



## SFPE10xx-1xx User's Guide

- **Stand-Alone Media Converter**
- **Power Over Ethernet**
- **100Base-TX to 100Base-FX**

The SFPE10xx-1xx Power Over Ethernet (POE) is a 100Base-TX to 100Base-FX media converter capable of providing power to Data Terminal Equipment (DTE) Power Devices (PD) via the Media Dependent Interface (MDI) twisted pair cable. The SFPE10xx-1xx emulates Power Sourcing Equipment (PSE) and is compatible with Powered Devices (PD) that comply with the IEEE802.3af™ standard. The SFPE10xx-1xx also includes Transition Networks' proprietary PD signature sensing and power monitoring features.

### AC-Powered Models:

Part Number	Port One - Copper 100Base-TX	Port Two - Duplex Fiber-Optic 100Base-FX
SFPE1011-100	RJ-45 100 m (328 ft.)	ST, 1300 nm multimode 2 km (1.2 miles)
SFPE1013-100	RJ-45 100 m (328 ft.)	SC, 1300 nm multimode 2 km (1.2 miles)
SFPE1014-100	RJ-45 100 m (328 ft.)	SC, 1310 nm single mode 20 km (12.4 miles)
SFPE1015-100	RJ-45 100 m (328 ft.)	SC, 1310 nm single mode 40 km (24.9 miles)

### DC-Powered Models:

Part Number	Port One - Copper 100Base-TX	Port Two - Duplex Fiber-Optic 100Base-FX
SFPE1011-110	RJ-45 100 m (328 ft.)	ST, 1300 nm multimode 2 km (1.2 miles)
SFPE1013-110	RJ-45 100 m (328 ft.)	SC, 1300 nm multimode 2 km (1.2 miles)
SFPE1014-110	RJ-45 100 m (328 ft.)	SC, 1310 nm single mode 20 km (12.4 miles)
SFPE1015-110	RJ-45 100 m (328 ft.)	SC, 1310 nm single mode 40 km (24.9 miles)

Cable distances are the typical maximum cable distance. Actual distance is dependent upon the physical characteristics of the network installation.

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**Optional Accessories** (sold separately)

Part Number	Description
WMBL	Optional Wall Mount Brackets Length: 4.0 in. (102 mm), Fits converter length: 4.7in. (119mm)
WMBD	Optional DIN Rail Mount Bracket; Length: 5.0 in. (127 mm)
WMBV	Optional DIN Rail Mount Bracket; Length: 5.0 in. (127 mm)

**NOTE:** The SEPOE10xx-1xx model is the **Ethernet** version of the media converter. For more information, see the SEPOE10xx-1xx user’s guide on-line at: [www.transition.com](http://www.transition.com).

## Installation and Service

**CAUTION: All installation and service must be performed by qualified service personnel.**

Read and follow all warning notices and instructions marked on the product or included in the manual.

**CAUTION: Ensure that the power source is NOT powered when connecting it to the DC-powered, SFEPE10xx-110 series media converter.** Failure to observe this caution could result in damage to, and subsequent failure of, the SFEPE10xx-110.

### Required Grounding (DC-powered only)

Proper earthing (grounding) of the SFEPE10xx-110 is required. A grounding terminal is provided on the SFEPE10xx-110 for proper grounding of the device as per customer installation requirements and local electrical codes.

The DC-powered, SFEPE10xx-110 series media converter is intended to be used in a restricted access location. It is recommended that the 18 - 72 VDC source is to be reliably connected to earth (ground). Equipment grounding is vital to ensure safe operation.

Prior to installation, use a voltmeter/ohmmeter to check the wiring for the presence of earth ground.

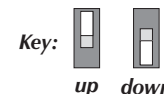
### Required Disconnect (DC-powered only)

A readily accessible disconnect device as part of the building installation shall be incorporated into the fixed wiring for the DC-powered, SFEPE10xx-110 series media converter. The disconnect device (a 18 - 72 VDC, 15 or 20 A circuit breaker or switch) must be included in the ungrounded supply conductor. Overcurrent protection must be a 15 or 20 A fuse with a voltage rating in accordance with the device specifications.

## Installation -- Continued

### Set the Configuration Switches

The configuration switches are located on the front panel of the SFEPE10xx-1xx media converter. Use a small, flat blade screwdriver to set the switches.



### 1 & 2 - Voltage Delivered to the Powered Device (PD)

Switches 1 and 2 are used to set the required DC voltage that the SFEPE10xx-1xx delivers (via the twisted-pair copper interface) to the Powered Device (PD).

### 3 - PD Signature Detect

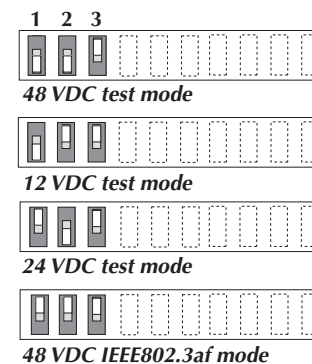
**up (enable) = IEEE802.3af™ Mode:** The SFEPE10xx-1xx determines if the PD is capable of accepting power via the twisted pair copper interface.

**down (disable) = Legacy Mode:** The SFEPE10xx-1xx provides limited protection to prevent power from being delivered to non-POE compatible (i.e., legacy) devices.

Set switches 1, 2 and 3 to set the required voltage for the PD with the SFEPE10xx-1xx in **IEEE802.3af™** mode. The drawing to the right shows the switch configuration for the four voltage settings:

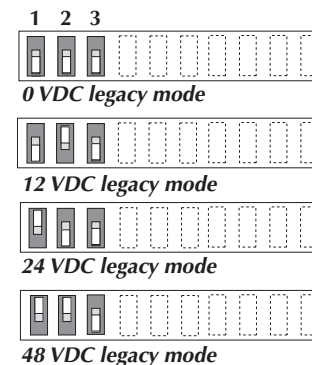
- 48 VDC test mode
- 12 VDC test mode
- 24 VDC test mode
- 48 VDC IEEE802.3af™ mode

**NOTE:** “test mode” forces the twisted-pair copper interface to power on.



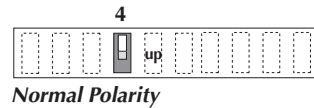
Set switches 1, 2 and 3 to set the required voltage for the PD with the SFEPE10xx-1xx in **Legacy** mode. The drawing to the right shows the switch configuration for the four voltage settings:

- 0 VDC legacy mode
- 12 VDC legacy mode
- 24 VDC legacy mode
- 48 VDC legacy mode



#### 4 - Voltage Polarity

**up (normal)** - Selects positive (+) voltage on pairs 4 & 5 and 1 & 2 for both signal pairs and spare pairs (see switch 5).



**down (reverse)** - Selects positive (+) voltage on pairs 7 & 8 and 3 & 6 for both signal pairs and spare pairs (see switch 5). **NOTE:** The PD Signature Detect function (switch 3) **must also be disabled**.

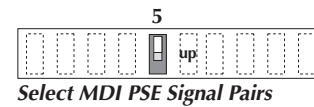


#### 5 - Signal Pairs / Spare Pairs

**up** - Selects MDI PSE signal pairs.

**down** - Selects MDI PSE spare pairs.

**NOTE:** When switches 1-5 are all set to “up”, the SFEPE10xx-1xx is in IEEE802.3™ mode and normal polarity power is inserted on the signal pairs.



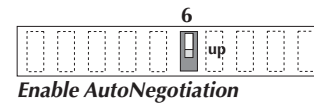
#### 6 - Auto-Negotiation

**up** - Enables Auto-Negotiation.

**down** - Disables Auto-Negotiation.

The Auto-Negotiation feature allows the media converter to bring up the copper links to the highest speed and mode possible for all the attached network devices.

**NOTE:** The SFEPE10xx-1xx does NOT support rate conversion between 10Mb/s and 100Mb/s network devices.



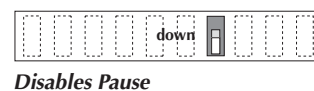
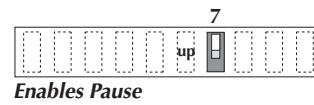
#### 7 - Pause

**up** - Enables the Pause feature.

**down** - Disables the Pause feature.

The Pause feature improves network performance by allowing one end of the link to signal the other to discontinue frame transmission to relieve buffer congestion.

Enable the Pause feature only if it is present on ALL network devices.

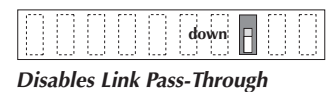


#### 8 - Link Pass-Through

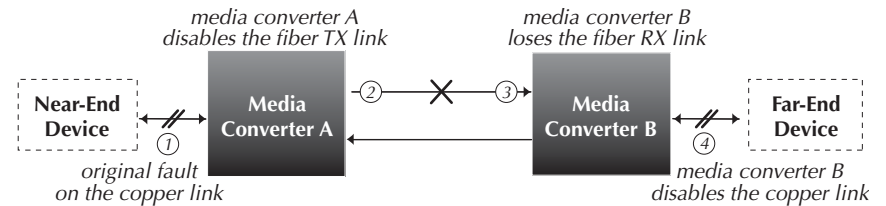
**up** - Enables Link Pass-Through.

**down** - Disables Link Pass-Through.

The Link Pass-Through feature allows the media converter to monitor both the fiber and copper RX (receive) ports for loss of signal. In the event of a loss of an RX signal on one media port, the media converter will automatically disable the TX (transmit) signal of the other media port, thus, “passing through” the link loss.



The far-end device is automatically notified of the link loss, which prevents the loss of valuable data unknowingly transmitted over an invalid link.



#### 9 - Far End Fault

**up** - Enables Far End Fault.

**down** - Disables Far End Fault.

When the Far-End Fault feature is activated, a fault on an incoming fiber link causes the media converter to transmit a Far-End Fault signal on the outgoing fiber link. In addition the Far-End Fault signal also activates the Link Pass-Through, which, in turn, disables the link on the copper portion of the network.

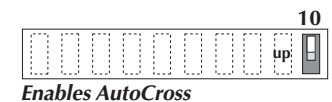


#### 10 - AutoCross™

**up** - Enables the AutoCross function.

**down** - Disables the AutoCross function.

The AutoCross™ feature allows either straight-through (MDI) or crossover (MDI-X) cables to be used when connecting to 100Base-TX devices, such as wireless access point, VoIP phone, network camera, etc. AutoCross determines the characteristics of the cable connection and automatically configures the unit to link up, regardless of the cable configuration.



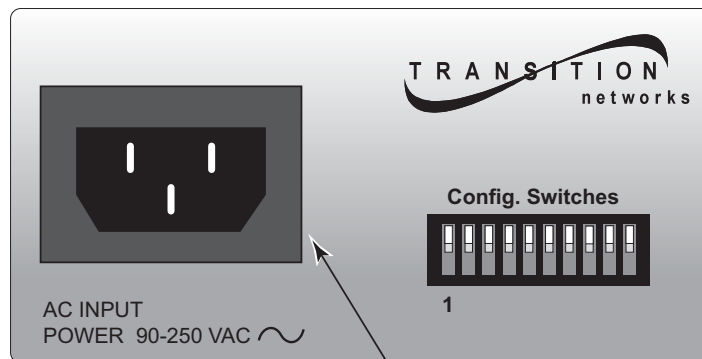
## Installation -- Continued

### Supplying AC Power to the SFEPE10xx-100

The SFEPE10xx-100 features under voltage lockout, which disables operation and eliminates excessive power draw from the external power source if the source falls below approximately 70 VAC.

To connect AC power to the SFEPE10xx-100

1. Connect the female end of the AC power cord to the AC power connector on the SFEPE10xx-100.



AC Power Connector

2. Plug the male end of the AC power cord into the correct voltage AC rack or wall socket.
3. Verify that the SFEPE10xx-100 is powered by observing the illuminated power LED.

### Disconnecting AC Power to the SFEPE10xx-100

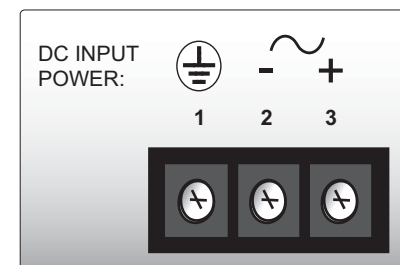
1. Disconnect the male end of the AC power cord from the AC rack or wall socket.
2. Disconnect the female end of the AC power cord from the AC power connector on the SFEPE10xx-100.

## Installation -- Continued

### Supplying DC Power to the SFEPE10xx-110

The SFEPE10xx-110 features under voltage lockout, which disables operation and eliminates excessive power draw from the external power source if the source falls below approximately 12 VDC.

**CAUTION: The power source MUST BE POWERED OFF when connecting it to the SFEPE10xx-110.** Failure to observe this caution could result in damage to, and subsequent failure of, the power supply and any attached device.



1. Ensure that external power source is powered OFF.
2. Connect the positive (+) terminal of the power supply to the positive terminal on the SFEPE10xx-110 (marked with a "3").
3. Connect the negative (-) terminal of the power supply to the negative terminal on the SFEPE10xx-110 (marked with a "2").
4. Connect the ground terminal of the power supply (or an appropriate 'earthing' ground location) to the ground terminal on the SFEPE10xx-110 (marked with a "1").
5. Turn on the power to the external power source.
6. Verify that the SFEPE10xx-110 is powered by observing the illuminated power LED.

### Disconnecting DC Power to the SFEPE10xx-110

**CAUTION: The power source MUST BE POWERED OFF when disconnecting it from the SFEPE10xx-110.** Failure to observe this caution could result in damage to, and subsequent failure of, the power supply and any attached device.

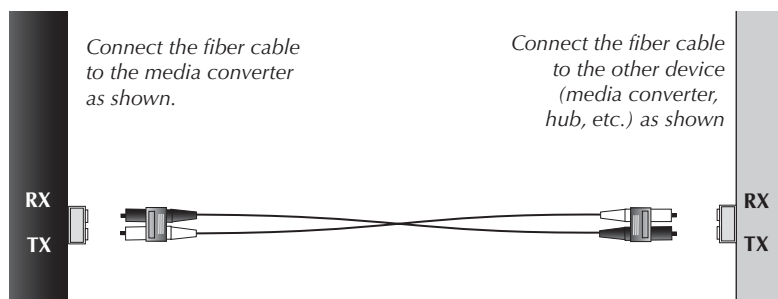
1. Ensure that external power source is powered OFF.
2. Disconnect the positive (+) terminal of the power supply from the positive terminal on the SFEPE10xx-110 (marked with a "3").
3. Disconnect the negative (-) terminal of the power supply from the negative terminal on the SFEPE10xx-110 (marked with a "2").
4. Disconnect the ground terminal of the power supply (or the 'earth' ground) from the ground terminal on the SFEPE10xx-110 (marked with a "1").

## Installation

**CAUTION:** Associated Ethernet wiring shall be limited to inside the building.

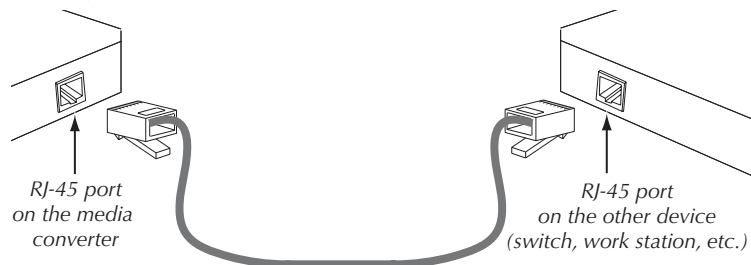
### Install the Fiber Cable

1. Locate or build 100Base-FX fiber cable with male, two-stranded TX to RX connectors installed at both ends.
2. Connect the fiber cables to the SFEPE10xx-1xx media converter as described:
  - Connect the male **TX** cable connector to the female **TX** port.
  - Connect the male **RX** cable connector to the female **RX** port.
3. Connect the fiber cables to the other device (another media converter, hub, etc.) as described:
  - Connect the male **TX** cable connector to the female **RX** port.
  - Connect the male **RX** cable connector to the female **TX** port.



### Install the Copper Cable

1. Locate or build 100Base-TX copper cables with male, RJ-45 connectors installed at both ends.
2. Connect the RJ-45 connector at one end of the cable to the RJ-45 port on the media converter.
3. Connect the RJ-45 connector at the other end of the cable to the RJ-45 port on the other device (wireless access point, VoIP phone, network camera, etc.).

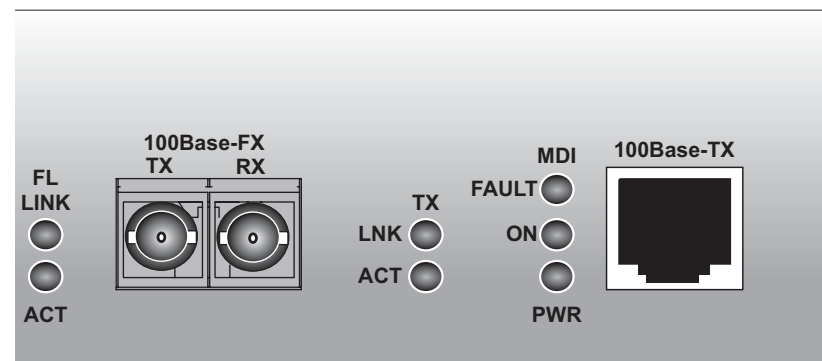


## Operation

**CAUTION:** Both the fiber and copper connections to the SFEPE10xx-1xx media converter must be of the same network speed and network protocol. **Failure to observe this caution will cause data transfer to fail.**

### LED Indicators

After installation, the media converter should function without operator intervention. Use the status LEDs to monitor media converter operation in the network.



**MDI FAULT** On (for 1 to 3 seconds) = The POE sources exceed approximately **0.4 A\*** of current on the MDI interface.

**MDI ON** On = The current to the MDI that is greater than approximately 10 mA or less than approximately **0.4 A\***. Power to the MDI is removed if the current is outside this range.

(\*Including the in-rush current required to charge the PD (Powered Device) load capacitance.)

**PWR** (Power) On = The input voltage is at the proper level (see "Technical Specifications" on page 10).

**TX LINK** (Twisted-Pair Link) On = A link from the twisted-pair (100Base-TX) connection to the work station or remote switch.

**TX ACT** (Twisted-Pair Activity) Flashing = Activity on the work station or remote switch.

**FL LINK** (Fiber Link) On = A link from the fiber (100Base-FX) connection to the other media converter or remote hub.

**FL ACT** (Fiber Activity) Flashing = Activity on the other media converter or remote hub.

## Operation - Continued

### MDI Power

MDI power can be set using configuration switches 1 & 2. (See page 3.) The SFEPE10xx-1xx power delivery capacity is approximately 0.35 A at 48 VDC.

The SFEPE10xx-1xx also has a current sensing feature in accordance with IEEE802.3af when in IEEE802.3af mode (switch 3 = enabled). If the load presented to the MDI is less than approximately 10 mA or greater than approximately **0.4 A\***, MDI power is removed from the interface.

(\*Including the in-rush current required to charge the PD (Powered Device) load capacitance.)

## Technical Specifications

For use with Transition Networks Model SFEPE10xx-1xx or equivalent

<b>Standards</b>	IEEE 802.3™
<b>Data Rate</b>	100 Mb/s
<b>Dimensions</b>	7.3" x 4.4" x 1.2" (185mm x 112mm x 30mm)
<b>Weight</b>	1.6 lbs. (730 g) (approximate)
<b>Fuse (DC models only)</b>	6.3 Amp
<b>Power Consumption</b>	45 watts (maximum)
<b>Power Supply - DC</b>	18 to 60 VDC / 17 to 30 VRMS (-110 models)
<b>Power Supply - AC</b>	90 to 250 VAC, 50/60 Hz, 45 Watts Max. (-100 models)
<b>Output Voltage</b>	16.8W @ 48VDC; 8.4W @ 24VDC; 4.2W @ 12VDC
<b>Environment</b>	Tmra*: 0 to 50°C (32 to 122°F) Storage Temp: -25 to 85°C (-13 to 185°F) Humidity: 5 to 95%, non condensing Altitude: 0 to 10,000 feet
<b>Warranty</b>	Lifetime

\*Manufacturer's rated ambient temperature.

**NOTE:** The information in this user's guide is subject to change. For the most up-to-date information on the SFEPE10xx-1xx media converter, view the user's guide on-line at: [www.transition.com](http://www.transition.com).

Product is certified by the manufacturer to comply with DHHS Rule 21/CFR, Subchapter J applicable at the date of manufacture.

**CAUTION:** Visible and invisible laser radiation when open. Do not stare into beam or view directly with optical instruments.

**CAUTION:** Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

## Cable Specifications

The physical characteristics must meet or exceed IEEE 802.3™ specifications.

### Fiber Cable

Bit Error Rate:	<10 <sup>-9</sup>
Single mode fiber (recommended):	9 μm
Multimode fiber (recommended):	62.5/125 μm
Multimode fiber (optional):	100/140, 85/140, 50/125 μm

#### SFEPE1011-100 (AC-Powered)

#### SFEPE1011-110 (DC-Powered)

Fiber-optic Transmitter Power:	min: -19.0 dBm	max: -14.0 dBm
Fiber-optic Receiver Sensitivity:	min: -30.0 dBm	max: -14.0 dBm
Link Budget:	11.0 dB	

#### SFEPE1013-100 (AC-Powered)

#### SFEPE1013-110 (DC-Powered)

Fiber-optic Transmitter Power:	min: -19.0 dBm	max: -14.0 dBm
Fiber-optic Receiver Sensitivity:	min: -30.0 dBm	max: -14.0 dBm
Link Budget:	11.0 dB	

#### SFEPE1014-100 (AC-Powered)

#### SFEPE1014-110 (DC-Powered)

Fiber-optic Transmitter Power:	min: -15.0 dBm	max: -8.0 dBm
Fiber-optic Receiver Sensitivity:	min: -31.0 dBm	max: -8.0 dBm
Link Budget:	16.0 dB	

#### SFEPE1015-100 (AC-Powered)

#### SFEPE1015-110 (DC-Powered)

Fiber-optic Transmitter Power:	min: -8.0 dBm	max: -2.0 dBm
Fiber-optic Receiver Sensitivity:	min: -34.0 dBm	max: -7.0 dBm
Link Budget:	26.0 dB	

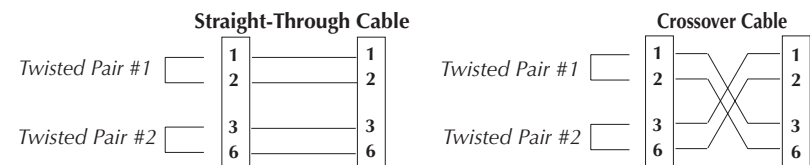
**The fiber optic transmitters on this device meet Class I Laser safety requirements per IEC-825/CDRH standards and comply with 21 CFR1040.10 and 21CFR1040.11.**

### Copper Cable

#### Category 5: (Minimum Requirement)

Gauge	24 to 22 AWG
Attenuation	22.0 dB /100m @ 100 MHz

- Straight-through **OR** crossover twisted-pair cable may be used.
- Shielded twisted-pair (STP) **OR** unshielded Twisted-pair (UTP) may be used.
- Pins 1&2 and 3&6 are the two active pairs in an Ethernet network .
- RJ-45 Pin-out: Pin 1 = TD+, Pin 2 = TD-, Pin 3 = RD+, Pin 6 = RD-
- Use only dedicated wire pairs for the active pins:  
(e.g., blue/white & white/blue, orange/white & white/orange, etc.)
- Do not use flat or silver satin wire.



## Maintenance

### AC-Powered SFEPE10xx-100

**CAUTION:** No operator-serviceable parts inside the AC-powered SFEPE10xx-100 models. Refer all service to qualified personnel.

### DC-Powered SFEPE10xx-110

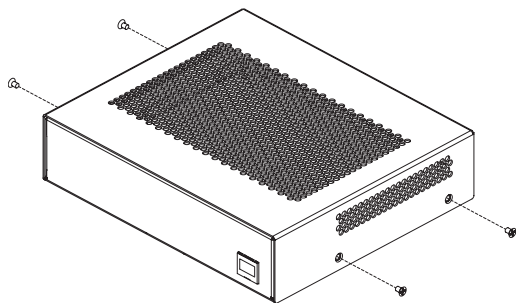
Catastrophic fault protection is provided by an **internal 6.3 Amp fuse**.

**CAUTION:** Failure to observe the following cautions could result in damage to, and subsequent failure of, the SFEPE10xx-110 media converter, the external power supply, and any attached device.

- Wear a grounding device and observe electrostatic discharge precautions when replacing the fuse in this device.
- Replace the fuse only with the same size and rating.
- Ensure that the power source is NOT powered when disconnecting power from, or connecting power to, this device.

To replace the fuse in the DC-powered SFEPE10xx-110:

1. Ensure that the external power source is not powered.
2. Disconnect the SFEPE10xx-110 from the external power source (see p.7).
3. Remove and retain the screws that secure the cover to the SFEPE10xx-110. Remove and retain the cover to the device.



4. Locate the fuse inside the SFEPE10xx-110 and carefully remove the fuse from the fuse holder.
5. Install the **same size and rating** replacement fuse in the fuse holder.
6. Replace the cover to the SFEPE10xx-110. Secure the cover by installing the screws.
7. Reconnect the SFEPE10xx-110 to the external power source (see page 7).

## Troubleshooting

If the media converter fails, isolate and correct the fault by determining the answers to the following questions and then take the indicated action:

### 1. Is the PWR LED on the media converter illuminated?

**NO**

- Is the external power source properly connected to the media converter (as described on pages 6 and 7) and is the external power source turned on?
- Does the external power source provide power?
- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Proceed to step 2.

### 2. Is the Powered Device (PD) a legacy device?

**NO**

- Proceed to step 3.

**YES**

- Ensure the twisted-pair cable is a 4-pair cable.
- Ensure switches 1-5 are set for a legacy device (see pages 4 and 5).
- Proceed to step 4.

### 3. Is the MDI ON LED illuminated?

**NO**

- Ensure the twisted-pair cable is a 4-pair cable.
- Ensure switches 1-5 are all set to "up" for a IEEE802.3af mode.
- Ensure the current load to the Powered Device (PD) is greater than 10 mA.
- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Proceed to step 4.

### 4. Is the MDI FAULT LED illuminated?

**NO**

- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Ensure the Powered Device (PD) IEEE 802.3af compliant.
- Ensure the load to the Powered Device (PD) is less than 0.4 Amp.
- Proceed to step 5.

### 5. Is the TX LINK LED illuminated?

**NO**

- Check the twisted pair cables for proper installation.
- Check switch 10 to ensure that the AutoCross feature is set correctly (see page 5).
- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Proceed to step 6.

## Troubleshooting -- Continued

### 6. Is the TX ACT LED illuminated?

**NO**

- Disconnect and reconnect the twisted pair cable to restart the initialization process.
- Restart the attached device to restart the initialization process.
- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Proceed to step 7.

### 7. Is the FL LINK LED illuminated?

**NO**

- Check the fiber cables for proper connection.
- Verify that the TX and RX cables on the media converter are connected to the RX and TX ports, respectively, on the other device.
- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Proceed to step 8.

### 8. Is the FL ACT LED illuminated?

**NO**

- Disconnect and reconnect the fiber cable to restart the initialization process.
- Restart the attached device to restart the initialization process.
- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

**YES**

- Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600.

## Contact Us

### Technical Support

Technical support is available 24 hours a day.

US and Canada: **1-800-260-1312**

International: **00-1-952-941-7600**

### Transition Now

Chat live via the Web with Transition Networks Technical Support.

Log onto **www.transition.com** and click the **Transition Now** link.

### Web-Based Seminars

Transition Networks provides seminars via live web-based training.

Log onto **www.transition.com** and click the **Learning Center** link.

### E-Mail

Ask a question anytime by sending an e-mail to our technical support staff.

**techsupport@transition.com**

### Address

Transition Networks



6475 City West Parkway

Minneapolis, MN 55344, USA

telephone: 952-941-7600

toll free: 800-526-9267

fax: 952-941-2322

		<b>Declaration of Conformity</b>
Name of Mfg:	<b>Transition Networks</b> 6475 City West Parkway, Minneapolis MN 55344 USA	
Model:	<b>SFEPE10xx-1xx Series Media Converters</b>	
Part Number(s):	<b>SFEPE1011-100, SFEPE1013-100, SFEPE1014-100, SFEPE1015-100 SFEPE1011-110, SFEPE1013-110, SFEPE1014-110, SFEPE1015-110</b>	
Regulation:	<b>EMC Directive 89/336/EEC</b>	
Purpose: To declare that the <b>SFEPE10xx-1xx</b> to which this declaration refers is in conformity with the following standards. CISPR22:1993; EN55022:1994+A1:1995+A2:1997 Class A; FCC Part 15 Subpart B; GR-1089-CORE: Issue 3, 2002 per section 3.2.2.2; 21 CFR Subpart J		
<i>I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).</i>		
 Stephen Anderson, Vice-President of Engineering		December 12, 2004 Date

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# Compliance Information

CISPR22/EN55022 Class A  
CE Mark

## FCC Regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

## Canadian Regulations

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## European Regulations

### Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Achtung !

Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fall ist der Benutzer für Gegenmaßnahmen verantwortlich.

### Attention !

Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.



**CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.**

Der Anschluss dieses Gerätes an ein öffentliches Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

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