INSTALLATION INSTRUCTIONS AND WIRING FOR ADDRESSABLE INTERFACE MODULES P/N 8702, 8703 AND 8704

INTRODUCTION

The 8702/8703/8704 Addressable Modules, shown in Figure 1, interface normally open contact devices to an Addressable Device Circuit of a fire alarm control unit.

The 8702 and 8704 can monitor a normally open or closed dry contact. The 8702 can only monitor and report the status of the contact, while the 8704 incorporates an addressable Form C relay. The 8703 is a dual input module that supervises and monitors two sets of dry contacts.

A multicolor LED, visable through the cover plate, indicates the condition of the initiating device circuit. This multicolor LED displays red for alarm, yellow for trouble and green for normal operation.

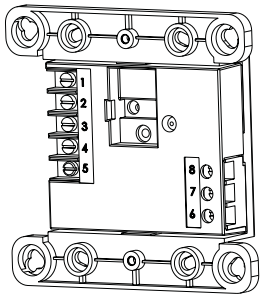


Figure 1
8702/8703/8704 Module

PROGRAMMING INSTRUCTIONS

Refer to Figure 2 to locate the opening on the module cover that allows access to the programming holes which are on the module printed circuit board.

CAUTION

To prevent potential damage to the 8720 DO NOT connect a module to the 8720 until at least one wire is removed from terminals 1 or 2 of the module.

1. Plug the programming cable of the Faraday 8720 Programmer/Tester into the two-pin receptacle on the module. (See Figure 2 for location.)
2. Set the address for the module by following the instructions in the 8720 Programmer/Tester Manual (P/N 315-033260FA). Refer to Figure 3 for setting normally open and normally closed switches.
3. Record the device address on the label located on the module. The module can now by installed and wired to the system.

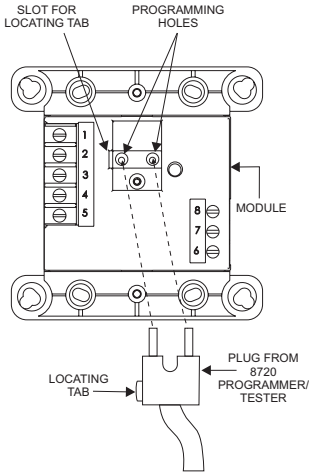
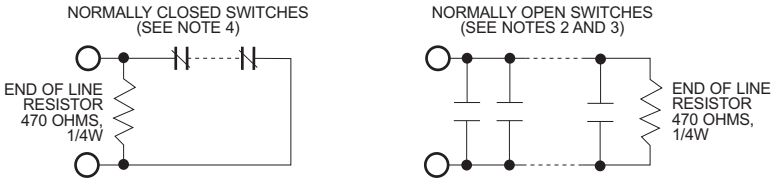


Figure 2
Connecting The 8720 Plug



NOTES:
1. There can be any number of normally closed or normally open switches.
2. The end of line resistor must be located at the last switch for normally open switches.
3. Do not wire a normally closed switch across the end of line resistor.
4. Only for use with status applications.

Figure 3
Wiring Switches

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MOUNTING

(Refer to Figure 4) Addressable Interface Models 8702, 8703, and 8704 mount directly into a (user supplied) double gang or 4 inch switchbox. Fasten the module to the switchbox with the switchplate using the 2 screws provided.

A red LED will blink to indicate an off-normal input switch position and/or an internal relay transfer.

NOTE: Be sure to program the module before fastening the switchplate to the unit.

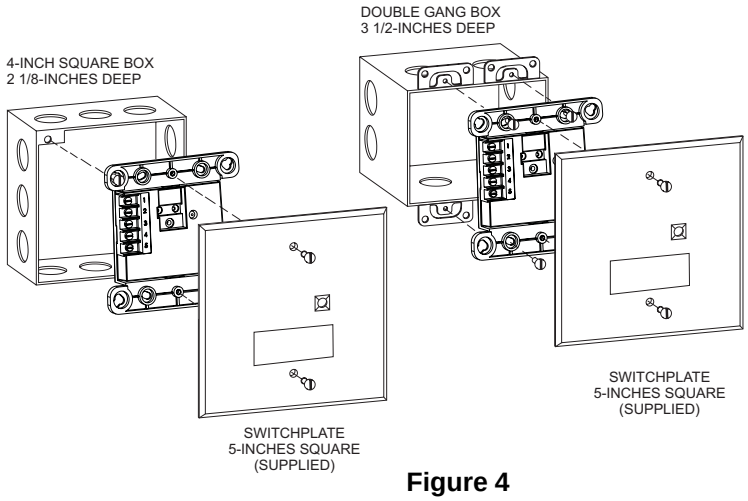

Figure 4
8702/8703/8704 Mounting

WIRING

(Refer to Figures 7 - 9) Refer to the appropriate wiring diagram and wire the addressable interface module accordingly.

NOTE: Recommended wire size: 18 AWG minimum, 14 AWG maximum
Wire larger than 14 AWG can damage the connector.

Power Limited Wiring

In compliance with NEC Article 760, all power limited fire protective signaling conductors must be separated a minimum of ¼ inch from all of the following items located within an outlet box:

- electric light
- power
- Class 1 or non-power limited fire protective signaling conductors

To meet the above the requirements, the following guidelines **must be observed** when installing this interface module.

NOTE: If power limited wiring is not used within this outlet box, then these guidelines do not apply. In that case, be sure to follow standard wiring practices.

8704 Wiring Barrier

The Wiring Barrier must be used when the 8704 relay contacts are connected to non-power limited wires. Break apart the barrier to the correct size and shape shown in Figure 5 for either the 4-inch square or double gang box. Install the barrier diagonally into the backbox to create two separate compartments within the backbox to separate the wires, as shown in Figure 5.

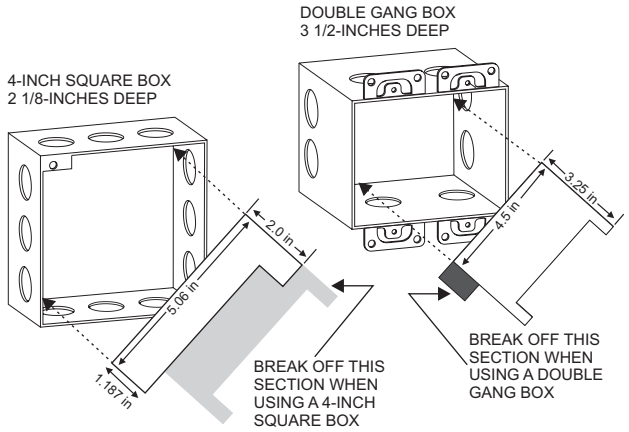

Figure 5
Installing the 8704 Control Module Barrier

Wiring Entering Outlet Box

All power limited wiring must enter the outlet box separately from the electric light, power, Class 1, or non-powered limited fire protection signaling conductors. For the 8704, wiring to terminal block positions 1, 2, 3, 4, and 5 must enter the outlet box separately from terminals 6, 7, and 8.

NOTE: Minimize the length of wire entering the outlet box.

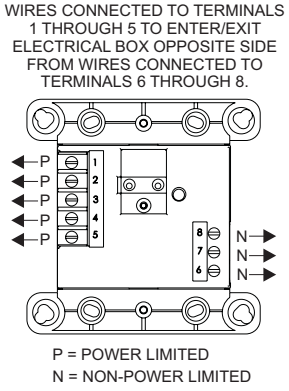

Figure 6
8704 Power Limited Wiring

WIRING AT THE TERMINAL BLOCKS

Power Limited Wiring

(Refer to Figure 6.) Wiring to positions 1, 2, 3, 4, and 5 is power limited.

Non-Power Limited Wiring

Wiring to positions 6, 7, and 8 is considered non-power limited.

CAUTION

Ground shield ONLY at the specified location on the Control Panel.

NOTE: Terminal 5 of the module must be connected to a known good earth ground for proper operation.

CAUTION

EOL device must be a 470 ohm, 1/4 W resistor. When replacing an existing 8702/8703/8704 on a device loop, you must also replace the EOL resistor if it is not 470 ohms, 1/4W.

NOTES:

1. All supervised switches must be held closed and/or open for at least a quarter of a second to guarantee detection.
2. End of line device: 470 ohm, 1/4W resistor, P/N 140-820164.
3. Module is polarity insensitive. Line 1 and Line 2 can be either line of the loop.
4. 8702/8703/8704 draws 1.3mA from the addressable device circuit.
5. Supervised switch ratings: Style B, Class B, See NFPA72 standard for the number of normally open contact devices allowed.
   Voltage maximum: 27 VDC
   Current maximum: 6mA during polling
   Contact resistance maximum: 10 ohms
   Maximum cable length: 200 feet (18 AWG)
   $C_{Line\ to\ line}$: 0.02uF
   $C_{Line\ to\ shield}$: 0.04uF
   Max line size: 14 AWG
   Min line size: 18 AWG
6. Relay contact ratings:
   4A, 125 VAC resistive
   4A, 30 VDC resistive
   Inductive:
   3.5A, 120 VAC (0.6 P.F.)
   3.0A, 30 VDC (0.6 P.F.)
   2.0A, 120 VAC (0.4 P.F.)
   2.0A, 120 VAC (0.35 P.F.)
   2.0A, 30 VDC (0.35 P.F.)
   The relay is shown in standby condition.
7. Terminal 5 must be connected to earth ground.

a. Use wire nuts to pass the shield wire through the electrical box with **NO** connection to the device terminal block or to local ground.
b. Use shielded wire to connect the switch wiring.
c. Tie the switch wiring shield to terminal 5 or the local earth ground.

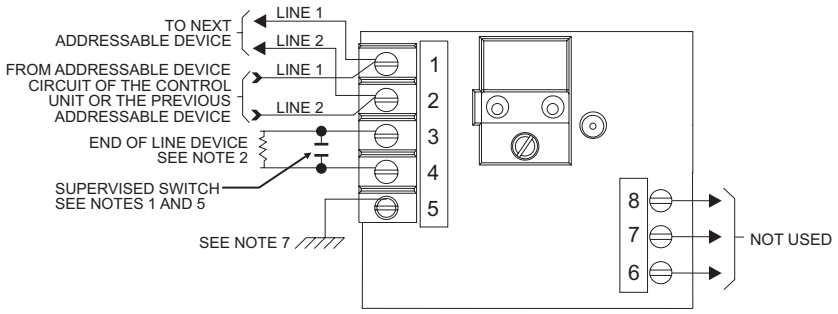

Figure 7
8702 Wiring

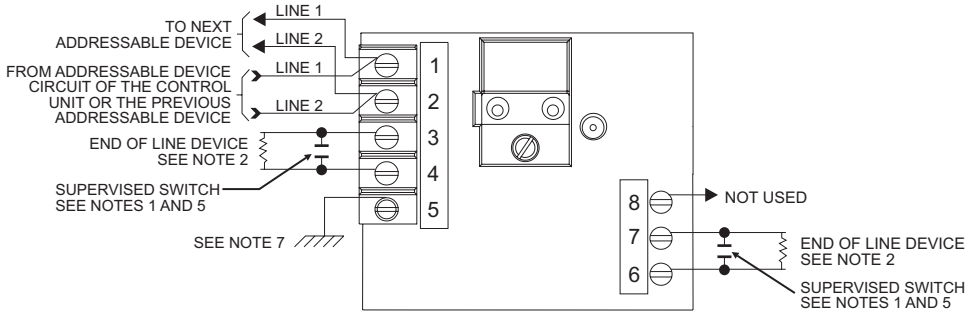

Figure 8
8703 Wiring

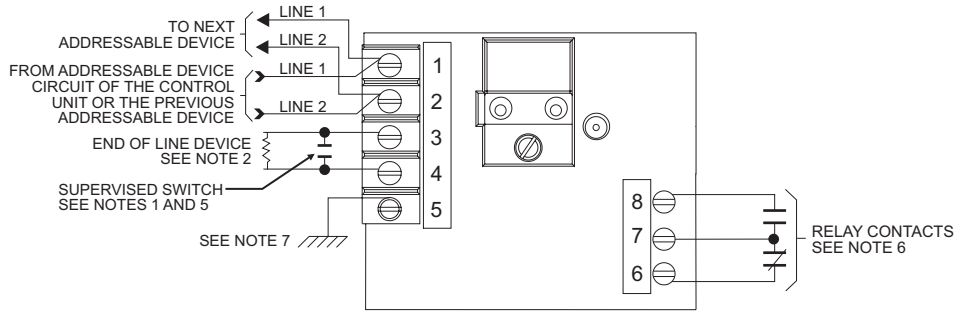

Figure 9
8704 Wiring