

Installation Manual: PAD100-NAC NAC Module

NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the PAD100-NAC module. This module is only compatible with addressable fire systems that utilize the PAD Addressable Protocol.

All terminals are power limited and should be wired in accordance with the requirements of NFPA 70 (NEC) and NFPA 72 (National Fire Alarm Code). Failure to follow the wiring diagrams in the following pages will cause the system to not operate as intended. For further information, refer to the control panel installation instructions.

The module shall only be installed with listed control panels. Refer to the control panel installation manual for proper system operation.

1. Description

The PAD100-NAC module uses one (1) SLC loop address on an SLC loop. The module provides a programmable source of power to supervise and control one (1) Class B or Class A Notification or one (1) Class B Releasing circuit. The module requires and supervises a 24 VDC auxiliary power connection. The module mounts on either an UL Listed 2-1/2" deep 2-gang box or 1-1/2" deep 4" square box.

The PAD100-NAC includes one red LED to indicate the module's status. In normal condition, the LED flashes when the device is being polled by the control panel. If the LED blink has been disabled via the programming software, in a normal condition the LED of the device will be off.

2. Setting the Address

All PAD protocol detectors and modules require an address prior to connection to the panel's SLC loop. Each PAD device's address (*i.e., detector and/or module*) is set by changing the dip switches located on the device. PAD device addresses are comprised of a **seven (7) position dip switch** used to program each device with an address ranging from 1–127.

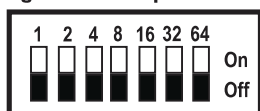
Figure 1. PAD Device Dip Switch Addresses Table (Addresses 1–127)

1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64		
1							27							53							79							103															
2							28							54							80							104															
3							29							55							81							105															
4							30							56							82							106															
5							31							57							83							107															
6							32							58							84							108															
7							33							59							85							109															
8							34							60							86							110															
9							35							61							87							111															
10							36							62							88							112															
11							37							63							89							113															
12							38							64							90							114															
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16							42							68							94							118															
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19							45							71							97							121															
20							46							72							98							122															
21							47							73							99							123															
22							48							74							100							124															
23							49							75							101							125															
24							50							76							102							126															
25							51							77														127															
26							52																																				
1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64		

Note: Each "gray" box indicates that the dip switch is "On," and each "white" box indicates "Off."

The examples shown below illustrate a PAD device's dip switch settings: the 1st example shows a device *not addressed* where all dip switch settings are in the *default "Off" position*, the 2nd illustrates an *addressed PAD device* via the dip switch settings.

Figure 2. Examples of PAD Device Showing Default Dip Switch Setting (Unaddressed) & Addressed PAD Device



All dip switches are shown in the "Off" position.



Example shows this PAD device's address = 42. Dip switches #2, 8 & 32 are in the "On" position.

Before connecting a device to the SLC loop, take the following precautions to prevent potential damage to the SLC or device.

- Power to the SLC is removed.
- Field wiring on module is correctly installed.
- Field wiring has no open or short circuits.

3. Technical Specifications

Operating Voltage	24.0V
Max SLC Standby Current	200 μ A
Max SLC Alarm Current	200 μ A
Aux Power Required	16-33 VDC
Output Ratings	24 VDC, 2A
EOL Resistor	5.1K Ω
EOL Resistor Diode	Stock #3005012 Releasing Applications (Not Included)
Operating Temperature Range	32° to 120° F (0° to 49° C)
Operating Humidity Range	0 to 93% (non-condensing)
Max. no of PAD100-NAC	127 units
Dimensions	4.17" L x 4.17" W x 1.14" D
Mounting Options	UL Listed 2-1/2" deep 2-gang box or 1-1/2" deep 4" square box
Shipping Weight	0.6 lbs

4. Installation

The wiring diagrams shown below illustrate how to wire a PAD100-NAC module as Class B, Class A and as a Releasing application. Additionally, an installation diagram shows how to install the module using a compatible electrical box.

Figure 3. Example of Installing a PAD100-NAC Using a Compatible Electrical Box

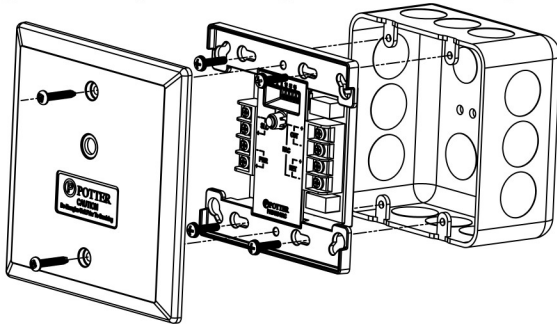


Figure 4. Example of Wiring a PAD100-NAC as Class B

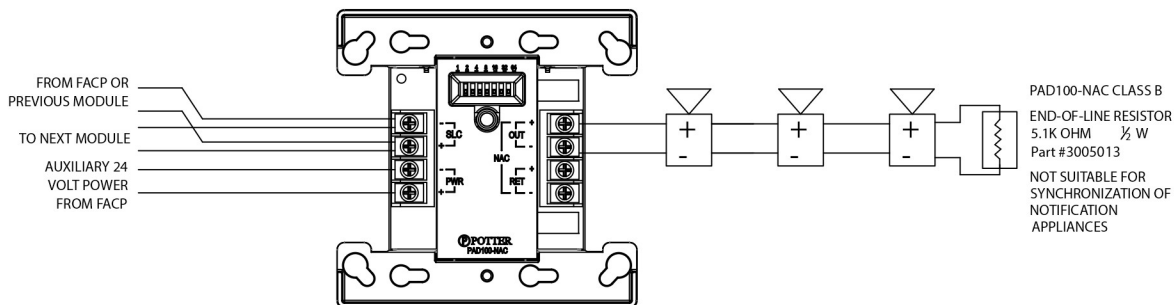


Figure 5. Example of Wiring a PAD100-NAC as Class A

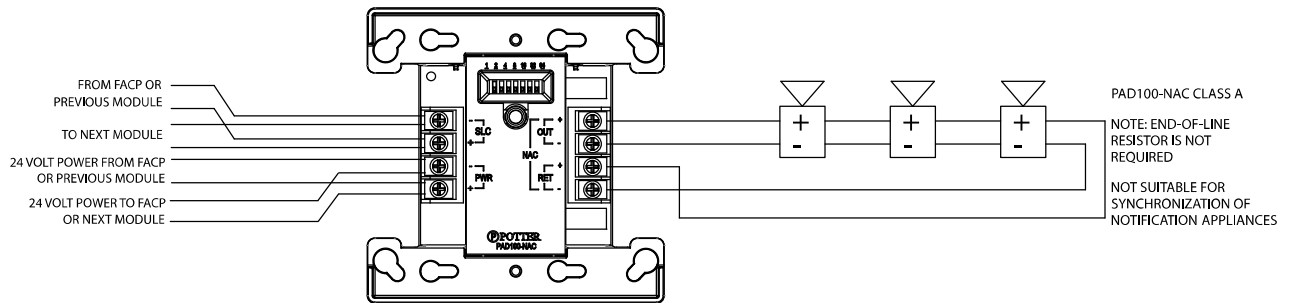
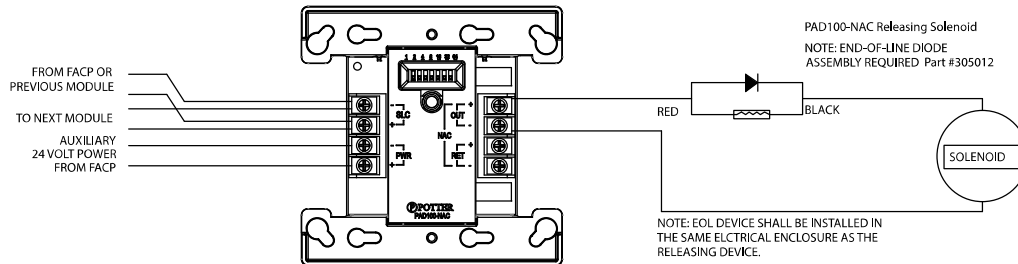


Figure 6. Example of Wiring a PAD100-NAC as a Releasing Application



Notes:

- SLC wiring style supports the Class A, Class X and Class B.
- NAC wiring style supports Class A and Class B.
- Wiring for terminals (PWR) are supervised.
- SLC loop wiring (SLC+, SLC-) and NAC device wiring (RET, OUT) are power limited.
- Wiring for terminals SLC+, SLC- are supervised.
- Wiring for terminals (RET, OUT) are supervised.
- All wiring is between #12 (max.) and #22 (min.).
- Wire Preparation – Strip all wires 1/4 inch from their edges as shown here:
 - Stripping too much insulation may cause a ground fault.
 - Stripping too little may cause a poor connection and subsequently an open circuit.



NOTICE

It is possible that the internal relay in the PAD100-NAC may be shipped in the non-normal / activated state. To ensure that the internal relay is set to the normal state, connect the module to the SLC loop and reset the control panel before terminating the wiring to the module's output.

These instructions do not purport to cover all the details or variations in the equipment described, nor provide for every possible contingency to be met in connection with installation, operation and maintenance.

Specifications subject to change without prior notification.

For Technical Assistance contact Potter Electric Signal Company at 866-956-1211.

Actual performance is based on proper application of the product by a qualified professional.

Should further information be desired or should particular problems arise, which are not covered sufficiently for the purchaser's purpose, the matter should be referred to a distributor in your region.