

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.

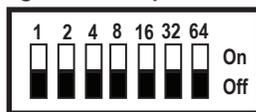
Figure 1. PAD Device Dip Switch Addresses Table (Addresses 1–127)

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	Gray	White	White	White	White	White	27	Gray	Gray	Gray	White	White	White	53	Gray	White	White	White	White	78	Gray	Gray	White	White	103	Gray	Gray	White	White					
2	White	Gray	White	White	White	White	28	White	White	White	White	White	White	54	White	White	White	White	White	79	White	White	White	White	104	White	White	White	White					
3	White	White	Gray	White	White	White	29	White	White	White	White	White	White	55	White	White	White	White	White	80	White	White	White	White	105	White	White	White	White					
4	White	White	White	Gray	White	White	30	White	White	White	White	White	White	56	White	White	White	White	White	81	White	White	White	White	106	White	White	White	White					
5	White	White	White	White	Gray	White	31	White	White	White	White	White	White	57	White	White	White	White	White	82	White	White	White	White	107	White	White	White	White					
6	White	White	White	White	White	Gray	32	White	White	White	White	White	White	58	White	White	White	White	White	83	White	White	White	White	108	White	White	White	White					
7	White	White	White	White	White	White	33	White	White	White	White	White	White	59	White	White	White	White	White	84	White	White	White	White	109	White	White	White	White					
8	White	White	White	White	White	White	34	White	White	White	White	White	White	60	White	White	White	White	White	85	White	White	White	White	110	White	White	White	White					
9	White	White	White	White	White	White	35	White	White	White	White	White	White	61	White	White	White	White	White	86	White	White	White	White	111	White	White	White	White					
10	White	White	White	White	White	White	36	White	White	White	White	White	White	62	White	White	White	White	White	87	White	White	White	White	112	White	White	White	White					
11	White	White	White	White	White	White	37	White	White	White	White	White	White	63	White	White	White	White	White	88	White	White	White	White	113	White	White	White	White					
12	White	White	White	White	White	White	38	White	White	White	White	White	White	64	White	White	White	White	White	89	White	White	White	White	114	White	White	White	White					
13	White	White	White	White	White	White	39	White	White	White	White	White	White	65	White	White	White	White	White	90	White	White	White	White	115	White	White	White	White					
14	White	White	White	White	White	White	40	White	White	White	White	White	White	66	White	White	White	White	White	91	White	White	White	White	116	White	White	White	White					
15	White	White	White	White	White	White	41	White	White	White	White	White	White	67	White	White	White	White	White	92	White	White	White	White	117	White	White	White	White					
16	White	White	White	White	White	White	42	White	White	White	White	White	White	68	White	White	White	White	White	93	White	White	White	White	118	White	White	White	White					
17	White	White	White	White	White	White	43	White	White	White	White	White	White	69	White	White	White	White	White	94	White	White	White	White	119	White	White	White	White					
18	White	White	White	White	White	White	44	White	White	White	White	White	White	70	White	White	White	White	White	95	White	White	White	White	120	White	White	White	White					
19	White	White	White	White	White	White	45	White	White	White	White	White	White	71	White	White	White	White	White	96	White	White	White	White	121	White	White	White	White					
20	White	White	White	White	White	White	46	White	White	White	White	White	White	72	White	White	White	White	White	97	White	White	White	White	122	White	White	White	White					
21	White	White	White	White	White	White	47	White	White	White	White	White	White	73	White	White	White	White	White	98	White	White	White	White	123	White	White	White	White					
22	White	White	White	White	White	White	48	White	White	White	White	White	White	74	White	White	White	White	White	99	White	White	White	White	124	White	White	White	White					
23	White	White	White	White	White	White	49	White	White	White	White	White	White	75	White	White	White	White	White	100	White	White	White	White	125	White	White	White	White					
24	White	White	White	White	White	White	50	White	White	White	White	White	White	76	White	White	White	White	White	101	White	White	White	White	126	White	White	White	White					
25	White	White	White	White	White	White	51	White	White	White	White	White	White	77	White	White	White	White	White	102	White	White	White	White	127	White	White	White	White					
26	White	White	White	White	White	White	52	White	White	White	White	White	White																					

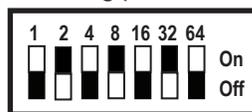
Note: Each "gray" box indicates that the dip switch is "On," and each "white" box indicates "Off."

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.

INSTALLATION MANUAL: PAD100-NAC NAC MODULE

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

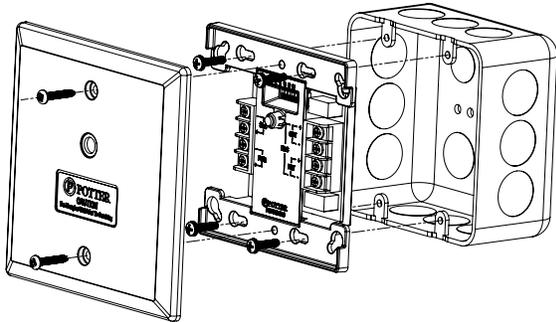
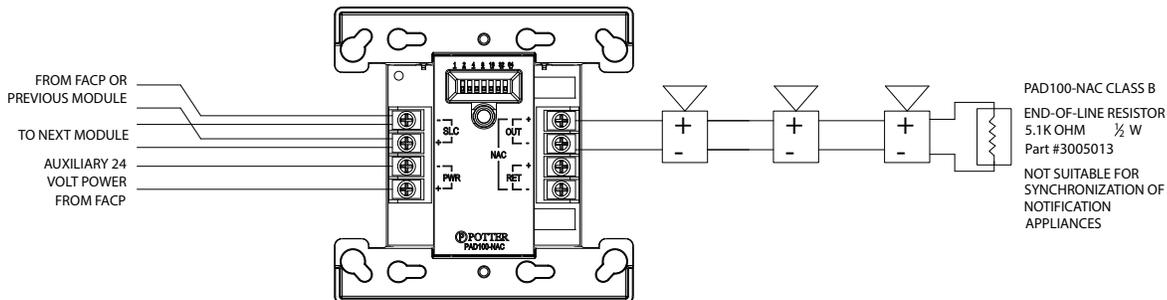


Figure 4. Example of Wiring a PAD100-NAC as Class B



INSTALLATION MANUAL: PAD100-NAC NAC MODULE

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

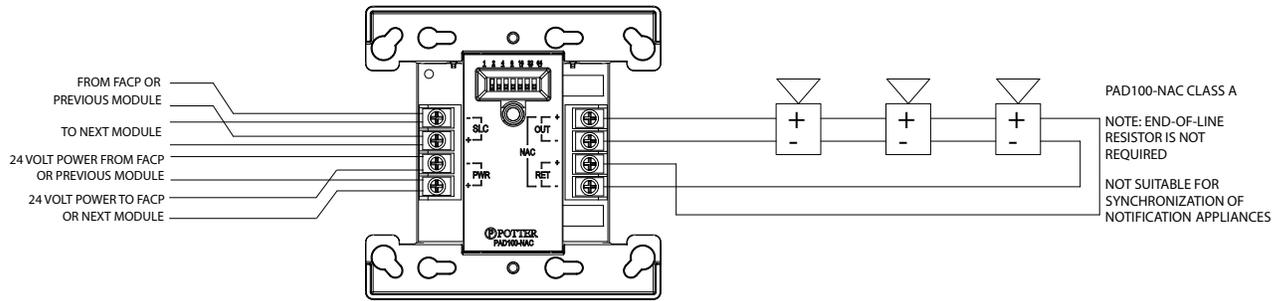
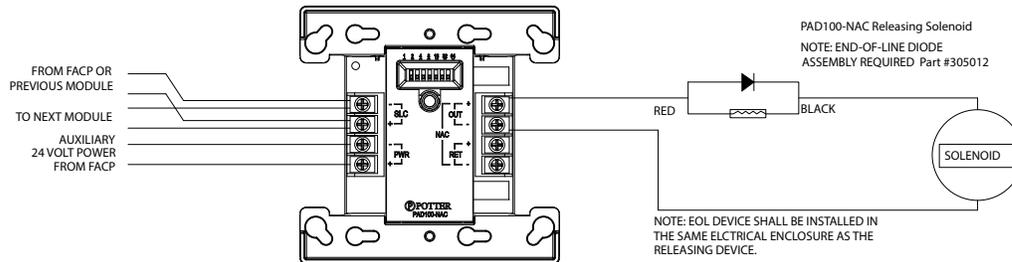


Figure 6. Example of Wiring a PAD100-NAC as a Releasing Application



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.