

Installation Manual: PAD300-10XIM Multi Input Module

NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the PAD300-10XIM 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 PAD300-10XIM module uses up to ten (10) SLC loop addresses on an SLC loop when monitoring up to ten (10) Class B or five (5) Class A circuits. Inputs can be used for dry contact inputs such as manual pull stations, waterflow, and supervisory service. The PAD300-10XIM resides on a stacker bracket for mounting in the fire alarm control panel, intelligent power supply, and AE cabinets. Dip switches are used to set addresses and define unused points.

The PAD300-10XIM utilizes LED indicators for each input. Green indicates a normal or trouble condition on a circuit. Red indicates a short circuit condition on a circuit. Off, Normal, and Slow blinking on the LEDs is determined by the panel settings.

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. The PAD300-10XIM is addressed using the first seven (7) dip switches on the ADDRESS bank of dip switches with an address range of 1 to 118. If any circuits are set as Unused and not used by any other devices, their LEDs will not flash.

Note: Dip switch eight (8) is not used.

The first address is set using the dip switches. The next nine (9) consecutive addresses will then be populated. Example: dip switches are set as address one (1) for the first input. Addresses two (2) through ten (10) are then automatically assigned for the remaining inputs on the module. The table below may be used to set dip switches when addressing the PAD300-10XIM. Addresses 119 through 127 do not show in the chart below as the largest address that can be set with the dip switches on this device is address 118.

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								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																
13								39								65								91								115																
14								40								66								92								116																
15								41								67								93								117																
16								42								68								94								118																
17								43								69								95																								
18								44								70								96																								
19								45								71								97																								
20								46								72								98																								
21								47								73								99																								
22								48								74								100																								
23								49								75								101																								
24								50								76								102																								
25								51								77																																
26								52																																								

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 first 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



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.

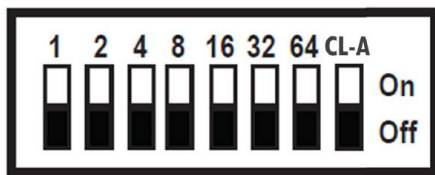
3. Technical Specifications

Operating Voltage	24.0V
Max SLC Standby Current	1mA
Max SLC Alarm Current	15mA all circuits active
Max Wiring Resistance of IDC	100 Ω
Max Wiring Capacitance of IDC	1 μF
Max IDC Voltage	6VDC
Max IDC Current	400 μA
EOL Resistor	5.1K Ω
Operating Temperature Range	32° to 120° F (0° to 49° C)
Operating Humidity Range	0 to 93% (non-condensing)
Max no. of Modules Per Loop	12 units
Dimensions	4.9" W x 7.3" H x 1.1" D
Mounting Options	Stacker Bracket – IPA-4000/4000V, AFC-1000/1000V, PSN-1000E, AE accessory enclosures
Shipping Weight	0.68 lbs

4. Class A and B Settings

The inputs on the PAD300-10XIM can be set for Class A and Class B Circuits. Dip switch #8 on the ADDRESS bank of dip switches is used to select between Class A and Class B inputs. The inputs are Class B when dip switch #8 is in the down position and Class A when dip switch #8 is in the up position. Each input type is defined as PAD-SIM/MIM in Class A and PAD-DIM in Class B. Inputs 1 and 2 are used for the first Class A circuit, inputs 3 and 4 for the second Class A circuit, inputs 5 and 6 for the third Class A circuit, inputs 7 and 8 for the fourth Class A circuit, and inputs 9 and 10 for the fifth Class A circuit.

Figure 3. Dip switch Setting and Input Type Definition in Class A



Address	Input	Class A
n	DIM CL-A	X
n + 1	DIM CL-A	X
n + 2	DIM CL-A	X
n + 3	DIM CL-A	X
n + 4	DIM CL-A	X

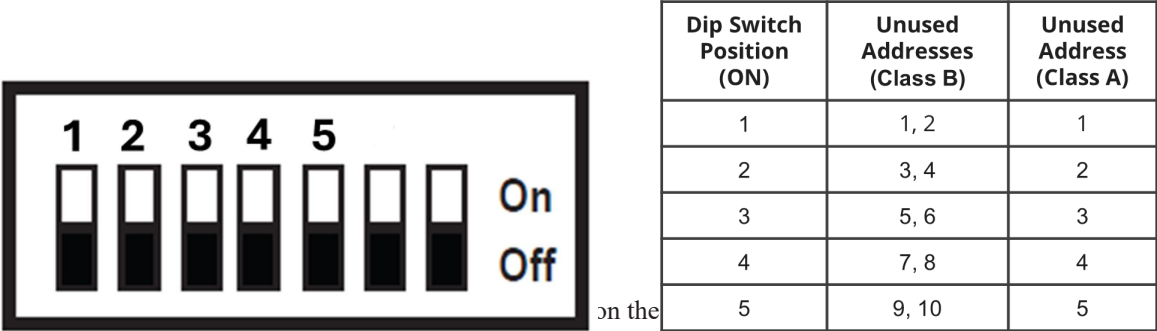
5. Unused Addresses

Addresses on the PAD300-10XIM can be selected as Unused. The SETTING bank of dip switches is used to set addresses as Unused. The diagram below shows how to set the dip switches for specific Unused addresses.

Note:

- Unused addresses are open for use and can be used by other devices on the SLC loop if desired.
- If all ten (10) dip switch positions are set as Unused, the PAD300-10XIM will enable the first address by default.

Figure 4. Unused Addresses



6. Wiring Diagrams

The wiring diagram shown below illustrates how to wire a PAD300-10XIM module.

Figure 5. PAD300-10XIM wiring diagram Class B Inputs

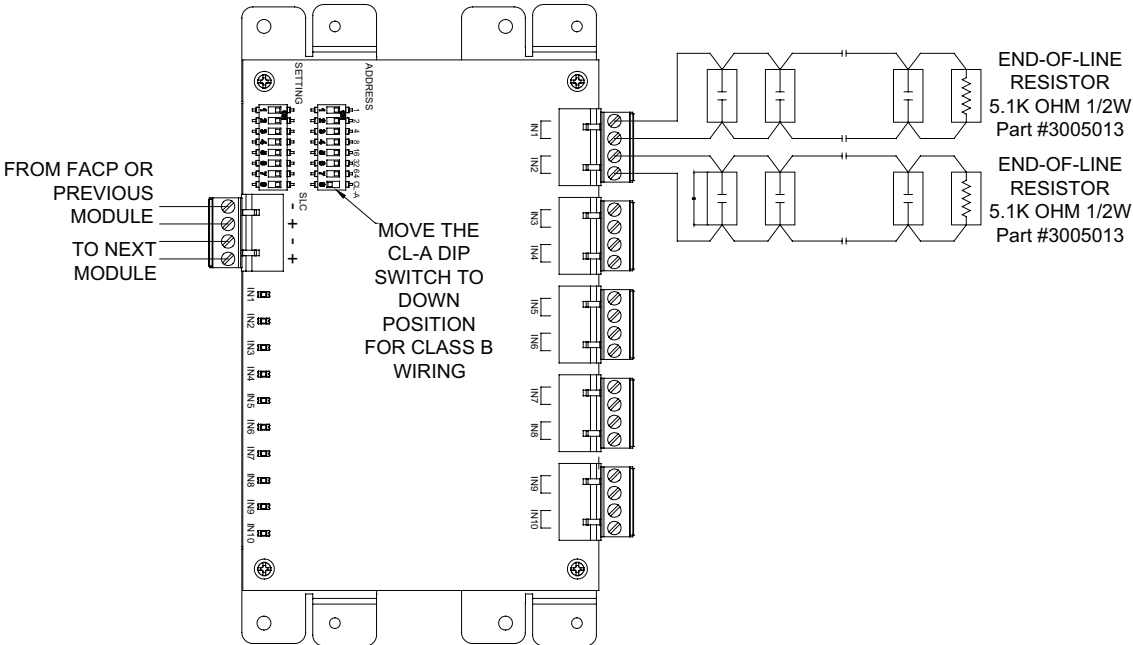
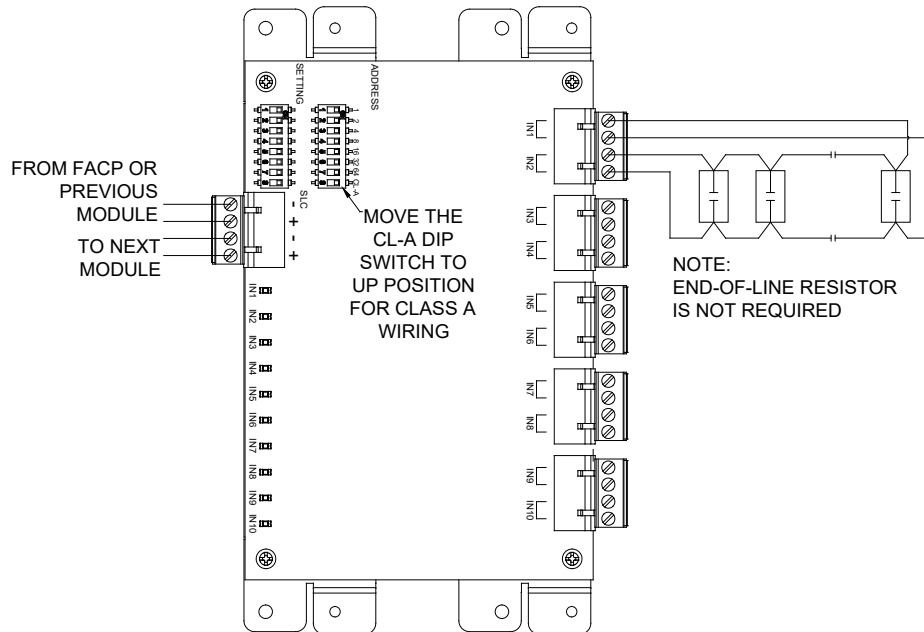


Figure 6. PAD300-10XIM wiring diagram Class A Inputs

INSTALLATION MANUAL: PAD300-10XIM MULTI INPUT MODULE



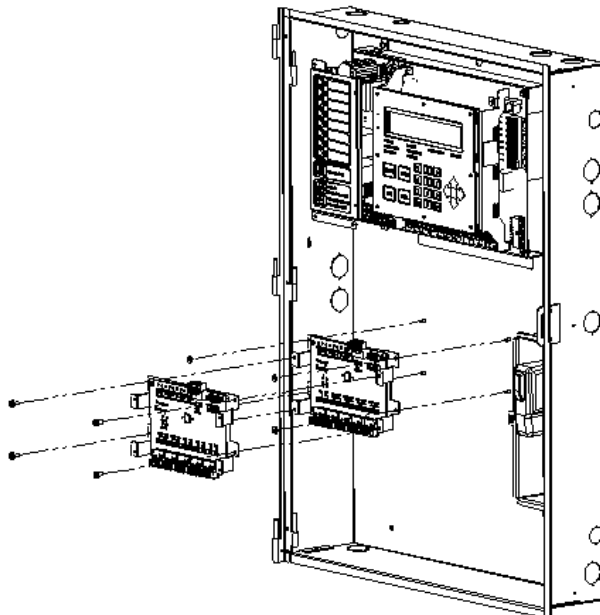
Notes:

- All Input circuits are power limited and supervised.
- SLC wiring style supports the Class A, Class B and Class X.
- SLC loop wiring (SLC+, SLC-) are power limited.
- Wiring for terminals SLC+, SLC- 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

PAD300-10XIM can be mounted in IPA-4000/IPA-4000V, AFC-1000/AFC-1000V, PSN-1000E or AE accessory enclosures.



NOTICE

It is possible that the internal relays in the PAD300-10XIM 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.