


# TRI-B6 Series

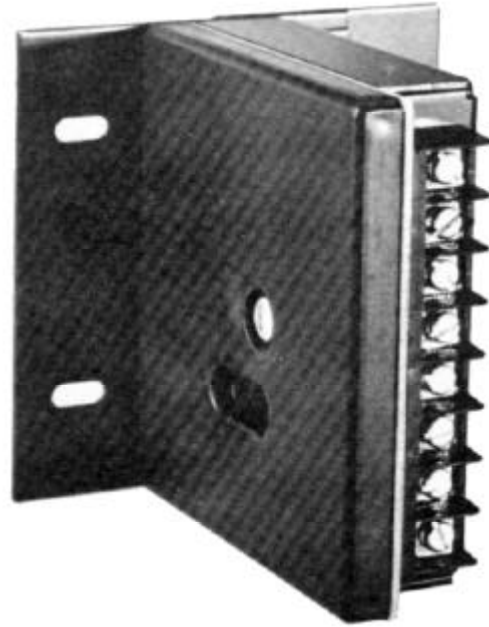
## Intelligent Initiating Devices Interface Modules

### ENGINEER AND ARCHITECT SPECIFICATIONS

#### Intelligent Interface Modules For XL3, MXL and IXL Control Panels

#### TRI-B6, TRI-B6R, TRI-B6D

- Interfaces and Supervises Normally Open (Fire Detection) or Normally Closed Contacts (Security Detection)
- Integral SPDT Relay Model TRI-B6R
- Dual Input Model TRI-B6D
- Microcomputer Chip Technology
- Innovative Technology Supports Comprehensive System and Interface Communication
- Dynamic Supervision
- Two Wire Operation
- **SensorLINK**, Model FPI-32 Programs and Verifies Device s Address and Tests Device s Functionality
- Electronic Address Programming is Easier and More Dependable
-  Listed, ULC Listed, CSFM, City of Chicago NYMEA and FM Approved



### Introduction

Cerberus Pyrotronics TRI-B6 Series Intelligent interface modules are designed to provide the means of interfacing direct shorting devices to the MXL system s ALD loop circuit, the IXL system s ICon loop circuit or to the XL3 system s INX loop circuit.

Cerberus Pyrotronics TRI-B6 Series Intelligent interface modules provide the market s most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each TRI-B6 Series interface module incorporates a microcomputer chip. The TRI-B6 Series microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel, achieve the state of an Intelligent Device.

### Description

The TRI-B6 Series intelligent interface modules are available in three models. The TRI-B6 and TRI-B6R are designed to monitor a normally open or closed dry contact. The interface module reports the contact s status to the control panel. The TRI-B6 model can only monitor and report the status of the contact, while the TRI-B6R incorpo-

rates an addressable Form C relay. The TRI-B6R relay and contact device input are controlled at the same address. For the XL3 and MXL system, the relay and input contact can be controlled as a separate function, while for the IXL, they are controlled as a related function. The relay is typically used where control or shunting of external equipment is required.

The TRI-B6D is a dual input module and is designed to supervise and monitor two sets of dry contacts. This interface module requires two address settings. The TRI-B6D is ideal for monitoring a waterflow switch and its respective valve tamper switch.

The TRI-B6D Series devices can also be used to monitor the status of normally closed security switches.

The device s microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information. In addition, the TRI-B6 Series interface modules using their microcomputer chip, can communicate in either of two protocols, XL3 or MXL for the MXL and IXL (ICon).

Cerberus Pyrotronics innovative technology allows all TRI-B6 Series intelligent interface modules to be programmed by using the **SensorLINK** model FPI-32 Programmer/Tester. The FPI-32 Programmer/Tester is a compact, portable,

menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods. The FPI-32 eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because the FPI-32 electronically sets the TRI-B6 interface's address into the interface's microcomputer chip non-volatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The TRI-B6 Series is fitted with screw terminals for connection to an addressable circuit.

The TRI-B6 Series is fully compatible on the same MXL or XL3 circuit with all intelligent IL and ID-60 Series detectors, MSI Series addressable manual stations or any other addressable intelligent modules, such as the CZM or ICP. The TRI-60 Series is fully compatible on the IXL (ICon) circuit with all intelligent IL and ID-60 detectors and MSI manual stations.

All TRI-B6 Series intelligent interface modules are UL listed.

Environmental operating conditions for all TRI-B6 Series modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

## Engineer and Architect Specifications

The addressable interface module shall incorporate a custom microprocessor based integrated circuit that shall provide communication with its compatible control panel. The addressable interface module shall be a Cerberus Pyrotronics TRI-B6 Series that shall be compatible with a Cerberus Pyrotronics IXL, MXL, or XL3 control panel.

Cerberus Pyrotronics TRI-B6 Series intelligent interface modules shall provide the means of interfacing direct shorting devices to the control panel's addressable circuits. The intelligent interface modules shall be available in three models. The TRI-B6 and TRI-B6R shall be designed to monitor a single normally open or normally closed dry contact. The interface module shall report the contact's status to the control panel. The TRI-B6 model shall only monitor and report the status of the contact, while the TRI-B6R shall incorporate an addressable Form C relay. The TRI-B6R relay and contact device input shall be controlled as a separate function at the same address by the XL3 or MXL control panel. The TRI-B6D shall be a dual input module designed to supervise and monitor two sets of dry contacts. This interface module shall require two address settings.

The TRI Series devices shall be capable of and listed for interfacing normally closed security switches to the MXL or XL3 (per UL 1076).

The addressable interface module shall be UL listed.

The addressable interface module shall be dynamically supervised and uniquely identifiable by the control panel.

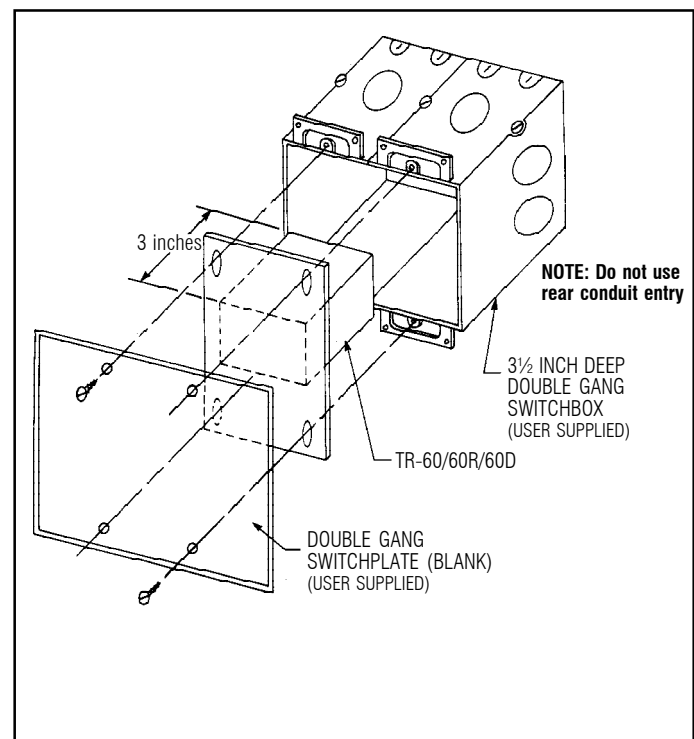
The addressable interface module's address shall be programmed with the use of a portable programming accessory. The programming accessory shall be a

Cerberus Pyrotronics FPI-32 Programmer/Tester. The portable programmer shall be menu driven. Once the desired address is entered the programmer shall set and verify the address. The programming accessory shall also be capable of testing the interface's functionality. The addressable interface module's address shall be set by electronic means only. No mechanical means such as programming pins, DIP switches or rotary dials shall be required.

The TRI-B6 Series shall be compatible on the same XL3 or MXL circuit with other Cerberus Pyrotronics intelligent IL and ID-60 Series detectors, TRI Series addressable interfaces, MSI Series addressable manual stations or any other Cerberus Pyrotronics XL/MXL addressable intelligent module. The TRI-B6 Series shall be compatible on the same IXL (ICon) circuit as other intelligent IL and ID-60 Series detectors, MSI Series manual stations and TRI Series interfaces.

## Ordering Information

Model	Description	Shipping Wt.	
		Lb.	Kg.
TRI-B6	Single Input	10 oz.	.3
TRI-B6R	Single Input w/ Relay	10 oz.	.3
TRI-B6D	Dual Input	10 oz.	.3



NOTE: Rear conduit entry not recommended, only 1/2" clearance.

# Mounting Data

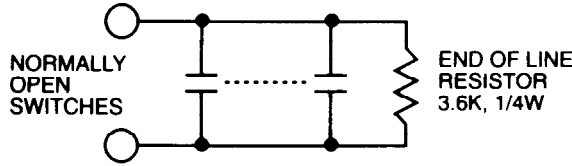
Addressable Interface Model TRI-B6, TRI-B6D, TRI-B6R mounts directly into a 3 and 1/2 inches deep, double gang switchbox (user supplied) only. Each module is secured to the switchbox with a standard blank, double gang switch-plate (also user supplied.) Refer to Figure 1 for details.

# Typical Wiring

(Refer to Figures 2, 3, 4, 5, 6 or 7) Refer to the appropriate wiring diagram below 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 screw terminals.

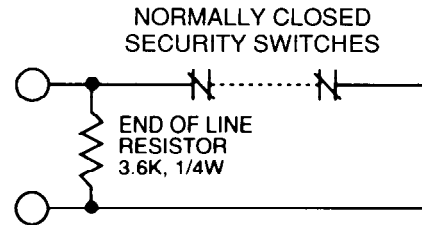


Notes:

1. There can be any number of normally open switches.
2. The end of line resistor must be located at the last switch.
3. **Do Not** wire a normally closed switch across the end of line resistor.
4. In security applications, an open or short causes a security alarm.

Application	FPI-32	
	Switch	Device Use
Fire Alarm	Normally Open	Alarm
Fire Trouble	Normally Open	Trouble
Fire Supervisory	Normally Open	Trouble
Security	Normally Open	Alarm

**Figure 2**  
**Wiring Normally Open Switches**

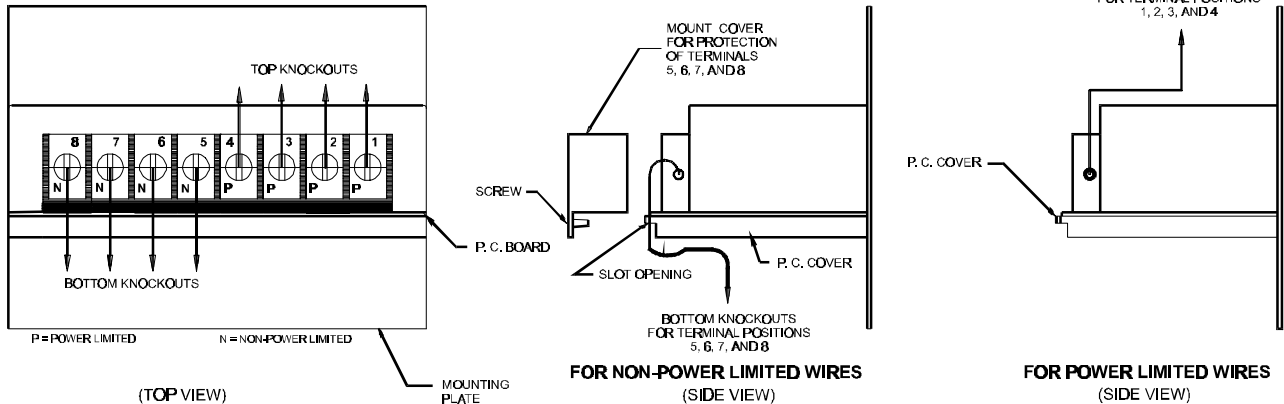


Application	FPI-32	
	Switch	Device Use
Security	Normally Closed	Alarm

Notes:

1. There can be any number of normally open switches.
2. The end of line resistor must be located at the TRI.
3. An open causes a security alarm.

**Figure 3**  
**Wiring Normally Closed Switches**  
**(Security Only)**



**Figure 4**  
**TRI-B6R Power Limited Wiring**

Notes:

1. **For XL3:** All supervised switches must be held closed for at least 15 seconds to guarantee detection.  
**For MXL:** 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: 3.6K ohms 1/4W resistor, P/N 140-820185.
3. The supervised switches have the following ratings:
 

Voltage maximum	27 VDC
Current maximum	3.5mA during polling
Contact resistance maximum	10 ohms
Maximum cable length	200 feet (18 AWG)
Maximum Capacitance:	
CLine to line	.02 uF
CLine to shield	.04 uF
Max line size	14 AWG
Min line size	18 AWG
4. When used with the XL3 System, Supervised switch S1 is on even numbered addresses, and Supervised switch S2 is on odd numbered addresses. When used with the MXL System Supervised switch S1 is on the first programmed address, and Supervised switch S2 is on the second programmed address. The first address is required to be even by the FPI-32.
5. Relay contacts are rated:
  - 2A, 125 VAC resistive,
  - 2A, 30 VDC resistive
 The relay is shown in standby condition.
6. For proprietary burglary application.
  - a. Use a TSW-1 tamper switch to monitor the main enclosure.
  - b. Monitor each TRI-B6/B6R/B6D related to this application continuously by using a listed motion detector (to prevent tampering.)
 In supervisory:
  - TRI-B6/B6R draws 1.5mA
  - TRI-B6D draws 1.8mA
7. Please refer to Installation Instructions for complete information prior to installation.

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

# Installing A Security Point

**WARNING: These circuits intended for 24 hour alarm monitoring only.**

UL 1076 requires a TSW-1 tamper switch as well as a TSP-40 printer. Only Models TRI-B6, TRI-B6D and TRI-B6R may be used as security points. A COMMUNICATION FAILURE with a TRI device configured for SECURITY results in a SECURITY ALARM as well as a communication trouble.

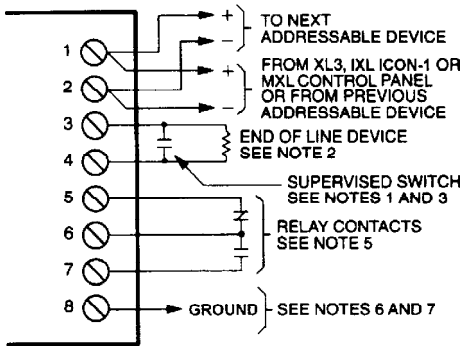
When installing a TRI device in the CSG-M, be sure to set the device usage to security. When setting the device address using the FPI-32, select the normally closed alarm causing input.

Connect only one switch per TRI input.

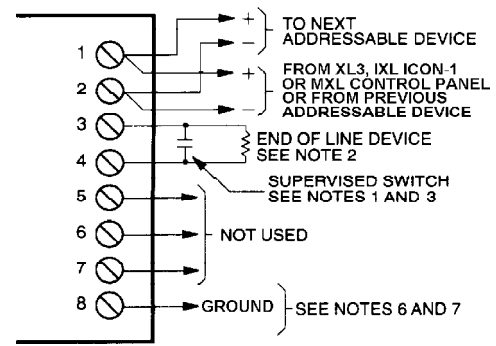
Reminder: Proper installation procedure for TRI Devices

As part of the normal installation practice each TRI device must be functionally tested. This includes testing the supervision through the end of the line resistor. The following steps must be followed for each TRI device installed:

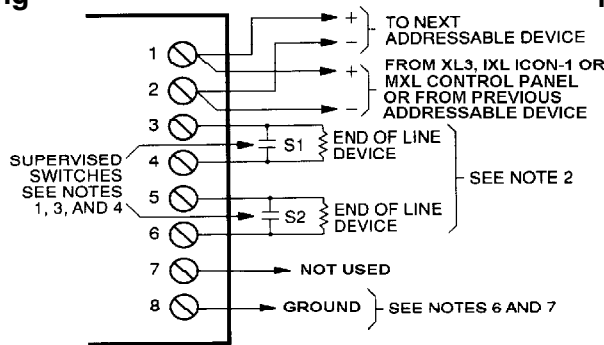
1. Open the end of line resistor.
2. Check that the system annunciates the programmed trouble message.
3. Return the resistor to its proper connection.
4. Change the state of the switch to confirm that the system's programmed response is executed.
5. Return the switch to its normal state.



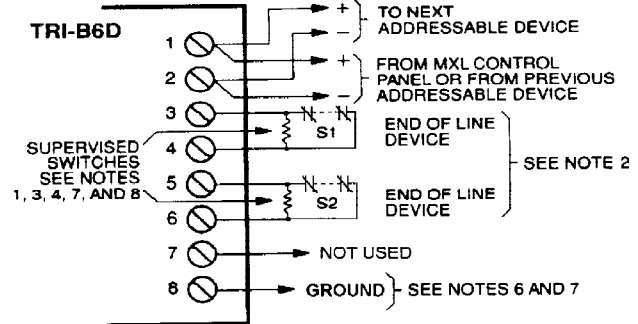
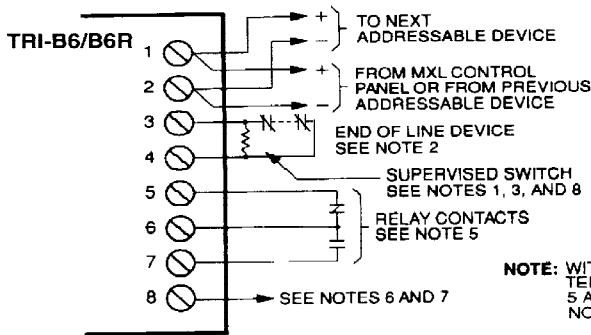
**Figure 5**  
**Model TRI-B6R Wiring**



**Figure 6**  
**Model TRI-B6 Wiring**



**Figure 7**  
**Model TRI-B6D Wiring**



**Figure 8**  
**Security Point (1076) Wiring Connections (for MXL only)**

**NOTICE:** The use of other than Cerberus Pyrotechnics detectors and bases with Cerberus Pyrotechnics equipment will be considered a misapplication of Cerberus Pyrotechnics equipment and as such voids all warranties either expressed or implied in regard to loss, damage, liabilities and/or service problems.



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