



**HIGH VOLTAGE**  
POWER SOLUTIONS, INC.

**HE500**  
**120/240VAC**  
**1Ø, 3W**

**SECONDARY**  
**SURGE**  
**"LIGHTNING"**  
**ARRESTER**

## FEATURES

- Industrial/Commercial Version
- MOV Circuit Design
- Made in America utilizing American Components
- Cost Effective
- Reliable Solid-State Protection
- Maintenance Free
- Molded Plastic Case
- Threaded 1/2" NPT conduit nipple with locknut
- 18 " Stranded 12 AWG color coded leads
- Suitable for indoor or outdoor installation
- Automatic Recovery, Self Restoring

## DESCRIPTION

The HE500 is a MOV (Metal Oxide Varistor) based hardwired Secondary Surge Arrester, often referred to as a Lightning Arrester. The device is designed to protect electrical equipment from damaging effects of Spikes (+) and Notches (-) caused by lightning, utility switching, insulation arcing, electrical motor cycling, and other large or sudden changes in electrical power flow on incoming AC power lines.

The HE500 is a two pole, single phase, three wire arrester intended to protect 120/240 VAC systems. The epoxy encapsulated arrester is designed to be easily installed in any position indoors or outdoors utilizing the integral 1/2" threaded nipple and supplied metal lock nut.

The housing is molded from flame retardant plastic that is both weather and UV resistant, and complies with the UL standard for strength and flame resistance properties. The arrester is sealed with UL component recognized epoxy potting compound. The HE500 has three 18" long, 12 AWG multi-stranded leads that are color coded for ease of installation.

The HVPSI HE500 is ideal protection for outdoor lighting and pole lamps, panelboards, oilfield pumps, workshops, irrigation and sump pumps, refrigeration systems, farm equipment including milking machines and poultry processing equipment, electric motors and controls, heat pumps and air conditioning equipment and many other electrical devices.

The HE500 utilizes a single MOV per pole to reduce the potential load balancing/sharing problems during operation.

Rev 5, May 2010



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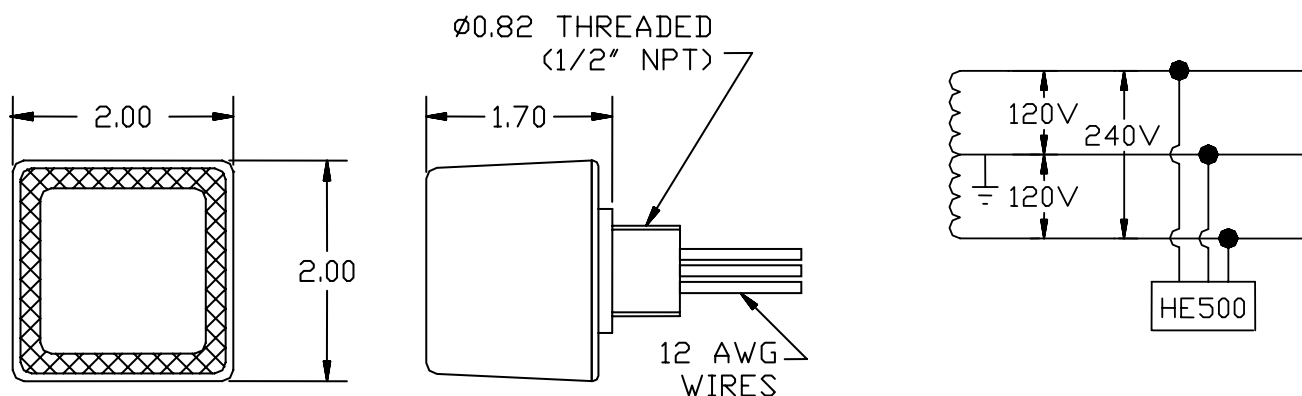
# ELECTRICAL CHARACTERISTICS

# HE500

PART NUMBER	SERVICE VOLTAGE AC	PHASE	WIRE CONFIGURATION	TYPICAL CLAMP VOLTAGE 8 X 20uS Current Wave (Line to Ground)				
				1.5kA	5kA	10kA	20kA	25kA
HE500	120/240V 175/300V Max (rms)	SINGLE	Line 1 (Black) Line 2 (Black) Neutral/Ground (White)	500V <sup>(1)</sup> 625V <sup>(2)</sup>	650V <sup>(1)</sup> 950V <sup>(2)</sup>	750V <sup>(1)</sup> 1400V <sup>(2)</sup>	950V <sup>(1)</sup> 2200V <sup>(2)</sup>	1050V <sup>(1)</sup> 2600V <sup>(2)</sup>

(1) 1" leads (2) 18" leads

## DIMENSIONS AND WIRING DIAGRAMS



### ARCHITECT and ENGINEERS SUGGESTED SPECIFICATIONS

The single phase, three wire Secondary Surge Arrester for 120/240 volt AC service or machine equipment shall be a High Voltage Power Systems Model HE500. The lightning arrester shall be of a single MOV per pole design and provide protection for Category C Transient Surges as defined in ANSI C62.41 (Formerly IEEE Std. 587-1980) without degradation of the components. The surge protector shall protect between each line and neutral/ground conductor. The enclosure shall be molded of fire retardant plastic. The unit will be sealed with a UL component recognized epoxy potting compound to minimize moisture and pollution intrusion. A one-half inch conduit nipple and metal lock nut shall be provided. 18 inch, stranded 12 gauge color coded leads shall be provided. The arrester shall carry a one year warrantee.

HIGH VOLTAGE POWER SOLUTIONS, INC. reserves the right to make changes in these specifications at any time and without notice in order to supply the best product possible.  
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### SPECIFICATIONS and STANDARDS

TECHNOLOGY: Metal Oxide Varistors (MOV) each line to neutral/ground.  
 PEAK SURGE CURRENT: (8x20uS) 25,000 Amps  
 M C O V: 175 VAC rms (Line to Neutral).  
 ENCLOSURE: Black molded flame retardant plastic housing with 1/2" x 20 threaded nipple. The housing is weatherproof and UV resistant.  
 ENCAPSULATION: UL component recognized epoxy potting material  
 WIRING: Three 12 gauge stranded color coded leads.  
 Black for each line  
 White for neutral/ground  
 OPERATION TEMPERATURE: -40°C to +85°C  
 RESPONSE TIME: <5ns  
 CURRENT DRAIN: <100uA  
 UNIT WEIGHT: 7.5 ounces  
 SHIPPING WEIGHT: per arrester 8.5 ounces  
 ANSI : C62.11-1987



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