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Owner's Manual

Programmable Relay I/O Card

Model: RELAYIOCARD



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Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended. Do not use this equipment in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.



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1. Introduction

1.1 Product Features

The RELAYIOCARD is a programmable UPS management device featuring:

- 6 programmable relay output contacts
- Configurable normal open or normal close for each relay contact
- Configurable UPS shutdown delay time
- Configurable input signal to shutdown UPS or test battery

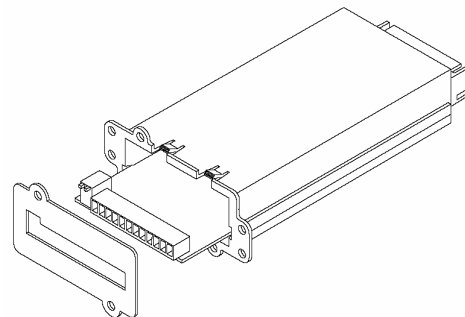
The RELAYIOCARD allows you to:

- Monitor UPS status and events
- Perform remote system shutdowns and battery tests

1.2 Package Contents

This Package Contains:

- RELAYIOCARD
- Configuration Cable
- Faceplates
- Owner's Manual



2. Installation and Setup

2.1 System Requirements

The RELAYIOCARD supports all Tripp Lite SmartOnline™ UPS Systems and select SmartPro™ UPS Systems, including SMART1050SLT, SMART1500SLT, SMART2200RMXL2U, SMX1050SLT, SMX1500SLT, SMART3000SLT, SMART2200SLT, SM2200RMNAFTA, SMART2600RM2U, SMART3000RM2U, SMART1500CRMXL, SMART1500SLTXL, SMART750XL_a, SMX3000XLRT2U and SMX2200XLRT2U. Supported systems must run a UPS protocol of 3008 or above.

To determine your UPS protocol:

1. Open Tripp Lite PowerAlert software.
2. Click on the “Misc” button on the main screen of the PowerAlert console.
3. View the protocol variable.

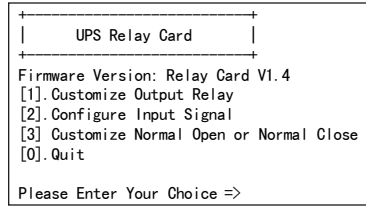
2.2 Communications Setup

1. Connect Tx to pin2, Rx to pin 3 and GND-C to pin5 of RS-232 DBP port.
2. In the Windows environment, launch the Hyper Terminal program, 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.

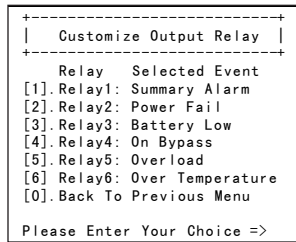
2. Installation and Setup *(continued)*

2.3 Configuration

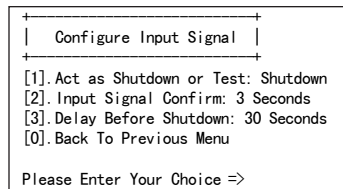
1. **Press Enter** to open the main menu of the RELAYIOCARD.
Press 1 to configure the alarm event for R1~R6.



2. Note: Contacts R1~R6 can be configured for different power events.

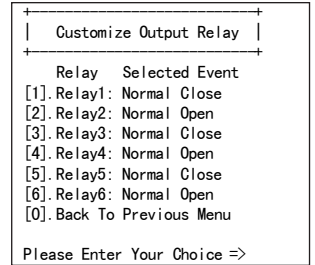


3. **Press 2** to configure the input signal.



In this menu, the input signal can be redefined as a shutdown UPS signal or battery test signal. The UPS shutdown delay time can be adjusted to a maximum of 9999 seconds.

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

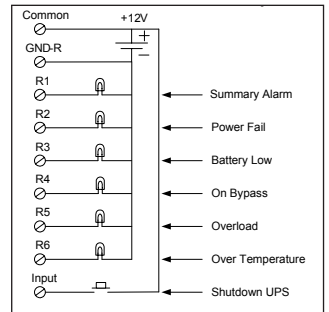


Once the configuration is complete, SW2 must be switched ON to apply the new settings. To automatically reset to default settings, switch SW2 to the OFF position.

5. **Press 0** to quit the configuration session. When the system prompts you to save your settings, press **Y** to save or **N** to ignore.

Application Example

Using the default settings, set SW1 and SW2 to OFF. Apply 12V DC to Common contact and connect the lamps to R1~R6 terminals. Install a push button from the Common contact to the input terminal. Press the button for at least 3 seconds to shut down the UPS remotely.



3. Specifications

Technical Specifications

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

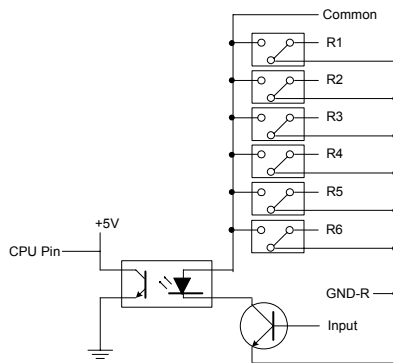
Output Contact Rating

	Maximum	
	DC Voltage	DC Current
Input	24V	1A

Input Rating

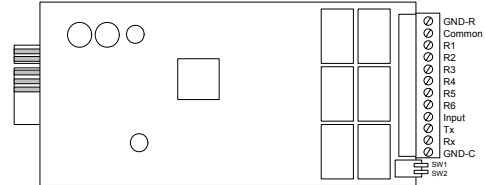
	Maximum	
	DC Voltage	DC Current
Input	24V	10mA

Internal Circuit



Outline

OUTLINE



I/O Pinout

GND-R: Ground for relays

Common: 12~24V DC

Default Alarm Event

R1	Summary Alarm
R2	Power Fail
R3	Battery Low
R4	On Bypass
R5	Overload
R6	Over Temperature

Input: Remote shutdown or battery test

Tx: Transmit to PC, connect to DB9-pin2

Rx: Receive from PC, connect to DB9-pin3

GND-C: Ground for configuration Tx and Rx pins

	OFF (default)	ON
SW1	Normal open for default settings	Normal close for default settings
SW2	Default settings	Customized settings

5. Warranty & Warranty Registration

LIMITED WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in materials and workmanship for a period of 2 years (except internal UPS system batteries outside USA and Canada, 1 year) from the date of initial purchase. If the product should prove defective in material or workmanship within that period, Seller will repair or replace the product, in its sole discretion. Service under this Warranty can only be obtained by your delivering or shipping the product (with all shipping or delivery charges prepaid) to: Tripp Lite, 1111 W. 35th Street, Chicago, IL 60609, USA. Seller will pay return shipping charges. Call Tripp Lite Customer Service at (773) 869-1234 before sending any equipment back for repair.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY OR FITNESS, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES. (Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from jurisdiction to jurisdiction.)

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes not representation or warranty as to the suitability or fitness of these devices for any specific application.

Not compatible with PoE (Power over Ethernet) applications.

WARRANTY REGISTRATION

Visit www.tripplite.com/warranty today to register the warranty for your new Tripp Lite product. You'll be automatically entered into a drawing for a chance to win a FREE Tripp Lite product!*

* No purchase necessary. Void where prohibited. Some restrictions apply. See website for details.

Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marking name or model number of the product.

Made in China.

Tripp Lite has a policy of continuous improvement. Product specifications are subject to change without notice.



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