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Installation Manual: RA-6500F LCD Annunciator Flush Mount

NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the RA-6500F 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.
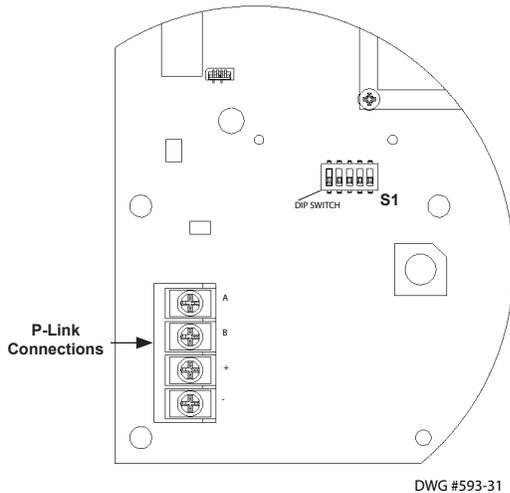
1. Description

The RA-6500F is a flush mount LCD remote annunciator. The RA-6500F communicates with the control panel via the 4-wire RS-485 connection to the main panel providing common indication of Alarms, Supervisory, Trouble and other system status and control functions. The RA-6500F features a 4x40 LCD display with LED's for Power, Alarm Supervisory, Trouble, Silenced, Pre-Release and Release conditions. It can be flush mounted or surface mounted. The annunciator is enclosed in a sheet metal enclosure and has a lock securing the keypad.

2. Setting the Address

The RA-6500F address is set by **dip switch S1**, which is located on the back of the RA-6500F. The address must be set in the range of one to thirty-one (1–31) to be recognized by the panel.

Figure 1. Example of Setting Address on the RA-6500F (panel view)

DWG #593-31

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

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

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 3. Examples of P-Link Module Showing Default Dip Switch Setting (Unaddressed) & Addressed
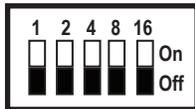
All dip switches are shown in the "Off" position.
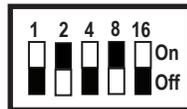
Example shows this P-Link module address = 10. Dip switches #2 & 8 are in the "On" position.

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 connection is removed.
• Field wiring on module is correctly installed.
• Field wiring has no open or short circuits.

3. Technical Specifications

Standby Current	20mA
Alarm Current	25mA
Operating Temperature Range	32° to 120° F (0° to 49° C)
Operating Humidity Range	10%-93% (non-condensing)
Maximum Wire Length	6500 ft
Maximum Annunciators	31
Flush Mount Size (WxHxD)	11 3/8" x 9 1/4" x 7/8"
Surface Mount Size (WxHxD)	11 3/8" x 9 1/4" x 3 1/8"
Wire Gauge	12 AWG–22 AWG

4. Installation

The RA-6500F is connected to the fire control panels using a 4-wire RS-485 connection. The connection is power limited and supervised. Up to thirty-one (31) RA-6500F LCD annunciator can be connected using Class B or Class A wiring. Class A wiring requires an optional Class A Expander.

The wiring diagrams shown below illustrate how to wire a RA-6500F annunciator as Class B and Class A.

Figure 4. Examples of Wiring a RA-6500F as Class B and Class A
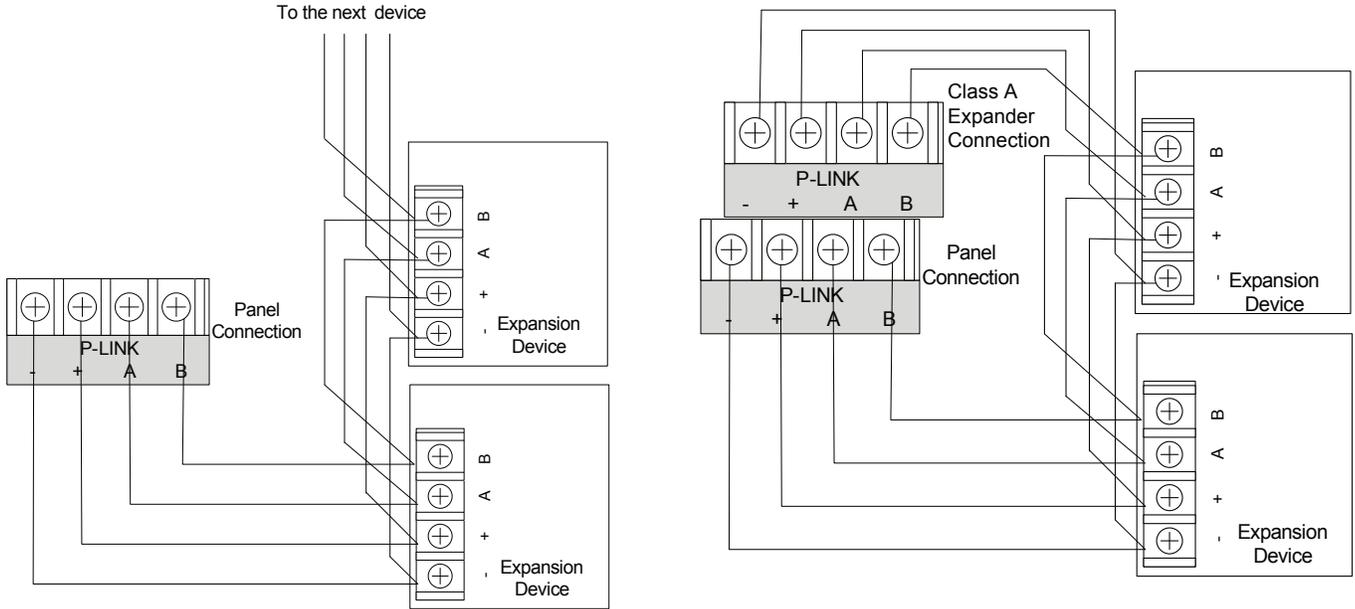
Notes:
- RS-485 wiring style supports Class A and Class B.
- RS-485 is power limited.
- Wiring for terminals (A, B) and (+, -) are supervised.
- All wiring is between #12 (max.) and #22 (min.).
- Wire Preparation – Strip all wires 1/4 inch from their edges as shown here:
    – Stripping too much insulation 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.