

## Dry Contact I/O Accessory (AP9810) Technical Guide

### Overview

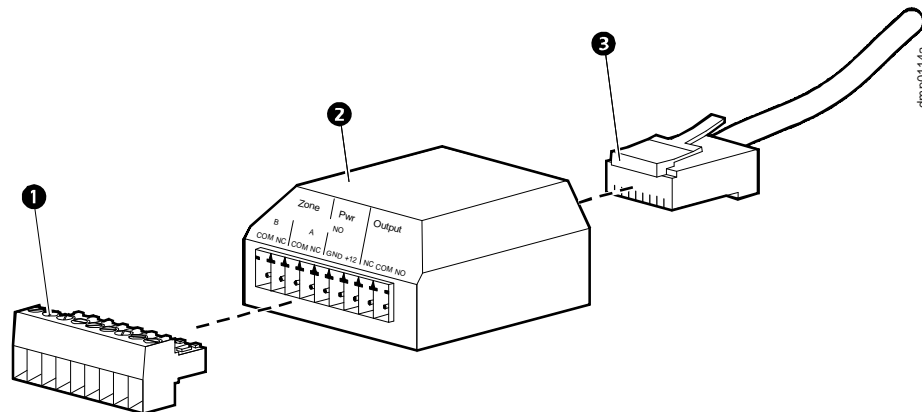
The APC<sup>®</sup> Dry Contact I/O Accessory provides a hardware interface for connecting the host device of a Network Management Card 2 (AP9631 or AP9635) with peripheral devices. The Dry Contact I/O Accessory includes:

- Inputs (labeled **Zones A** and **B**) for two dry contact devices
- One 12 V, 25 mA power output (labeled **Pwr**)
- One Form C relay (relay outputs labeled **Output**).

Dry Contact I/O Accessories connect to Universal I/O ports on your Management Card 2: AP9635 includes one port and AP9631 includes two ports. Through your Management Card 2 software interface, you specify which alarms will cause a change in the state of the Form C relay. You also set the actions that will occur at the host due to a change in state of your dry contact devices.

### Installation

Install the Dry Contact I/O Accessory using the details below. Connect devices to the screw terminal block using the following subsections.



Item	Description
①	Screw terminal block; accepts 16 AWG to 28 AWG wires
②	Dry Contact I/O Accessory
③	25.4 cm (1 ft) CAT-5E RJ-45 patch cable used to connect the Dry Contact I/O Accessory to a Universal I/O port on a Management Card 2

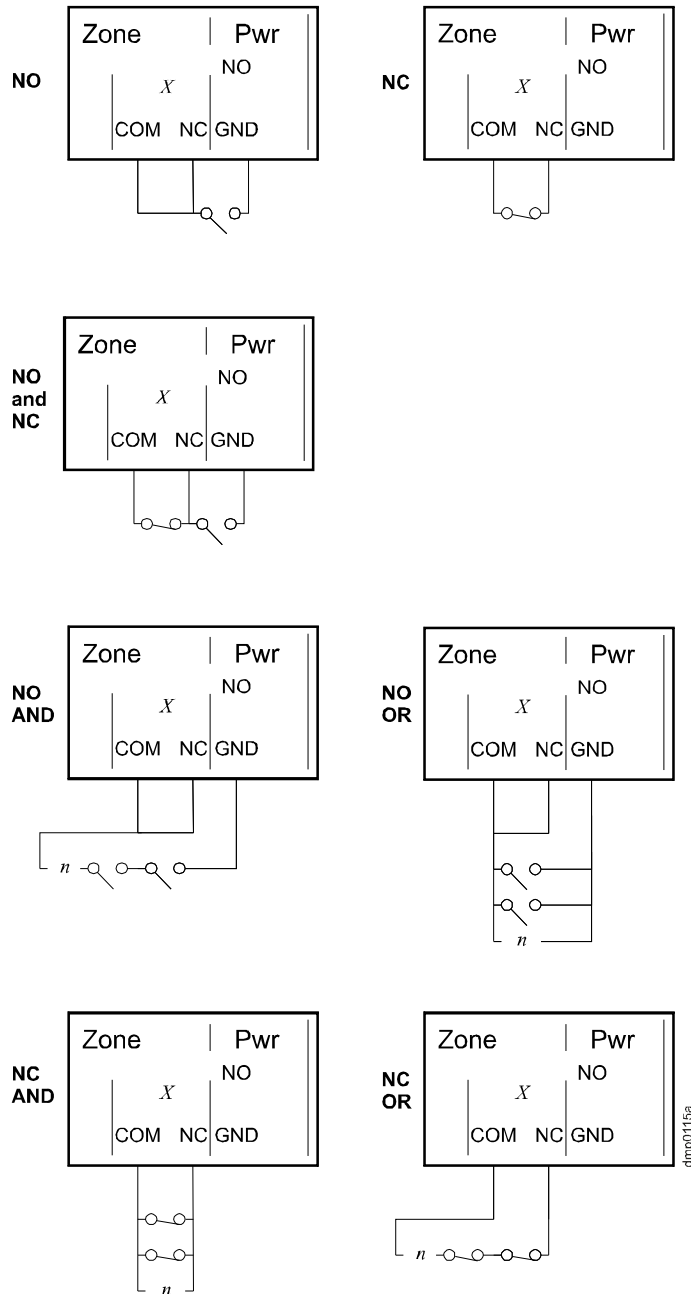


**Note:** The Management Card 2 must have application firmware v5.0.2 or greater. For details on upgrading the Management Card 2 firmware, see the user's guide on the *Network Management Card Utility CD* or on the APC Web site ([www.apc.com](http://www.apc.com)).

**Note:** If you are using PowerChute Network Shutdown (PCNS) and if your Management Card 2 has two Universal I/O ports, you must connect the Dry Contact I/O Accessory to Universal I/O port 2. PCNS supports only one Dry Contact I/O Accessory.

## Connecting dry contact devices to the Zone A and B terminals on the screw terminal block

The sensing voltage available on the Zone A and B pins of the Dry Contact I/O Accessory is nominally 5 Vdc at less than 1 mA, referenced to system ground.



## Connecting a device to the power output (Pwr) terminals on the screw terminal block

You can use the NO/GND terminal on the screw terminal block to connect Normally Open (NO) dry contact devices and to connect a device to the power output (Pwr) terminals.

## Connecting a device to the Output terminals on the screw terminal block



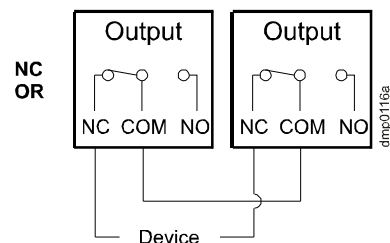
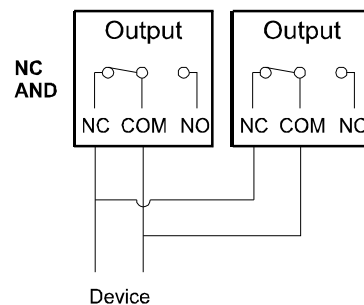
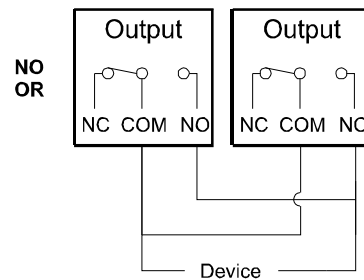
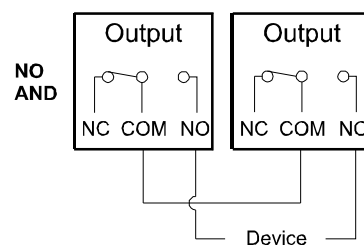
**Note:** The Form C relay is not intended to switch AC loads directly (see the ratings below).

### Form C relay ratings

Normal switching capacity	1 A at 30 VDC
Maximum switching power	30 W
Maximum switching voltage	60 VDC
Maximum switching current	2 Adc
Maximum carrying current	2 Adc
Surge ratings	2 kV per Bellcore; TA-NWT-001089 1.5 kV per FCC part 68

If you are connecting two Dry Contact I/O Accessories to a Management Card 2, you have two options:

- Connect a device to the Output terminals for each Dry Contact I/O Accessory separately.
- Connect the Dry Contact I/O Accessories in the same circuit to implement AND or OR logic (see the diagram to the right). For example, if one Output changes state when the host reports a **Replace Battery** alarm and the other Output changes state when the host reports a **Fault** alarm, you can connect the Dry Contact I/O Accessories so that the device detects a change in state when only one alarm occurs (OR logic) or when both alarms occur simultaneously (AND logic).



# Specifications

## Electrical

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Input voltage	24 VDC
Current draw	40 mA DC
Output	12 VDC, 25 mA

## Physical

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Size	22.0 x 45.2 x 44.6 mm
(Height x Width x Depth)	(0.87 x 1.78 x 1.76 in)
Weight	51.0 g (1.8 oz)

## Environmental

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Temperature	
Operating	0 to 40°C (32 to 104°F)
Storage	-15 to 65°C (5 to 149°F)
Relative Humidity	
Operating	0 to 95%
Storage	0 to 95%
Elevation	
Operating	0 to 3 000 m (0 to 10,000 ft)
Storage	0 to 15 000 m (0 to 50,000 ft)



Customer support and warranty information is available at the APC Web site, [www.apc.com](http://www.apc.com).

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