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# TR-F485C Fiber-to-SBUS Converter Product Installation Document

PN LS10002-002TR-E:A 04/27/2021 ECN: 151608

## 1 Description

The TR-F485C is a fiber-to-SBUS converter. It offers a seamless conversion from the fire alarm control panel SBUS connection to the fiber and then convert back again.

**NOTE:** Do not use this product to network FACP's. The primary power, SBUS, and SLC circuits are supervised and power-limited. Fiber-optic circuits are supervised.

### 1.1 Compatibility

The TR-F485C is compatible with the following Triga Series FACP's and power supplies.

- TR-2100
- TR-2100ECSR
- TR-RPS1

For additional information, refer to following FACP Installation Manuals. The documents are located on the Triga website, www.trigaglobal.com.

Document	Document Part Number
TR-2100ECSR Manual	LS10143-003TR-E
TR-RPS1 Manual	LS10259-002TR-E

### 1.2 Specifications

The specifications are as follows.

- External Power Supply: 9-35VDC @ 125 mA maximum
  - Fiber Connection Duplex ST connectors for Tx and Rx Data  
 Fiber Cable Duplex 62.5 micron Multimode Fiber Data Rate: 115.2K bits/second
  - Fiber Distance: Up to 1.0 Mile (1.6Km) SK-F485C Connection (two-wire) or Terminal strip, and jumper selectable bias / termination
- Note:** There are several jumpers on the board. These jumpers need to remain in place.
- Maximum Attenuation: 5.5db
  - TR-F485C Cable: single twisted-pair, 24AWG, Helix 21011
  - TR-F485C Data Direction Control Automatic half duplex transmitter enable control, for any baud rate / data bits
  - Operating Temperature: 32° - 120°F (0-49°C)
  - Humidity: 10%-93% (non-condensing)
  - Dimensions: 4.75" x 4.25" x 1.0" (12.06cm x 10.79cm x 2.54cm)

## 2 Mounting

Mount the TR-F485C in a compatible FACP cabinet as described in the following steps.

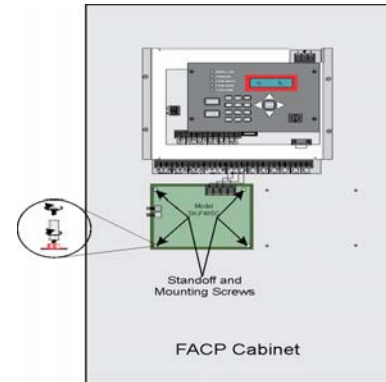


**Figure 1 1/4" (.63cm) Standoff & Screw**

1. Remove the AC power and disconnect the backup batteries from the main control panel.
2. Mount the TR-F485C in an FACP or power supply using the 1/4" (.63cm) standoff provided and secure with the screws provided. See Figure 1 and Figure 2.

**NOTE:** When the TR-F485C is used, you must use the TR-5815RMK cabinet.

Figure 2 shows the TR-F485C installed in the FACP Cabinet.

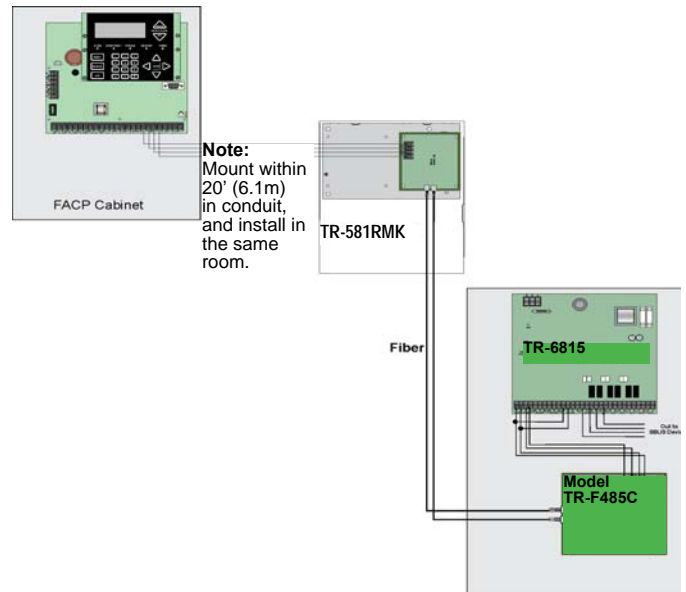


**Figure 2 TR-F485C Installed in the FACP Cabinet**

### 2.1 TR-5815RMK Mounting

The TR-5815RMK is a Remote Mounting Kit that offers you the option to install up to two TR-F485C converter modules in a single cabinet.

**NOTE:** When you use a TR-5815RMK, you must mount it within 20' (6.1m) of the control panel or the power supply in conduit.



**Figure 3 TR-F485C Mounting Installation using the TR-5815RMK**

## 3 Wiring

To wire a TR-F485C to a compatible FACP, refer to Table 1 and Figure 4.

TR-F485C Terminals	FACP SBUS Out Terminals
+	+
-	-
A	A
B	B

**Table 1 TR-F485C-to-FACP Wire Connection**

Figure 4 shows the TR-F485C-to TR-F485C wiring connection.

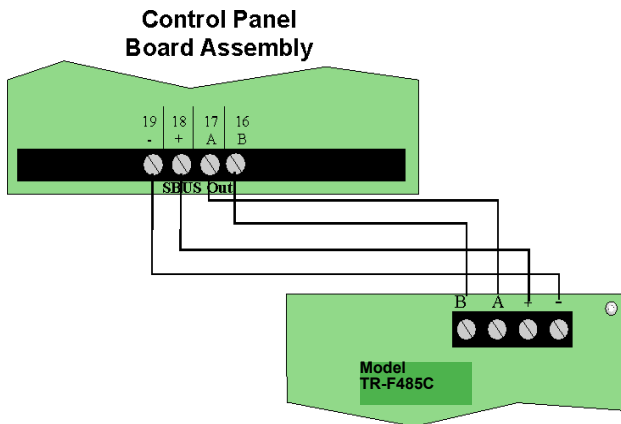


Figure 4 TR-F485C to the Panel Wire Connection

### 3.1 TR-F485C-to-TR-F485C Wire Connection

See Table 2 for the TR-F485C- to-TR-F485C wiring terminal connections.

TR-F485C Terminals	TR-F485C Terminals
RX	TX
TX	RX

Table 2 TR-F485C-to-TR-F485C Terminal Connection

### 3.2 TR-F485C to Power Supply Terminal Connection

See Table 3 and Figure 5 for the terminal connections from the TR-F485C to the TR-6815 or from the TR-F485C to the TR-RPS1.

TR-F485C Terminals	Power Supply Terminal Number	
+	32	
-	33	
A	31	
B	30	
	22	32
	23	33

Table 3 TR-F485C to the Power Supply Wiring Connection

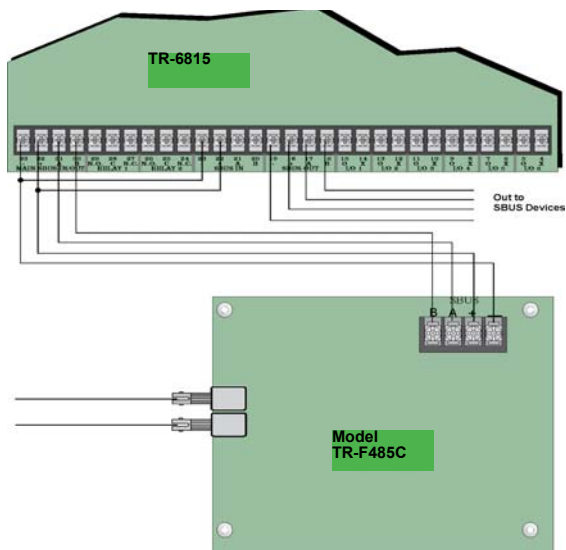


Figure 5 TR-F485C to the Power Supply Wiring Terminal Connection

### 3.3 Fiber Wiring Connection from the Panel to the Power Supply

Figure 6 shows the fiber wiring connection from the panel to the power supply.

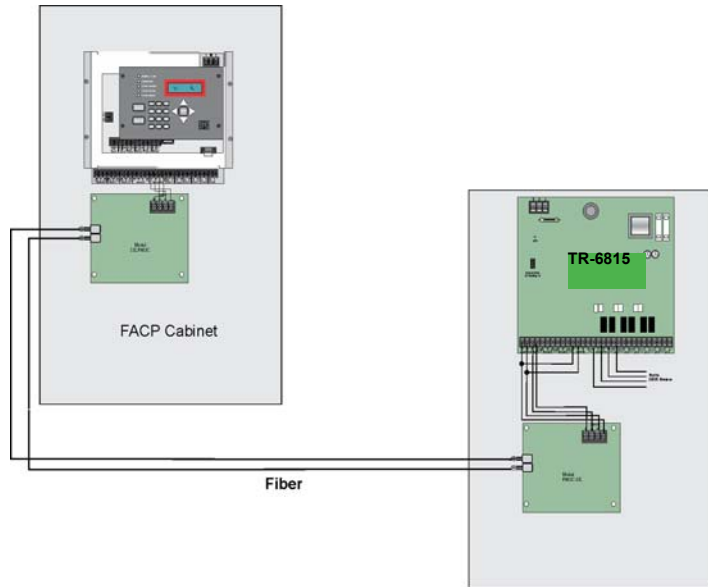


Figure 6 Fiber Wiring Connection from the Panel to the Power Supply