

Installation Manual: PAD100-SLCE Addressable Loop Expander

NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the PAD100-SLCE 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 Signaling Line Circuit Expander allows up to thirty one additional loops. Each loop adds 127 addressable sensors or modules in any combination. The PAD100-SLCE may be configured for Class A or Class B wiring without the need for additional modules. The PAD100-SLCE communicates with the control panel via the 4-wire RS-485 communication bus. The loop adder is mounted in either the control panel cabinet, the intelligent power supply, AE-2, AE-8 or the AE-14 expander cabinet. Each card is mounted to the exclusive Stacker Bracket for secure and accessible mounting

2. Setting the Address

Each P-Link device has a **five (5) position dip switch** which is used to program the device address ranging from one (1) to thirty-one (31). The table below may be used to set dip switches when addressing any P-Link module:

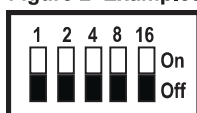
Figure 1. Dip Switch Settings Table (Addresses 1–31)

	1	2	4	8	16		1	2	4	8	16
1	Gray	White	White	White	White	17	Gray	White	White	White	White
2	White	Gray	White	White	White	18	White	Gray	White	White	White
3	Gray	White	White	White	White	19	Gray	White	White	White	White
4	White	White	Gray	White	White	20	White	White	Gray	White	White
5	Gray	White	White	White	White	21	Gray	White	White	White	White
6	White	Gray	White	White	White	22	White	Gray	White	White	White
7	Gray	White	White	White	White	23	Gray	White	White	White	White
8	White	White	White	Gray	White	24	White	White	White	Gray	White
9	Gray	White	White	White	White	25	Gray	White	White	White	White
10	White	Gray	White	White	White	26	White	Gray	White	White	White
11	Gray	White	White	White	White	27	Gray	White	White	White	White
12	White	White	Gray	White	White	28	White	White	Gray	White	White
13	Gray	White	White	White	White	29	Gray	White	White	White	White
14	White	Gray	White	White	White	30	White	Gray	White	White	White
15	Gray	White	White	White	White	31	Gray	White	White	White	White
16	White	White	White	White	Gray						
	1	2	4	8	16		1	2	4	8	16

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

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

Figure 2. Examples of P-Link Module Showing Default Dip Switch Setting (Unaddressed) & Addressed



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



Example shows this P-Link module address = 10. Dip switches #2 & 8 are in the "On" position.

INSTALLATION MANUAL: PAD100-SLCE ADDRESSABLE LOOP EXPANDER

Before connecting a device to the RS-485 connection, take the following precautions to prevent potential damage to the RS-485 connection or device.

- Power to the RS-485 is removed.
- Field wiring on module is correctly installed.
- Field wiring has no open or short circuits.

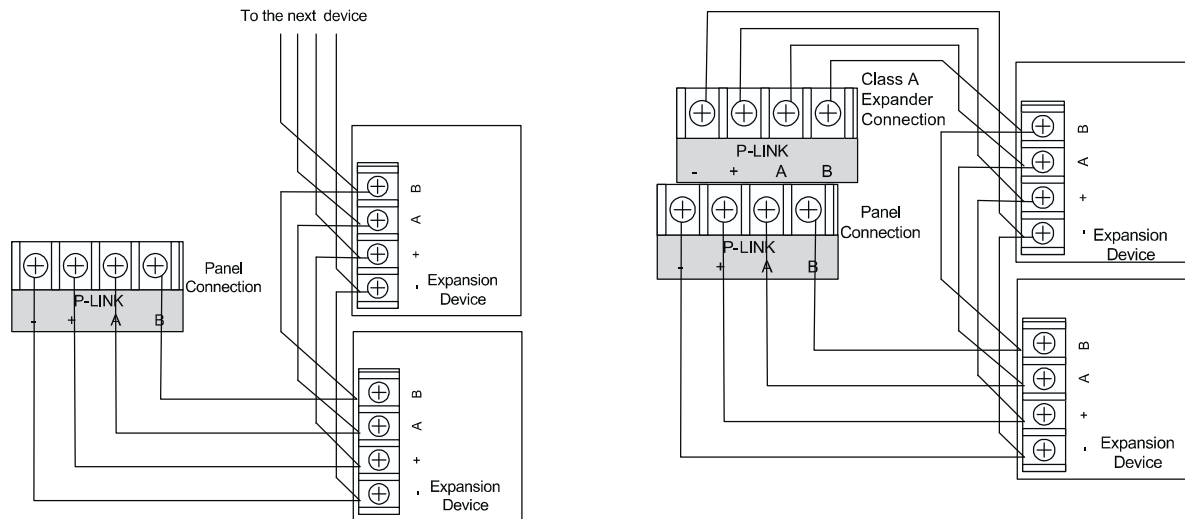
3. Technical Specifications

Standby Current	50mA
Alarm Current	50mA
SLC Voltage	24 VDC
Max. SLC Resistance	50 Ohms
P-Link Voltage	24 VDC
Operating Temperature Range	32° to 120° F (0° to 49° C)
Operating Humidity Range	10% to 93% (non-condensing)
Max. no of PAD100-SLCE	31
Dimensions	4" L x 6" W x 1 5/8" D

4. Installation

The PAD100-SLCE is connected to the listed control panels using a four wire RS-485 connection. This connection is power limited and supervised. The PAD100-SLCE can be installed in the AE-2, AE-8, AE-14 expansion enclosure or inside the large listed fire alarm control panel enclosure using the supplied bracket. The wiring diagrams shown below illustrate how to wire a PAD100-SLCE as Class B and Class A.

Figure 3. Examples of Wiring a PAD100-SLCE P-Link Class B & Class A Wiring



Notes:

- RS-485 wiring style supports the Class A and Class B.
- RS-485 wiring is power limited and 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.



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.