SIEMENS

Fire Safety

Installation Instructions

Models FS-TRI-S, FS-TRI-D, FS-TRI-R Addressable Interface Modules

The **SIEMENS** FS-TRI-S/-D/-R (FS Series of TRI devices) Addressable Modules interface normally open contact devices to an Addressable Device Circuit of a fire alarm control unit.

The FS-TRI-D is a dual input module that supervises and monitors two sets of contact devices. It requires two consecutive address settings. The FS-TRI-R incorporates a Form C relay.

A multicolor LED, visible 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.

The FS-Series TRI Addressable Modules support Style B (Class B) Initiating Device Circuit wiring. The FS-TRI-S and FS-TRI-R modules use one address on the Addressable Device Circuit. The FS-TRI-D module uses two consecutive addresses. It does not require any mechanical address programming. Use the FS-FPI Programmer/Tester to program and test each module.

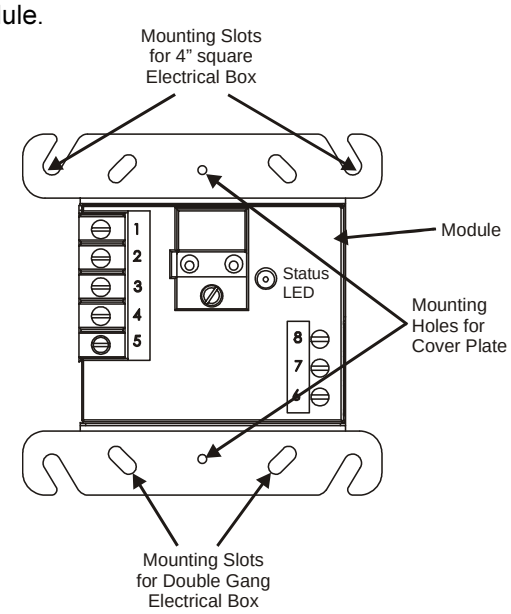

Figure 1
FS-TRI-S/-D/-R Module

PROGRAMMING INSTRUCTIONS

CAUTION:

1. ***To prevent damage to the FS-FPI, do not connect modules to the FS-FPI until the Addressable Device Circuit wiring is disconnected.***
2. ***Only one device must be connected to the FS-FPI at a time.***

1. Plug the programming cable of the Faraday FS-FPI 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 FS-FPI Programmer/Tester Manual (P/N 315-699480).
3. Record the device address on the label located on the module. The module can now be installed and wired to the system.

MOUNTING

The FS-Series TRI devices must be installed in a UL Listed electrical box.

1. Use a 3 1/2-inch deep, double gang electrical switchbox or a 4-inch square electrical box that is 2 1/2 inches deep with either a 1 1/2-inch deep extension or a 1 1/4-inch deep plaster ring extension.
2. Connect the field wiring. Insert the module into the box and fasten the module to the box.
3. Fasten the cover plate to the module, making sure the LED is aligned with the hole in the cover plate.

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WIRING

Remove all system power before installation, first battery and then AC.
(To power up, connect AC first then battery.)

(Refer to Figures 4-6)

Refer to the appropriate wiring diagram and wire the addressable interface module accordingly.

POWER LIMITED WIRING FOR ADDRESSABLE INTERFACE MODULES

All power limited fire protective signaling conductors must be separated a minimum of 1/4 inch from all of the following items located within an electrical 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 non-power limited wiring is not used within this electrical box, then the following guidelines do not apply. In that case, be sure to follow standard wiring practices.

WIRING BARRIER FOR FS-TRI-R RELAY CONTACTS

The wiring barrier must be used when the FS-TRI-R relay contacts are connected to non-power limited wires. Install the barrier diagonally into the backbox to create two separate compartments within the backbox to separate the wires, as shown in Figure 2.

WIRING ENTERING ELECTRICAL BOX

IMPORTANT: Minimize the length of wire entering the electrical box.

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

WIRING AT THE TERMINAL BLOCKS

(Refer to Figure 3)

Power Limited Wiring

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.

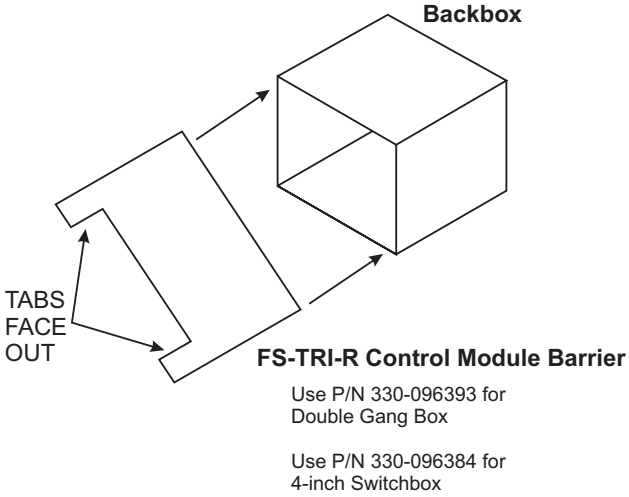
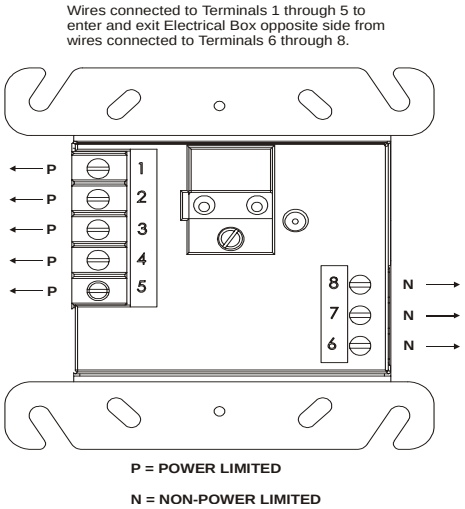


Figure 2
Wiring Barrier for FS-TRI-R Module



NOTE: Remove all slack from these wires by pulling excess wiring back through the holes.

Figure 3
Wiring Separation for FS-TRI-R Module

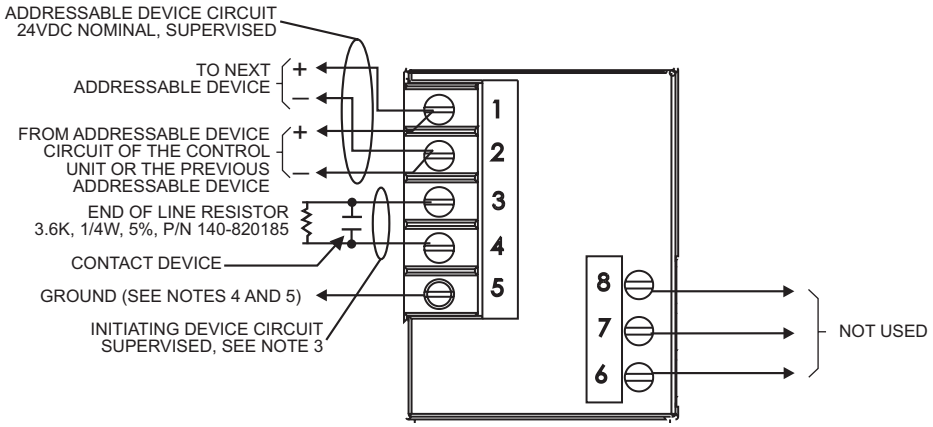


Figure 4
FS-TRI-S Wiring

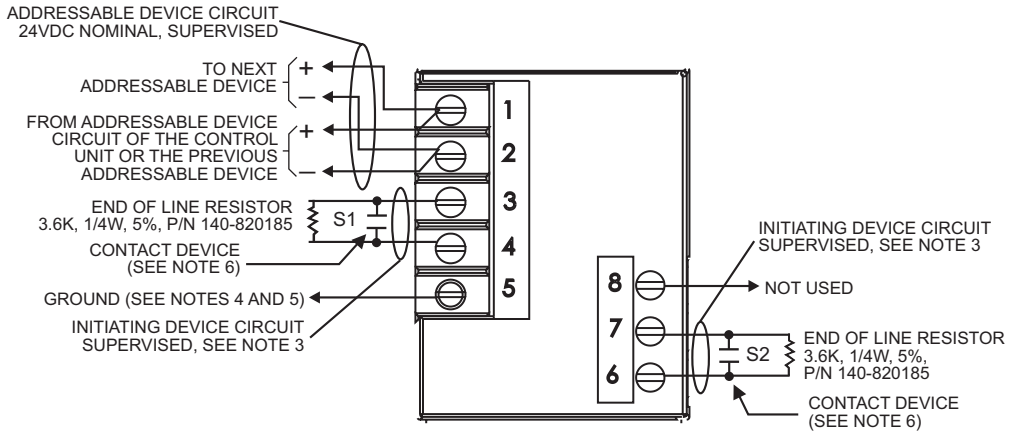


Figure 5
FS-TRI-D Wiring

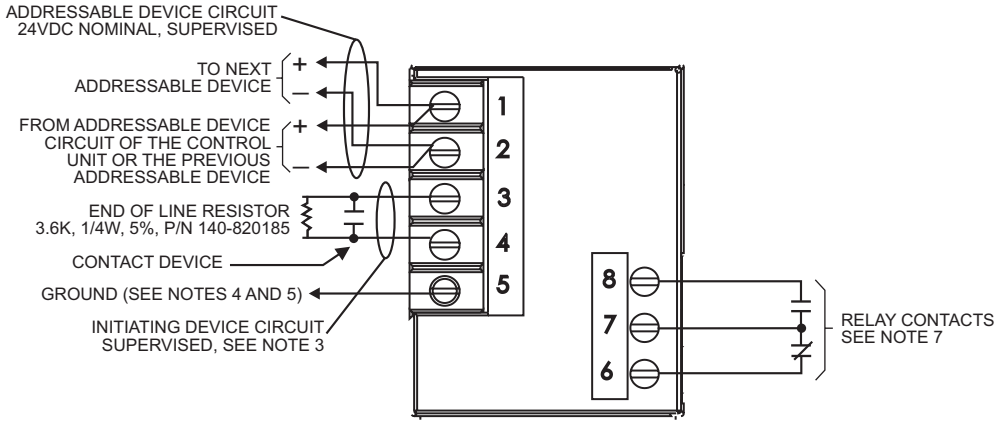


Figure 6
FS-TRI-R Wiring

NOTES:

1. All circuits are power limited (except FS-TRI-R relay contacts may be wired for non-power limited source).
2. In supervisory:

   FS-TRI-S draws 1.6mA

   FS-TRI-D draws 1.6mA

   FS-TRI-R draws 1.6mA
3. Initiating Device Circuit ratings:

   Style B, Class B

   See NFPA 72 standard for the number of normally open contact devices allowed.

Voltage (max.):	5 VDC (during polling)
Supervisory current (max.):	0.5mA (during polling)
Alarm current (max.):	0.8mA (during polling)

   IDC cable requirements:

Wire size:	18 to 14 AWG
Wire resistance (max.):	2 ohms
Cable length (max.):	200 feet
Cable Type:	Data grade, twisted pair
4. If Earth Ground is available, the green wire should be connected to earth ground.
5. If Earth Ground is NOT available, the IDC wiring should be limited to the same room.
6. For the FS-TRI-D dual input module, S1 is on the first programmed address and S2 is on the second programmed address.
7. The FS-TRI-R relay contact is shown in standby condition.

   FS-TRI-R Relay contacts are rated:

Resistive:	4A, 125 VAC 4A, 30 VDC
Inductive:	3.5A, 120 VAC (0.6P.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.)

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