

Uninterruptible Power Supply

Contact Signal Interface Card

(D-SUB connector Type)

User Manual

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DWG.No. M0010270



Introduction

Thank you for choosing this product. This document contains important safety precautions for users and service technicians. To ensure proper operation and reliability throughout the useful life of this device, read this manual prior to use and keep it nearby for future reference.

Safety Precautions

Read this manual carefully before installing, operating, performing maintenance, or inspecting this device in order to understand all instructions and related safety precautions.

Usage and Storage Precautions



CAUTION

Never operate or store the equipment in the following environmental conditions, as doing so may cause malfunction, damage or deterioration, which could result in fire and/or injury:

- In ambient environmental conditions other than those specified (temperatures outside the range of 0 to 40°C (32 to 104°F), and relative humidity outside of the range of 30% to 90%).
- Where the device is exposed to direct sunlight.
- Where the equipment is directly exposed to heat from a heat source, such as a stove.
- Where the device may be subject to vibration or physical shock.
- Near a device that may emit sparks.
- In the presence of dust, salt, or corrosive or flammable gas.
- Outdoors.

1. Confirming Package Contents

When opening the package, confirm that the following items are included. Contact your nearest sales representative if you find any discrepancy.

- Contact Interface Card 1 set
- Communication Cable (20cm) 1 pcs
- User Manual (this document) 1 copy

2. Contact Signal Interface Card Part Names

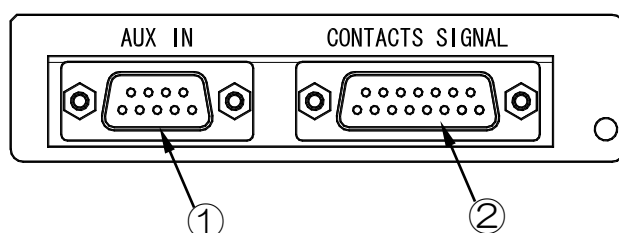


Fig. 2-1 Contact Signal Interface Card Exterior (Front View)

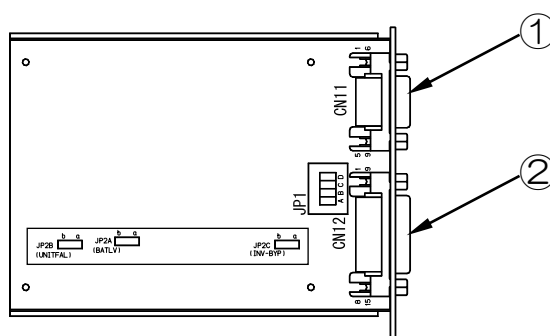


Fig. 2-2 Contact Signal Interface Card Exterior (Bottom View)

Table 2-1 Parts Description

	Name	Description
①	AUX IN (D-SUB 9-pin female)	Connector for communication with the UPS: When receiving the status signal from the UPS*, power will also be supplied to the contact signal interface card.
②	CONTACTS SIGNAL (D-SUB 15-pin female)	External status signal connector: Outputs the UPS status signals via dry (no voltage) contacts.

* UPS is an abbreviation for “Uninterruptible Power System”.

3. Contact Signal Interface Card Installation


Follow steps (1) through (7) to install the Contact Signal Interface Card.

Caution:

- If the device is shipped with the Contact Signal Interface Card preinstalled, proceed from step (6).

(1) Preparation

The Contact Signal Interface Card should be installed only after the UPS has been shut down completely. If the UPS is in operation, follow the instructions of “Operation Shutdown (If UPS is not to be used for a week or more)” in the UPS Instruction Manual, and shut down the UPS completely.

 CAUTION	Before installing the Contact Signal Interface Card, the UPS must be completely shut down. Inserting the card when the UPS is not shut down completely may result in electric shock.
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(2) Remove the protective cover

Remove the cover from the rear panel of the UPS.

- ① Remove the screws from both locations, and then the cover from the UPS.

Note that one of the screws will be used for securing the Contact Signal Interface Card.

Note: The protective cover will not be used after inserting the card, but should be stored in a safe place in case of future need.

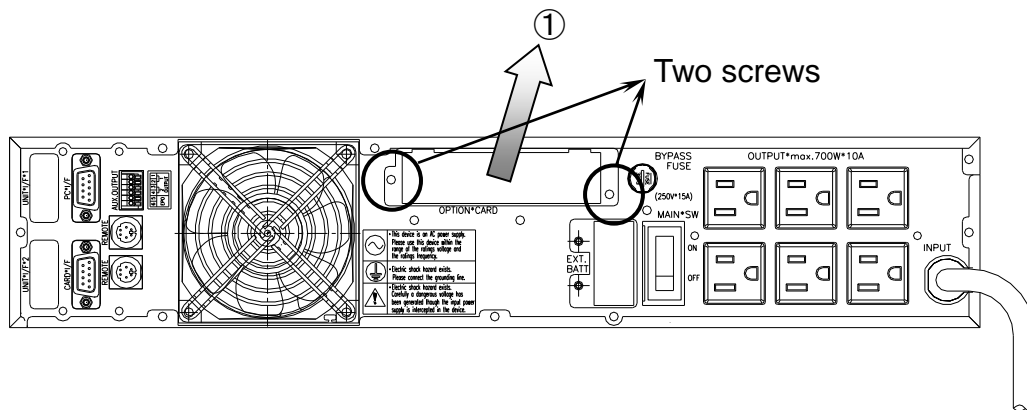


Fig. 3-1 Rear panel cover removal (E11A)

(3) The check of the jumpers for a setup

- The jumper for a setup (JP1)

Setting these jumpers to “remove” makes each contact of the external transmission signals independent. The jumpers are all set to “Insertion” at the time of shipment from the factory.

- The jumper for a setup (JP2)

“Low Battery voltage”, “Bypass Output” and “UPS Fault” can choose of Make contact or Break contact. The jumpers are all set to “Make contact” at the time of shipment from the factory.

Set to suit your requirements.

Please look at "5. External Signals ("CONTACTS SIGNAL")."

(4) Insert the Contact Signal Interface Card

Insert the Contact Signal Interface Card into the card slot on the rear panel of the UPS as shown in the Fig. 3-2.

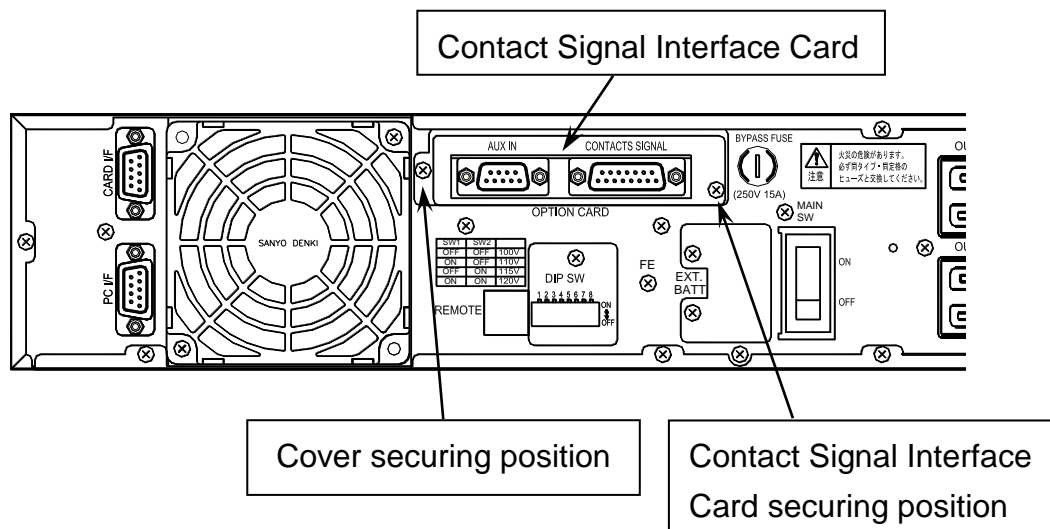


Fig. 3-2 Inserting the Contact Signal Interface Card (UPS rear panel)

(5) Secure the Contact Signal Interface Card

Secure the Contact Signal Interface Card to the UPS using one of the screws removed in step (2).

Insert the remaining screw into the cover securing position, to prevent losing it.

(6) Connect the Contact Signal Interface Card and the UPS using the accessory cable

Use the communication cable to connect the “CARD I/F” connector of the UPS and the “AUX IN” connector of the Contact Signal Interface Card as shown in the Fig.3-3.

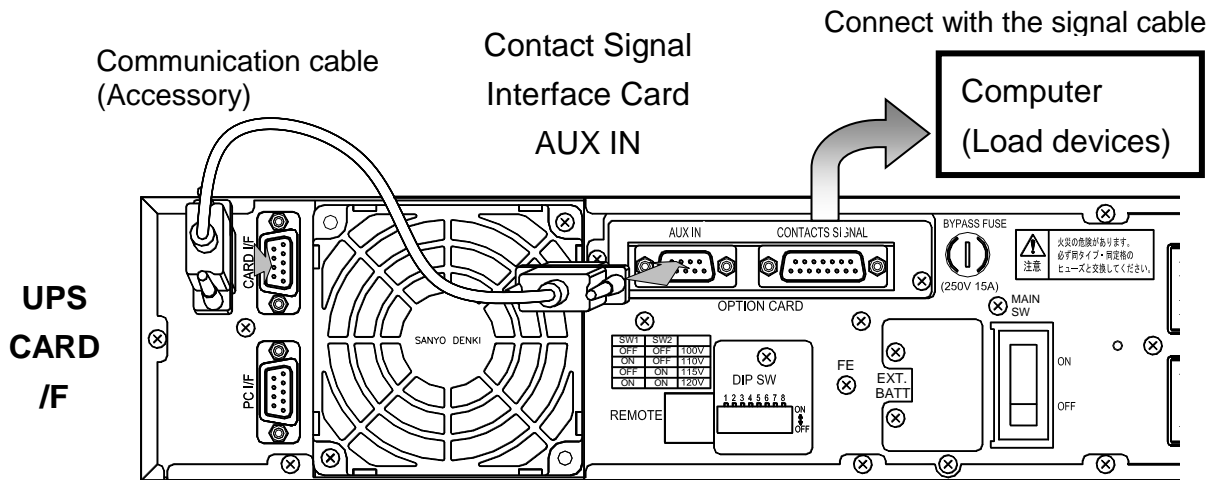


Fig. 3-3 Connection to the UPS using the communication cable (UPS rear panel)

(7) Connect the computer and the Contact Signal Interface Card using the signal cable

Use the special signal cable to connect the “CONTACTS SIGNAL” TERMINAL BLOCKS of the Contact Signal Interface Card to the computer.

When the UPS is E11A series, Installation of the Contact Signal Interface Card and the UPS setting procedures are now complete.

Start the UPS according to the procedures in the UPS Instruction Manual. Even if interface setting of E11A is set to “Workstation mode” or to “Standalone mode”, UPS works.

In addition, you cannot use the Contact Signal Interface Card and the LAN Interface Card at the same time.

In the case of E11A, only TYPE C can be connected to this CARD.

4. UPS Settings (A11F series)

There are two communication mode settings for the UPS.

- Standalone mode
- W/S mode (Workstation mode)

Set the UPS to Standalone mode when using this Card.

Follow the procedures described on pages 6~7 to verify and change the UPS mode settings.

Note that if the card was factory preinstalled, this step is unnecessary.

Caution:

If the UPS is set to W/S mode, the Interface Card cannot be used.

Also, this card cannot be used with power control software (SANUPS SOFTWARE) that requires a PC I/F connector for serial connection. If PC shutdown capability is required while using this Card, the communication settings in the power control software must be set to "Contact Connection".

Mode verification and setting modification

(1) Start the UPS

Operating mode verification and setting changes are done using the operating unit and the display of the UPS front panel. Begin by starting the UPS.

Follow the procedures for startup operation as described in the UPS Instruction Manual.

Caution:

When the UPS starts, power will be supplied from the outlet.

It is recommended to disconnect the load devices before starting the UPS.

(2) Verify the operating mode and modify settings using the operating unit and the display

Verify the operating mode and modify settings following the procedures described in the UPS Instruction Manual.

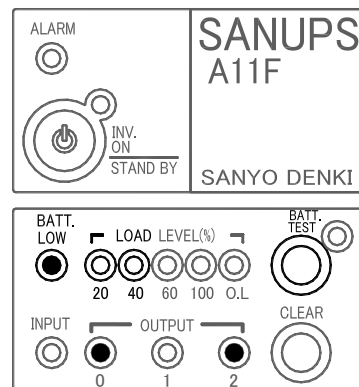
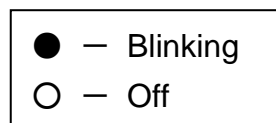


Fig. 4-1 LED display when standalone mode is selected

(3) Disable the Automatic startup

Verify and change settings following the procedures described in the UPS Instruction Manual.

For more information about the ring signal startup, refer to "§6 Special Functions" of this manual.

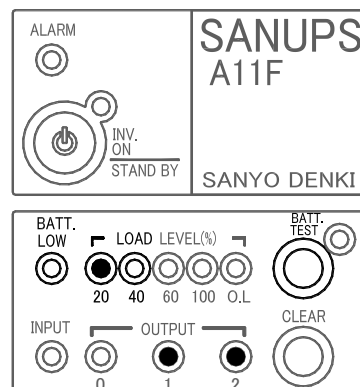
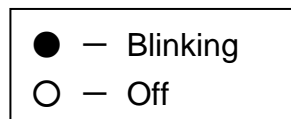


Fig. 4-2 LED display when the ring signal is set to "Disabled"

(4) Stop the UPS

When setting modifications are complete, stop the UPS. Follow the procedures of the UPS Instruction Manual to properly shut down the UPS.

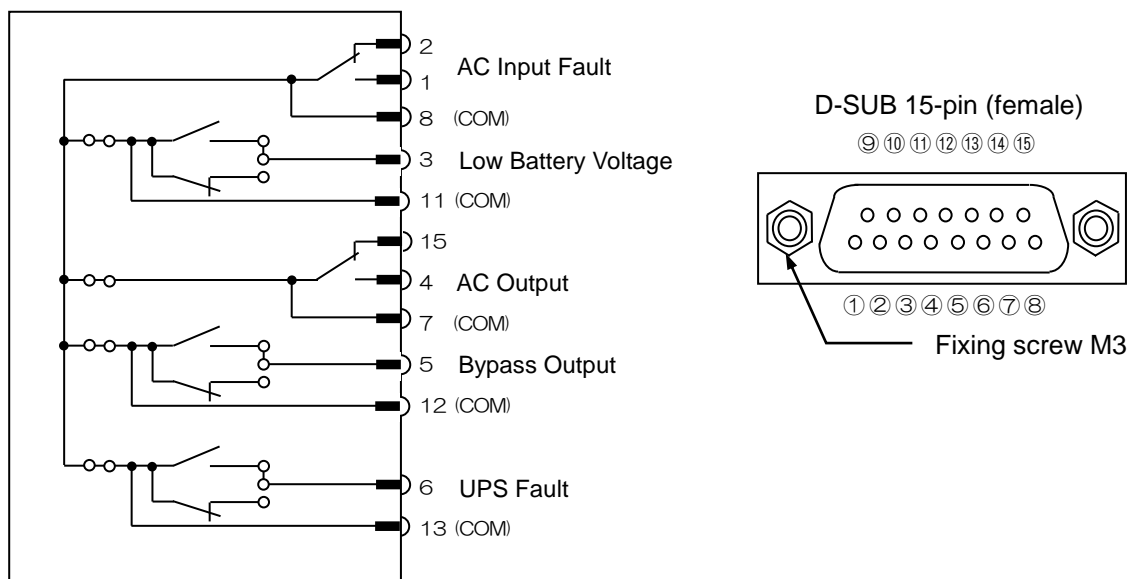
Caution:

- If any load devices were disconnected, reconnect them at this time.
- If any settings were modified, stop the UPS completely. Otherwise, any changes in the settings are not validated, and will not take effect.

Installation of the Contact Signal Interface Card and the UPS setting procedures are now complete.

Start the UPS according to the instructions in the UPS Instruction Manual.

5. External Signals (“CONTACTS SIGNAL”)



Note: The figure above shows the device's status when stopped.

	Signal Name	Description
Signal output	AC Input Fault	This signal is output when there is a failure in the commercial power supply, or when voltage is insufficient. (Make contact, Break contact)
	Low Battery voltage	This signal is output when the battery voltage falls below the preset value. (Make contact or Break contact. Default : Make contact) Note 3
	AC Output	This signal is output when AC output is supplied to the load devices via OUTPUT1 or 2. (Make contact, Break contact) Note 2
	Bypass Output	This signal is output when bypass output is supplied to the load devices. (Make contact or Break contact. Default : Make contact) Note 3
	UPS Fault	This signal is output when a fault occurs in the UPS. (Make contact or Break contact. Default : Make contact) Note 3

Note 1. These signal outputs are non-voltage contacts, with a contact capacity of AC 110V/DC 24V 0.2A.

Note 2. In the case of A11F, when using OUTPUT1,2 and supplying the output, this Card output a signal.

Note 3. “Low Battery voltage”, “Bypass Output” and “UPS Fault” can choose of Make contact or Break contact. Default is Make contact.

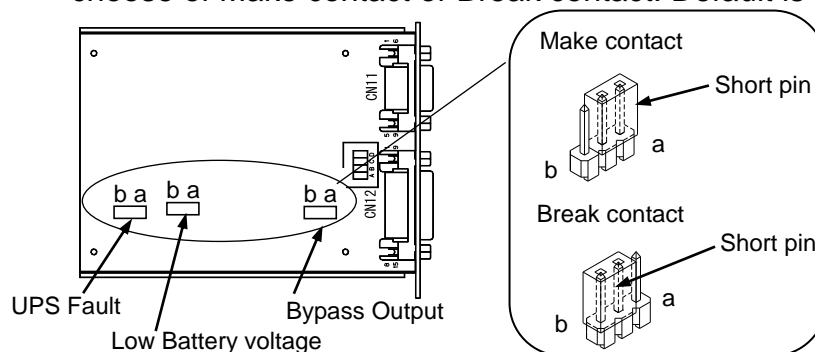


Fig. 5-1 Contact Signal Interface Card Exterior (Bottom View)

6. Special Functions

The AC output signal is capable of sending a ring signal* (depending on the computer type, this may be called a “modem signal”). To use the ring signal, this setting should be modified as described below. After changing the settings, the UPS must be completely stopped and then restarted for the setting to take effect.

- ◆ E11A (TYPE C):
 - Modify the settings according to the procedures in the UPS User Settings Guide.
- ◆ A11F102,A11F152:
 - Modify the settings according to the procedures in the UPS Instruction Manual.

Caution:

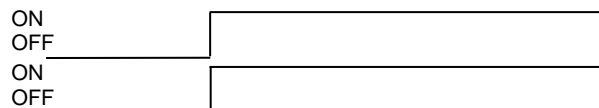
If the AC output signal is used as is, the following settings are necessary:

- ◆ E11A (TYPE C):
 - Set the " Setting a Ring Signal" of the UPS User Settings Guide to “Do not output”
- ◆ A11F102, A11F152:
 - Set the " Setting the automatic start of the computer” to “Do not start”.

Ring signal startup settings

[Disabled]:

UPS output (OUTPUT 1 or 2)
AC output signal (4 pin – com)



[Enabled] (Factory setting):

UPS output (OUTPUT 1 or 2)
AC output signal (4 pin – com)



After starting the UPS output, ON (2 sec) and OFF (1 sec) is repeated for 30 seconds (ring signal).

*What is a ring signal?

A ring signal is a false modem signal sent to the computer’s serial port. When the computer receives this signal, it automatically boots up. The serial port and the motherboard of the computer must support the ring signal feature in order to use this function.