresponding or similar item to install. Follow the same procedure even if your product is not mentioned below.

8.1 Installing PRLANIF011B or PRLANIF013B

The same installation procedure applies to PRLANIF011B and PRLANIF013B. This section takes PRLANIF011B as an example.
If you have PRLANIF013B, install the LAN interface card to the UPS and then see "9. INSTALLING AND CONNECTING THE SENSOR" to install the sensor.

Checking before the installation

- Check that the UPS is shut down.
  Confirm that the power supply to the UPS is turned off and the UPS is completely shut down. Refer to the UPS manual for details on the shutdown status of the UPS.
- Check that the DIP switches on the LAN interface card are set to suit your purpose.
  See "7.2 Checking DIP Switch Settings" for details.

Installation

(1) Remove the cover for **"OPTION CARD"** on the UPS.

(2) Insert the LAN interface card and fasten it with two screws.

(3) Connect the **"CARD I/F"** connector and the **"UPS"** connector using the supplied 00829938-01 UPS connection cable.

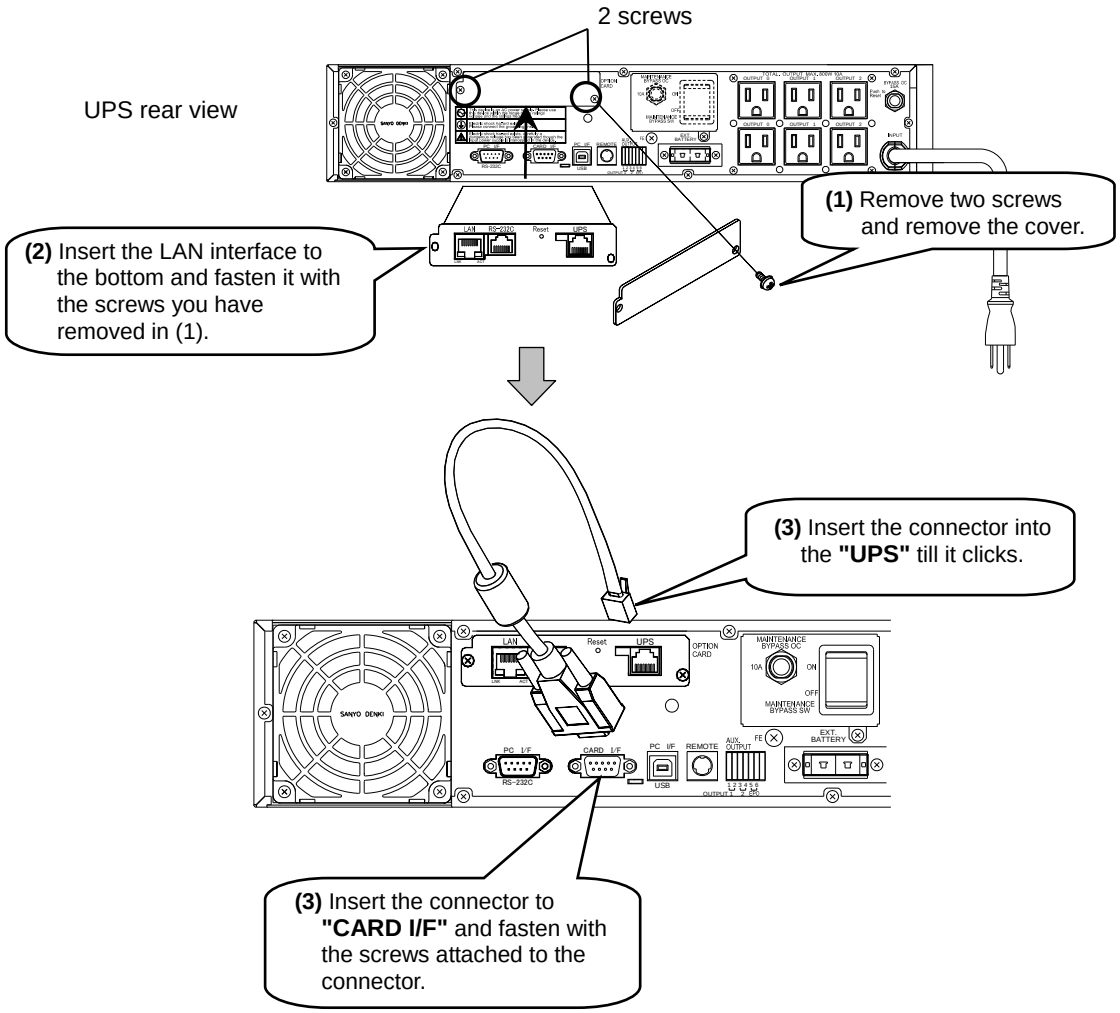
Checking after the installation

- Check that the screws for the LAN interface card are not loose, and the connectors are connected properly.

Notes on installing the LAN interface card

- You cannot install the LAN interface card if you insert the card from the wrong end. Check the direction before inserting.
- Do not connect the cable to a wrong connector; otherwise, the device may break down.
- You cannot connect the connector to the wrong end of the cable. Check the direction before inserting.
- Keep the cover removed from the UPS safe.
- If the UPS Instruction Manual also contains instructions on installing a LAN interface card, check the instructions in the UPS Instruction Manual along with these instructions.

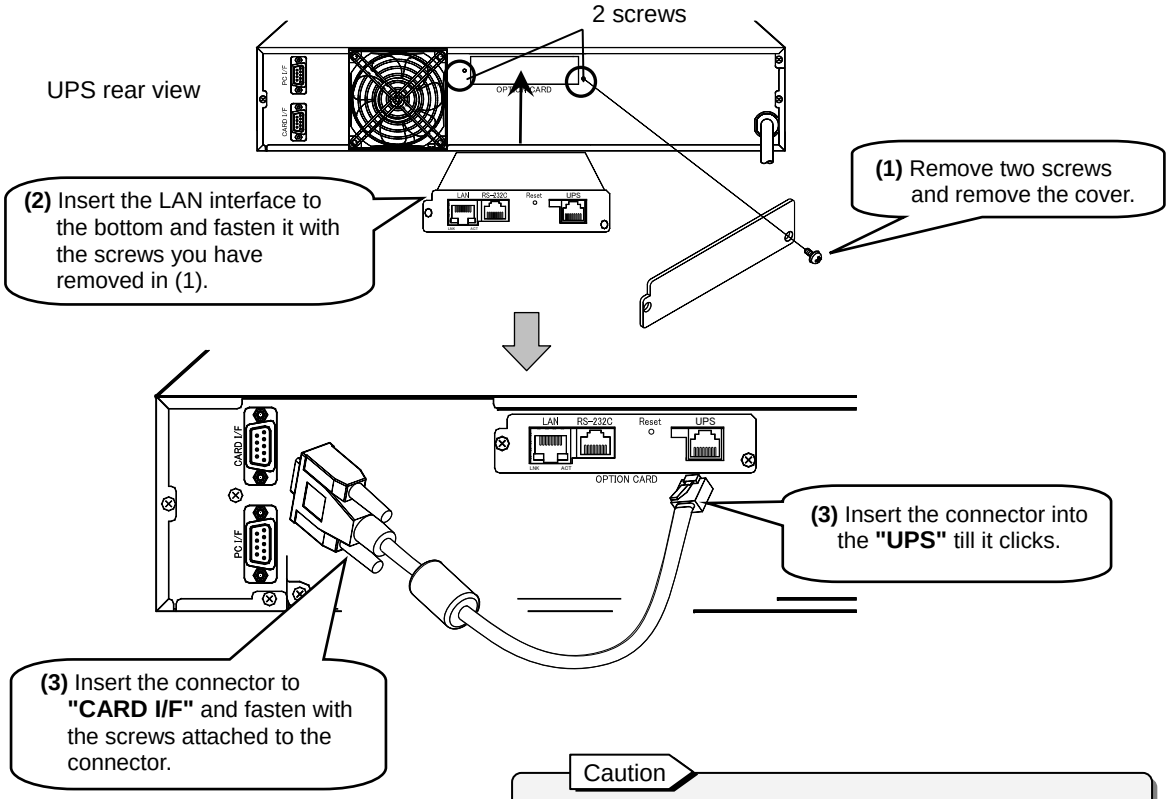
A11K type



Caution

The position of the **"CARD I/F"** connector varies depending on the UPS. Check the label of the connector before connecting.

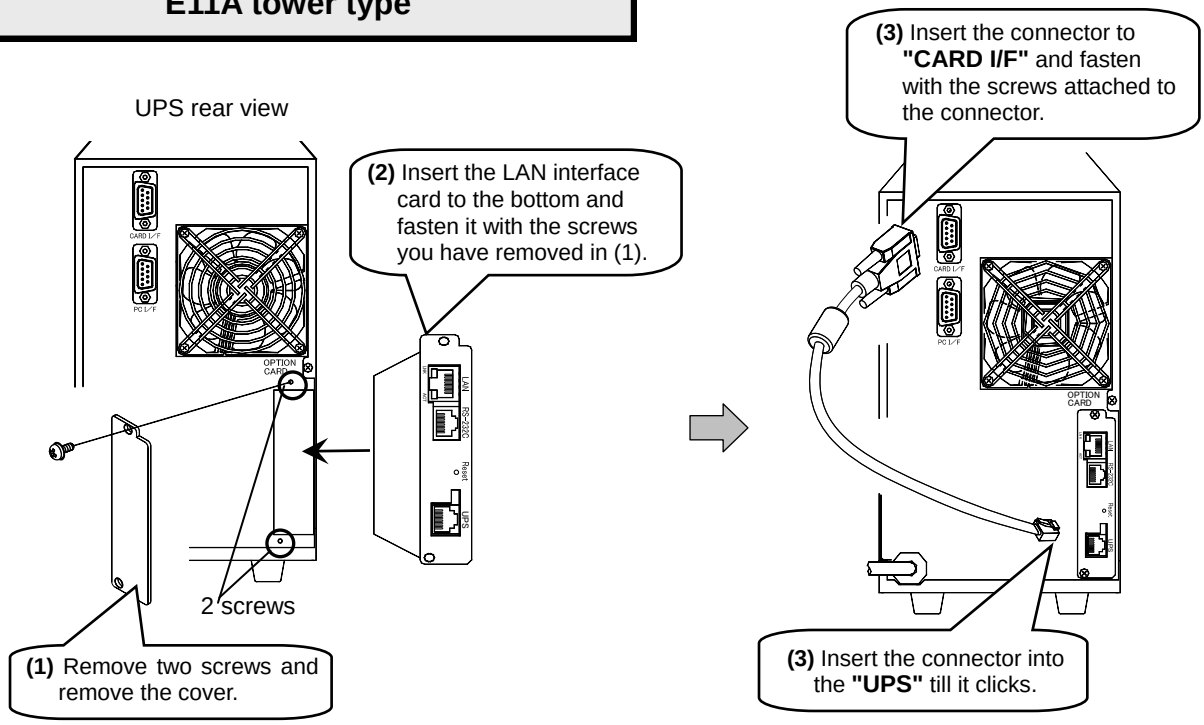
ASE-H, A11G-Ni, A11F, E11A standard type



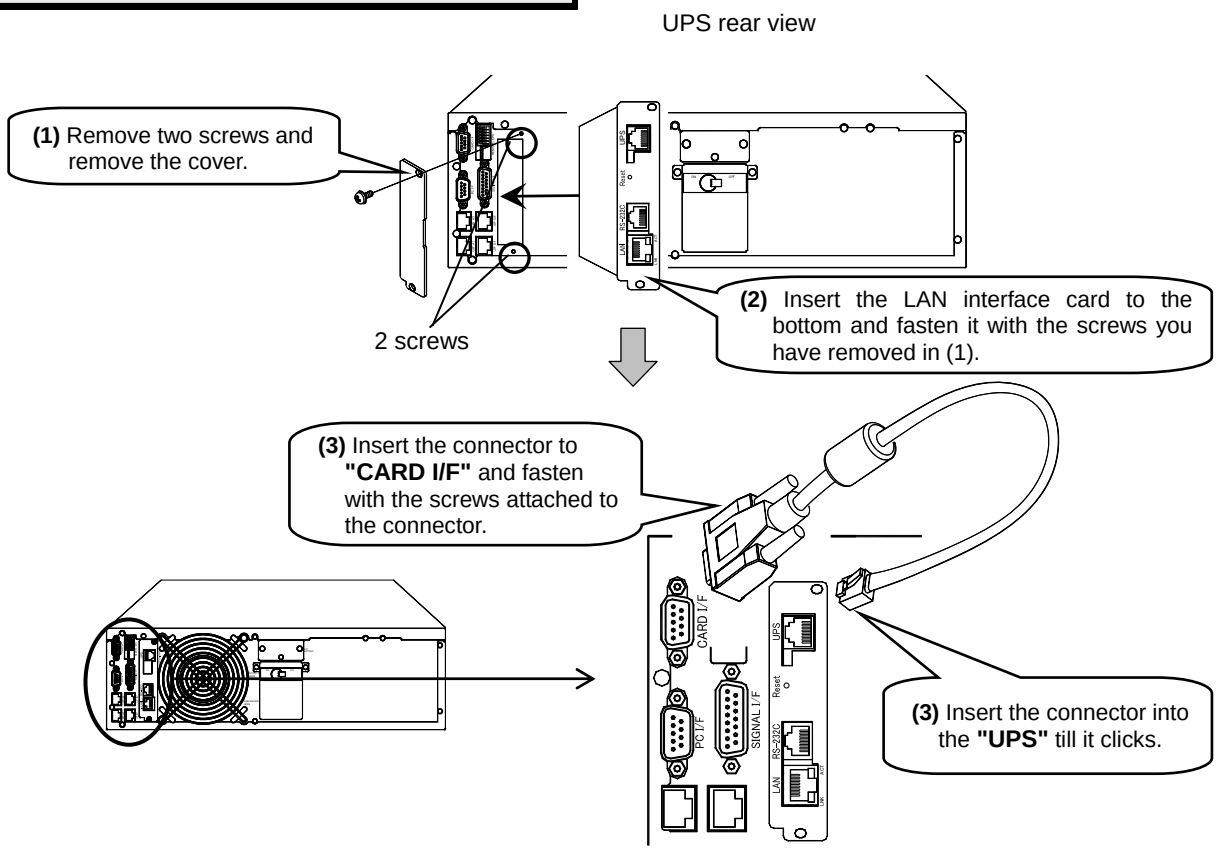
Caution

The position of the **"CARD I/F"** connector varies depending on the UPS. Check the label of the connector before connecting.

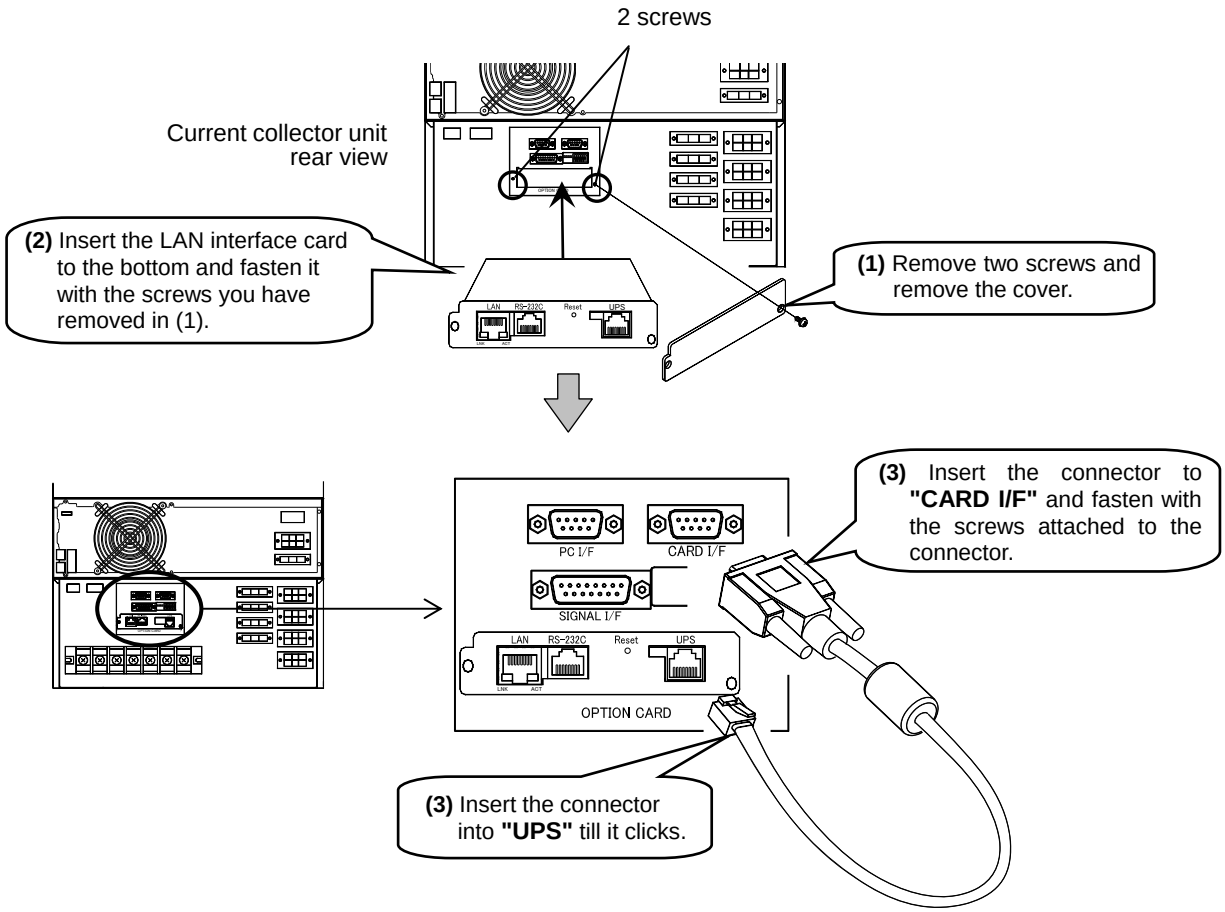
E11A tower type



A11J single type

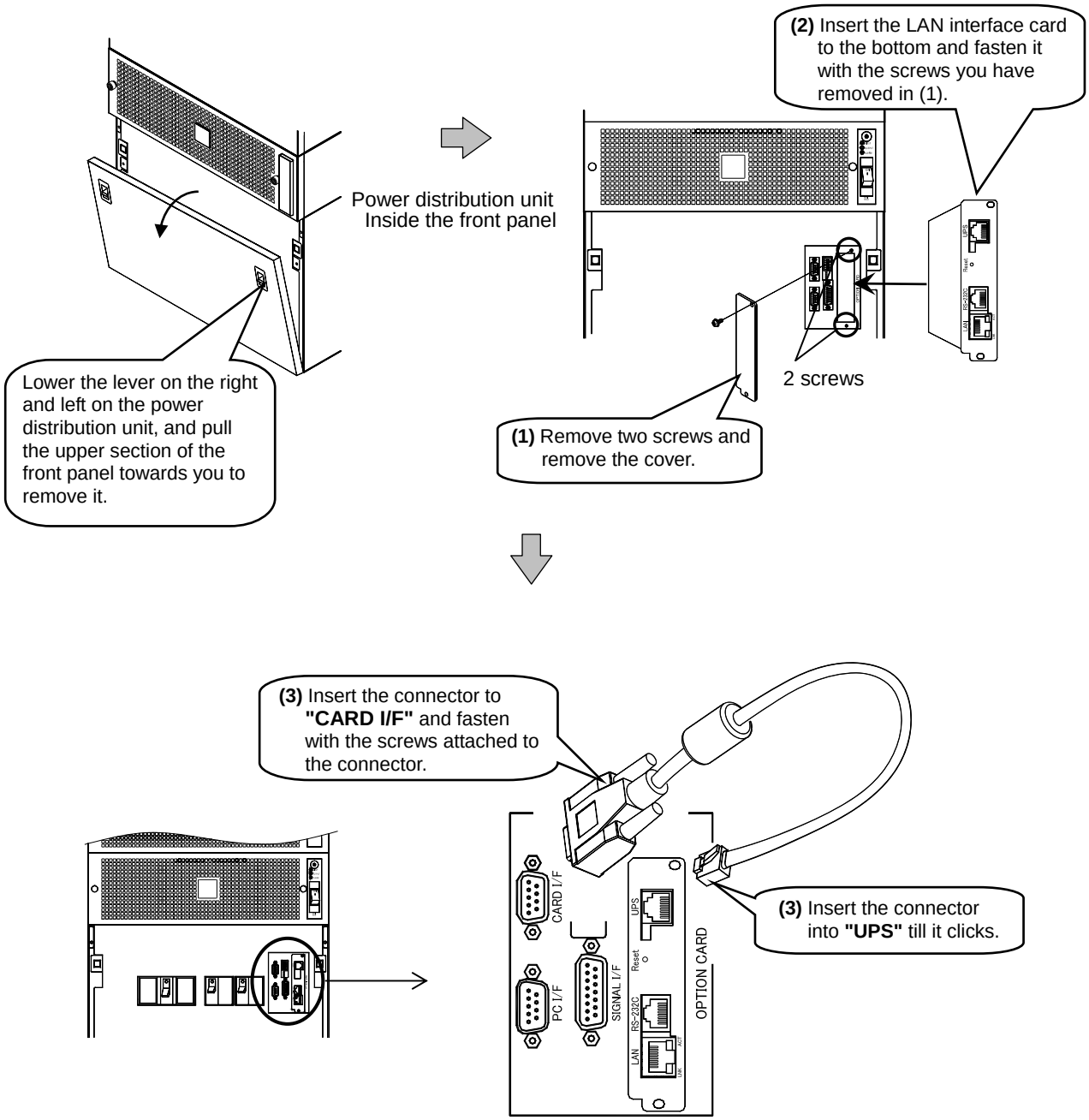


A11J S2 type



A11J W type

"OPTION CARD" to insert the LAN interface card is located inside the front panel of the power distribution unit.
Remove the front panel to insert the LAN interface card.



Caution

Reattach the front panel of the power distribution unit after you have finished all connection tasks.
Take care not to catch the cable when you reattach the front panel.

8.2 Installing PRLANIF012B or PRLANIF014B

The same installation procedure applies to PRLANIF012B and PRLANIF014B. This section takes PRLANIF012B as an example.

If you have PRLANIF014B, install the LAN interface card to the UPS and then see "9. INSTALLING AND CONNECTING THE SENSOR" to install the sensor.

Checking before the installation

- Check that the UPS is shut down.
- Check that the DIP switches on the LAN interface card are set to suit your purpose.
  See "7.2 Checking DIP Switch Settings" for details.

Installation

(1) Remove the cover for **"OPTION CARD"** on the UPS.

(2) Insert the LAN interface card and fasten it with a screw.

(3) Connect the **"CARD I/F"** connector and the **"UPS"** connector using the supplied 00829938-01 UPS connection cable.

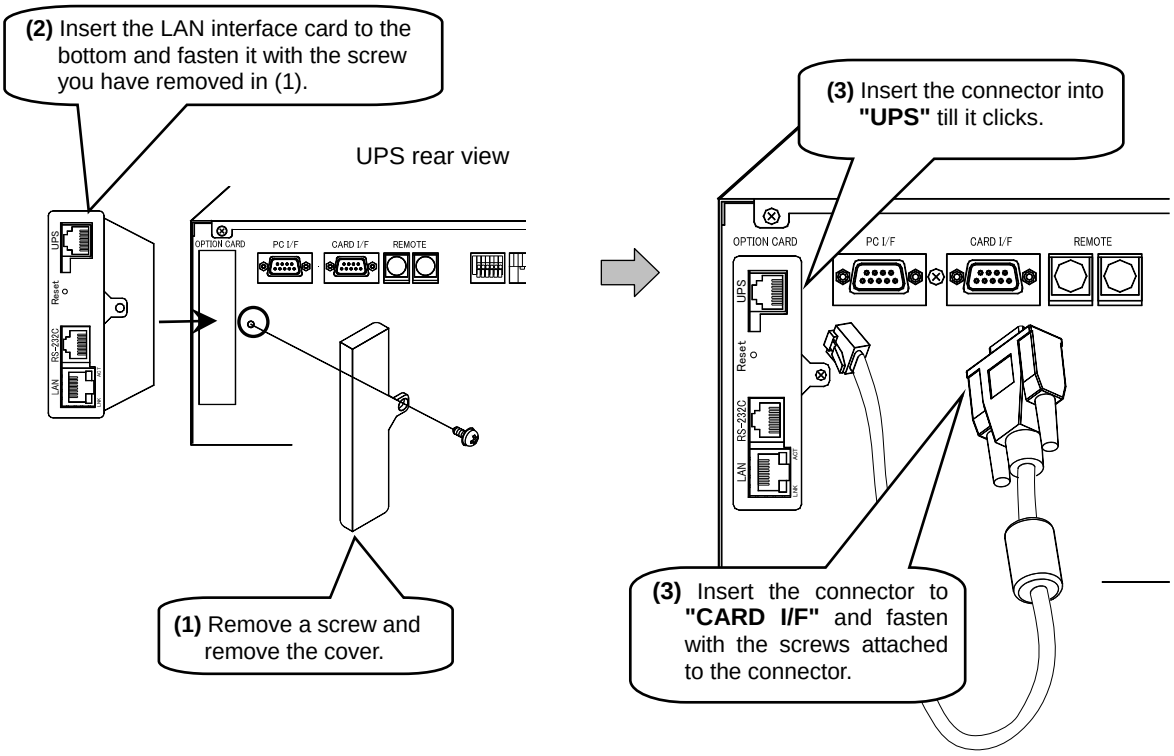
Checking after the installation

- Check that the screws for the LAN interface card are not loose, and the connectors are connected properly.

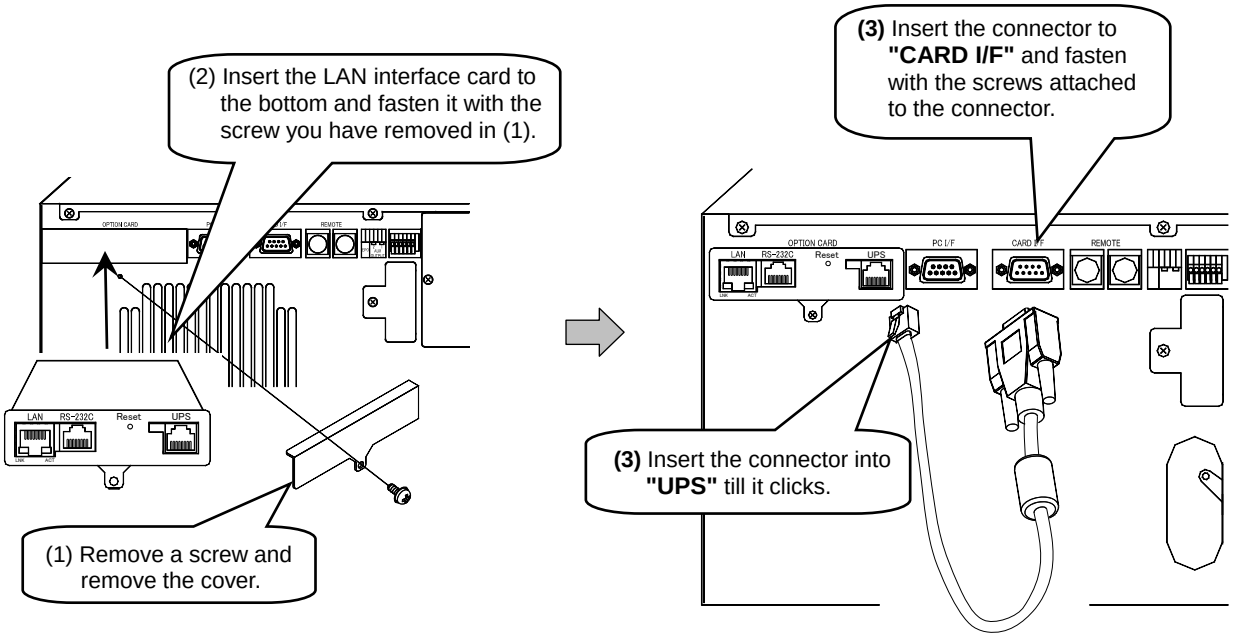
Notes on installing the LAN interface card

- You cannot install the LAN interface card if you insert the card from the wrong end. Check the direction before inserting.
- Do not connect the cable to a wrong connector; otherwise, the device may break down.
- You cannot connect the connector to the wrong end of the cable. Check the direction before inserting.
- Keep the cover removed from the UPS safe.
- If the UPS Instruction Manual also contains instructions on installing a LAN interface card, check the instructions in the UPS Instruction Manual along with these instructions.

A11F202



A11F302



9. INSTALLING AND CONNECTING THE SENSOR

Read this chapter and install the sensor if your have PRLANIF013B or PRLANIF014B.
Go to "10. CONFIGURING THE UPS INTERFACE" if you have PRLANIF011B or PRLANIF012B.

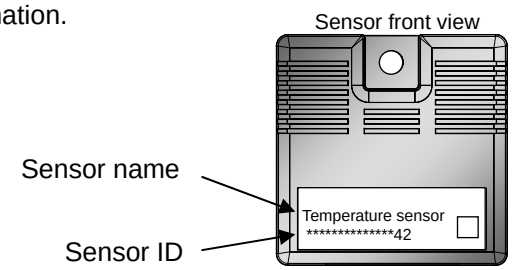
The same installation procedure applies to the temperature sensor (PRLANSN001) and humidity sensor (PRLANSN002).
You can connect up to 16 sensors.

9.1 Recording the Sensor ID

Sensors are managed by sensor IDs and installed locations registered with the Web Management Tool. The sensor ID is automatically captured when registering the sensor information if the sensor is already connected; however, it is recommended to record the sensor IDs and installed locations in the following table so that you can identify the locations of the sensors when their IDs are captured.
Refer to the *User Guide* for how to register sensor information.

Sensor IDs are set as follows.

Temperature sensor ID: 16 digits ending with "42"
Humidity sensor ID: 16 digits ending with "26"



Pick one

No.	Temperature sensor	Humidity sensor	Sensor ID	Installed location, comments, etc.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

9.2. Installing the Sensor

Check the sensor ID and location you have recorded in "9.1 Recording the Sensor ID" and install the sensor at the recorded location.

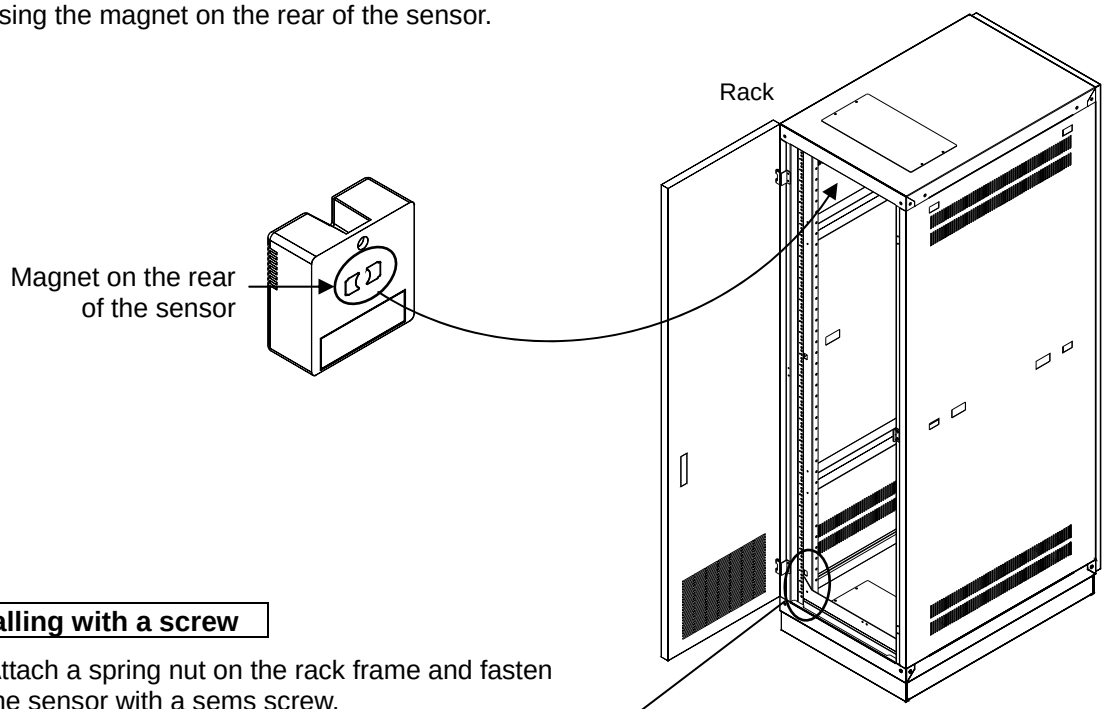
This section describes how to install a sensor in a rack. Install in the way suitable to the given location.

Caution

- Sensors are designed to be used indoors. Do not install outdoors.
- A magnet is attached to the rear of the sensor. Do not place it near any object that is susceptible to magnetic force such as a mobile phone, watch, or magnetic card. Also, do not install on a magnetic disk device.

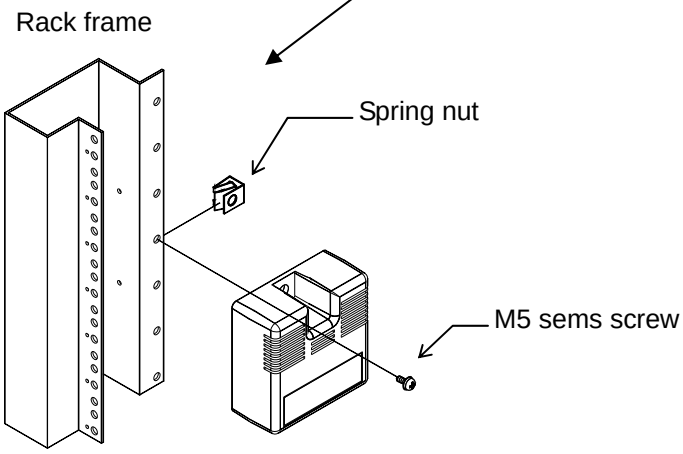
Installing with a magnet

Install on a smooth metal surface in the rack using the magnet on the rear of the sensor.



Installing with a screw

Attach a spring nut on the rack frame and fasten the sensor with a sems screw.



9.3 Connecting the Sensor

Connect the UPS installed with the LAN interface card (hereinafter just UPS) and the sensor, and between sensors.

(1) Prepare the following items.

- Supplied sensor connection cable 00845787-01 x 1

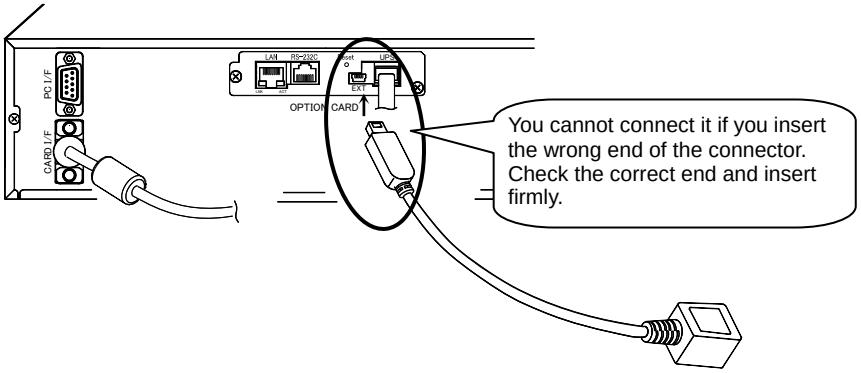
- LAN cable (straight 8 wires) x as required*

*Caution

You need the same number of LAN cables as the connected sensors.
Prepare the suitable length of LAN cables for the distance between installed sensors.

- The total length of cables that connect all sensors should not exceed 100 m.
- Use LAN cables that are CAT5 or better and straight 8 wires.

(2) Insert the supplied sensor connection cable 00845787-01 to the "EXT" connector on the UPS.

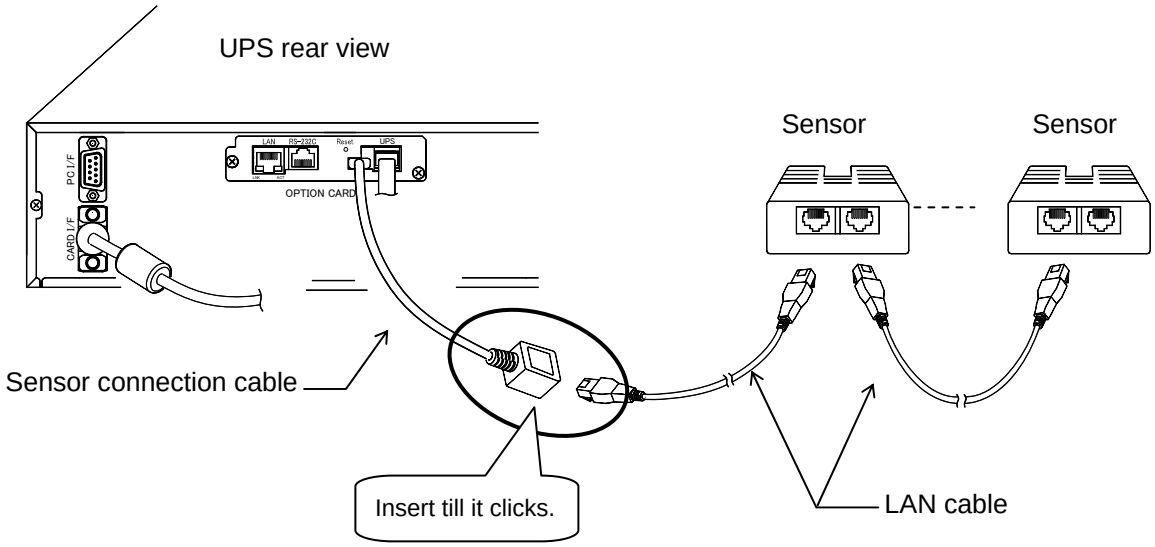


Caution

Fasten the cables using the supplied cable tie if the sensor connection cable might come off.
See "14. FASTENING THE CABLES".

(3) Connect the sensor connection cable and the sensor using a LAN cable.

(4) Connect sensors with LAN cables as shown below if you have more than one sensor.



(5) Check that the connector is properly inserted, and the LAN cables are not stretched or forced.

Caution

- The number of sensors should not exceed 16, and the total length of cables connecting the UPS and the sensor, and between sensors should not exceed 100 m.
  Operations cannot be guaranteed if 17 sensors or more are connected or the total length of the cables exceeded 100 m.
- LAN cables can be connected to both the right and left connectors on the sensor. They are not specific to input or output.
- As long as the total number of sensors is 16 or less, the connected order of and the number of temperature sensors or humidity sensors are not restricted. Install them to suit your system configuration.
- Give considerations to protect sensors and connections between sensors from noise influence.
- Do not connect devices that supply power such as POE (Power Over Ethernet).

10. CONFIGURING THE UPS INTERFACE

[Interface] in the user setup menu must be set to "**WS** (workstation)" on the UPS where the LAN interface card is installed (hereinafter just UPS) to use the LAN interface card.

Check and set [Interface] in the user setup menu as follows.

(1) Check the default value of [Interface] in the user setup menu.
Refer to the manual that describes the user setup menu such as the UPS manual, user setting manual, or LCD panel operation manual for how to check.

Default setting for [Interface]

The default setting for [Interface] varies depending on the UPS.
The following table describes the default values for [Interface] for main SANUPS Series UPS.

SANUPS series	default value
A11K	WS (workstation)
A11F*	Standalone ★ (Note)
A11J	WS (workstation)
E11A	WS (workstation)
A11G-Ni*	Standalone ★
ASE-H*	Standalone ★

*: "WS (workstation)" is already set if the UPS is installed with the LAN interface card when shipping from the factory.
★: When you change the default value indicated by "★" mark, the setting value can not be applied unless you restart the UPS.
Note: When your UPS is A11F series, after changing the value, a request to restart the UPS differs depending on the UPS Model. See the UPS manual for details.

(2) Start up the UPS. Refer to the UPS manual for the procedure.

- When the default value is "**Standalone**"
- When the default value is changed to "**Standalone**"
- When the current setting is unknown

- When the default value is "**WS** (workstation)"
- When the default value has not been changed from "**WS** (workstation)"

Go to "11. PREPARING FOR NETWORK ADDRESS CONFIGURATION".

(3) Specify **"WS (workstation)"** to [Interface] in the user setup menu of the UPS.
Refer to the UPS manual for the procedure.

Caution

The configuration change may not be applied after changing the value for [Interface] unless you restart the UPS. Refer to the UPS manual for the procedure.

11. PREPARING FOR NETWORK ADDRESS CONFIGURATION

Prepare the following before setting network addresses in "12. CONFIGURING NETWORK ADDRESSES".

11.1 Connecting the Serial Interface Connector

Connect the UPS and PC using the serial communication cable supplied with this product.

(1) Prepare the following items.

- Supplied serial communication cable 00830882-01 x 1

- PC x 1
- Terminal software
- RS-232C serial cable* (D-sub 9-pin cross) x 1
- USB to RS-232C converter x 1 if your PC has no serial port

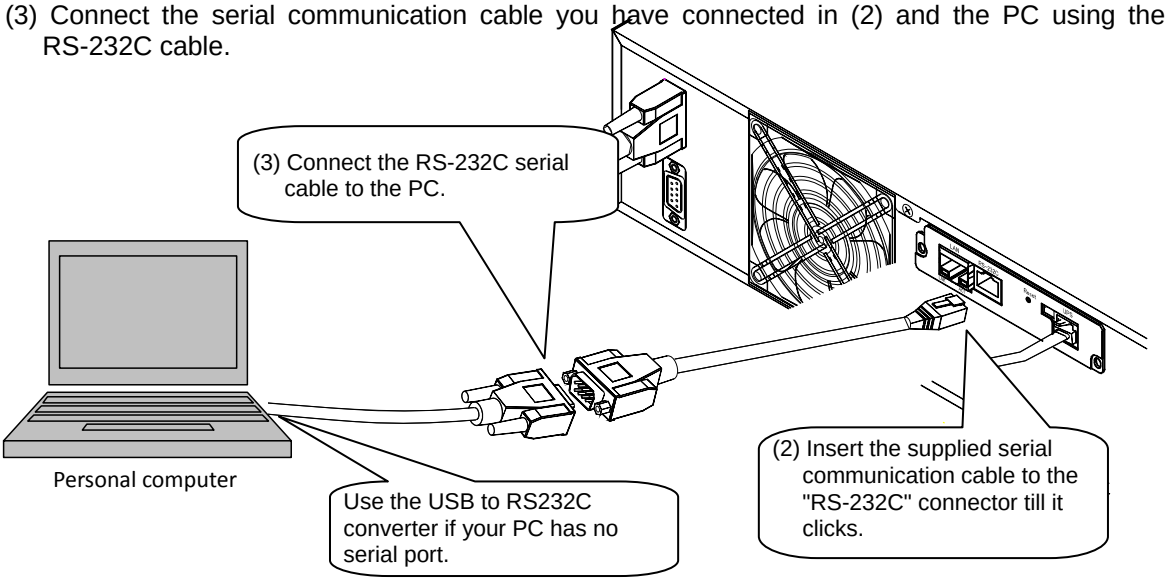
Prepare the items on the left by yourself

*Point

If a communication cable is supplied with your UPS, you can use the cable.

(2) Insert the supplied serial communication cable 00830882-01 to the "RS-232C" connector.

(3) Connect the serial communication cable you have connected in (2) and the PC using the RS-232C cable.



(4) Check that all connectors are firmly connected.

11.2 Checking IP Address

To make the UPS one of your networked devices, change the network address to suit the environment being used. *1

Set either or both IPv4 and IPv6 addresses.

Caution

*1. If you have a device whose address is the same as the UPS's default address in your network, configure the address using the "serial interface connector" or connecting the UPS and computer directly with a crossover LAN cable.
*2. If you have specified the IP address to be assigned by DHCP, be sure to check if the IP address has been correctly assigned by the DHCP server after restarting the LAN interface card. You cannot shut down the UPS properly in the event of a power failure if the IP address is not correctly assigned.
*3. This is assigned automatically based on the MAC address. This cannot be configured by the user.

The factory default IP addresses are as follows. It is recommended to record the IP address in the following table.

IPv4 address : **192.168.1.1**

Fixed IP address	DHCP *2
IP address	IP address
Subnet mask	
Default gateway	
DNS server address	

IPv6 address : **Not set**

IP address
IP address
Prefix length
Default gateway
DNS server address
Link local address *3

Point

In addition to methods described in "12. CONFIGURING NETWORK ADDRESSES", IP addresses can also be set via the network using Telnet or web browsers.
Refer to "3.3.1 Configuring via the network" in the *User Guide* for details.

12. CONFIGURING NETWORK ADDRESSES

Configure the network addresses to make the UPS one of your networked devices.

(1) Start the terminal software.

Start the terminal software on the PC and specify the communication conditions as shown below.

Setup item	Setup value
Baud rate	9600
Data bit	8 bits
Parity	None
Stop bit	1 bit
Flow control	None

(2) Specify the network addresses.

Press the "ENTER" key in the terminal software screen to display the account and password entry screen.

Check the displayed screen and perform the operation described as follows.

```
Welcome to UPS Agent
User name: UpsAdmin
```

Enter the user name.

How to operate

Enter "UpsAdmin" and press "ENTER".

```
Welcome to UPS Agent
User name: UpsAdmin
Password:
```

Enter the password.

How to operate

Enter "UpsAdmin"* and press "ENTER".

*Caution

- The character string entered in the password is not displayed on the screen.
- The characters are case sensitive.

Main Menu

```
Main Menu
1.Configuration
2.Schedule
3.Control
4.Display
5.Locale
6.Connection Device
7.Event
8.Outlet
9.Ping
10.Download/Upload
11.Exit
Agent>1
```

Select [1.Configuration].

How to operate

Enter "1" and
press "ENTER".

Configuration Menu

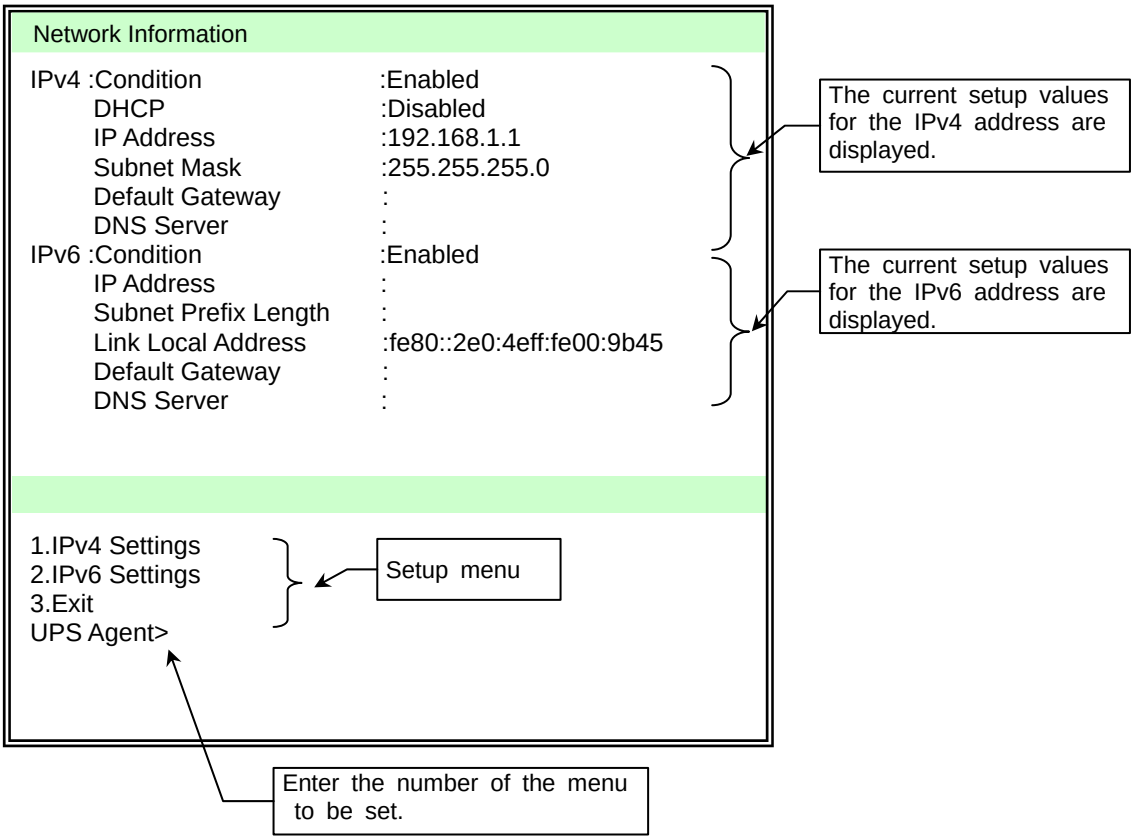
```
Configuration Menu
1.Network
2.Account
3.Control Configuration
4.Service
5.UPS Information
6.E-Mail
7.NTP
8.Collecting Data Monitoring
9.Deviation Monitoring
10.Sensor Information
11.Exit
Agent>1
```

Select [1.Network].

How to operate

Enter "1" and
press "ENTER".

Network Information



Setup menu	Description
1.IPv4 Settings	Specify the settings for the IPv4 address of the UPS.
2.IPv6 Settings	Specify the settings for the IPv6 address of the UPS.
3.Exit	Return to the "Configuration Menu".

When setting IPv4 IP addresses

Go to next page.

When setting IPv6 IP addresses

Go to page 35.

When setting IPv4 IP addresses

Network Information Menu

```
Network Information

IPv4 :Condition              :Enabled
      DHCP                   :Disabled
      IP Address             :192.168.1.1
      Subnet Mask            :255.255.255.0
      Default Gateway        :
      DNS Server             :
IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

1.IPv4 Settings
2.IPv6 Settings
3.Exit
UPS Agent>1
```

Select “IPv4 Settings”

How to operate

Enter “1” and press “Enter”.

Network Information(IPv4)

```
Network Information(IPv4)

IPv4 :Condition              :Enabled
      DHCP                   :Disabled
      IP Address             :192.168.1.1
      Subnet Mask            :255.255.255.0
      Default Gateway        :
      DNS Server             :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>
```

Check that [Condition] is set to [Enabled].

Setup menu

Caution

The factory default Condition for IPv4 and IPv6 is [Enabled]. If you are not using an IPv6 address, you do not need to set the IPv6 address to [Disabled]. If you need to prevent an IPv6 address from being forcibly used, set it to [Disabled].

Setup menu for IPv4 Address

Setup menu	Description		
1.Condition	Specify the condition for the network address of the UPS.		
	1.Disabled		Select when you do not use the IPv4 address.
	2.Enabled		Select when you use the IPv4 address.
2.IP Address	Specify the network address of the UPS.		
	DHCP Mode	1.Disabled	Select this to set a static IP address. • Enter the IP address. • Enter the subnet mask.
		2.Enabled	Select this to assign the IP address by DHCP.
3.Default Gateway	Enter the address of the default gateway. *		
4.DNS Server	Enter the address of the DNS server. *		
5.Exit	Return to the "Configuration Menu".		

* This cannot be set when DHCP is enabled.

We are going to specify the following addresses in this example.

IP address	:	172.30.3.181
Subnet mask	:	255.255.255.0
Router address	:	172.30.3.254
DNS server address	:	172.30.1.9

Caution

Specify the IP addresses you have recorded in the table on page 24.

(a) When setting fixed IP addresses

(b) When using DHCP to assign the IP addresses

Go to **(b)** on page 33.

(a) When setting fixed IP addresses

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :192.168.1.1
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>2
```

Select [2.IP Address].

How to operate

Enter “2” and
Press “Enter”.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :192.168.1.1
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

Select DHCP Mode.
1.Disabled
2.Enabled
UPS Agent>1
```

Select [1.Disabled] for DHCP Mode.

How to operate

Enter “1” and
Press “Enter”.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :192.168.1.1
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

Input IP Address.
UPS Agent>172.30.3.181
```

Enter the IP address.

How to operate

Enter IP address and press “Enter”.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :192.168.1.1
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

Input SubnetMask.
Agent>255.255.255.0
OK
=== Hit Enter Key !! ===
```

Enter the subnet mask.

How to operate

Enter the subnet mask and press “Enter”.
Press “Enter” again.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :172.30.3.181
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>3
```

When performing network communication via a router, set the [Default Gateway].

Select [3. Default Gateway].

How to operate

Enter “3” and
Press “Enter”.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :172.30.3.181
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

Input Default Gateway.
UPS Agent>172.30.3.254
OK
=== Hit Enter Key !! ===
```

Enter the default gateway.

How to operate

Enter the default gateway and press “Enter”.
Press “Enter” again.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :172.30.3.181
      Subnet Mask        :255.255.255.0
      Default Gateway    :172.30.3.254
      DNS Server         :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>4
```

When using a host name, set the [DNS Server].

Select [4.DNS Server].

How to operate

Enter “4” and press “Enter”.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :172.30.3.181
      Subnet Mask        :255.255.255.0
      Default Gateway    :172.30.3.254
      DNS Server         :

Input DNS Server.
UPS Agent>172.30.1.9
OK
=== Hit Enter Key !! ===
```

Enter the DNS Server address.

How to operate

Enter the DNS Server address and press “Enter”.
Press “Enter” again.

Go to page 34.

(b) When using DHCP to assign the IP addresses

Caution

If the IP address of the UPS is assigned by DHCP, it must be possible to convert the network name to the IP address.
Register the IP address corresponding to the MAC address of the UPS to the DHCP server, and then register the network name corresponding to the IP address to the DNS server.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :192.168.1.1
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>2
```

Select [2.IP Address].

How to operate

Enter “2” and
press “Enter”.

```
Network Information(IPv4)

IPv4 :Condition          :Enabled
      DHCP               :Disabled
      IP Address         :192.168.1.1
      Subnet Mask        :255.255.255.0
      Default Gateway    :
      DNS Server         :

Select DHCP Mode.
1.Disabled
2.Enabled
UPS Agent>2
OK
=== Hit Enter Key !! ===
```

Select [2.Enabled] for DHCP Mode.

How to operate

Enter “2” and
press “Enter”.
Press “Enter” again.

Go to page 34.

```
Network Information(IPv4)

IPv4 :Condition              :Enabled
      DHCP                   :Disabled
      IP Address             :172.30.3.181
      Subnet Mask            :255.255.255.0
      Default Gateway        :172.30.3.254
      DNS Server             :172.30.1.9

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>5
```

The current setup values are displayed.

How to operate

Enter “5” and press “Enter”.

Return to the Network Information screen.

```
Network Information

IPv4 :Condition              :Enabled
      DHCP                   :Disabled
      IP Address             :172.30.3.181
      Subnet Mask            :255.255.255.0
      Default Gateway        :172.30.3.254
      DNS Server             :172.30.1.9
IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

1.IPv4 Settings
2.IPv6 Settings
3.Exit
UPS Agent>
```

When setting IPv6 IP addresses

Go to next page.

When configuration is complete

Go to page 39.

When setting IPv6 IP addresses

Network Information

```
Network Information

IPv4 :Condition              :Enabled
      DHCP                   :Disabled
      IP Address             :192.168.1.1
      Subnet Mask            :255.255.255.0
      Default Gateway        :
      DNS Server             :
IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

1.IPv4 Settings
2.IPv6 Settings
3.Exit
UPS Agent>2
```

Select [2.IPv6 Settings].

How to operate

Enter “2” and press “Enter”.

Network Information(IPv6)

```
Network Information(IPv6)

IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>
```

Check that [Condition] is set to [Enabled].

You cannot change the Link Local Address.

Setup menu

Caution

The factory default Condition for IPv4 and IPv6 is [Enabled]. If you are not using an IPv4 address, you do not need to set the IPv4 address to [Disabled]. If you need to prevent an IPv4 address from being forcibly used, set it to [Disabled].

Setup menu for IPv6 Address

Setup menu	Description	
1.Condition	Specify the condition for the network address of the UPS.	
	1.Disabled	Select when you do not use the IPv6 address.
	2.Enabled	Select when you use the IPv6 address.
2.IP Address	Enter the network address of the UPS.	
3.Default Gateway	Enter the address of the default gateway.	
4.DNS Server	Enter the address of the DNS server.	
5.Exit	Return to the " Network Information ".	

We are going to specify the following addresses in this example.

IP Address	:	2001:db8::1
Subnet Prefix Length	:	64
Default Gateway	:	2001:db8::ffff
DNS Server	:	2001:db8::fffe

Caution

Specify the IP addresses you have recorded in the table on page 24.

```
Network Information(IPv6)

IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>2
```

Select [2.IP Address].

How to operate

Enter “2” and press “Enter”.

```
Network Information(IPv6)

IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

Input IP Address.
UPS Agent>2001:db8::1
```

Enter the IPv6 Address.

How to operate

Enter the IP Address and press “Enter”.

```
Network Information(IPv6)

IPv6 :Condition              :Enabled
      IP Address             :
      Subnet Prefix Length   :
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :
      DNS Server             :

Input Subnet Prefix Length.
UPS Agent>64
OK
=== Hit Enter Key !! ===
```

Enter the Subnet Prefix Length.

How to operate

Enter the Subnet Prefix Length and press “Enter”.
Press “Enter” again.

```
Network Information(IPv6)

IPv6 :Condition                :Enabled
      IP Address               :2001:db8::1
      Subnet Prefix Length     :64
      Link Local Address       :fe80::2e0:4eff:fe00:9b45
      Default Gateway          :
      DNS Server               :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>3
```

When performing network communication via a router, set the [Default Gateway].

Select [3.Default Gateway].

How to operate

Enter “3” and press “Enter”.

```
Network Information(IPv6)

IPv6 :Condition                :Enabled
      IP Address               :2001:db8::1
      Subnet Prefix Length     :64
      Link Local Address       :fe80::2e0:4eff:fe00:9b45
      Default Gateway          :
      DNS Server               :

Input Default Gateway.
UPS Agent>2001:db8::ffff
OK
=== Hit Enter Key !! ===
```

Enter the Default Gateway.

How to operate

Enter the Default Gateway and press “Enter”.
Press “Enter” again.

```
Network Information(IPv6)

IPv6 :Condition                :Enabled
      IP Address               :2001:db8::1
      Subnet Prefix Length     :64
      Link Local Address       :fe80::2e0:4eff:fe00:9b45
      Default Gateway          :2001:db8::ffff
      DNS Server               :

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>4
```

When using a host name, set the [DNS Server].

Select [4.DNS Server].

How to operate

Enter “4” and press “Enter”.

```
Network Information(IPv6)

IPv6 :Condition                :Enabled
      IP Address               :2001:db8::1
      Subnet Prefix Length     :64
      Link Local Address       :fe80::2e0:4eff:fe00:9b45
      Default Gateway          :2001:db8::ffff
      DNS Server               :

Input DNS Server.
UPS Agent>2001:db8::fffe
OK
=== Hit Enter Key !! ===
```

Enter the DNS Server address.

How to operate

Enter the DNS Server address and press “Enter”.
Press “Enter” again.

```
Network Information(IPv6)

IPv6 :Condition                :Enabled
      IP Address               :2001:db8::1
      Subnet Prefix Length     :64
      Link Local Address       :fe80::2e0:4eff:fe00:9b45
      Default Gateway          :2001:db8::ffff
      DNS Server               :2001:db8::fffe

1.Condition
2.IP Address
3.Default Gateway
4.DNS Server
5.Exit
UPS Agent>5
```

The current setup values are displayed.

How to operate

Enter “5” and press “Enter”.

Return to the Network Information screen.

```
Network Information

IPv4 :Condition                :Enabled
      DHCP                     :Disabled
      IP Address               :172.30.3.181
      Subnet Mask              :255.255.255.0
      Default Gateway          :172.30.3.254
      DNS Server               :172.30.1.9
IPv6 :Condition                :Enabled
      IP Address               :2001:db8::1
      Subnet Prefix Length     :64
      Link Local Address       :fe80::2e0:4eff:fe00:9b45
      Default Gateway          :2001:db8::ffff
      DNS Server               :2001:db8::fffe

1.IPv4 Settings
2.IPv6 Settings
3.Exit
UPS Agent>
```

Go to page 39.

(3) Exit from the Main Menu to apply the network address changes.

```
Network Information

IPv4 :Condition              :Enabled
      DHCP                   :Disabled
      IP Address             :172.30.3.181
      Subnet Mask            :255.255.255.0
      Default Gateway        :172.30.3.254
      DNS Server             :172.30.1.9
IPv6 :Condition              :Enabled
      IP Address             :2001:db8::1
      Subnet Prefix Length   :64
      Link Local Address     :fe80::2e0:4eff:fe00:9b45
      Default Gateway        :2001:db8::ffff
      DNS Server             :2001:db8::fffe

1.IPv4 Settings
2.IPv6 Settings
3.Exit
UPS Agent>3
```

How to operate

Enter “3” and press “Enter”. Or press “Esc”.

```
Configuration Menu
1.Network
2.Account
3.Control Configuration
4.Service
5.UPS Information
6.E-Mail
7.NTP
8.Collecting Data Monitoring
9.Deviation Monitoring
10.Sensor Information
11.Exit
Agent>11
```

How to operate

Enter “11” and press “Enter”. Or press “Esc”.

```
Main Menu
1.Configuration
2.Schedule
3.Control
4.Display
5.Locale
6.Connection Device
7.Event
8.Outlet
9.Ping
10.Download/Upload
11.Exit
Agent>11
Disconnected ! (Serial)
UPS Agent Start!!! [PXXXXXXXX]
```

How to operate

Enter “11” and press “Enter”. Or press “Esc”.

The disconnection message

Restart message

The LAN interface card restarts 30 seconds after the disconnection message.
The UPS becomes available in your network after the restart.

13. CONFIGURING OPERATIONAL PARAMETERS

Configure the operational parameters to suit your system configuration and network environment.

Refer to the *User Guide* if you are configuring with the terminal function or Web Management Tool. You can download the User Guide from our homepage. (Refer to “1.2 About the User Guide”)

Refer to the manual supplied with the UPS Management Software if you are using our UPS Management Software that is sold separately.

Caution

The UPS will operate based on the default values as soon as it is installed with the LAN interface card even if you have not configured it including the IP addresses. Once you have installed the card, modify the settings to suit your environment.

The following table describes the default values for main setting items.

Item	PRLANIF011B, 012B, 013B, and 014B (Current products)	PRLANIF001, 002 (Old products)*1
Power failure confirmation time	60 sec.	60 sec.
Shutdown delaying time	30 sec. Time is counted down even without registered devices	30 sec. Time is not counted down if no device is registered
UPS automatic stopping time	120 sec.	120 sec.
Automatically stop the UPS at power failure	Do not stop	Stop
When power failure recovered, automatically start the UPS	Do not start	Start

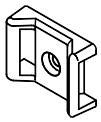
*1 Some default values for the current products are different from those for the old products. Check carefully if you have been using the old products.

*2 The default values mentioned above are the same for older products PRLANIF003, 004, 005, 006, 011, 012, 013, 014 and for this product.

14. FASTENING THE CABLES

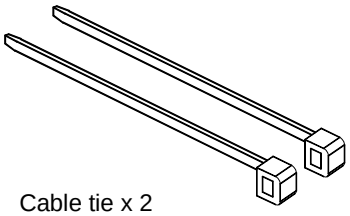
Fasten the cables using the supplied cable tie if the sensor connection cable or serial communication cable you have connected in "9.3 Connecting the Sensor" might come off.

(1) Prepare the following supplied items.



Cable tie mount x 1

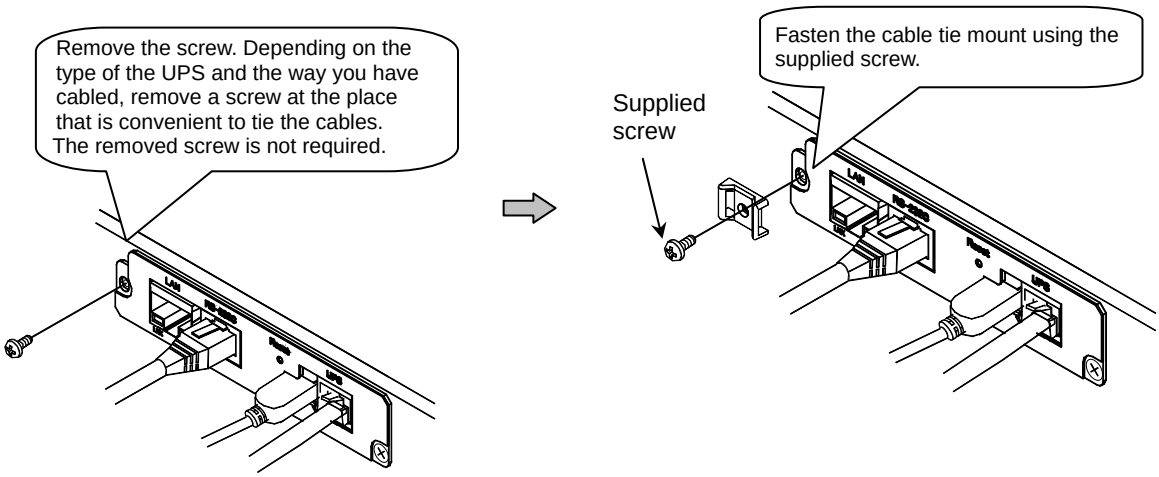
Screw x 1



Cable tie x 2
(One is the spare)

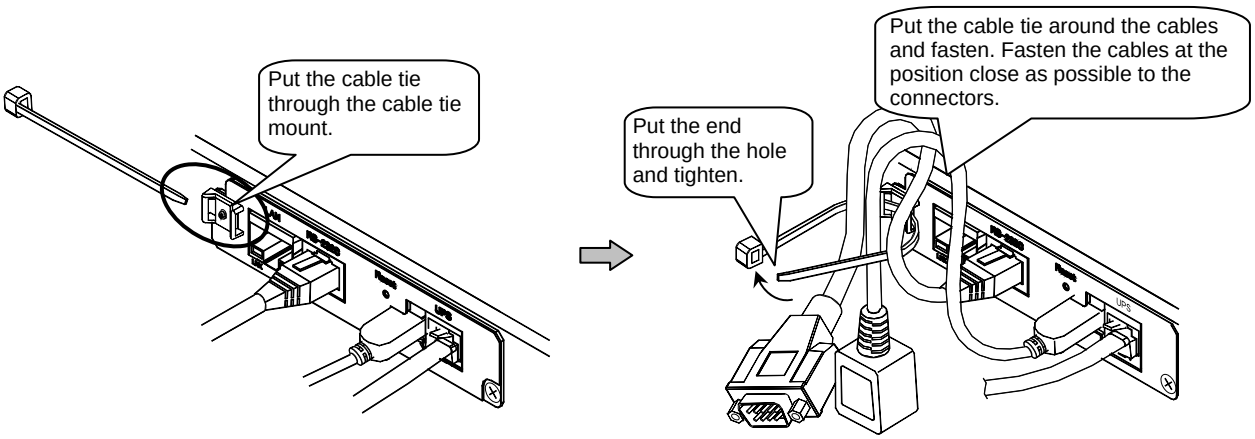
(2) Remove the screw that is holding the LAN interface card in place.

(3) Fasten the cable tie mount using the supplied screw.



(4) Put the cable tie through the cable tie mount.

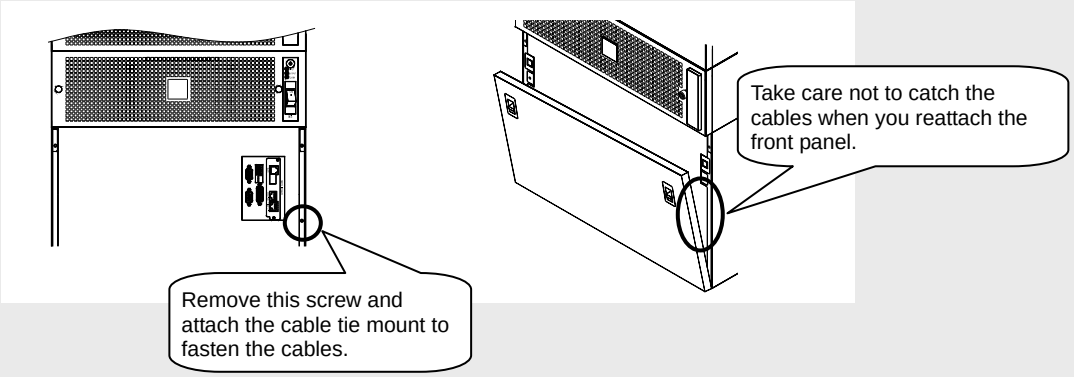
(5) Fasten the cables with the cable tie.
If you have the sensor connection cable and serial communication cable, fasten them together with the cable tie as shown below.



(6) After you have fastened, cut off the excess cable tie.

Caution

- Do not force the connectors and cables when fastening.
- Be sure to cut off excess cable tie after fastening.
  It may be caught in the fan at the rear of the UPS if it is hanging loose.
- You cannot undo the cable tie once it is fasten. Cut the cable tie and fasten with the spare cable tie if you need to redo it.
- If you have the A11J W type or a similar model on which you cannot fasten the cables using the screw hole of the LAN interface card, use the hole of the screw that is fastening the panel of the UPS as shown below.



- Take care not to catch the cables in the front panel or the front door if you have installed the LAN interface card inside the front panel or the front door of the UPS.

15. CHECKING AND MAINTAINING

The projected service life of this LAN interface card is 10 years.*
The LAN interface card does not require periodical checks since it does not include parts that need replacing after some time.
Remove dust from sensors if you have sensors connected.

*The projected service life is the value at 30℃ ambient temperature.

16. ABOUT THE WARRANTY

The same warranty as the UPS applies to the LAN interface card. Refer to the UPS manual for details.

17. SPECIFICATIONS

17.1 LAN Interface Card

PRLANIF011B and PRLANIF012B

Item	Standards or features	
Model	PRLANIF011B	PRLANIF012B
External dimensions (W x D x H)	105 x 125.5 x 23.5 mm	87.6 x 125.5 x 33.2 mm
Weight	120 g	
Operational environment	Temperature: -25 to 60°C (-13 to 140°F) Humidity: 0 to 90% RH (no condensation)	
Power consumption	1.4W	
Clock backup battery	CR1220 (Backup duration: Approx. 5 years*)	
LAN communication	Transfer speed : 100Mbps/10Mbps (Automatic detection) Transfer method(Full duplex/Half duplex) : Auto	
Functions	- Automatic shutdown of computers (multi-platform support) - Shutdown of computers with power redundancy - Automatic start-up of computers when the power is restored - Scheduled operations - UPS status display (web browser, SSH, and Telnet support) - SNMP agent (RFC1628, JEMA-MIB, and SANYO DENKI Private MIB) - E-mail transmission and reception - NTP (Network Time Protocol) support - Download and upload of setup values - Test function (script execution, e-mail transmission, SNMP trap transmission, shutdown) - Event notification to the Syslog server - Measures value deviation monitoring (UPS internal information) - Statistics graph display function (UPS internal information)	
Supported protocols	TCP/IP, UDP, DHCP, SNMP (v1, v2, and v3), HTTP, HTTPs, Telnet, SSH, FTP, FTPs, SMTP (over SSL/TLS), POP3 (over SSL/TLS), APOP, NTP	

*Notes on the clock backup duration

The clock function may be lost if the LAN interface card is not turned on more than five years.

PRLANIF013B and PRLANIF014B

Item	Standards or features	
Model	PRLANIF013B	PRLANIF014B
External dimensions (W x D x H)	105 x 125.5 x 23.5 mm	87.6 x 125.5 x 33.2 mm
Weight	160 g	
Operational environment	Temperature: -25 to 60°C (-13 to 140°F) Humidity: 0 to 90% RH (no condensation)	
Power consumption	1.7W when 16 humidity sensors are installed	
Clock backup battery	CR1220 (Backup duration: Approx. 5 years*)	
LAN communication	Transfer speed : 100Mbps/10Mbps (Automatic detection) Transfer method(Full duplex/Half duplex) : Auto	
Functions	- Automatic shutdown of computers (multi-platform support) - Shutdown of computers with power redundancy - Automatic start-up of computers when the power is restored - Scheduled operations - UPS status display (web browser, SSH, and Telnet support) - SNMP agent (RFC1628, JEMA-MIB, and SANYO DENKI Private MIB) - E-mail transmission and reception - NTP (Network Time Protocol) support - Download and upload of setup values - Test function (script execution, e-mail transmission, SNMP trap transmission, shutdown) - Event notification to the Syslog server - Temperature and humidity measurement (at up to 16 positions) - Measures value deviation monitoring (UPS internal information, temperature, and humidity) - Statistics graph display function (UPS internal information, temperature, and humidity)	
Supported protocols	TCP/IP, UDP, DHCP, SNMP (v1, v2, and v3), HTTP, HTTPs, Telnet, SSH, FTP, FTPs, SMTP (over SSL/TLS), POP3 (over SSL/TLS), APOP, NTP	

*Notes on the clock backup duration

The clock function may be lost if the LAN interface card is not turned on more than five years.

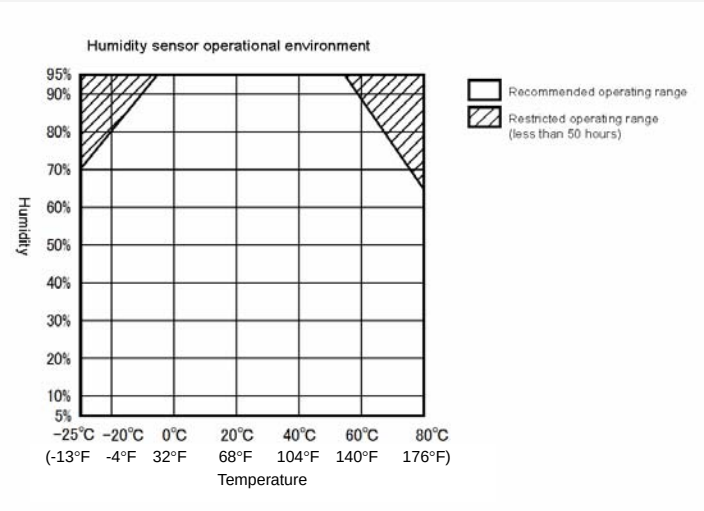
17.2 Sensor

PRLANSN001 and PRLANSN002

Item	Standards or features	
Sensor	Temperature sensor	Humidity sensor
Model	PRLANSN001	PRLANSN002
External dimensions (W x D x H)	60 x 60 x 27 mm	
Weight	50 g	
Operational environment	Temperature: -25 to +80°C (-13 to +176°F) Humidity: 0 to 90% RH (no condensation)	*1 Temperature: -25 to +80°C (-13 to +176°F) Humidity: 0 to 95% RH (no condensation)
Measurable range	-25 to +80°C (-13 to +176°F)	*1 5 to 95% RH (no condensation)
Accuracy	±1.0°C (-10 to +80°C) ±2.0°C (-10 or less) ±1.8°F (-14 to +176°F) ±3.6°F (-14 or less)	*2 Accuracy after a year = ±5% RH (25°C, 77°F) Accuracy after 5 years = ±8% RH (25°C, 77°F) Accuracy after 10 years = ±10% RH (25°C, 77°F)
Maximum cable length	100 m (total length)	
Maximum connections	16	
Supported cables	LAN cable CAT5 or better straight 8 wires	
Lifecycle	10 years	

*Features of the humidity sensor

*1 The following graph shows the operational environment of the humidity sensor.



*2 The accuracy of the humidity sensor varies depending on the number of years after the purchase.