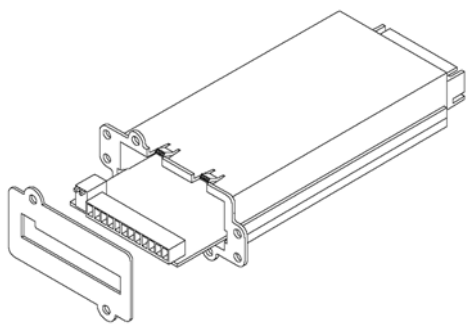


# PROGRAMMABLE RELAY I/O CARD USER MANUAL



## PRESENTATION

### FEATURES

This relay I/O card is an UPS management product with 6 relay output contacts for monitoring UPS status and 1 input contact as shutdown UPS or test battery command.

Features:

- UPS status information presented as 6 contact closures and they are changable.
- Programmable output contacts, monitors the UPS events that users really concern in different practices.
- Customized normal open or normal close for individual relay.
- Configurable UPS shutdown delay time.
- Configurable input signal as shutdown UPS or battery test.
- Has the ability to protect up to 6 computers unattended shutdown gracefully.

## TECHNICAL SPECIFICATION

### TECHNICAL SPECIFICATION

Size	130 x 60 mm
Weight	200 g
Operating Temperature	0 ~ 40° C
Operating Humidity	10 ~ 80 %
Power Input	8 ~ 20V DC
Power Consumption	1.2 Watts

### OUTPUT CONTACT RATING

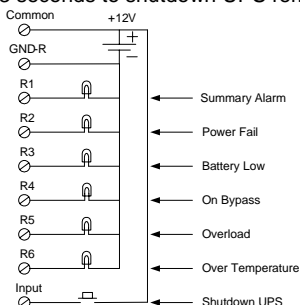
Relay	Maximum	
	DC Voltage	DC Current
R1~R6	24 V	1A

### INPUT RATING

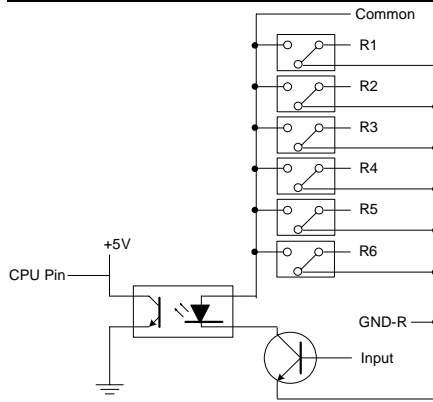
Input	Maximum	
	DC Voltage	DC Current
Input	24 V	10 mA

## APPLICATION EXAMPLE

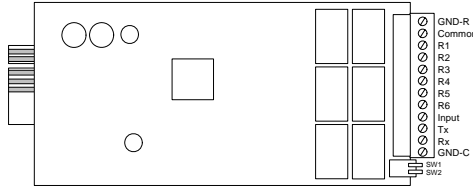
In this case we'll adopt the default settings, please keep SW1 and SW2 to OFF position. Provide less than 24VDC to **Common** contact and connect the lamps to **R1~R6** terminals. Press the button over 3 seconds to shutdown UPS remotely.



## INTERNAL CIRCUIT



## OUTLINE



## I/O PINOUT

<b>GND-R:</b> Ground for relays		
<b>Common:</b> 12~24VDC		
Default Alarm Event		
<b>R1</b>	Summary Alarm	
<b>R2</b>	Power Fail	
<b>R3</b>	Battery Low	
<b>R4</b>	On Bypass	
<b>R5</b>	Overload	
<b>R6</b>	Over Temperature	
<b>Input:</b> Remote shutdown or battery test		
<b>Tx:</b> Transmit to PC, connect to sub9-pin2		
<b>Rx:</b> Receive from PC, connect to sub9-pin3		
<b>GND-C:</b> Ground for configuration Tx and Rx pins		
	OFF (Default)	ON
<b>SW1</b>	Normal open for default settings	Normal close for default settings
<b>SW2</b>	Default settings	Customized settings

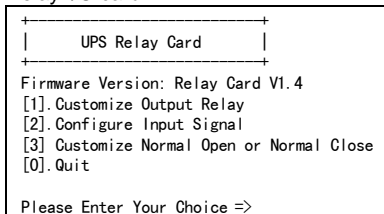
## PROGRAMMABLE CONTACTS

### COMMUNICATION SETUP

1. Connect **Tx** to pin2, **Rx** to pin3 and **GND-C** to pin5 of PC RS232 port.
2. In Windows environment, launch HyperTerminal application then open the specified COM port.
3. Set the following properties:  
Baud rate: **2400**, Data Bits: **8**, Parity: **None**  
Stop Bit: **1**, Flow Control: **None**

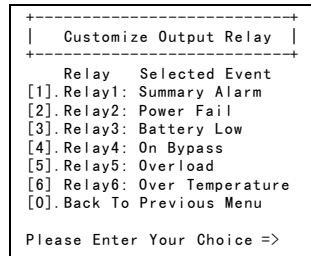
## CONFIGURATION

1. Press <Enter> to get the main menu from Relay I/O card.



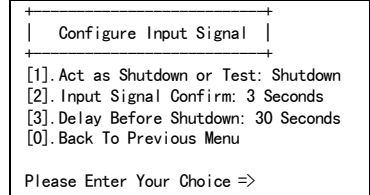
2. Press '1' to configure the alarm event for **R1~R6**.

In this menu, contacts **R1~R6** are allowed to assign to different power events.



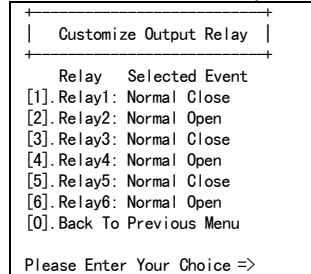
After finishing the configuration please switch **SW2** to ON position to apply your settings, switch **SW2** back to OFF position to apply default settings.

3. Press '2' to configure the **Input** signal.



In this menu, the input signal can be redefined as shutdown UPS or battery test signal. Meanwhile, the UPS shutdown delay time is also adjustable to maximum 9999 seconds.

4. Press '3' to configure the normal open or normal close for each relay.



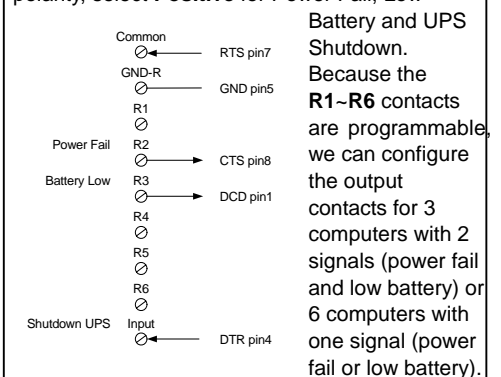
Switch **SW2** to ON position to apply your settings. If the **SW2** is backed to OFF position to apply default settings then you can use **SW1** to control normal open or normal close for all relays.

5. Press '0' to quit this configuration session. The system would prompt you to save or not. Press 'Y' to save your settings, 'N' to ignore.

## POWER OPTION IN WIN 2000/XP

This relay card has the ability to provide UPS signals for Windows NT4/2000/XP/2003. Firstly please connect the RS232 port from your PC to the relay card shown as the following.

Then open the power option from control panel and click on the UPS tab to setup the signals polarity, select **Positive** for Power Fail, Low



**Note:** To ensure all of the protected computers have the same ground level, it is required to connect their input power to the same UPS.