

## PRODUCT INFORMATION

## Global LIGHTNING Solutions

The **SX™** radio frequency DC-blocked filter protectors are ideal for RF coaxial applications where DC is not required. The **SX™** can be used on high-powered RF feeder lines in the range of 350 to 2,300 MHz, as well as, low-powered microwave sites at 2 to 10GHz. The **SX™** is available in a multitude of connector configurations each exhibiting low return loss, insertion loss and let through voltage.

### Features

- Ultra Compact, Patented Filter Design
- Industry's Best RF Performance
- Industry's Lowest Throughput Energy
- Fully Weatherized Housing
- Maintenance Free
- DC Blocked RF Path
- Ultra Wide Bandwidth
- Multi-Strike Capable
- No Gas Tubes to Replace
- 10 Year Warranty

### **SX™**, Simply eXceptional Filter Protection.

#### Simple

- Bulkhead Mounting
- Grounding Protection

#### eXceptional

- Let through Energy
- Insertion Loss
- Value
- VSWR

### Specs

#### Environmental

- Fully Weatherized Housing Meets IEC 60529 IP65
- Procedure 4.11, Wind Driven (120MPH)

- Meets Bellcore #TA-NWT-00487
- Rain Intrusion Test

#### Temperature

- -40°C to +85°C Storage and Operating
- Condensing

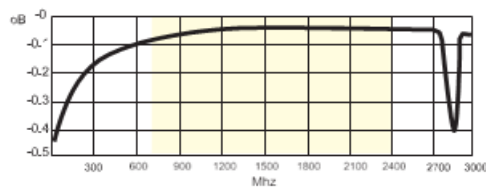
#### Vibration

- 1G @ 5Hz to 100Hz

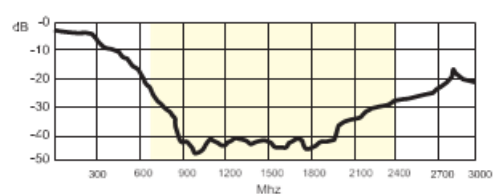
#### Humidity

- 0 to 100%

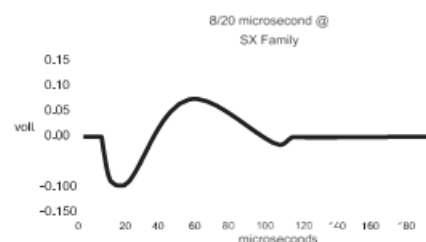
### Typical Insertion Loss



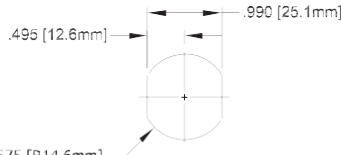
### Typical Return Loss



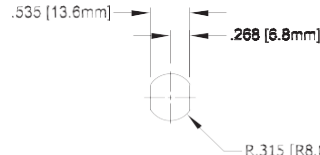
### Typical Voltage Let Through



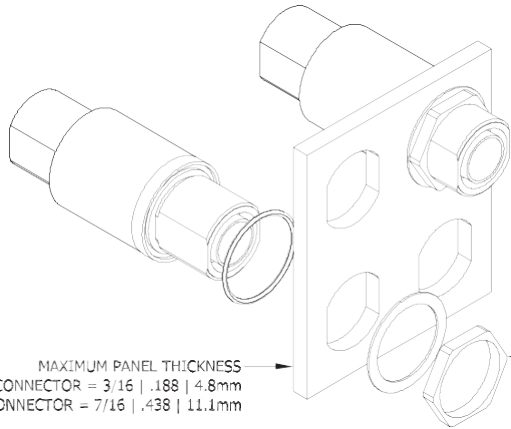
Part Number	Frequency(MHz)	Connector Surge	Connector Protected	Max Power (Watts) @20°C	Insertion Loss (dB)	Return Loss (dB)	Surge (Max)	Throughput Energy@2kA(nJ)	Drawing Number
LSXL	1800-3800, 4200-6000	N Fem	N Fem	10	<0.2	>20	20kA, 8x20μS	<10	14



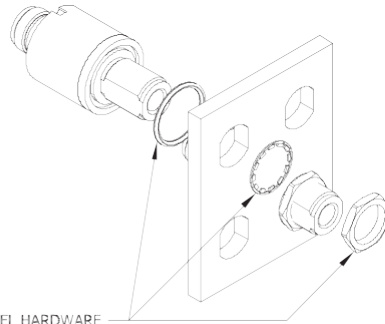
FEMALE 'DIN' DOUBLE D  
BULKHEAD MOUNTING HOLE  
MOUNTING NUT TORQUE: 275-325 lbf-in [31.10-36.72 N-m]  
MATING CONNECTOR TORQUE: 216-240 lbf-in [24.40-27.12 N-m]



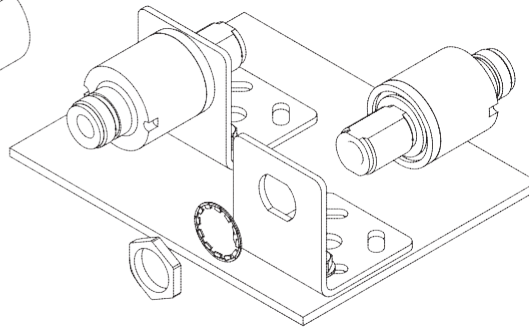
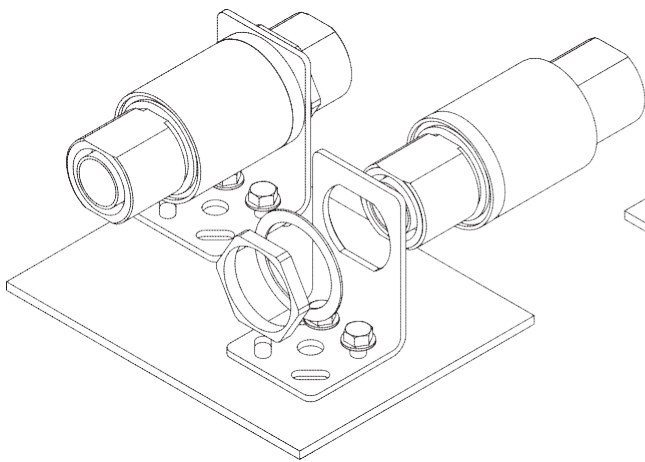
FEMALE 'N' DOUBLE D  
BULKHEAD MOUNTING HOLE  
MOUNTING NUT TORQUE: 55-65 lbf-in [6.21-7.34 N-m]  
MATING CONNECTOR TORQUE: 15-20 lbf-in [1.70-2.26 N-m]



MAXIMUM PANEL THICKNESS  
'N' CONNECTOR = 3/16 | .188 | 4.8mm  
'DIN' CONNECTOR = 7/16 | .438 | 11.1mm



STAINLESS STEEL HARDWARE  
AND WEATHERPROOF O-RING  
INCLUDED WITH PURCHASE OF  
SX SERIES UNITS

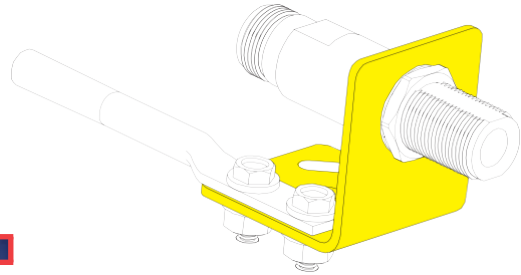


**WARNING!**

It is very important that this unit be grounded to a low impedance (low R and low L) ground system in order to work properly. We strongly recommend this ground be interconnected to the tower ground and power ground to form one system. To minimize "in-air" interconnect inductance to the ground system since skin effect is present, use as straight and large a surface area copper strap as possible. Keep bends in copper strap to an 8.0" [203.2mm] radius or larger.

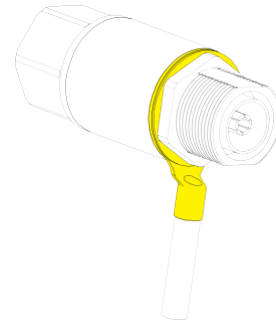
### GROUNDING WITH BFD

The BFN or BFD bracket can be used with a 19mm or ¾ inch 2-hole lug as shown. The bracket allows for multiple grounding configurations. Hardware for grounding a lug, and the lug itself are not included with the bracket, or with the protection device and should be purchased separately.



### GROUNDING WITH A TERMINAL LUG

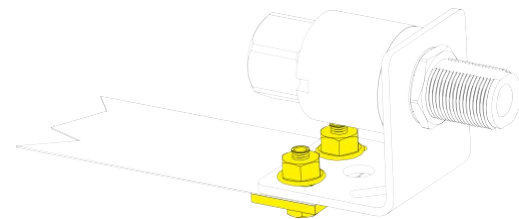
The SX™ device can be grounded using an N (Part # TLN) or Din (Part# TLD) terminal lug as shown. The bracket allows for multiple grounding configurations. Hardware for attaching a terminal lug as shown is included with the device.



### GROUNDING WITH A COPPER STRAP

Using flat copper strap is the most effective way to drain surge energy to the ground plane. When used in conjunction with a single point grounding system, such as the PB and PEEP grounded entry panels, the copper strap is especially effective in considerably reducing, and in some cases eliminating surge currents to the equipment.

If you wish to use a 1-½" flat copper strap (Part# CS112-25) to ground the SX™ to a grounding plane it will be necessary to purchase the 9100-0413 hardware package for each end of the strap. This hardware package includes the nuts, bolts, and sandwich plate. This method is the preferred method for effective surge drainage.



### IMPORTANT NOTE:

When grounding the SX™ to the PEEP grounding system a 6AWG grounding wire is acceptable if less than 12 inches. When not using a PEEP grounding system a Uni-Kit cable grounding kit must be used to effectively drain surge energy from the shield prior to the cable building entry point.

#### Also ask for our accessories and grounding catalog for:

- Single Point Ground Entry Panels
- Cable Shield Grounding Kits
- Tower Mounting Kits
- Weatherization Kits