

210  
212

## In-Line® Coaxial Lightning Surge Protectors

Designed for Broadband  
Network Applications

Meets SCTE "F" Port  
Connector Requirements

Meets UL Primary Surge  
Protection Requirements

Impedance Matched to 75 Ohms  
Environmentally Sealed to 15 PSI

Transparent to Analog/Digital  
Bi-directional Signal Transmission

Listed to UL 497



Tii Technologies Inc.

**Corporate Headquarters:**

141 Rodeo Drive  
Edgewood, NY 11717  
Phone: 631.789.5000 • Fax: 631.789.5063  
Toll Free: 888.844.4720  
sales@tiitech.com

www.tiitech.com



210FF75F225-31



210MF75F225-31



212FF75F225-31

Tii's cutting edge In-Line® Coaxial Lightning Surge Protectors protect personnel and customer premises equipment, e.g. Televisions, Cable Set Top Boxes and Cable Modems from lightning and power induced surges on coaxial cables. They are specifically designed for today's Broadband signals carried over the coax cables.

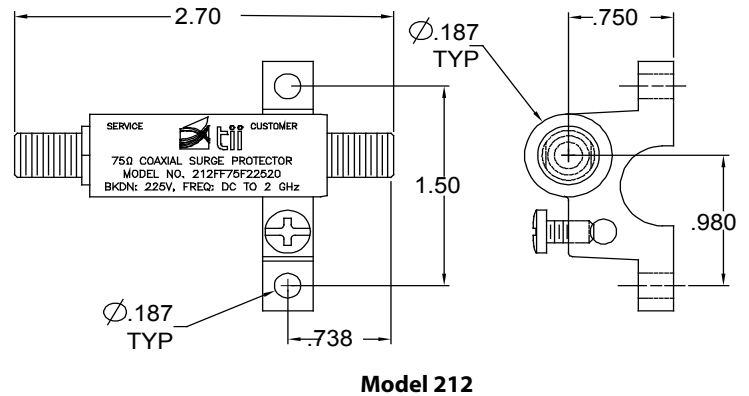
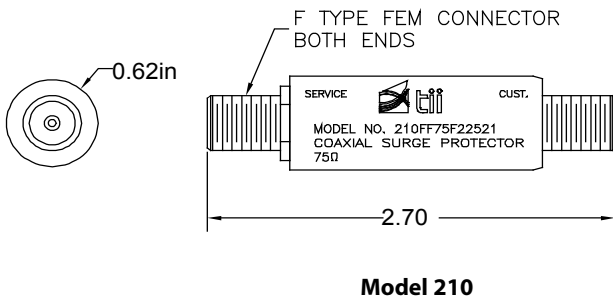
### KEY PRODUCT BENEFITS

- ▶ Ideally suited to protect Broadband CATV subscriber's "COSTLY" HDTV receivers, DVRs, cable modems, home networking components and interfaces from potentially damaging surges
- ▶ Will reduce "out of warranty" repair expense caused by surge lightning damage. Reduces service outages by protecting against induced high-voltage surges that may appear on the center conductor of a coaxial drop cable
- ▶ Unique In-Line® design is impedance matched to 75 ohms and is virtually transparent to all analog or digital bi-directional signals transmitted from DC to 1.0 GHz
- ▶ Tii's patented proprietary coaxial gas tube surge protector is equipped with an integral failshort mechanism for a power-cross condition which shunts both the coaxial cable's center conductor and sheath for a common path to ground. The DC breakdown voltage of the protector provides superior protection against transient surges, yet is compatible with network powered applications.
- ▶ The protection element is designed to reset after each over voltage event
- ▶ Metallic housing of the Tii In-Line® Coaxial Lightning Surge Protector provides necessary EMI shielding
- ▶ When properly connected the protector is environmentally sealed (15 psi) to prevent ingress of moisture and humidity encountered in broadband pedestals, vaults, NIDs and stand alone applications
- ▶ Full 360° "F" port connectors provide superior RF performance and tighter connections

### INDUSTRY STANDARDS

- ▶ UL 497C Certified
- ▶ Meets and exceeds Telcordia GR 2908-CORE
- ▶ Complies with 1999 National Electric Code - Article 830
- ▶ Designed with full thread, flush face "F" type connectors which conform to ANSI/SCTE 01 1996R2001 specification

# 210 / 212



Dimensions are in Inches

## SPECIFICATIONS

<b>R.F. Performance</b>	DC – 1.0 GHz
<b>Characteristic Impedance</b>	75 Ohms
<b>Insertion Loss (includes Flatness)</b>	< 0.3 dB / 0.2dB Typical
<b>Return Loss</b>	30 dB Typical
<b>Protection:</b>	
1. DC Breakdown @ 2000 V/Sec	120 – 300 Volts
2. Impulse Breakdown @ 100 V/μSec	< 450 Volts
3. Insulation Resistance	>100 Megohms
*4. Surge Life:	
A. 10 A, 10/1000 μSec.	>1500 Surges
B. 100 A, 10/1000 μSec.	>100 Surges
C. 1000 A, 10/250 μSec.	>10 Surges
D. 5000 A, 8/20 μSec.	>10 Surges
5. AC Life:	
A. 5A, 1000 VAC, 1 Sec.	>5 Operations
B. 1A, 1000 VAC, 1 Sec.	>60 Operations
6. Failshort:	
30 A, 1000 VAC	>15 Minutes
7. Operating Temperature	-40° C to + 65° C (-40° F to 149° F)

\*Figures given above are for service life only.

## ORDERING INFORMATION

Model No.	Description
<b>210FF75F225-31</b>	Female/Female Connector Configuration, "F" Type Connector
<b>210FF75F225-311</b>	Female/Female Connector Configuration, "F" Type Connector with 6 Inch #12 Ground Wire
<b>210MF75F225-31</b>	Male/Female Connector Configuration, "F" Type Connector
<b>212FF75F225-31</b>	Female/Female Connector Configuration, "F" Type Connector with Integral Ground Block