



# HLP Series

## Highway Lighting Protection Surge Protection Device

The **HLP Series** is a **Type 4 SPD** designed to protect equipment from surges.

**Features include:**

- Listed to ANSI/UL 1449
- Solid State 20mm MOV Design
- Line-to-Ground Protection
- LED Status Diagnostics
- Weather Resistant
- No Follow Current

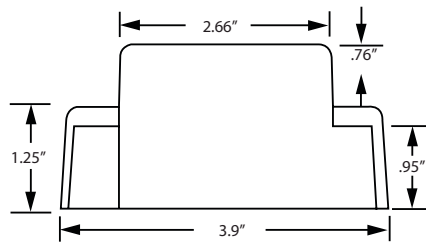
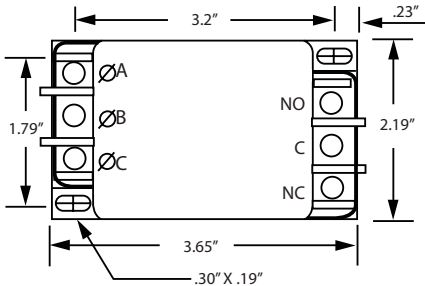
**Applications**

Traffic Signals, Highway Lighting, Parking Lighting, Interior Lighting, Security Systems, Fire Alarms.

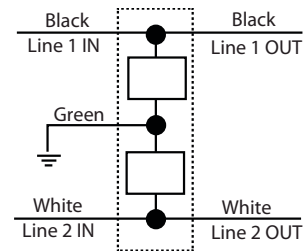
A **15 Year Product Warranty** is included.



**Dimensions**



**Wiring Diagram**



*(Diagrams not drawn to scale)*

**Product Specifications**

	<b>HLP020-120-3L-0-AS1006</b>	<b>HLP020-240-3L-0-AS1006</b>	<b>HLP020-480-3L-0-AS1006</b>
Operating Voltage	120 Volt	150 Volt	—
MCOV	150 VAC	275 VAC	550 VAC
Continuous Current	20 A	20 A	20 A
Max Surge Current	20kA (40kA available)	20kA (40kA available)	20kA (40kA available)
Clamp Voltage VPR	L-G 700, N-G 700, L-N 1200	L-G 1000, N-G 1000, L-N 1800	L-G 1800, N-G 1800, L-N 3000
SCCR	5kA	5kA	5kA
I <sub>n</sub>	3kA	3kA	3kA
Surge Technology	MOV	MOV	MOV
Response Time	5 nanoseconds	5 nanoseconds	5 nanoseconds

**Options:**

- Replace **020** with **040** for 40kA Surge Rating
- Replace **S** with **P** for Parallel Connection
- Replace **06** with **GL** for Ground Lug
- Replace **1006** with **TB** for Terminal Block Connection
- Replace **1006** with **1414** for 14 AWG Wire and Ground
- Replace **1006** with **1410** for 14 AWG Wire and 10 AWG Ground
- Replace **1006** with **1406** for 14 AWG Wire and 6 AWG Ground
- Replace **1006** with **1010** for 10 AWG Wire and 10 AWG Ground
- Replace **-0-** with **-F-** for Internal Fusing (Type 1 locations)\*

\*Fusing does not disconnect load

Length	Gauge	Color	Connection
22"	6	Green	Ground
12"	10	Black	Line 1 (Hot)
12"	10	White	Line 2 (Hot)

All product dimensions provided are ± 0.125

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## GENERAL

1. This document provides detailed information on how to install and operate the SLT-HEB Series of Surge Protection Devices (SPD).
2. Incorrect installation may significantly impair the performance of the SPD. It is particularly important that all installation procedures and guidelines be followed exactly.
- 3. INSTALLATION OF THIS DEVICE SHOULD ONLY BE PERFORMED BY A QUALIFIED INSTALLER**
4. CHECK TO ENSURE THAT ALL CONNECTIONS ARE CORRECT AND SECURE BEFORE ENERGIZING.
5. KEEP THIS MANUAL IN A SAFE, DRY PLACE FOR FUTURE REFERENCE.

### **DANGER**

#### ***HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH***

Thoroughly read and comprehend all instructions before commencing installation.

This equipment must be installed by qualified electrical personnel in accordance with all applicable codes which supersede these instructions.

Improper installation or misapplication of these devices may result in death or serious injury.

Failure to follow these instructions could result in damage to the electrical system(s) or related equipment.

Apply appropriate Personal Protective Equipment (PPE) and follow safe electrical work practices. See NFPA 70E

### **CAUTION**

#### ***HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH***

Never install this unit if it has fallen, has been dropped or looks damaged in any way. Return device to factory for diagnostic testing.

### **WARNING**

#### ***HAZARD OF EQUIPMENT DAMAGE***

This device does NOT contain serviceable parts. Do NOT attempt to test this device, damage may occur. Any alterations, tampering or misuse or unauthorized repairs of this product will void it's original factory warranty.

Never install on an ungrounded system.

## WARRANTY INFORMATION

Meter-Treater, Inc. (MTI) warrants all HLP Series models to be free from defects, and will at our option repair or replace the product should it fail within fifteen (15) years from the first date of shipment. This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as specified, your sole recourse shall be repair or replacement as described above. Under no condition shall MTI be liable for any damages incurred by the use of this product. Damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. MTI specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

### WARRANTY RETURNS

All warranty and non-warranty repairs must be returned freight prepaid and insured to MTI. All returns must have a Return Authorization (RA) number on the outside of the shipping container. This number may be obtained from MTI Warranty Department (800) 342-6890. Products returned without an RA number will not be accepted.

**IF UNIT(S) ARE RECEIVED DAMAGED,  
NOTIFY THE SHIPPING COMPANY  
IMMEDIATELY. RETAIN ALL SHIPPING  
CONTAINERS AND PACKING MATERIALS FOR  
INSPECTION.**

Please Note:  
There are no user serviceable parts inside.



**Meter-Treater, Inc.**

QUALITY SURGE PROTECTION DEVICES SINCE 1986

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# HLP Series Surge Protection Device

## USER MANUAL AND INSTALLATION GUIDE

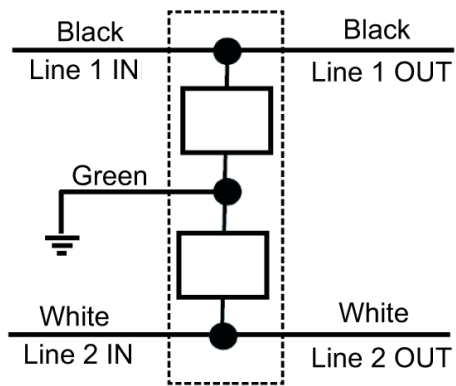


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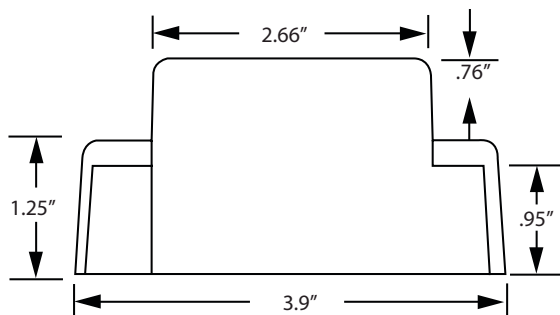
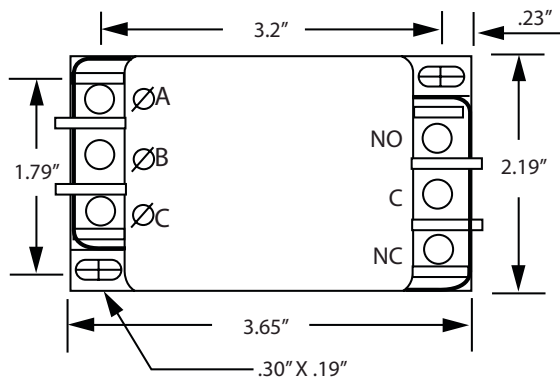


COMMERCIAL INSTALLATIONS

## SCHEMATIC



## DIMENSIONS



## INSTALLATION

1. This document provides detailed information on how to install and operate the HLP Series of Surge Protection Devices (SPDs).
2. Units should be installed per the information and illustrations provided herein.
3. Applicable HLP Series of Surge Protection Devices may be installed/connected in series with the line and the equipment to be protected.
4. Identified or indicated Leads/Wires must be connected exactly with respect to the power feeding/supplying the SPD and equipment. Failure to do so may result in damage to the SPD, the equipment/system or pose a danger to personnel.
5. Incorrect installation may significantly impair the performance of the SPD. It is particularly important that all installation procedures and guidelines be followed exactly.
6. Before starting any installation procedures, verify service voltages (AC or DC) with a volt meter to ensure that the correct model has been selected for the supply voltage.
7. DO NOT INSTALL THE SPD IF MEASURED VOLTAGE EXCEEDS UNIT RATINGS.
8. The SPD MUST BE mounted in an enclosure to assure personnel safety from exposed leads/terminals.
9. REMOVE POWER FROM ELECTRICAL SYSTEM PRIOR TO INSTALLATION
10. The SPD should be positioned as the last device in the circuit prior to protected equipment.
11. Units requiring external 20 amp fusing must be connected to the electrical service with appropriate midget or miniature fuse rated 500V or 250V respectively.
12. Connecting leads should be at least 14AWG and, if series connected, have a maximum load current not to exceed 20 Amperes.
13. Connecting leads should be as short and straight as possible for the inputs of a parallel connected SPD and for the outputs of a series connected SPD.
14. Terminate any loose leads per NEC.
15. The SPD Line/Load designations are for orientation purposes only and do not effect the install.
16. Mechanically mount the SPD utilizing the mounting tabs.
17. A) Connect "LINE" Side:
  - \* System ground to the terminal labeled "G"; or green wire
  - \* Neutral or Line 2 wire to the terminal labeled "L2"; or white wire
  - \* HOT wire to the terminal labeled "L1"; or black wire
 B) Connect "LOAD" Side: (Series Only)
  - \* Neutral or Line 2 wire to the terminal labeled "L2"
  - \* HOT wire to the terminal labeled "L1"
18. ENSURE THAT ALL CONNECTIONS ARE CORRECT BEFORE ENERGIZING.
19. Apply power (energize). If unit equipped with LED, LED indicator should illuminate. If light fails to illuminate contact supplier. If LED is out, unit requires service.
20. Keep this MANUAL in a safe, dry place for future reference.