ISO 9001 Certified

Times Protect®

LP-HBX-D Series

- *DC Blocked for Maximum RF Surge Protection*
- *Multi-Strike Capability*
- *Broadband Performance from 100MHz up to 700MHz*
- *Exceptional RF Characteristics*
- *High Power Design for Single & Multi Channel Coax Applications*
- *Universal Mounting/Grounding Bracket Included*

Lightning and Surge Protection for The 21st Century™

The **Times Protect®** LP-HBX-D series high performance surge arrestor series addresses applications in the 100MHz-700MHz spectrum. Our unique DC blocking technology employed in this design provides optimum isolation of the antenna port from the protected equipment port for maximum surge protection. LP-HBX-D series surge protectors have exceptional RF performance and are constructed from the highest quality materials for unsurpassed durability and longevity. These units meet and surpass all applicable industry standards.

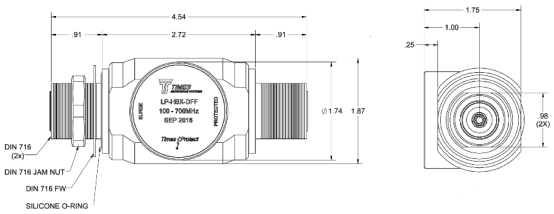
The LP-HBX-D series product family is available with DIN connector configurations to satisfy various installation requirements.

LP-HBX-D Series:

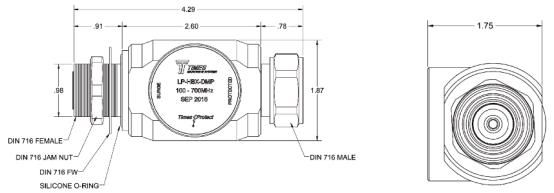
- LP-HBX-DFF
  DIN Female connectors on surge and protected sides
- LP-HBX-DMP
  DIN Male connector on protected side with DIN Female connector on surge side
- LP-HBX-DMS
  DIN Male connector on surge side with DIN Female connector on protected side

TIMES MICROWAVE SYSTEMS
An Amphenol Company

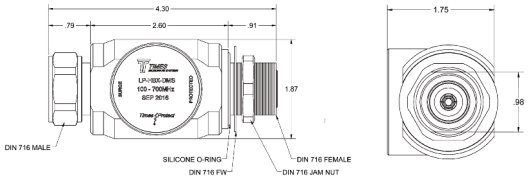
Times-Protect®



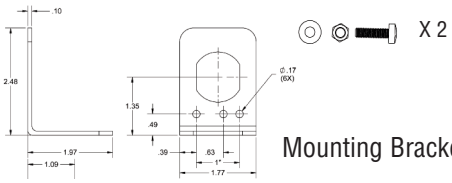
• LP-HBX-DFF
DC Blocked DIN Type Female/Female



• LP-HBX-DMP
DC Blocked DIN Type Male on Protected



• LP-HBX-DMS
DC Blocked DIN Type Male on Surge



Mounting Bracket Included

Electrical Specifications

Impedance	50 Ω
Frequency Range	100-700 MHz
VSWR/Return Loss	<1.15:1 / <-23dB (100-150 MHz) <1.1:1 / <-26dB (150-700 MHz)
Insertion Loss	< 0.1dB
Impulse Discharge Current	20KA multiple (8x20µs wave-form)
Residual Pulse Voltage	<5V@6kV/3kA (8x20µs wave-form)
Energy Throughput Rating	<1.4µJ @ 6kV/3kA (8x20µs wave-form)
Power Handling	750 Watts
Protection Circuit	DC Blocked

Mechanical / Environmental Specifications

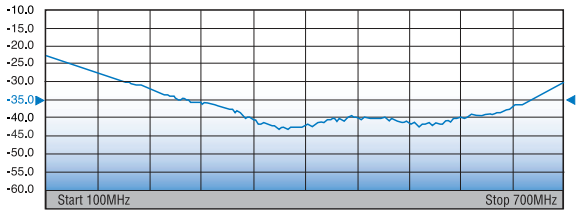
Temp Range Storage/Operating	-40°C - +85°C / -40°C - +50°C
Weatherization	IP 65
Thermal Shock	US MIL-STD 202, Meth.107,Cond.B
Vibration	US MIL-STD 202, Meth.204,Cond.B
Shock	US MIL-STD 202, Meth.213,Cond.I
RoHS Compliant	Yes
Mating Life Cycle	> 500
Recommended Coupling Nut Torque	220 to 300 in-lb
Unit Weight	0.48kg/pc / 1.06lb

Material Specifications

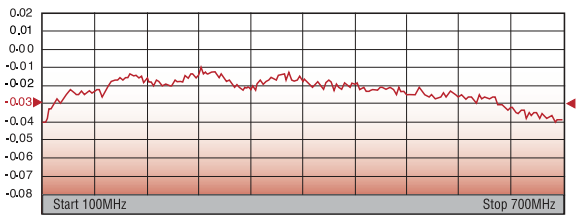
Component	Material	Plating
Body	Aluminum	White Bronze
Inner Conductor Male	Brass	Silver
Inner Conductor Female	Phosphor Bronze	Silver
Coupling Nut	Brass	White Bronze
Insulator	PTFE	--
O-Ring	Silicone Rubber	--

*All dimensions shown in inches

S11 **TYPICAL RETURN LOSS**



S21 **TYPICAL INSERTION LOSS**



TIMES MICROWAVE SYSTEMS
An Amphenol Company

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

© 2016, Times Microwave Systems, Wallingford, CT 06492

ISO 9001 Certified

Times Protect®

LP-HBX-N Series

- *DC Blocked for Maximum Surge Protection*
- *Multi-Strike Capability*
- *Broadband Performance from 100MHz up to 700MHz*
- *Exceptional RF Characteristics*
- *High Power Design for Single & Multi Channel Applications*

Lightning and Surge Protection for The 21st Century™

The **Times Protect®** LP-HBX-N series high performance surge arrestor series addresses applications in the 100MHz-700MHz spectrum. Our unique DC blocking technology employed in this design provides optimum isolation of the antenna port from the protected equipment port for maximum surge protection. LP-HBX-N series surge protectors have exceptional RF performance and are constructed from the highest quality materials for unsurpassed durability and longevity. These units meet and surpass all applicable industry standards.

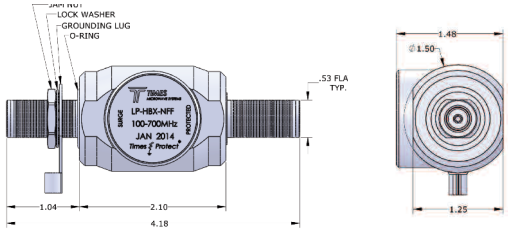
The LP-HBX-N series product family is available with N connector configurations to satisfy various installation requirements.

LP-HBX-N Series:

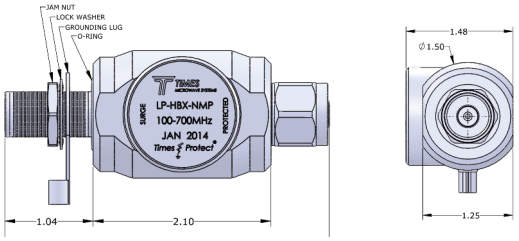
- LP-HBX-NFF
  N Female connectors on surge and protected sides
- LP-HBX-NMP
  N Male connector on protected side with N Female connector on surge side
- LP-HBX-NMS
  N Male connector on surge side with N Female connector on protected side

TIMES MICROWAVE SYSTEMS
An Amphenol Company

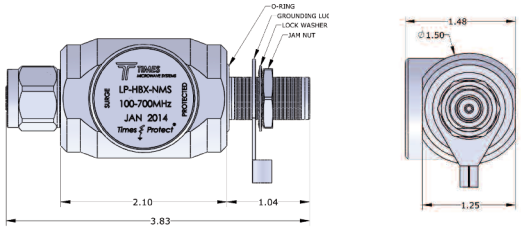
Times-Protect®



• LP-HBX-NFF
100-700MHz DC Blocked N Type F/F



• LP-HBX-NMP
100-700MHz DC Blocked N Type M on Protected



• LP-HBX-NMS
100-700MHz DC Blocked N Type M on Surge

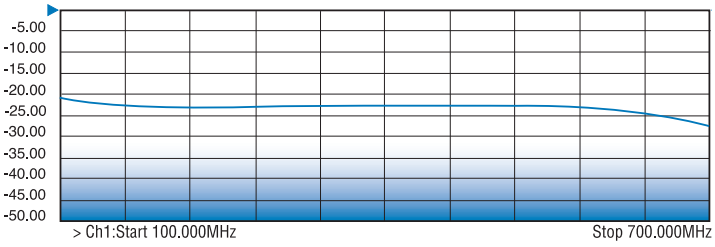
*All dimensions shown in inches

Electrical Specifications	
Impedance	50 Ω
Frequency Range	100-700 MHz
VSWR/Return Loss	<1.15:1 / <-23dB
Insertion Loss	< 0.1dB
Impulse Discharge Current	20KA multiple (8x20µs wave-form)
Residual Pulse Voltage	<5V@6kV/3kA (8x20µs wave-form)
Energy Throughput Rating	<1.4µJ (6kV/3kA 1.2x50/8x20µs wave-form)
Power Handling	750 Watts
Protection Circuit	DC Blocked

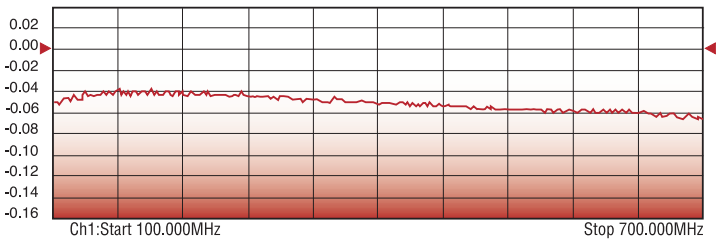
Mechanical / Environmental Specifications	
Temp Range Storage/Operating	-40°C - +85°C / -40°C - +50°C
Weatherization	IP 65
Thermal Shock	US MIL-STD 202, Meth.107,Cond.B
Vibration	US MIL-STD 202, Meth.204,Cond.B
Shock	US MIL-STD 202, Meth.213,Cond.I
RoHS Compliant	Yes
Mating Life Cycle	> 500
Recommended Coupling Nut Torque	7 to 10 in-lb
Unit Weight	0.2kg/pc / 0.4lb

Material Specifications		
Component	Material	Plating
Body	Aluminum	White Bronze
Inner Conductor Male	Brass	Silver
Inner Conductor Female	Phosphor Bronze	Silver
Coupling Nut	Brass	White Bronze
Insulator	PTFE	--
O-Ring	Silicone Rubber	--

S11 **TYPICAL RETURN LOSS**



S21 **TYPICAL INSERTION LOSS**



TIMES MICROWAVE SYSTEMS
An Amphenol Company

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

© 2014, Times Microwave Systems, Wallingford, CT 06492