

## Tii 210 & 212

### *In-Line® Coaxial Lightning Surge Protectors*

Environmentally Sealed to 15 PSI

Meets SCTE "F" Port Connector  
Requirements

Meets UL Primary Surge  
Protection Requirements

Unique Patented In-Line® Coaxial  
Gas Tube Lightning Surge  
Protector

Designed for Broadband Network  
Applications

Transparent to Analog/Digital  
Bi-directional Signal Transmission

Impedance Matched to 75 Ohms

Power Passing

Insertion Loss 0.2 dB Typical

Return Loss 30dB Typical

Frequency Range DC - 1.0 GHz

Listed to UL 497 & CSA Certified



tii network technologies

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**Tii 210FF75F225-31**



**Tii 210MF75F225-31**



**Tii 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. It is specifically designed for today's Broadband signals carried over the coax cables.

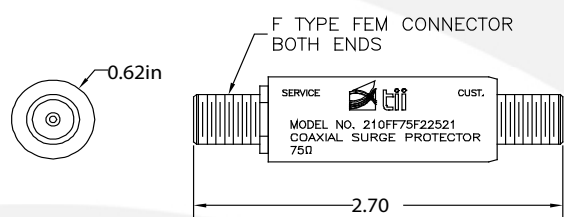
### KEY PRODUCT BENEFITS

- ▶ 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.

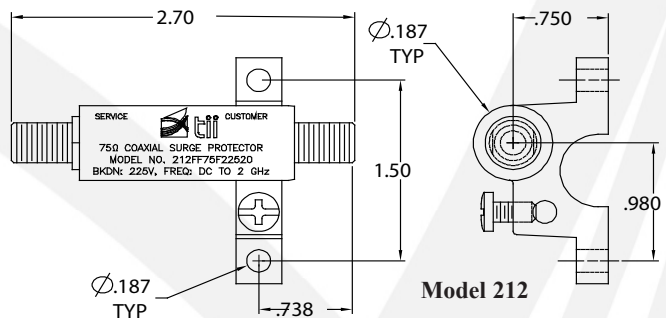
### INDUSTRY STANDARDS

- ▶ Listed to UL 497C & CSA 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.

# Tii 210 & 212



Model 210



Model 212

Dimensions in inches

## SPECIFICATIONS

R.F. Performance	DC – 1.0 GHz
Characteristic Impedance	75 Ohms
Insertion Loss (includes Flatness)	< 0.3 dB / 0.2dB Typical
Return Loss	30 dB Typical

Protection:

1.	DC Breakdown @ 2000 V/Sec	150 – 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:	
	30A, 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
210FF75F225-31	Female/Female Connector Configuration, "F" Type Connector
210FF75F225-311	Female/Female Connector Configuration, "F" Type Connector with 6' #12 Ground Wire
210MF75F225-31	Male/Female Connector Configuration, "F" Type Connector
212FF75F225-31	Female/Female Connector Configuration, "F" Type Connector with Integral Ground Block
Standard Package:	50 pieces
Weight (without grounding hardware):	210FF75F225-31 0.077 lbs. each
	210MF75F225-31 212FF75F225-31 0.074 lbs. each
	0.132 lbs. each