

# EATON

# Powerware

## Powerware® Relay Interface Card

Product Focus



### Features

- Provides isolated dry contact Form-C relay outputs for "utility failure," "low battery," "UPS alarm/OK," or "on bypass"
- User-selectable "normally open" (N/O) or "normally closed" (N/C) contacts
- Remote UPS shutdown
- Hot-swappable
- DB-15 output connection; terminal block outputs on X-Slot™ card
- Cables available for AS/400 applications
- Works with any Powerware UPS equipped with an X-Slot, in addition to the Powerware 9120 and Powerware 9170+
- Increases reliability and system availability X-Slot relay interface card supports:
  - Powerware 5115 Rackmount
  - Powerware 5125
  - Powerware 9125
  - Powerware 9155
  - Powerware 9320
  - Powerware 9330
  - Powerware 9335
  - Powerware 9340
  - Powerware 9390
- BestDock relay interface card supports:
  - Powerware 9120
  - Powerware 9170+

Communications and control are at the heart of any reliable UPS solution. Powerware relay interface cards provide shutdown and monitoring of UPS status through a connected computer.

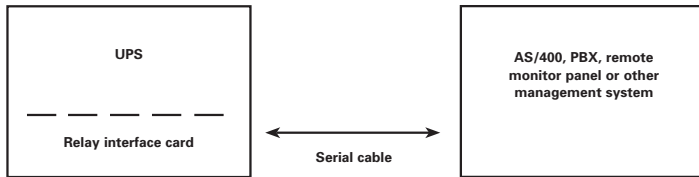
Relay interface cards are available in two models, the X-Slot version and BestDock version. Both are dedicated adapters that provide the essential dry-contact interface between your Powerware UPS and any relay-connected computer, including the AS/400, as well as a variety of industrial applications.

The X-Slot relay interface card is designed to function with all Powerware UPS products equipped for X-Slot communications, which include the Powerware 5115 Rackmount,

Powerware 5125, Powerware 9125, Powerware 9320, Powerware 9330, Powerware 9335 and Powerware 9340. The BestDock relay interface card is designed to work specifically with the Powerware 9120 and Powerware 9170+.

These relay interface cards include a remote shutdown feature, with which the UPS shutdown is performed by connecting the relay interface card shutdown (pin 15) to +12VDC (pin 13) for a minimum of five seconds.

The BestDock relay interface card shutdown feature functionality depends on the jumper (JP1, JP2 & JP3) selected on the board and on the UPS mode (normal or on-battery).



## Relay interface card contact information

The relay contacts must not be galvanically connected to any mains-connected circuits. Do not use +12VDC (pin 13) of the relay interface card for any power supply purposes for external devices. Reinforced insulation to the mains is required for equipment and cables attached to these connections. Relay contacts are rated for maximum 1A/30VAC or 200mA/60VDC. All relay outputs are galvanically isolated from the other circuits of the UPS.

## DESCRIPTION OF RELAY INTERFACE CARD PINS AND RELAY INFORMATION

| Relay # on board | System State           | DB-15 pin# | NC/NO* |
|------------------|------------------------|------------|--------|
| K1: AC Line      | AC line OK             | 1-2        | NC     |
|                  | AC line failure        | 1-3        | NO     |
| K2: Battery      | Battery normal         | 4-5        | NC     |
|                  | Battery low            | 4-6        | NO     |
| K3: UPS Alarm    | UPS alarm              | 7-8        | NC     |
|                  | UPS ON/OK              | 7-9        | NO     |
| K4: Bypass       | UPS on bypass          | 10-12      | NC     |
|                  | UPS normal/on inverter | 10-11      | NO     |
|                  | UPS shutdown**         | 13-15      | -      |

Normally-closed (NC)/-open (NO) connection state when the relay interface card is not powered. \*\*The shutdown (pin 15) needs minimum of five seconds high level signal (connection to +12VDC) to perform the UPS shutdown. Shutdown function is not available for 9125, 9330, and 9340.

## UPS TO SUPPORTED CONTACTS MATRIX

| PW UPS   | Line Fail | Low Batt | UPS Alarm/OK | Bypass |
|----------|-----------|----------|--------------|--------|
| PW 5115  | X         | X        | -            | -      |
| PW 5125  | X         | X        | -            | -      |
| PW 9120  | X         | X        | X            | X      |
| PW 9125  | X         | X        | -            | -      |
| PW 9170+ | X         | X        | X            | X      |
| PW 9320  | X         | X        | -            | X      |
| PW 9330  | X         | X        | -            | X      |
| PW 9335  | X         | X        | -            | X      |
| PW 9340  | X         | X        | X            | X      |

Note: UPS alarm/OK and bypass relay information are not available for PW 5125 and PW 9125 UPSs.

## BESTDOCK RELAY INTERFACE CARD SHUTDOWN FUNCTION

|          |            | JP1 (factory default)                                                                 | JP2                                                        | JP3                  |
|----------|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------|
| PW 9120  | UPS normal | ---                                                                                   | Immediate output off, online when shutdown pins are opened | Immediate output off |
|          | On battery | Shutdown as in RS-232 port; Output off after 120 sec., back online when power returns | Immediate output off, online when shutdown pins are opened | Immediate output off |
|          |            |                                                                                       |                                                            |                      |
| PW 9170+ | UPS normal | ---                                                                                   | ---                                                        | Immediate output off |
|          | On battery | ---                                                                                   | Immediate output off                                       | Immediate output off |

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Italy: 39.02.66.04.05.40  
Norway: 47.23.03.65.50  
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