



ISO 9001 Certified

## LP-STRH-D Series

- Long Term Evolution (LTE) and 700 MHz Public Safety Applications
- Excellent PIM Performance
- Outstanding IL/RL Characteristics
- DC Blocked for Superior Surge Performance
- High Surge Current/Power Rated
- Broadband Multi-Strike Design
- Fully Weatherized Housing
- Solid Brass Construction for Durability and Long Life



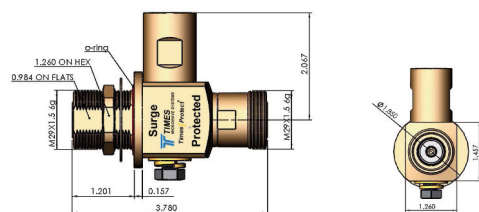
100% PIM  
Tested

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

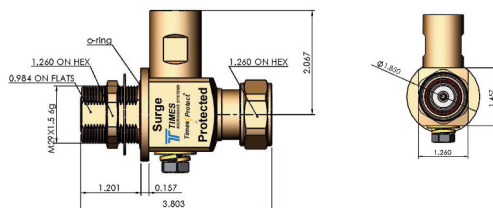
The **Times Protect®** high performance series is an exceptional DC blocked design for outstanding surge performance, capable of withstanding multiple lightning strikes. The operating band width of 700MHz-2700MHz makes the LP-STRH-D series suitable for a broad range of applications. This design covers the 700MHz Band for Public Safety Services as well as LTE (Long Term Evolution) applications. With its excellent passive intermodulation performance, outstanding RF performance over the entire operating band and superior power handling capability, the LP-STRH-D product family is unequalled. Its fully weatherized housing meeting IP67 standard allows for outdoor as well as indoor installation.

- LP-STRH-DFF  
716 DIN Female connectors on surge and protected side
- LP-STRH-DMP  
716 DIN Male connector on protected side with 716 DIN Female connector on surge side
- LP-STRH-DMS  
716 DIN Male connector on surge side with 716 DIN Female connector on protected side

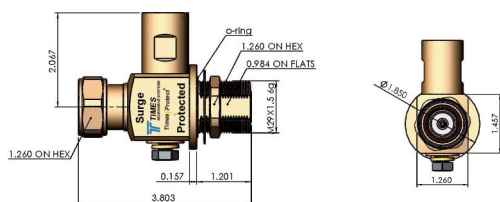




- LP-STRH-DFF  
700-2700MHz DC Blocked DIN Type F/F



- LP-STRH-DMP  
700-2700MHz DC Blocked DIN Type M on Protected



- LP-STRH-DMS  
700-2700MHz DC Blocked DIN Type M on Surge

\*All dimensions shown in inches

## Electrical Specifications

Impedance	50 Ω
Frequency Range	700-2700 MHz
VSWR / Return Loss	<1.1:1 / <-26dB (700-2700MHz)
Insertion Loss	< 0.1dB
Average Power	700 Watts
PIM	<-160 dBc
Maximum Surge Current	50kA (8/20μs wave-form)
Residual Pulse Voltage	< 100V (50kA 8/20μs wave-form)
Residual Pulse Voltage	< 1V (4kV/2kA 1.2x50/8x20μs wave-form)
Energy Throughput Rating	< 1nJ (4kV/2kA 1.2x50/8x20μs wave-form)
Protection Circuit	DC Blocked

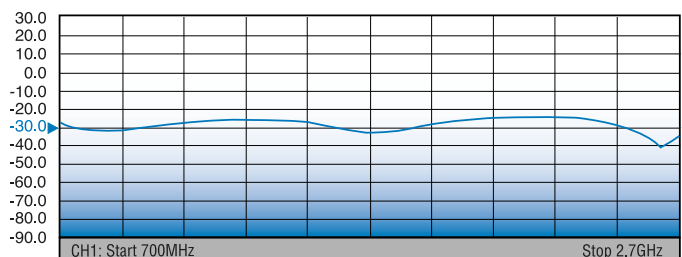
## Mechanical / Environmental Specifications

Temp Range Storage/Operating	-40°C - +85°C
Weatherization	IEC 60068 55/155/56 & IP67
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 lb-in
Unit Weight	0.6kg/pc    \    1.32lb

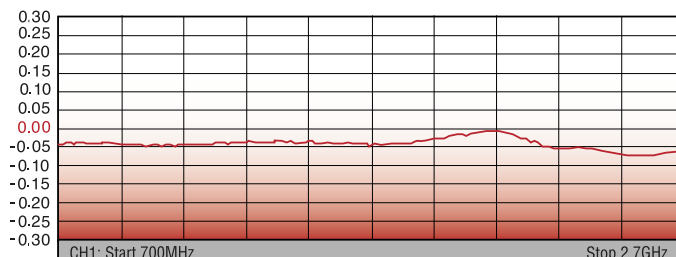
## Material Specifications

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

## S11 TYPICAL RETURN LOSS



## S21 TYPICAL INSERTION LOSS



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[www.timesmicrowave.com](http://www.timesmicrowave.com)

LP-STRH-D-1 11/16

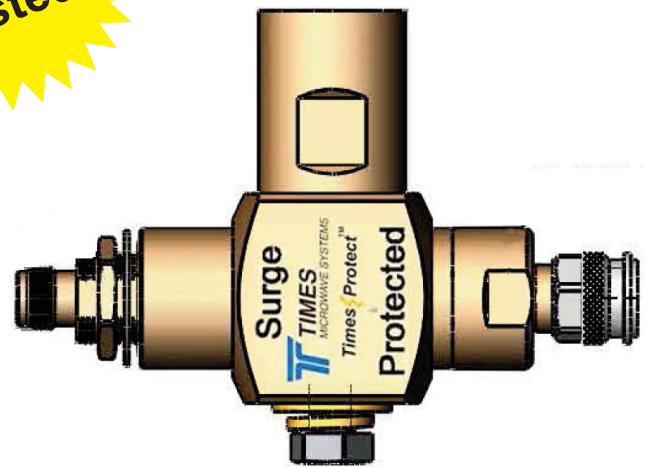


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### LP-STRH-N Series

- Excellent PIM Performance
- Outstanding IL/RL Characteristics
- DC Blocked for Superior Surge Performance
- High Surge Current Rating
- Broadband Multi-Strike Design
- High Power Rated
- Fully Weatherized Housing
- Solid Brass Construction for Durability and Long Life

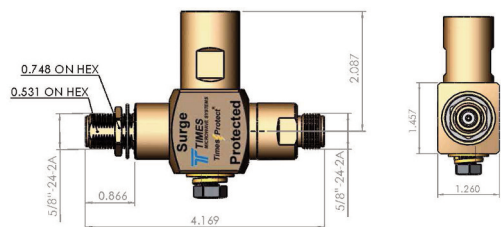


### Lightning and Surge Protection for The 21st Century™

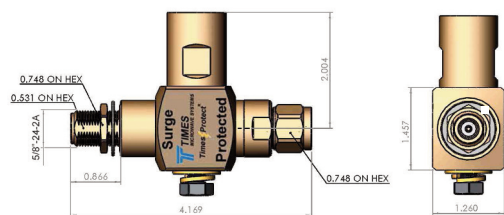
The **Times Protect®** LP-STRH-N is an exceptional DC blocked design for superior surge performance, capable of withstanding multiple lightning strikes. The operating band width of 700MHz-2700MHz makes the LP-STRH-N suitable for a broad range of applications. With its excellent passive intermodulation performance, outstanding RF performance over the entire operating band and excellent power handling capability, the LP-STRH-N product is unequalled. Its fully weatherized housing meeting IP67 standard allows for outdoor as well as indoor installation.

#### LP-STRH-N Series:

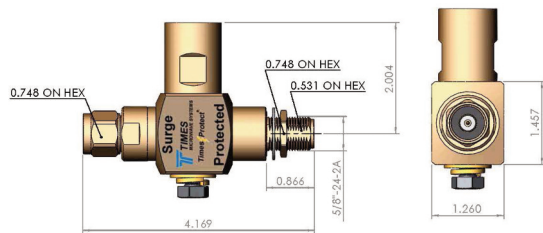
- LP-STRH-NFF  
N Female connectors on surge and protected sides
- LP-STRH-NMP  
N Male connector on protected side with N Female connector on surge side
- LP-STRH-NMS  
N Male connector on surge side with N Female connector on protected side



- LP-STRH-NFF  
700-2700MHz DC Blocked N Type F/F



- LP-STRH-NMP  
700-2700MHz DC Blocked N Type M on Protected



- LP-STRH-NMS  
700-2700MHz DC Blocked N Type M on Surge

\*All dimensions shown in inches

## Electrical Specifications

Impedance	50 $\Omega$
Frequency Range	700-2700 MHz
VSWR/Return Loss	< 1.2:1 / <-24dB (700-840MHz) < 1.1:1 / <-26dB (840-2700MHz)
Insertion Loss	< 0.1dB
Average Power	500 Watts
PIM	<-160 dBc
Maximum Surge Current	50kA (8x20 $\mu$ s wave-form)
Residual Pulse Voltage	< 100V (50kA 8x20 $\mu$ s wave-form)
Residual Pulse Voltage	< 1V (4kV/2kA 1.2x50/8x20 $\mu$ s wave-form)
Energy Throughput Rating	< 1nJ (4kV/2kA 1.2x50/8x20 $\mu$ s wave-form)
Protection Circuit	DC Blocked

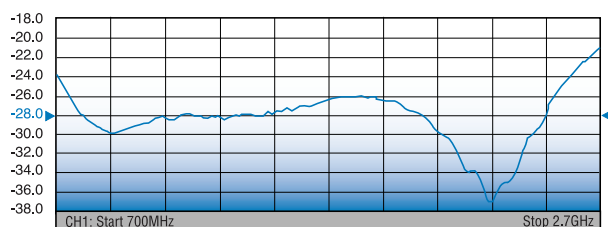
## Mechanical / Environmental Specifications

Temp Range Storage/Operating	-40°C - +85°C
Weatherization	IEC 60068 55/155/56 & IP67
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
Wear/Mating Cycles	500 minimum
Recommended Coupling Nut Torque	7 to 10 in-lb
Unit Weight	0.53kg/pc      1.17lb

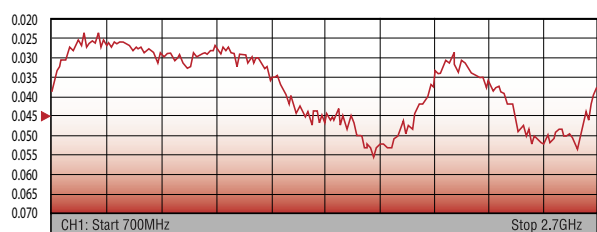
## Material Specifications

Component	Material	Plating
Body	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	--

S11 TYPICAL RETURN LOSS



S21 TYPICAL INSERTION LOSS







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## LP-STRH-4.3-10 Series

- Excellent PIM Performance
- Outstanding IL/RL Characteristics
- DC Blocked for Superior Surge Performance
- High Surge Current Rating
- Broadband Multi-Strike Design
- High Power Rated
- Fully Weatherized Housing
- Solid Brass Construction for Durability and Long Life

100% PIM  
Tested



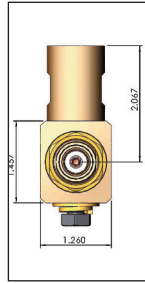
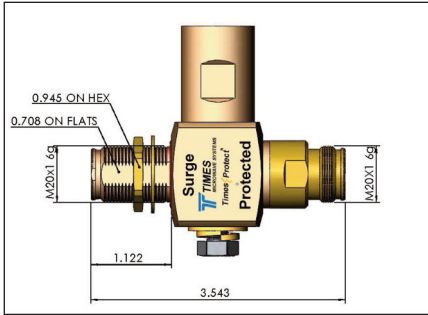
## Lightning and Surge Protection for The 21st Century™

The **Times Protect®** LP-STRH-4.3-10 series is an exceptional DC blocked design for superior surge performance, capable of withstanding multiple lightning strikes. The operating band width of 700MHz-2700MHz makes the LP-STRH-4.3-10 suitable for a broad range of applications. With its excellent passive intermodulation performance, outstanding RF performance over the entire operating band and excellent power handling capability, the LP-STRH-4.3-10 product is unequalled. Its fully weatherized housing meeting IP67 standard allows for outdoor as well as indoor installation.

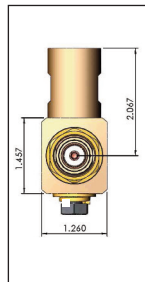
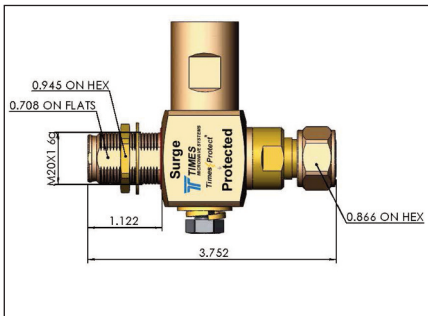
### LP-STRH-4.3-10 Series:

- LP-STRH-43FF - 4.3-10 female connector on surge and protected side
- LP-STRH-43MP - 4.3-10 male connector on protected side with 4.3-10 female connector on surge side
- LP-STRH-43MS - 4.3-10 male connector on surge side with 4.3-10 female connector on protected side

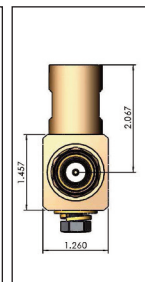
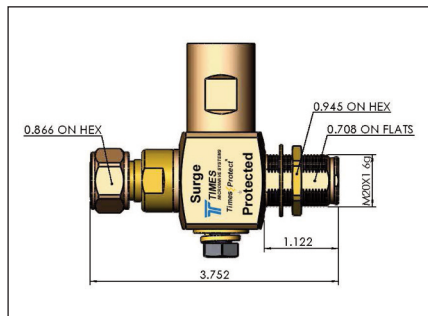




• LP-STRH-43FF



• LP-STRH-43MP



• LP-STRH-43MS

\*All dimensions shown in inches

## Electrical Specifications

Impedance	50 Ω
Frequency Range	700-2700 MHz
VSWR/Return Loss	< 1.15:1 / <-24dB
Insertion Loss	< 0.1dB
Average Power	750 Watts
PIM	<-160 dBc
Maximum Surge Current	50kA (8x20μs wave-form)
Residual Pulse Voltage	< 100V (50kA 8x20μs wave-form)
Residual Pulse Voltage	< 1V (4kV/2kA 1.2x50/8x20μs wave-form)
Energy Throughput Rating	< 1nJ (4kV/2kA 1.2x50/8x20μs wave-form)
Protection Circuit	DC Blocked

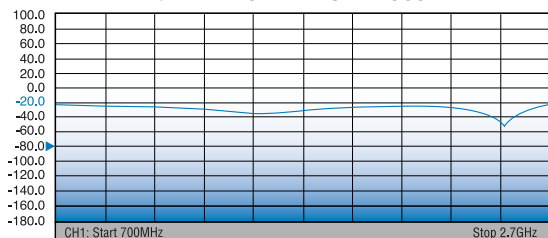
## Mechanical / Environmental Specifications

Temp Range Storage/Operating	-40°C - +85°C
Weatherization	IEC 60068 55/155/56 & IP67
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
Wear/Mating Cycles	500 minimum
Recommended Coupling Nut Torque	90 in-lb
Unit Weight	0.53kg/pc 1.17lb

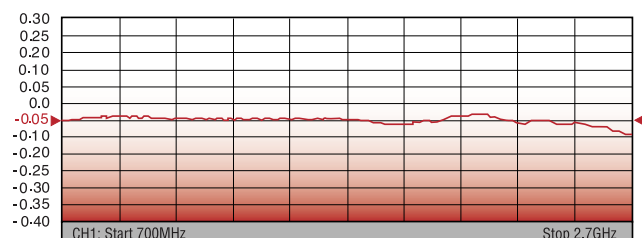
## Material Specifications

Component	Material	Plating
Body	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	--

S11 TYPICAL RETURN LOSS



S21 TYPICAL INSERTION LOSS



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LP-STRH-4.3-10 06/16