

EMP COMMERCIAL AND DEFENSE TEMPEST POWERLINE FILTERS

ETS-Lindgren EMP/HEMP Power Line Filters offer excellent multi-stage over-voltage and EMI/RFI protection.



ETS-Lindgren EMP/HEMP Power Line filters offer excellent multi-stage over-voltage and EMI/RFI protection, and are designed to meet point-of-entry requirements of MIL-STD-188-125-1 & -2 for Short and Intermediate Pulses, in addition to high insertion loss performance for SCIF, TEMPEST, and other military commercial applications.

Key Features

- High Frequency Response Design
- Reliable Transient Suppression Elements
- Superior Insertion Loss Performance
- Extended Filter Life
- Pulse Current
- Wide Selection of Current Ratings
- Custom Designs Available

Features

Configurations

These filters are available in the following configurations:

- Individual, Stand-alone Single Circuit Filters (contact factory)
- “Twin” Dual Circuit Filters for Single Phase Installations
- Multiple Line Panel Filters for Facility Installations
 - Single Phase
 - Three Phase Performance

Performance

All EMP/HEMP filters meet or exceed the following performance and safety criteria:

- MIL-STD-188-125-1 & -2
- MIL-F-15733
- MIL-STD-220
- UL 1283
- IEC 60939
- LVD (2006/95/EC)

Electrical Specifications

Model
LRX-2010-EMP
LRX-2030-EMP
LRX-2060-EMP
LRX-2100-EMP
LRX-2250-EMP
LRX-2400-EMP
LPRX-2x30-EMP
LPRX-3x30-EMP
LPRX-4x30-EMP
LPRX-2x60-EMP
LPRX-3x60-EMP
LPRX-4x60-EMP
LPRX-2x100-EMP
LPRX-3x100-EMP
LPRX-4x100-EMP
LFPRX-2x250-EMP
LFPRX-3x250-EMP
LFPRX-4x250-EMP
LFPRX-2x400-EMP
LFPRX-3x400-EMP
LFPRX-4x400-EMP
LFPRX-2x600-EMP
LFPRX-3x600-EMP
LFPRX-4x600-EMP
LFPRX-3x800-EMP
LFPRX-4x800-EMP
LFPRX-3x1250-EMP
LFPRX-4x1250-EMP

Pulse Suppression Performance "E2"

MIL-STD-188-125 Acceptance Test, Intermediate Pulse Current Injection, Wave-shape 1.5/3000 μ s

Input Pulse Amplitude	MIL-STD-188-125 Requirement	Typical Filter Response
250 A	No Filter Damage or Performance Degradation	No Filter Damage or Performance Degradation

Pulse Suppression Performance "E1"

MIL-STD-188-125 Acceptance Test, Short Pulse Current Injection, Wave-sharp 20/500 ns

Input Pulse Amplitude	MIL-STD-188-125 Requirement and Filter Residual Let Through
250 A	<10 A
500 A	<10 A
1000 A	<10 A
1800 A	<10 A
2500 A	<10 A

Insertion Loss Performance

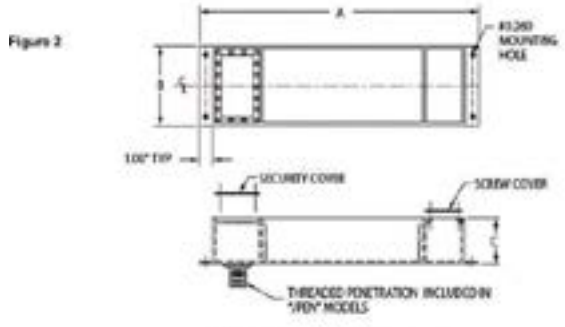
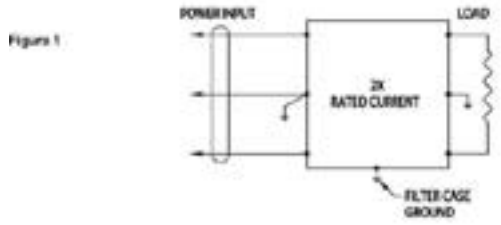
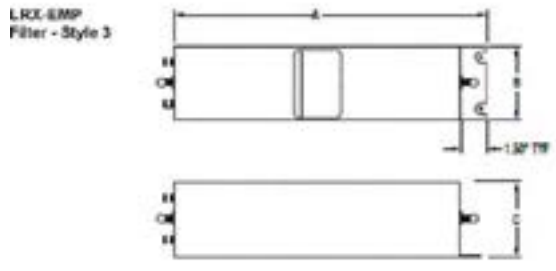
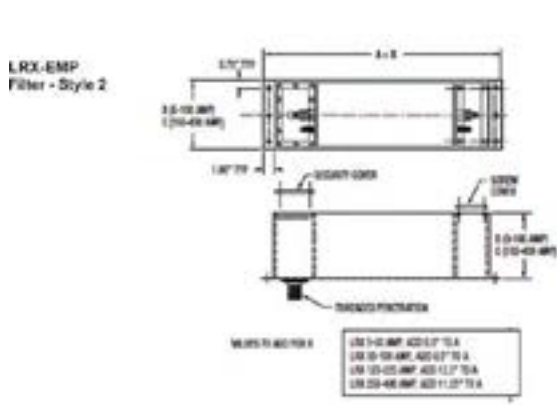
Minimum Loss in 50 Ω System with/without Load

Frequency	Insertion Loss
14 kHz - 40 GHz	100 dB

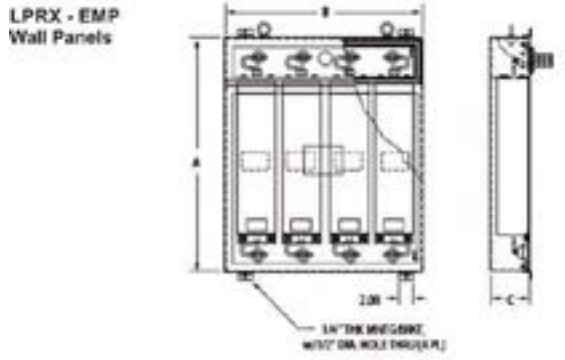
Ratings and Characteristics

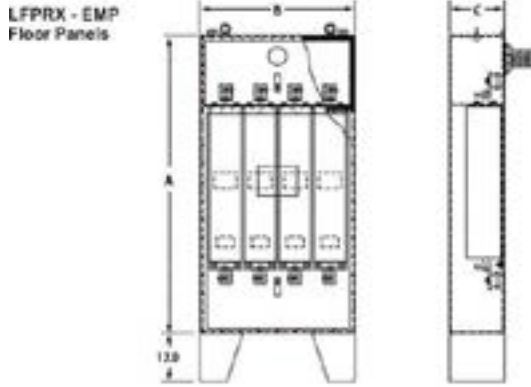
Rated Voltage	Test Voltage	Insulation Resistance	Discharge Resistors	Discharge Time	Maximum Temperature Rise on Full Load	Full Load Operating Temperature Range	Leakage Current at 250 VAC 50 Hz	Peak Surge Current
0 to 277/480 VAC 50/60 Hz	2250 VDC Each Line to Case per UL 12583 and LVD (Prior to Fitting Transient Suppressors)	>100 M Ω (Prior to Fitting Discharge Resistors)	Fitted Internally from Each Line to Case	<30 sec.	25 $^{\circ}$ C (77 $^{\circ}$ F)	-25 $^{\circ}$ C to 65 $^{\circ}$ C (-13 $^{\circ}$ F to 149 $^{\circ}$ F)	<10% of Rated Current	50 kA (8/ μ s)

Physical Specifications



1. GROUNDING USED FROM THE POWER AND OUTPUT WIRING COMPARTMENTS.
2. ADDITIONAL MOUNTING HOLES PROVIDED IN MOUNTING FLANGE ON 1 AND 4 LINE FILTERS.





Model	Case Width ("B")	Case Depth ("C")	Approximate Weight
LRX-2010-EMP	22.9 cm (9 in)	12.7 cm (5 in)	31.8 kg (70 lb)
LRX-2030-EMP	22.9 cm (9 in)	12.7 cm (5 in)	31.8 kg (70 lb)
LRX-2060-EMP	35.6 cm (14 in)	15.2 cm (6 in)	36.3 kg (80 lb)
LRX-2100-EMP	35.6 cm (14 in)	15.2 cm (6 in)	45.4 kg (100 lb)
LRX-2250-EMP	35.6 cm (14 in)	15.2 cm (6 in)	68.0 kg (150 lb)
LRX-2400-EMP	61.0 cm (24 in)	22.9 cm (9 in)	90.7 kg (200 lb)
LPRX-2x30-EMP	61.0 cm (24 in)	15.2 cm (6 in)	36.3 kg (80 lb)
LPRX-3x30-EMP	45.7 cm (18 in)	15.2 cm (6 in)	49.9 kg (110 lb)
LPRX-4x30-EMP	61.0 cm (24 in)	15.2 cm (6 in)	63.5 kg (140 lb)
LPRX-2x60-EMP	40.6 cm (16 in)	21.6 cm (8.5 in)	63.5 kg (140 lb)
LPRX-3x60-EMP	76.2 cm (30 in)	21.6 cm (8.5 in)	90.7 kg (200 lb)
LPRX-4x60-EMP	76.2 cm (30 in)	21.6 cm (8.5 in)	117.9 kg (260 lb)
LPRX-2x100-EMP	40.6 cm (16 in)	21.6 cm (8.5 in)	68.0 kg (150 lb)
LPRX-3x100-EMP	76.2 cm (30 in)	21.6 cm (8.5 in)	97.5 kg (215 lb)
LPRX-4x100-EMP	76.2 cm (30 in)	21.6 cm (8.5 in)	81.6 kg (180 lb)
LFPRX-2x250-EMP	50.8 cm (20 in)	35.6 cm (14 in)	163.3 kg (360 lb)
LFPRX-3x250-EMP	99.1 cm (39 in)	35.6 cm (14 in)	231.3 kg (510 lb)
LFPRX-4x250-EMP	99.1 cm (39 in)	35.6 cm (14 in)	299.4 kg (660 lb)
LFPRX-2x400-EMP	50.8 cm (20 in)	35.6 cm (14 in)	172.4 kg (380 lb)
LFPRX-3x400-EMP	99.1 cm (39 in)	35.6 cm (14 in)	244.9 kg (540 lb)
LFPRX-4x400-EMP	99.1 cm (39 in)	35.6 cm (14 in)	317.5 kg (700 lb)
LFPRX-3x600-EMP	119.4 cm (47 in)	50.8 cm (20 in)	430.9 kg (950 lb)
LFPRX-4x600-EMP	119.4 cm (47 in)	50.8 cm (20 in)	453.6 kg (1000 lb)
LFPRX-3x800-EMP	236.2 cm (93 in)	35.6 cm (14 in)	589.7 kg (1300 lb)
LFPRX-4x800-EMP	236.2 cm (93 in)	35.6 cm (14 in)	680.4 kg (1500 lb)
LFPRX-3x1250-EMP	254 cm (100 in)	50.8 cm (20 in)	771.1 kg (1700 lb)
LFPRX-4x1250-EMP	254 cm (100 in)	50.8 cm (20 in)	907.2 kg (2000 lb)

Product Charts

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