

## LP-WBX Series

- Filter based Protection Circuit
  - Broadband Outstanding IL/RL
  - DC Blocked for Superior Surge Performance
  - Ultra Broadband Multi-Strike Design
- Fully Weatherized Housing



## Lightning and Surge Protection for The 21st Century™

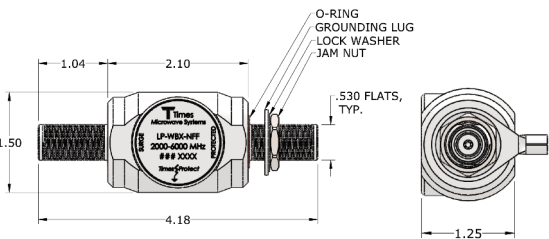
The LP-WBX-N high performance series uses a filter circuit to provide exceptional lightning protection over the 2000-6000MHz frequency band, covering both the unlicensed WiFi bands and several licensed operating bands.

Unlike competitive protectors, the white bronze plated construction of the LP-WBX-N series eliminates potential galvanic corrosion issues and provides long life in hostile environments. The fully weatherized housing is sealed to IP65 allowing for outdoor as well as indoor installation.

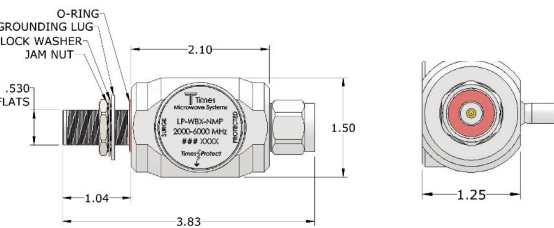
### LP-WBX-N Series:

- LP-WBX-NFF  
N Female connectors on surge and protected sides
- LP-WBX-NMP  
N Male connector on protected side with N Female connector on surge side
- LP-WBX-NMS  
N Male connector on surge side with N Female connector on protected side

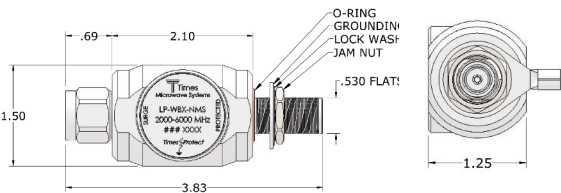




• LP-WBX-NFF  
2000 - 6000MHz N Type F/F



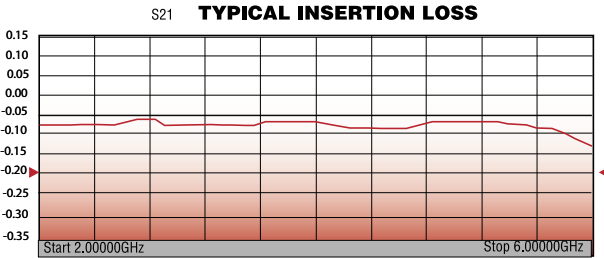
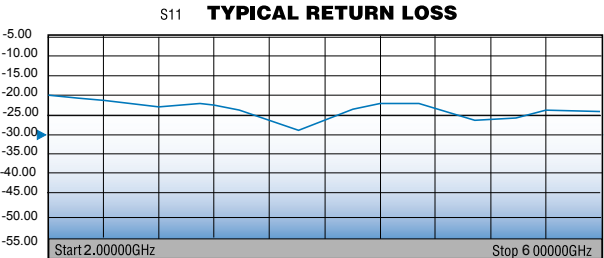
• LP-WBX-NMP  
2000 - 6000MHz N Type M on Protected



• LP-WBX-NMS  
2000 - 6000MHz N Type M on Surge

\*All dimensions shown in inches

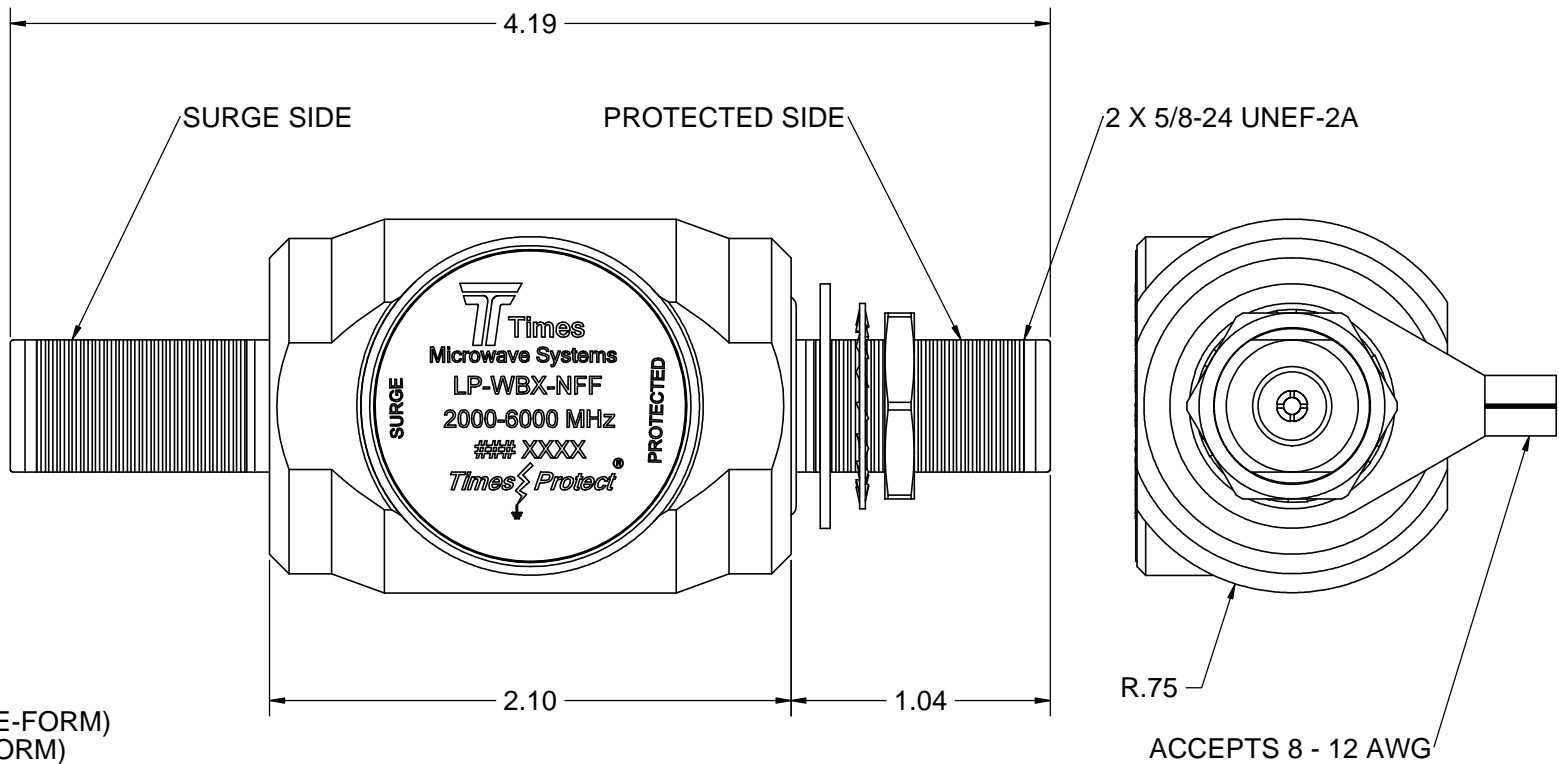
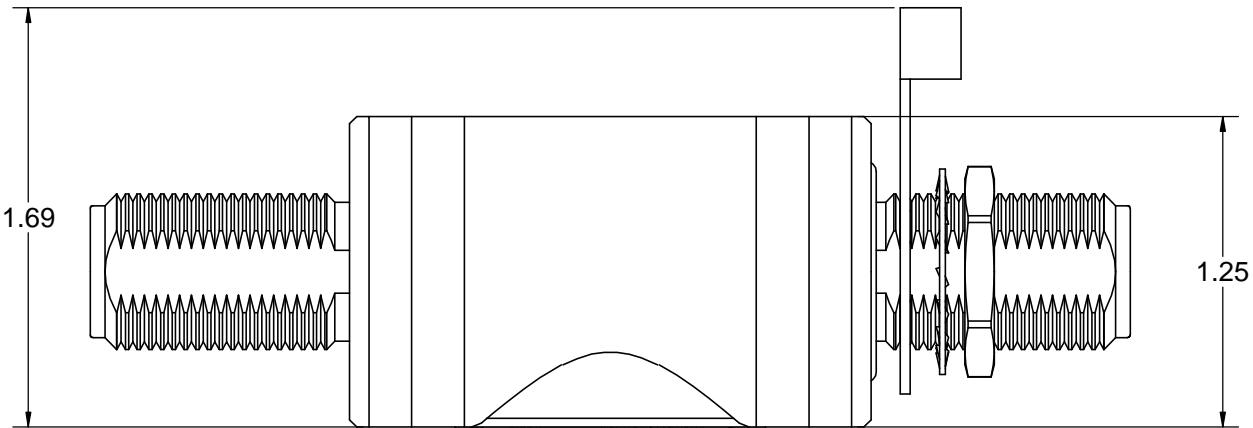
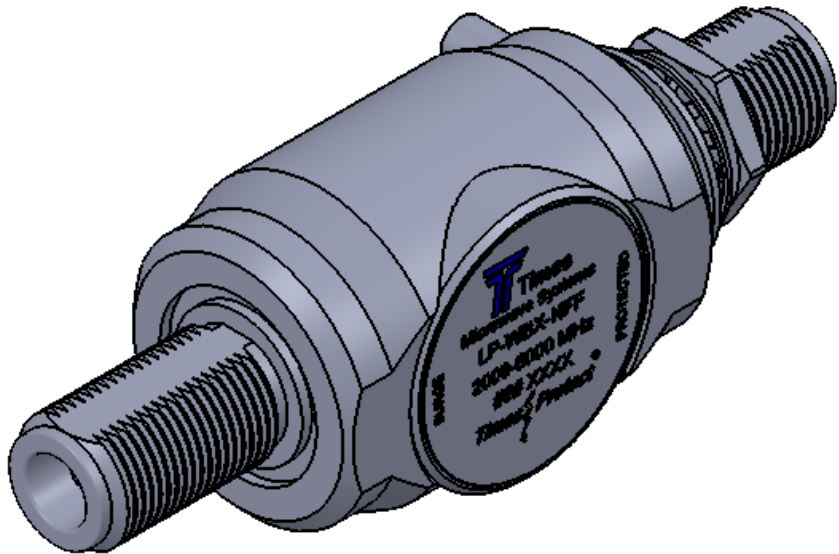
Electrical Specifications		
Impedance	50 Ω	
Frequency Range	2000 - 6000 MHz	
VSWR/Return Loss	<1.2:1 / <-20dB	
Insertion Loss	< 0.2dB	
Average Power	50W	
Maximum Surge Current	20kA max/10kA multiple (8x20μs wave-form)	
Residual Pulse Voltage	< 3V (6kV/3kA 1.2x50/8x20μs wave-form)	
Energy Throughput	<150nJ	
Protection Circuit	DC Blocked	
Mechanical / Environmental Specifications		
Temp Range Storage/Operating	-40°C - +85°C	
Weatherization	IEC 60529 & IP65	
Thermal Shock	US MIL-STD 202, Meth.107,Cond.B	
Vibration	US MIL-STD 202, Meth.204,Cond.B	
Shock	US MIL-STD 202, Meth.213,Cond.I	
RoHS Compliant	Yes	
Mating Life Cycle	> 500	
Recommended Coupling Nut Torque	7-10 in-lb	
Material Specifications		
Component	Material	Plating
Body	Aluminum	White Bronze
Connector Housing	Brass	White Bronze
Inner Conductor Male	Brass	Silver
Inner Conductor Female	Phosphor Bronze	Silver
Coupling Nut	Brass	White Bronze
Insulator	PTFE	--
O-Ring	Silicone Rubber	--



World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 • Tel: 203-949-8400, 1-800-867-2629 • Fax: 203-949-8423  
International Sales: 4 School Brae, Dysart, Kirkcaldy, Fife, Scotland KY1 2XB UK • Tel: +44(0)1592655428  
China Sales: No. 318 Yuan Shan Road, Shanghai 201108 China • Tel: 86-21-51761234 • Fax: 86-21-64424098  
www.timesmicrowave.com

NOTICE OF PROPRIETARY RIGHTS  
THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA, INCLUDING TRADE SECRETS, PROPRIETARY TO TIMES MICROWAVE SYSTEMS. DISCLOSURE OF THIS DATA IS EXPRESSLY CONDITIONED UPON YOUR ASSENT THAT ITS USE IS LIMITED TO USE WITHIN YOUR COMPANY ONLY. ANY OTHER USE IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF TIMES MICROWAVE SYSTEMS.

REV.	REVISION DESCRIPTION	DFM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	M.E.	03/24/14	M.E.	03/24/14



NOTES:

1. ELECTRICAL PERFORMANCE

IMPEDANCE: 50 OHMS  
OPERATING FREQUENCY: 2000-6000 MHz  
VSWR/RETURN LOSS: < 1.2:1 / < -20 dB  
INSERTION LOSS: < 0.2 dB  
AVERAGE POWER: 50 W  
MAX SURGE CURRENT: 20 kA MAX / 10 kA MULTIPLE (8X20 us WAVE-FORM)  
RESIDUAL PULSE VOLATGE: < 3 V (6kV/3kA 1.2X50/8X20us WAVE-FORM)  
ENERGY THROUGHPUT RATING: < 150 nJ  
PROTECTION CIRCUIT: DC BLOCKED

2. ENVIRONMENTAL CHARACTERISTICS

STORAGE/OPERATING TEMPERATURE: -40C TO +85C  
WEATHERIZATION: IP65  
VIBRATION: MIL-STD 202, METHOD 204, CONDITION B  
RoHS COMPLIANT

3. MATERIAL AND FINISH

INNER CONNECTOR FEMALE: PHOSPHOR BRONZE, SILVER PLATE  
BODY: ALUMINUM, WHITE BRONZE PLATE  
CONNECTOR HOUSING: BRASS, WHITE BRONZE PLATE  
COUPLING NUT: BRASS, WHITE BRONZE PLATE  
INSULATOR: PTFE  
O-RING: SILICONE RUBBER

MATERIAL:



USED ON ASSY.

DRAFTSMAN	M. ELLIS	03/24/14
CHECKER	M. ELLIS	03/24/14
APPROVED	M. ELLIS	03/24/14

UNLESS OTHERWISE SPECIFIED	
ALL DIMENSIONS ARE IN INCHES	
MACHINED SURFACES FINISH 32 RMS MAX.	
REMOVE ALL BURRS .005 MAX. BREAK	
MACHINE CORNERS .005 MAX. FILLET R.	
TOLERANCES ON DECIMALS	
.XX ± .01	.XXX ± .005
ANGLES ± 1°	FRACTIONS ± 1/32
DO NOT SCALE DRAWING	

TIMES MICROWAVE SYSTEMS

TITLE:  
SURGE PROTECTOR  
N FEMALE TO N FEMALE  
2000-6000 MHz

DWG. SIZE	DRWG. NO.	REV.
C	LP-WBX-NFF	A
CODE IDENT.	SCALE:	SHEET 1 OF 1
68999	2:1	