Dry Contact I/O Accessory (AP9810) Technical Guide

Overview

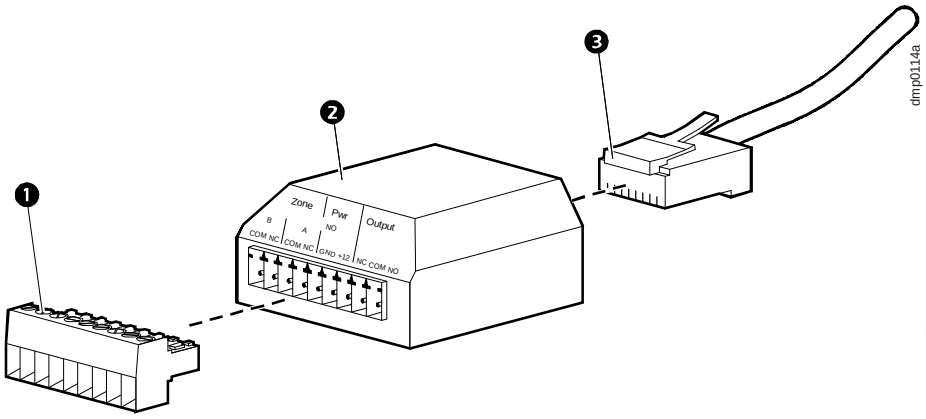
The APC® Dry Contact I/O Accessory provides a hardware interface for connecting the host device of a Network Management Card 2 (AP9631 or AP9635) with peripheral devices. The Dry Contact I/O Accessory includes:

- 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.



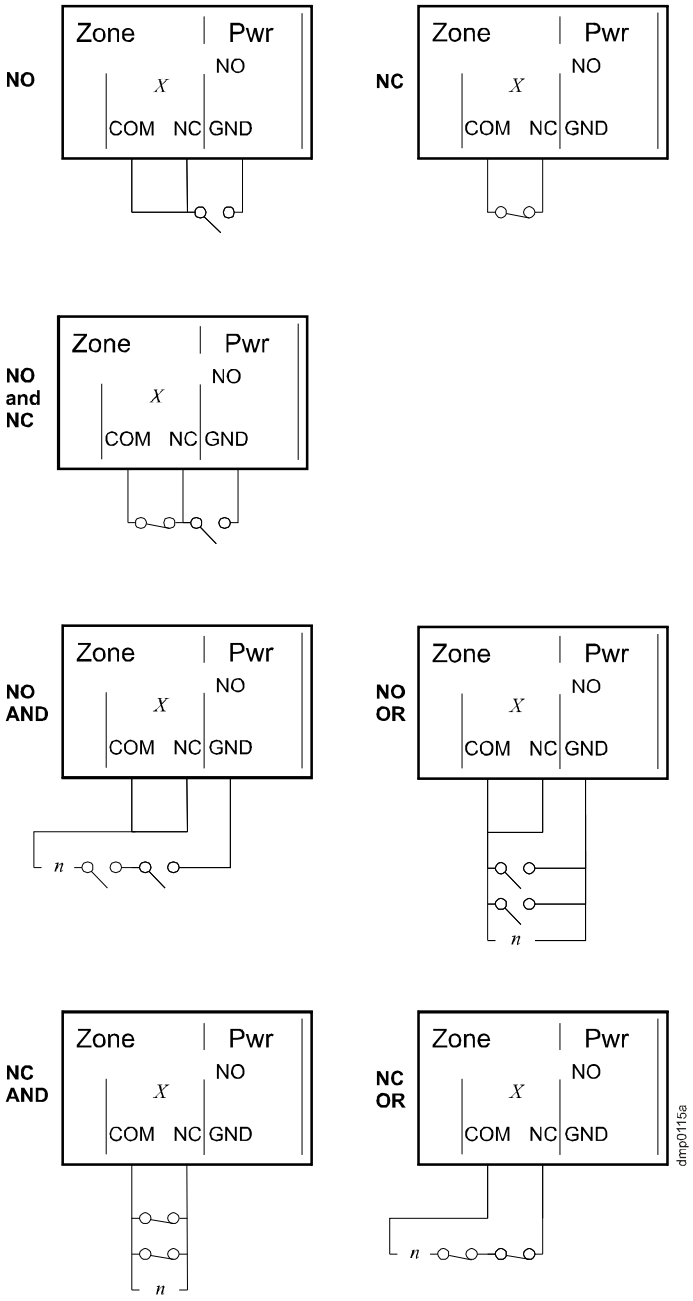
Item	Description
❶	Screw terminal block; accepts 16 AWG to 28 AWG wires
❷	Dry Contact I/O Accessory
❸	25.4 cm (1 ft) CAT-5E RJ-45 patch cable used to connect the Dry Contact I/O Accessory to a Universal I/O port on a Management Card 2

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**).

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.

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

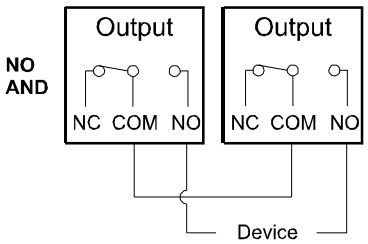
Note: The Form C relay is not intended to switch AC loads directly (see the ratings below).

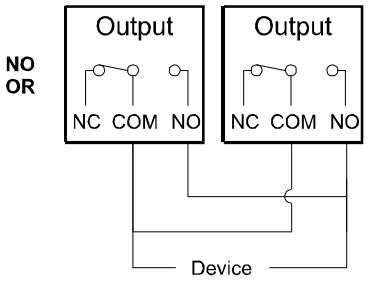
Form C relay ratings

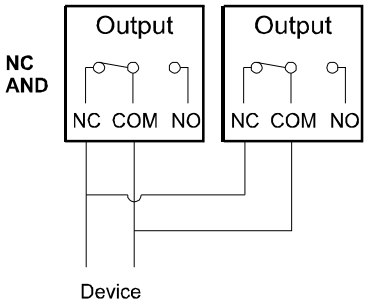
Normal switching capacity	1 A at 30 VDC
Maximum switching power	30 W
Maximum switching voltage	60 VDC
Maximum switching current	2 Adc
Maximum carrying current	2 Adc
Surge ratings	2 kV per Bellcore; TA-NWT-001089 1.5 kV per FCC part 68

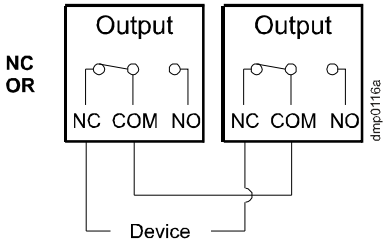
If you are connecting two Dry Contact I/O Accessories to a Management Card 2, you have two options:

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

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

Environmental	
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**.

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