

Installation Manual: PAD100-MIM Micro Input Module

NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the PAD100-MIM 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-MIM is used to monitor the status of an initiating device(s) that contain a normally open set of dry contacts. The module is enclosed in a plastic case to protect against inadvertent shorts and ground faults. The case can be mounted using a single screw. Generally the PAD100-MIM is used to monitor pull stations and other devices where the module is installed in an electrical box or enclosure behind the device being monitored.

The PAD100-MIM 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. When an input is activated, the LED will flash at a fast rate. If the LED blink has been disabled via the programming software in a normal condition the LED of the device will be off. All other conditions remain the same.

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.

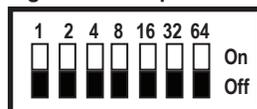
Figure 1. PAD Device Dip Switch Addresses Table (Addresses 1–127)

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

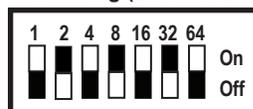
Note: Each "gray" box indicates that the dip switch is "On," and each "white" box indicates "Off."

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.

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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.

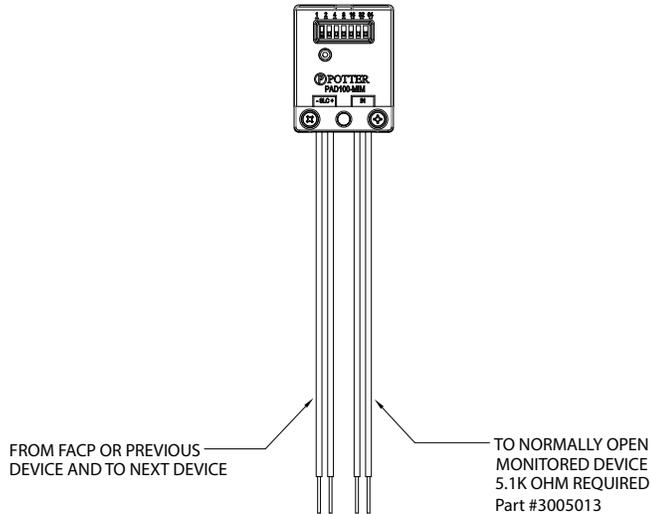
3. Technical Specifications

Operating Voltage	24.0V
Max SLC Standby Current	200 μ A
Max SLC Alarm Current	200 μ A
IDC Input Circuit	Class B
Max Wiring Resistance of IDC	100 Ω
Max Wiring Capacitance of IDC	1 μ F
Max IDC Voltage	2.05 VDC
Max IDC Current	120 μ A
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 Module Per Loop	127 units
Dimensions	1.75" L x 1.36" W x 43" D
Mounting Options	2-1/2" deep single-gang box
Shipping Weight	0.3 lbs

4. Wiring Diagram

Below is an wiring diagram showing how to wire a PAD100-MIM module to the panel.

Figure 3. Example of Wiring a PAD100-MIM



Notes:

- SLC wiring style supports the Class A, Class B and Class X.
- IDC wiring style is Class B.
- SLC loop wiring (SLC+, SLC-) and initiating device wiring (IN) are power limited.
- Wiring for terminals SLC+, SLC- are supervised.
- Wiring for terminals (IN) are supervised.
- This addressable module does not support 2-wire detectors.
- 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.

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.