

# Relay Interface Card for Powerware 9120 and 9170+

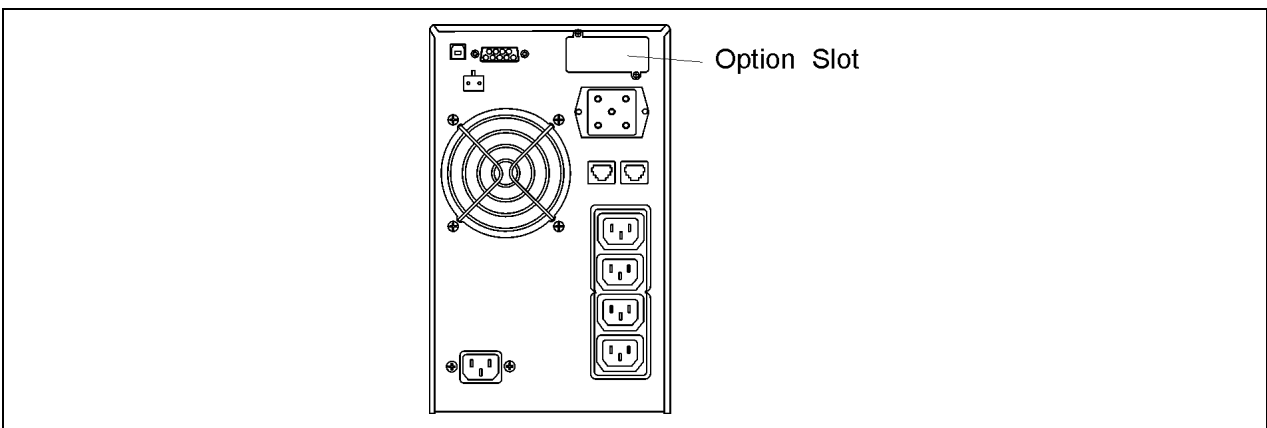
## General

This Relay Interface Card (p/n 1014018) provides potential free true relay interface for AS/400 and other relay connected computers and industrial applications. This relay interface uses a 15-pin D-sub connector and this Relay Interface Card is installed in the slot on rear panel of the UPS.

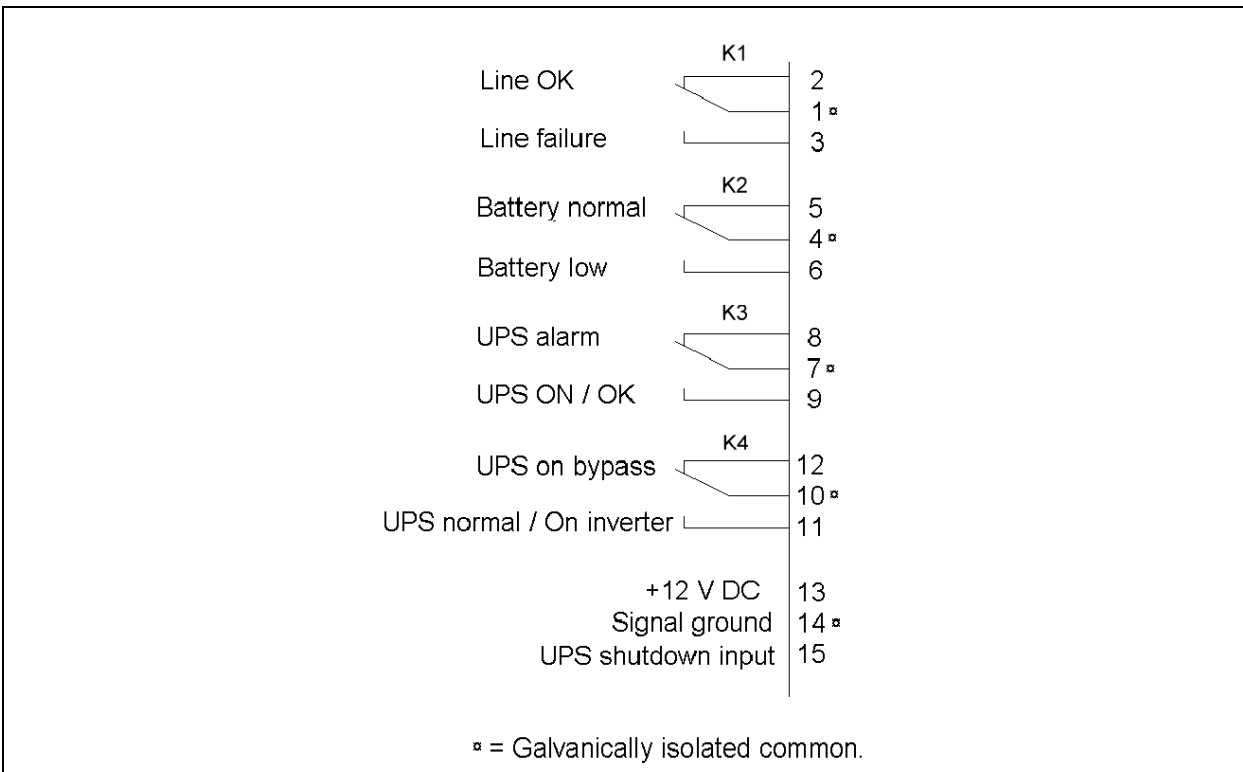
## Installation

The UPS does not have to be shut down when installing this Relay Interface Card.

1. Remove the cover on the option slot on the back of UPS to install the Relay Interface Card.
2. Put the Relay Interface Card into the slot and attach it to the rear panel by using the screws removed.



The following information is available from the Relay Interface Card:



**Table 1.** Relay information available.

Relay # on board	System state	D15 pin # connected	NC / NO *
K1: Line	Line OK	1 - 2	NC
	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	

**Table 1**

\* Normally closed (NC) /open (NO) connection state when the Relay Interface Card is not powered.

\*\* The shutdown pin (15) needs minimum of 5 seconds high level signal (connection to +12VDC) to perform the UPS shutdown.

NOTICE: The relay contacts must not be galvanically connected to any mains connected circuits. Do not use +12VDC (Pin13) of the Relay Interface Card for any power supply purposes for external devices. Reinforced insulation to the mains is required for equipment and cables connected to these connections.

The relay contacts are rated for maximum 1A/30VAC or 200mA/60VDC. All relay outputs are galvanically isolated from the other circuits of the UPS (IEC 950, EN 50091-1).

## Shut down function

The Relay Interface Card shut down functionality depends on the jumper (JP1, JP2 & JP3) selected on the board and on the UPS mode (Normal or On Battery). The functions are described in table 2.

**Table 2.** Shut down options.

		JP1 (factory default)	JP2	JP3
PW 9110	UPS Normal	-	-	-
	On Battery	-	UPS Off immediately, back online when power returns.	-
PW 9120	UPS Normal	-	Immediate output off, back on line when shut down pins are opened	Immediate output off
	On Battery	Shut down as in RS-232 port. Output off after 120 sec, back on line when power returns.	Immediate output off, back on line when shut down pins are opened	Immediate output off
PW 9170+	UPS Normal	-	-	Immediate output off
	On Battery	-	Immediate output off	Immediate output off

**Table 2**