



LP-HBR-U Series

- 1.8MHz to 100MHz
- Covers 160-6 Meter Bands
- 2 kW Average RF Power Rating
- DC Blocked RF Path
- Multi-Strike Capability
- Less Than 0.1 dB Insertion Loss
- UHF Connectors
- White Bronze Plated Body
- IP-65 Rated for Outdoor Use
- Bulkhead or Flange Installation



ISO 9001 Certified



Lightning and Surge Protection for The 21st Century™

The **Times Protect**® LP-HBR-U series high performance surge arrester series addresses applications in the 1.8MHz - 100MHz spectrum that includes the 160-6 meter amateur radio bands.

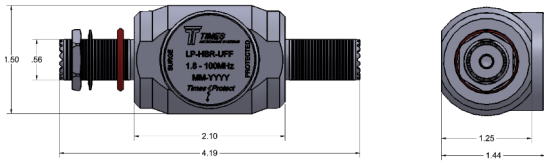
Our unique DC blocking technology employed in this gas tube design provides optimum isolation of the antenna port from the protected equipment port for maximum surge protection. LP-HBR-U series surge protectors have exceptional RF performance and are constructed from the highest quality materials for unsurpassed durability and longevity. They equal or surpass all applicable industry standards.

The LP-HBR-U series product family is available with three connector configurations to satisfy various installation requirements.

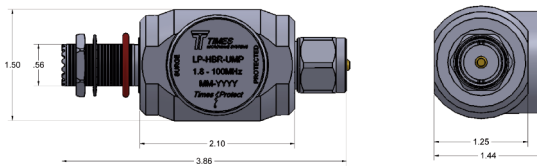
LP-HBR-U Series:

- LP-HBR-UFF
UHF Female connectors on surge and protected sides
- LP-HBR-UMP
UHF Male connector on protected side with UHF Female connector on surge side
- LP-HBR-UMS
UHF Male connector on surge side with UHF Female connector on protected side

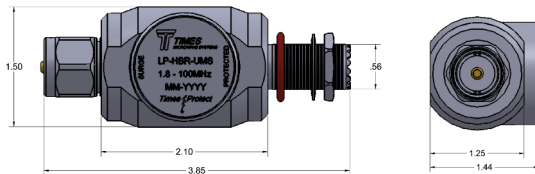
Times-Protect®



- LP-HBR-UFF
1.8 - 100MHz DC Blocked UHF Type F/F



- LP-HBR-UMP
1.8 - 100MHz DC Blocked UHF Male on Protected Side



- LP-HBR-UMS
1.8 - 100MHz DC Blocked UHF Male on Surge Side



LP-BFU-AL Bracket (Included)

*All dimensions shown in inches

Electrical Specifications

| | |
|----------------------------|-----------------------------|
| Impedance | 50 Ω |
| Frequency Range | 1.8 MHz - 100MHz |
| VSWR/Return Loss | <1.06:1 / <-30dB |
| Insertion Loss | < 0.1dB |
| Maximum Peak RF Voltage | 4400 Volts |
| Maximum Surge Current | 20 kA Single Strike |
| Energy Throughput Rating | <12mJ |
| Power Handling - Average | 2000 Watts |
| Impulse Spark-Over Voltage | 2000 Volts Nominal |
| DC Turn On Voltage | 1400 Volts Nominal |
| Protection Circuit | DC Blocked, Uni-Directional |

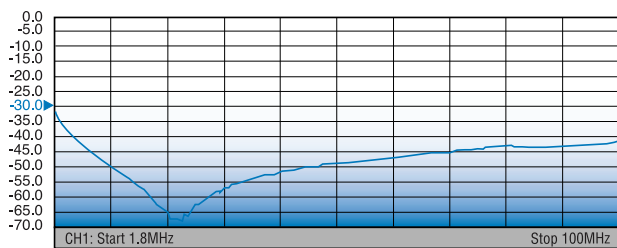
Mechanical / Environmental Specifications

| | |
|---------------------------------|-------------------------------|
| Temp Range Storage/Operating | -40°C - +85°C / -40°C - +50°C |
| Weatherization | IP-65 |
| Vibration | US MIL-STD 202, Method 204-B |
| RoHS Compliant | Yes |
| Mating Life Cycle | > 500 |
| Recommended Coupling Nut Torque | 7 to 10 in-lb |
| Unit Weight | 8.0 oz / 227g |

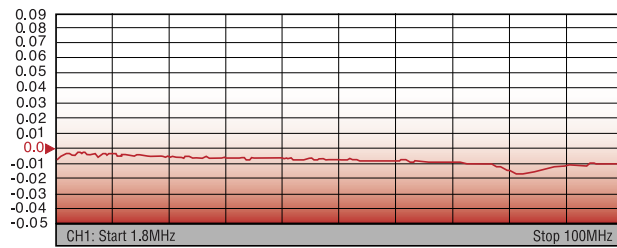
Material Specifications

| 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



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