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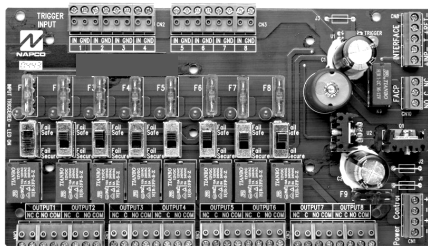
333 Bayview Avenue
Amityville, New York 11701
For Sales and Repairs, (800) 645-9445
For Technical Service, (800) 645-9440

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NP-AMOD8

ACCESS POWER CONTROLLER

WI1329A 12/05



DESCRIPTION

The NP-AMOD8 is an access power controller that distributes one (1) 12-24 volt AC or DC input over eight (8) independently controlled (and fuse protected) outputs. In addition, these 8 outputs can be configured as dry form "C" contacts. The outputs are activated by an open collector sink or normally open (NO) dry trigger input from a Card Reader, Access Control System, Push Button, Keypad, PIR, etc. It will direct power to many access control hardware devices including Electric Strikes, Magnetic Locks and Door Holders, etc. Outputs operate in both fail-secure and fail-safe modes. The NP-AMOD8 can be powered by one common power source that provides power for both the locking devices and board operation, or two totally independent power sources, one supplying power for lock / accessory power and the other for board operation. The FACP Interface enables Alarm Monitoring, Emergency Egress, HVAC Shutdown, Elevator Recall or can be used to trigger other auxiliary devices. The fire alarm disconnect can be configured for the following modes: Eight (8) outputs unaffected (Fail Safe) or Eight (8) outputs affected (Fail Secure). Each output is independent controlled.

FEATURES

- 12 to 24volt AC or DC Operation (setting not required). (.5amp @ 12volt, .22amp @ 24volt current consumption with all relays energized).
- Power supply input options:
 - a) One (1) common power input (board and lock power).
 - b) Two (2) isolated power inputs (one (1) for board power and one (1) for lock power).
- Eight (8) Access Control System trigger inputs. Input options:
 - a) Eight (8) normally open (NO) inputs.
 - b) Eight (8) open collector sink inputs.
 - c) Any combination of the above.
- Eight (8) independently controlled outputs. Output options:
 - a) Eight (8) fail-Safe and/or fail-Secure power outputs.

- b) Eight (8) dry form "C" 5 amp rated relay outputs.
 - c) Any combination of the above.
- Eight (8) auxiliary power outputs (unswitched).
 - Output fuses are rated 3. amp.
 - Main fuse is rated at 10 amp. **Note:** Total output current is determined by the power supply, not to exceed a maximum of 10 amp total.
 - Red LEDs indicate outputs are triggered (relays energized).
 - Fire Alarm disconnect (latching or non-latching). Fire Alarm disconnect input options:
 - a) Normally open (NO) or normally closed (NC) dry contact input.
 - b) Polarity reversal from FACP signal circuit.
 - Fire Alarm disconnect output options:
 - a) Eight (8) outputs affected.
 - b) Eight (8) outputs unaffected.
 - FACP output relay (form "C" contact rated @ 1 amp 28VDC not evaluated by UL).
 - Green LED indicates when FACP disconnect is triggered.
 - Removable terminal blocks facilitate ease of installation.
- Board Dimensions: 203.2mm L x 114.3mm W x 45mm H

INSTALLATION INSTRUCTIONS

1. Mount NP-AMOD8 in desired location/enclosure.

Note: Keep power limited wiring separate from non-power limited wiring (115VAC / 60Hz Input, Battery wires). Minimum .25" spacing must be provided. Carefully review:

 - Terminal Identification Table
 - Typical Application Diagram
 - LED Diagnostics
 - Hook-up Diagrams
2. **Power supply input:**

The NP-AMOD8 can be powered with one (1) power supply which will provide power for both board operation and the locking devices or two (2) separate power supplies, one (1) to provide power for the board operation and the other to provide power for the locking devices.

Note: The input power can be either 12 to 24 volts AC or DC (.5amp @ 12volt, .22amp @ 24volt current consumption with all relays energized).

(a) Single power supply input:
If the NP-AMOD8 and the locking devices are to be powered using a single power supply, connect the output (12 to 24 volts AC or DC) to the terminals marked [- Control+].

(b) Multiple power supply inputs :
When the use of two power supplies is desired, **jumpers J1 and J2** (located to the left of the power/

control terminals) **must be cut**. Connect power for the NP-AMOD8 to the terminals marked [- Control +] and connect power for the locking devices to the terminals marked [- Power +].

Note: When using DC power supplies, polarity must be observed. When using AC power supplies polarity need not be observed.

Note: For UL compliance, the power supplies must be UL Listed for Access Control Systems and accessories.

3. Output hookup options :

The NP-AMOD8 will provide either eight (8) powered (switched and/or auxiliary), eight (8) form "C", or any combination of both powered and form "C" outputs.

(a) Switched Power outputs:

Connect the negative (-) input of the device being powered to the terminal marked [COM]. For fail-safe operation connect the positive (+) input of the device being powered to the terminal marked [NC]. For fail-secure operation connect the positive (+) input of the device being powered to the terminal marked [NO].

(b) Form "C" outputs:

When form "C" outputs are desired, the corresponding output fuse (1-8) must be removed. Connect negative (-) of the power supply directly to the locking device. Connect the positive (+) of the power supply to the terminal marked [C]. For fail-safe operation, connect the positive (+) of the device being powered to the terminal marked [NC]. For fail-secure operation connect the positive (+) of the device being powered to the terminal marked [NO].

(c) Auxiliary Power outputs (unswitched):

Connect positive (+) input of the device being powered to the terminal marked [C] and the negative (-) of the device being powered to the terminal marked [COM]. This output can be used to provide power for card readers, keypads etc.

4. Input trigger hookup options :

(a) Normally Open [NO] input trigger:

Inputs 1-8 are activated by normally open or open collector sink inputs. Connect devices (card readers, keypads, request to exit buttons etc.) to terminals marked [IN] and [GND].

(b) Open Collector Sink inputs:

Connect the access control panel open collector sink positive (+) to the terminal marked [IN] and the negative (-) to the terminal marked [GND].

5. Fire Alarm Interface :

A normally closed [NC], normally open [NO] or reversal of polarity input from a fire alarm control panel (FACP) will trigger all outputs, except when the independent mode option is selected.

Independent output mode: (eight (8) outputs with FACP disconnect with or outputs without FACP disconnect).

To program the independent mode set switch to the Fail Safe or Fail Secure position. In this mode of operation, Fail Safe will be affected when the fire alarm interface is triggered and outputs Fail Secure will remain unaffected.

(a) Normally Open [NO] input:

Connect the normally open FACP trigger input to the

terminals marked [+ INP] and [T].

(b) Normally Closed [NC] input:

Connect the normally closed FACP trigger input to the terminals marked [+ INP -] and install a jumper across the terminals marked [+ INP] and [T].

(c) Signaling Circuit input trigger:

Connect the positive (+) and negative (-) from the FACP signaling circuit to the terminals marked [+ INP -].

Connect the FACP EOL or next signaling device to the terminals marked [+ RET --] (polarity is referenced in an alarm condition). **Jumper J3 must be cut.**

6. FACP dry contact output:

Connect desired device to be triggered by the NP-AMOD8's dry contact output to the terminals marked [NO] and [C] FACP for normally open output or the terminals marked [NC] and [C] FACP for normally closed output.

LED DIAGNOSTICS		
LED	ON	OFF
LED 1-LED 8 (Red)	Output relay(s) energized.	Output relay(s) de-energized.
Trigger (Green)	FACP input triggered (alarm condition).	FACP normal (non-alarm condition).

TERMINAL IDENTIFICATION	
Terminal Legend	Function/Description
-- Power +	12 to 24 volts AC/DC from UL Listed lock power supply.
-- Control +	12 to 24 volts AC/DC from UL Listed power supply (operates)
TRIGGER INPUT 1- INPUT 8 IN,GND	From normally open and/or open collector sink trigger inputs (request to exit buttons, exit PIR's, etc.).
OUTPUT 1- OUTPUT 8 NC, C, NO, COM	12 to 24 volts AC/DC switched controlled outputs: • Fail-safe [NC positive (+) & COM Negative (-)], • Fail-secure [NO positive (+) & COM Negative (-)]. Auxiliary outputs (unswitched): [C positive (+) & COM Negative (-)]. (When using AC power supplies polarity need not be observed), NC, C, NO convert to 5 amp 24 VAC/VDC rated form "C" dry outputs when fuses 1-8 are removed. Contacts referred to in a non-triggered state.
FACP INTER-FACE T, + INPUT --	Fire Alarm Interface trigger input from FACP. Trigger inputs can be normally open, normally closed or an FACP Signal Circuit input.
FACP INTER-FACE NC, C, NO	Form "C" relay contact rated @ 1 amp 28VDC for alarm reporting. (This output has not been evaluated by UL)

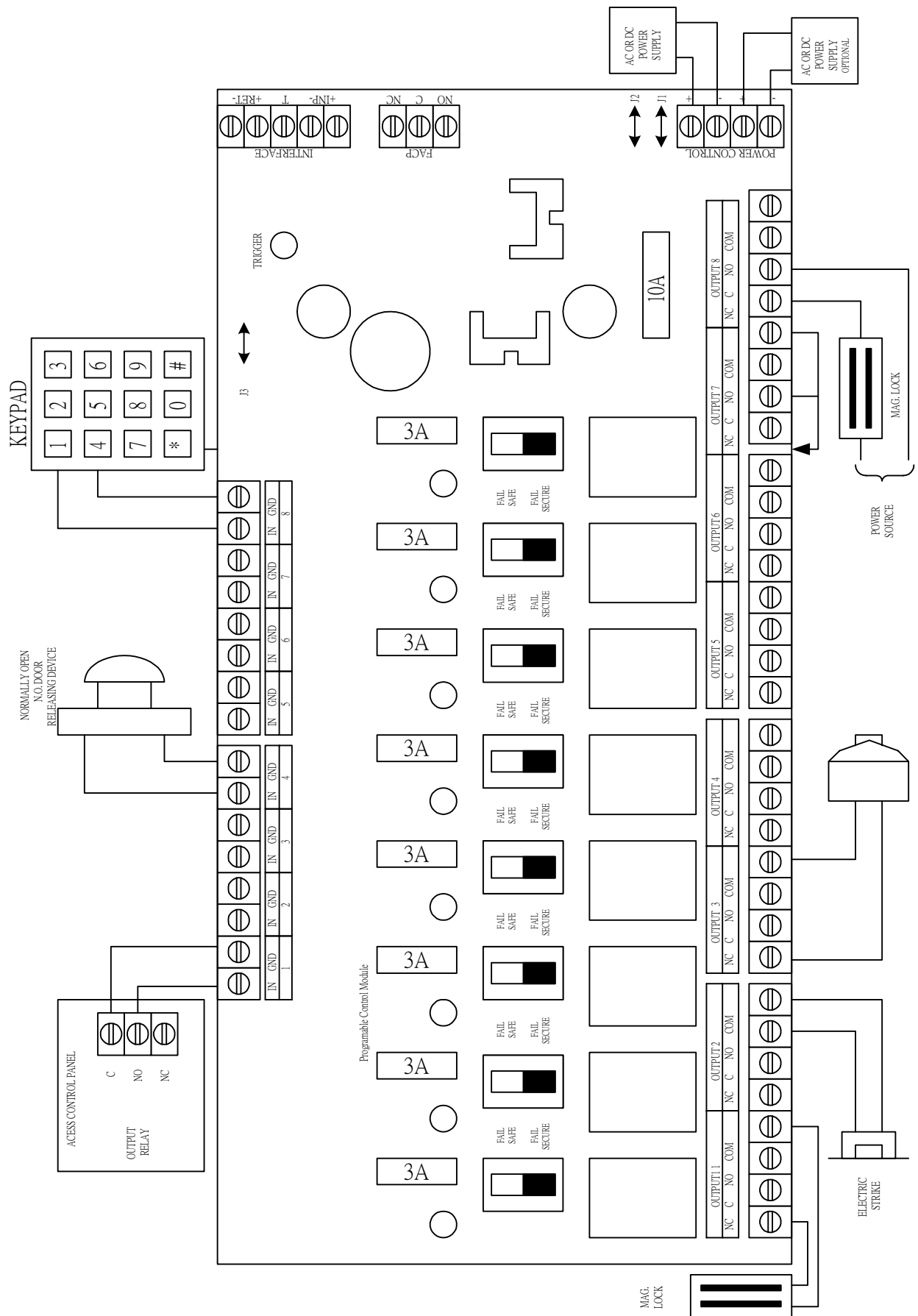


Fig. 1 Typical Application Diagram

Hookup Diagrams

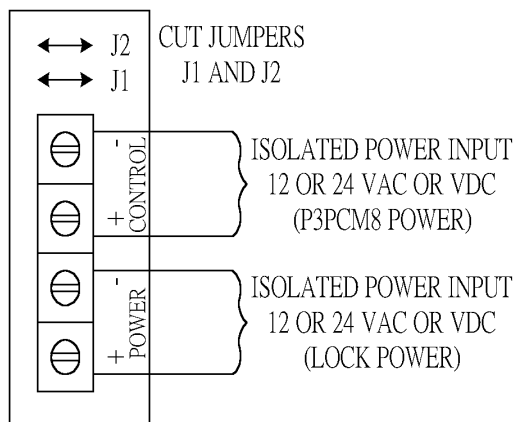


Fig. 2: Optional hook-up using two (2) isolated power inputs.

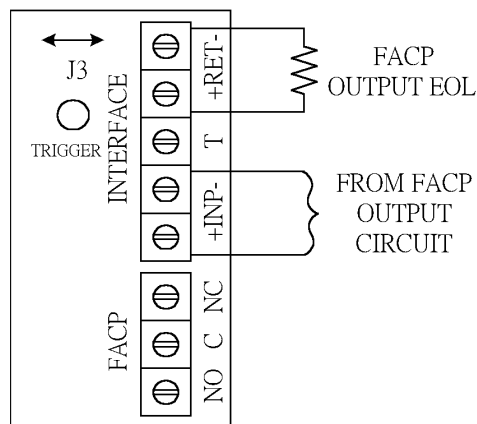


Fig. 3: Polarity reversal input from FACP output circuit (polarity is reference in alarm condition).

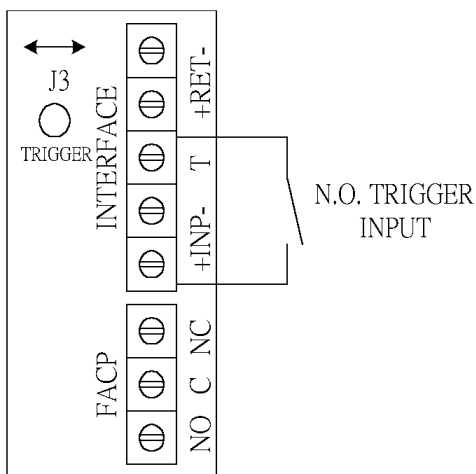


Fig. 4: Normally Open Non-Latching FACP trigger input.

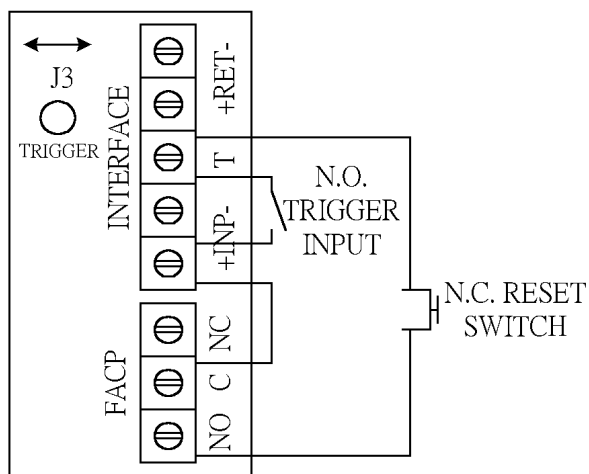


Fig. 5: Normally Open Latching FACP trigger input with reset. (This output has not been evaluated by UL).

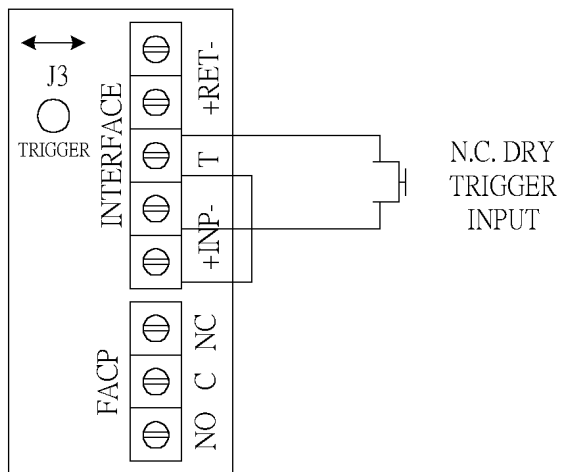


Fig. 6: Normally Closed Non-Latching FACP trigger input.

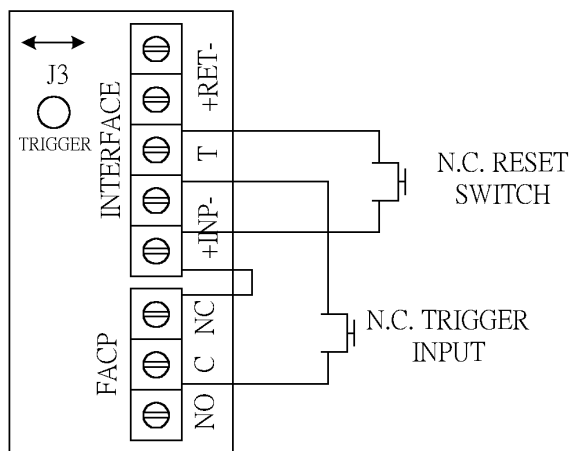


Fig. 7: Normally Closed Latching FACP trigger input with reset. (This output has not been evaluated by UL).