



Relay Control Card

DTC 400

User's Manual

The Relay Control Card allows a UPS system to send signals about power system conditions providing galvanic separation



Overview

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

Technical Specifications

| Relay Control Card | |
|----------------------------|------------------------------|
| 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 |
| 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 /250VAC | 3A (per relay) |

Function Description

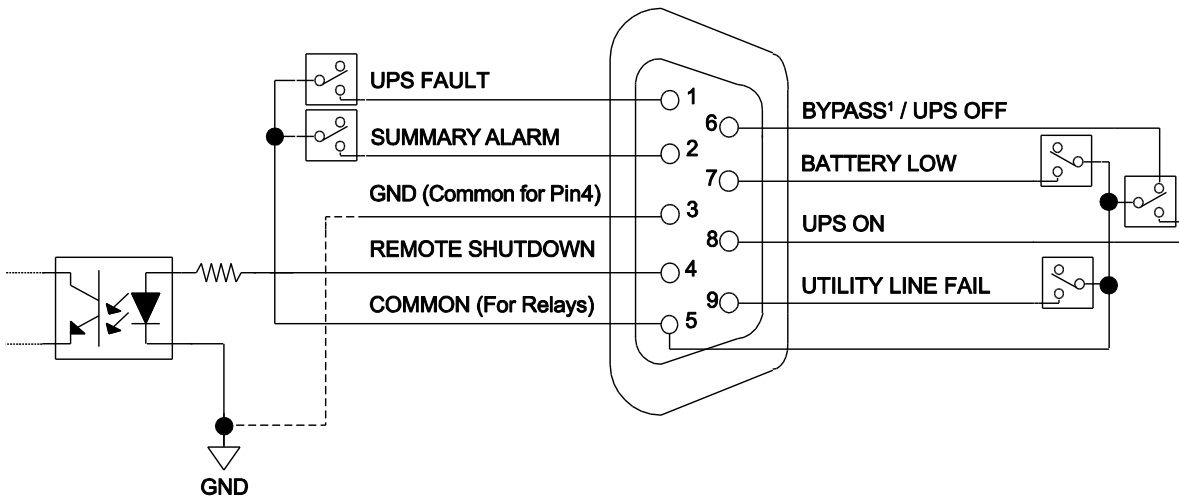
| Status | Condition |
|--------------------|---|
| Pin1 short to Pin5 | UPS fault |
| Pin2 short to Pin5 | Summary alarm |
| Pin6 short to Pin5 | UPS is OFF. / UPS is in Bypass Mode. ¹ |
| Pin7 short to Pin5 | Battery Low |
| Pin8 short to Pin5 | UPS is on. |
| Pin9 short to Pin5 | Utility Line Fail |

¹ For online series UPS models only

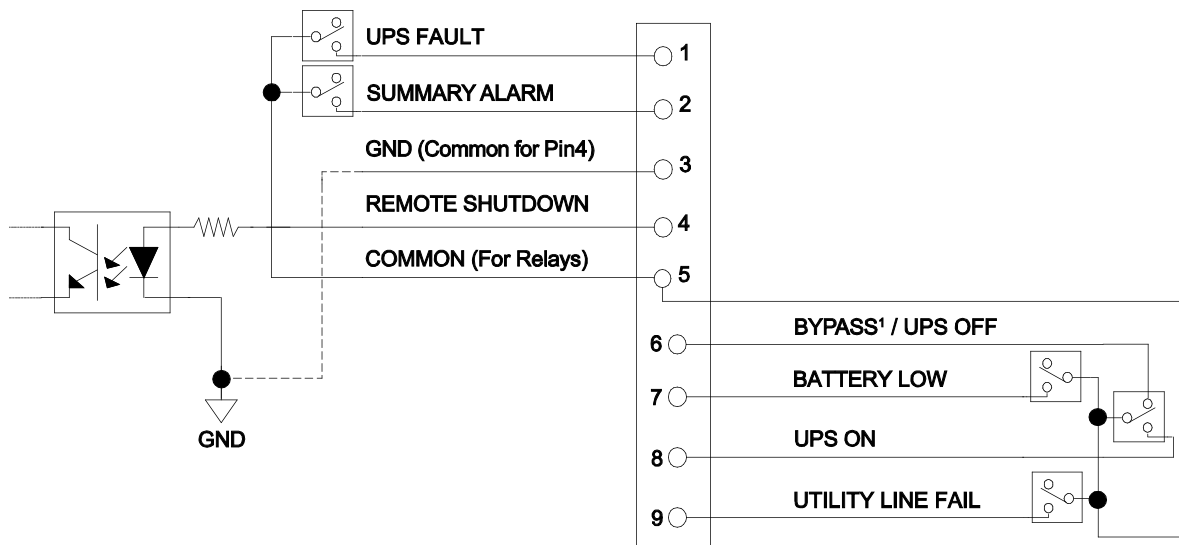


Internal Circuit

Version DB9 connector



Version terminal connectors





Relay Control Card Pin out

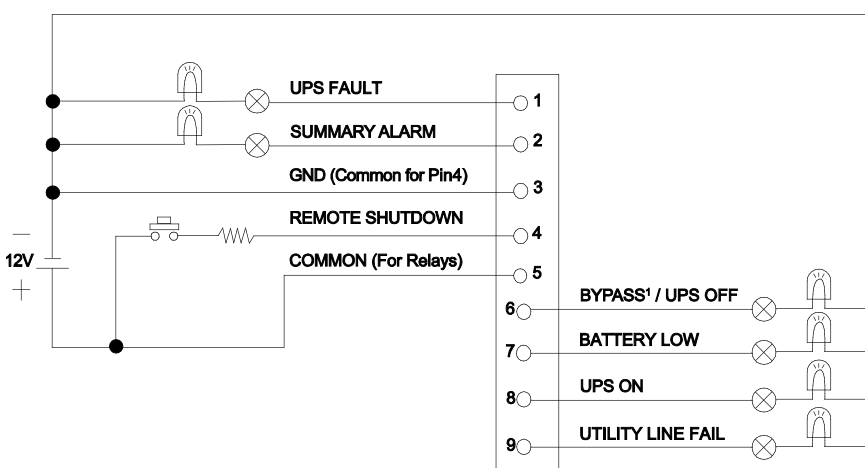
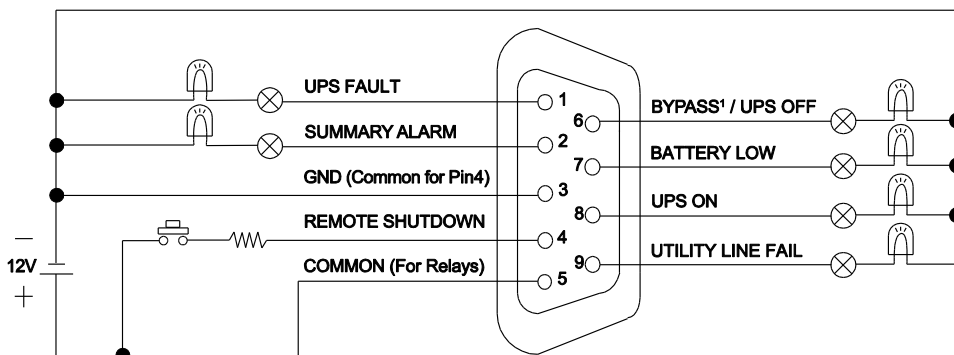
| Pin Assignment | Function | I/O |
|----------------|-------------------------------|-------------|
| Pin1 | UPS FAULT | O/P |
| Pin2 | SUMMARY ALARM | O/P |
| Pin3 | GND (Common for Pin4) | Power GND |
| Pin4 | REMOTE SHUTDOWN | Power + Vcc |
| Pin5 | COMMON (For Relays) | O/P |
| Pin6 | BYPASS ¹ / 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 online series UPS models only.

Example Application

Supply 12VDC to the COMMON contact and connect LEDs to the 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.

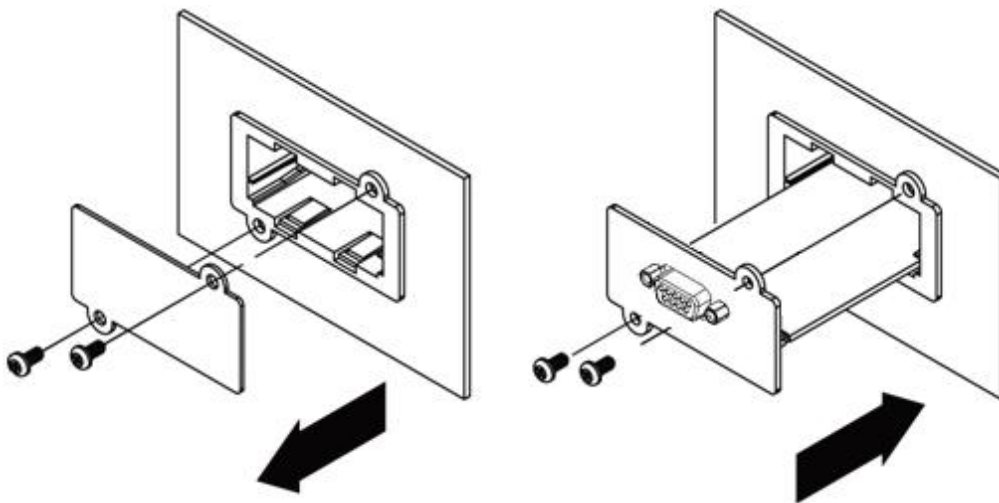




Hardware Installation

Note: The Relay Control Card is hot-swappable and can be installed while the UPS is on.

1. Remove the two retaining screws from the expansion slot and remove the cover.
2. Install the Relay Control Card into the expansion slot.
3. Insert and tighten the retaining screws.
4. Connect signal wires to proper terminals.



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.

