

## Installation Manual: MC-1000 Multi-Connect Expander

### NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the MC-1000 module.

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 Multi-Connect Expander (MC-1000) allows up to sixty-three (63) fire alarm control panels to share a single reporting technology. Each MC-1000 supports communication between the host reporting panel and two client panels. The MC-1000 communicates with the host and client control panels via the potter P-Link communication bus. The MC-1000 can be 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:

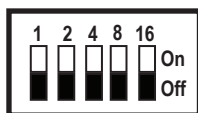
Figure 1. Dip Switch Settings Table (Addresses 1–31)

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

**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.

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

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

## 3. Technical Specifications

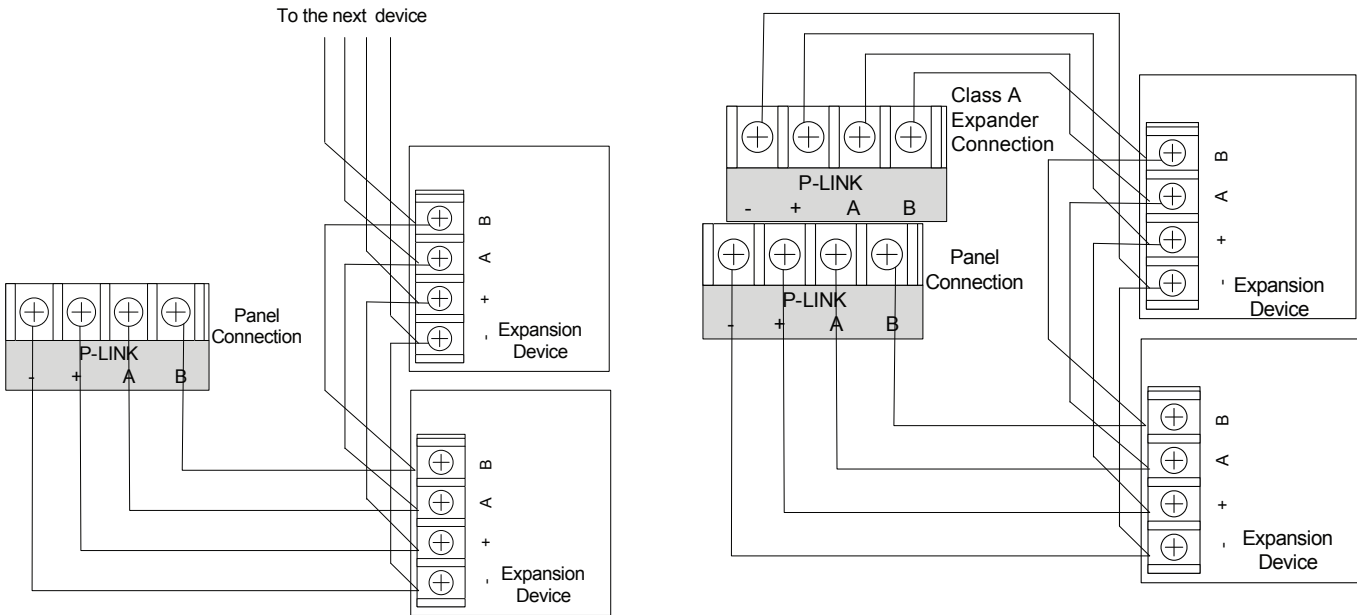
Standby Current	10mA
Alarm Current	10mA
Operating Temperature Range	32° to 120° F (0° to 49° C)
Operating Humidity Range	10%-93% (non-condensing)
Max no. of MC-1000 Expanders	31
Dimensions (WxHxD)	4" x 6" x 1 5/8"

## 4. Installation

The MC-1000 is connected to the fire control panels using a 4-wire RS-485 connection. The connection is power limited and supervised. The MC-1000 can be mounted in either the control panel cabinet, the intelligent power supply repeater, AE-2, AE-8 or the AE-14 expander cabinet. Each card is mounted to the exclusive Stacker Bracket for secure and accessible mounting.

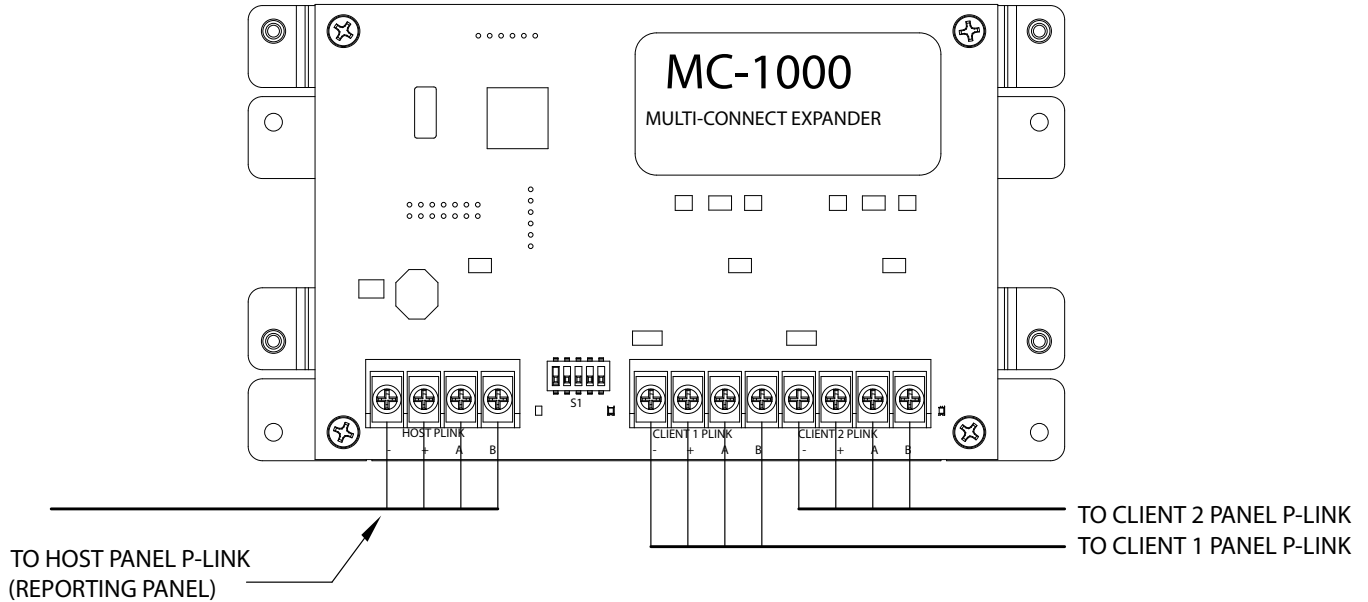
The wiring diagrams shown below illustrate how to wire a MC-1000 as Class B and Class A.

**Figure 3. Examples of Wiring a MC-1000 as Class B and Class A**



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Figure 4. Example of Wiring a MC-1000 Module (Showing Host Panel & Client Panel)



### Notes:

- RS-485 wiring style supports Class A and Class B.
- RS-485 is power limited.
- Wiring for terminals (A, B) and (+, -) 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.



**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.**