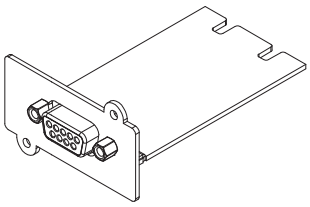
CyberPower®



Relay Control Card
RELAYIO500

User's Manual

K01-0000416-01

Overview

The CyberPower Relay Control Card (RELAYIO500) offers users the solution for UPS status monitoring via 5 output relays. In addition, the RELAYIO500 card provides 1 input contact to perform UPS shutdown in battery mode. This card is compatible with most CyberPower UPS devices with expansion slot.

Installation Guide

The RELAYIO500 card is hot-swappable and can be installed while the UPS is on.

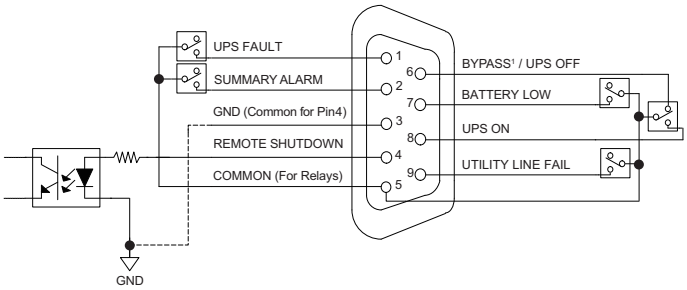
1. Remove the two retaining screws on the expansion slot cover, and then remove the cover.
2. Install the CyberPower RELAYIO500 card into the expansion slot.
3. Re-install and tighten the retaining screws.

Technical Specifications

RELAYIO500	
Electrical	
External S/D Voltage	7.5V – 12V
Power Dissipation	1.35W Max (Default 12V input)
Physical	
Dimensions (WxHxD)	41.8 x 14.2 x 81mm (1.65 x 0.6 x 3.2 in)
Weight	52g (1.92oz)
Environmental	
Operating Temperature	0°C – 40°C (32°F - 104°F)
Operating Humidity	0% – 95% (Non-condensing)

Output Relay Rating	
Maximum	
Voltage	Current
30VDC / 125VAC	3A (per relay)

Internal Circuit



RELAYIO500 Card Pinout

Pin Assignment	Function	I/O
Pin1	UPS FAULT	O/P
Pin2	SUMMARY ALARM	O/P
Pin3	GND (Common for Pin4)	Power GND
Pin4	REMOTE SHUTDOWN	Power + Vcc
Pin5	COMMON (For Relays)	O/P
Pin6	BYPASS [1] / UPS OFF	O/P
Pin7	BATTERY LOW	O/P
Pin8	UPS ON	O/P
Pin9	UTILITY LINE FAIL	O/P

Note: All relay contacts are normally open (N.O.) except for Pin6.
Acceptable Power + Vcc for Pin4 is 7.5 – 12V, 0.0672W Max.
[1] For OL series UPS models only

Function Description

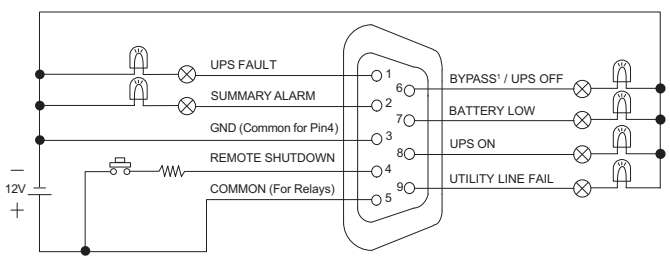
Status	Condition
Pin1 short to Pin5	UPS fault (Inverter Fault / DC Bus Fault / Over Temperature / Output Short / Battery Over Charge / Battery Test Fail [1] / Fan Error [1])
Pin2 short to Pin5	Summary alarm (Inverter Fault / DC Bus Fault / Output Short / Over Temperature / Over Load / Battery Missing / Battery Over Charge / Battery Low / Wiring Fault / Runtime Low [2] / Battery Test Fail [1] / Load Over Setting Level [1] / Fan Error [1])
Pin6 short to Pin5	UPS is OFF. / UPS is in Bypass Mode. [1]
Pin7 short to Pin5	Battery Low
Pin8 short to Pin5	UPS is on.
Pin9 short to Pin5	Utility Line Fail

[1] For OL series UPS models only
[2] For PR/OR series UPS models only

Example Application

Supply 12VDC to the COMMON contact and connect LEDs to the DB-9 port pins 1, 2 and 6 to 9. Connect a push button to COMMON (Pin5) and REMOTE SHUTDOWN (Pin4). Pressing the button for at least 5 seconds will shutdown the UPS when it is on battery.

Note: When the UPS is on battery, the REMOTE SHUTDOWN input (Pin4 & Pin3) accepts at least 5 seconds of high level signal (+12VDC) to perform the UPS shutdown. UPS output power will turn off after 120 seconds.



Conformance Approvals

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 to 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.

Important: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Compliance

CAN ICES-3 (B)/NMB-3(B)

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