



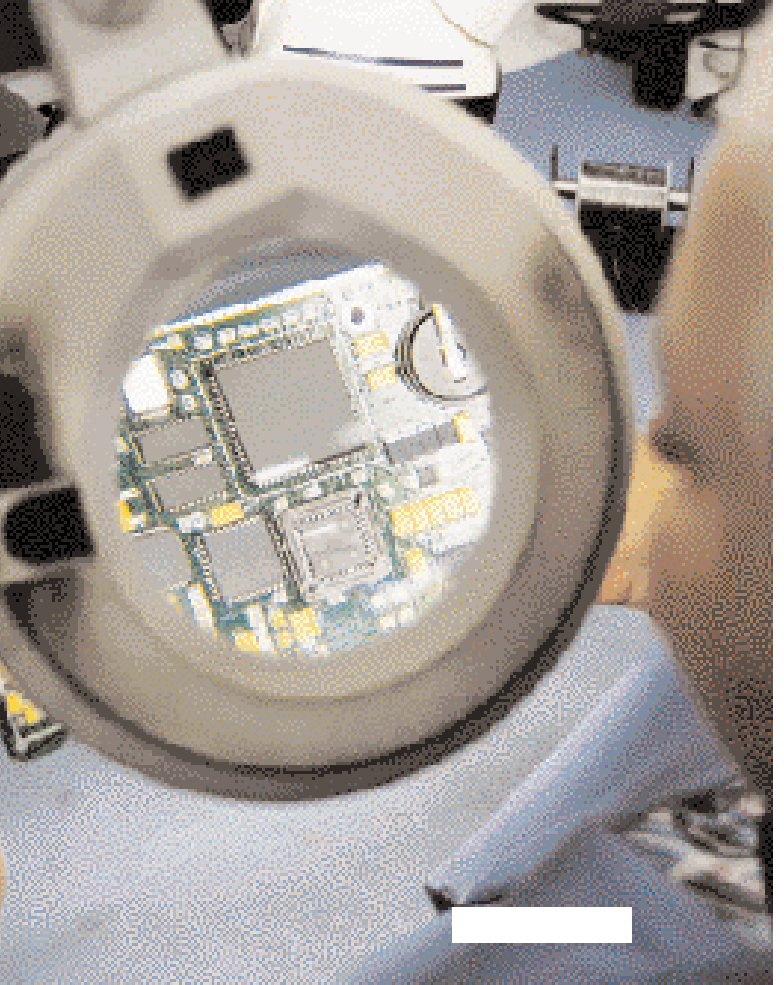
Hubbell Surge Protection System

SpikeShield[™]

Protection you can trust from
the company that knows
your building inside and out.



HUBBELL
WIRING DEVICE-KELLEMS





Hubbell takes the mystery out of surge protection

If your work depends on microprocessors—as everyone’s does today—you’re vulnerable to transients. Contrary to popular belief, most voltage surges originate within your own facility. Regardless of their origin, they have the potential to destroy your electronic equipment in a millisecond. That’s why surge suppression devices are multiplying as rapidly as PC’s and the other electronic equipment that drive productivity in today’s business environment. When you buy computers, you buy based on performance, brand, value and reliability. That’s precisely how you should buy surge protection. And precisely why you should buy Hubbell SpikeShield™ surge protection. Hubbell provides SpikeShield products for all three lines of defense against transient over-voltages. Hubbell meets the new industry standards and offers easy installation and convenience features you won’t find anywhere else. And Hubbell knows your building inside and out—because we’ve been providing wiring devices for all types of commercial and industrial facilities for more than a century. The Hubbell SpikeShield Surge Protection System: Protection that will have you ready for the next century.





The ten most frequently asked questions about surge protection

Where do power problems come from?

Surprise—only about a third of them come from outside your facility from sources such as lightning, utility grid switching and so forth. The great majority of problems come from within the facility from motors or other inductive loads as they switch on and off.

What causes transient voltages?

HVAC equipment, elevator motors, robotic equipment—basically, all inductive loads, regardless of size. In the office, they are caused by coffee makers, air conditioners, photocopiers, laser printers and vending machines.

Why has power quality grown into a major issue today?

Computer chips are becoming more dense and, subsequently, more sensitive to even the slightest power surges. In addition, clock speeds, or operating speeds, have increased and reached the range of high-speed transients. And, every time a device turns on, transient voltages may be created—a problem since we use more electrical and electronic devices every year.



How big is the problem?

More than 63 percent of all loss pay-outs on electronic equipment are due to power problems.

Do some people not have this problem?

No, there is no such thing as a transient-free facility.

What are the symptoms of transient voltages?

There are several: Disruptive symptoms occur when a computer freezes or suffers confused logic (this may often go undiagnosed). Dissipative symptoms result from repeated exposure to transients and will reduce equipment life. Destructive symptoms—usually caused by lightning or wiring mistakes—are catastrophic and result in major damage. Loss of power is another symptom because as power is restored, it does not come

back in a stable fashion, but as a high-voltage transient. Brownouts do not cause electronic equipment to fail, but the transients associated with them do.

What is the cost of these problems?

\$26B

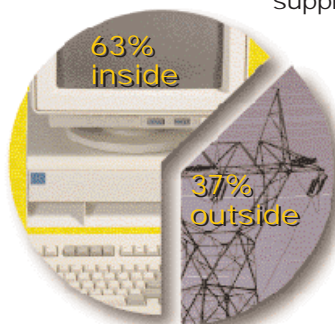
Power-related problems cost U.S. companies over \$26 billion a year (that does not include in-home losses).

What does Hubbell offer that other companies do not?

- The broadest product line in the industry.
- Patented Hot Swappable™ panels for the easiest field installation.
- LED diagnostics that indicate the suppressor is functioning properly.
- 10-year warranty on all wired-in products.
- Lifetime warranty on all plug strip products.
- Knowledge of your facility's circuits that comes with 110 years as a leading provider of commercial and industrial wiring devices and systems.

Are diagnostics on a surge suppressor important?

Yes. Many surge suppressors do not have indicators or alarms that report loss of protection. If failure occurs, you don't know about it and may continue to use the faulty suppressors.



Is response time important when selecting a surge suppressor?

Of course. However, transients actually occur in a micro or millisecond, which is relatively slow. Most surge suppressor components react a thousand to a million times faster, so response time is irrelevant. Often, this issue has been the focal point when discussing the merits of transient voltage surge suppression (TVSS) protection. Unfortunately, response time lacks accepted testing parameters. The TVSS industry has yet to adopt sufficient testing specifications for response time.



Protection & convenience: No trade-offs with Hubbell

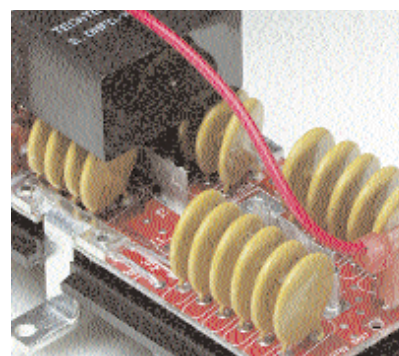
LightningTemp™ Fuse: Crucial in those surges that can deliver catastrophic damage

Two-thirds of the time, transients originate within your facility and, while disruptive and potentially damaging, they are not catastrophic in the sense that they'll deliver a totally disabling blow to electronic equipment. The most severe transients are those that originate outside your facility. Of these, lightning holds the most potential for serious damage.

To protect against transients of all sizes, the primary ingredient in a surge suppressor is a small, nickel-size disk called a metal oxide varistor (MOV). An MOV, under typical circumstances, will intercept a transient and keep connected computers and other equipment safe from harm. However, when subjected to

an extremely large transient—for example, from a lightning strike or when subjected to a long-term over-voltage condition, the MOV can suffer irreparable damage. When damaged, the MOV can overheat and, if undetected, will continue until it becomes red-hot and, perhaps, burn.

Recognizing this danger led Underwriters Laboratory to adopt its new TVSS 1449, 2nd edition standard to mandate safe conditions even when surge suppression devices are subjected to extreme conditions. This safety measure is achieved through the use of thermal fusing, a fuse activated by rising temperatures. Incorporating thermal fusing into the surge suppression provides protection by disconnecting damaged MOV's before the heat reaches dangerous levels. The principal shortcoming of most thermal fuses is that they were not designed to handle high-current surge environments without suffering damage. Even though the MOV is still functional, the thermal fuse has opened, removing the MOV from the line and rendering the suppressor helpless.



Hubbell's LightningTemp fuse overcomes this problem. It was specifically designed for the high current surge environment. It is able to take high currents of up to 100KA and still function properly when needed, whereas other thermal fuses will blow off the circuit board at about 25KA. Potentially even worse is the tendency for these thermal fuses to weld shut when exposed to high-level transients, leaving the MOV vulnerable to overheating, which the thermal fuse was designed to prevent.



PanelMaster™ Series: Superior protection with easy installation and field maintenance

Hubbell's PanelMaster series provides the maximum in branch panel protection, ease of installation and flexibility. PanelMaster mounts easily to any manufacturer's standard 20" x 5" panel, thus eliminating costly customization delays and long lead times. PanelMaster features feed-through construction, which eliminates connecting lead lengths and provides the best surge protection to the entire panel. PanelMaster also features Hubbell's patented Hot Swappable™ capability, which creates the most flexible transient voltage surge suppression panel in the industry. Hot Swappable modules mean service and maintenance can be performed without interrupting power. In addition, individual phase modules permit quick and easy field replacement.



The Hubbell SpikeShield Family: Protection you won't find anywhere else

For commercial and industrial applications...for protection at all three levels—service entrance, branch and point of use...for the convenience and performance features you value the most...the name to know in transient voltage surge suppression is Hubbell.

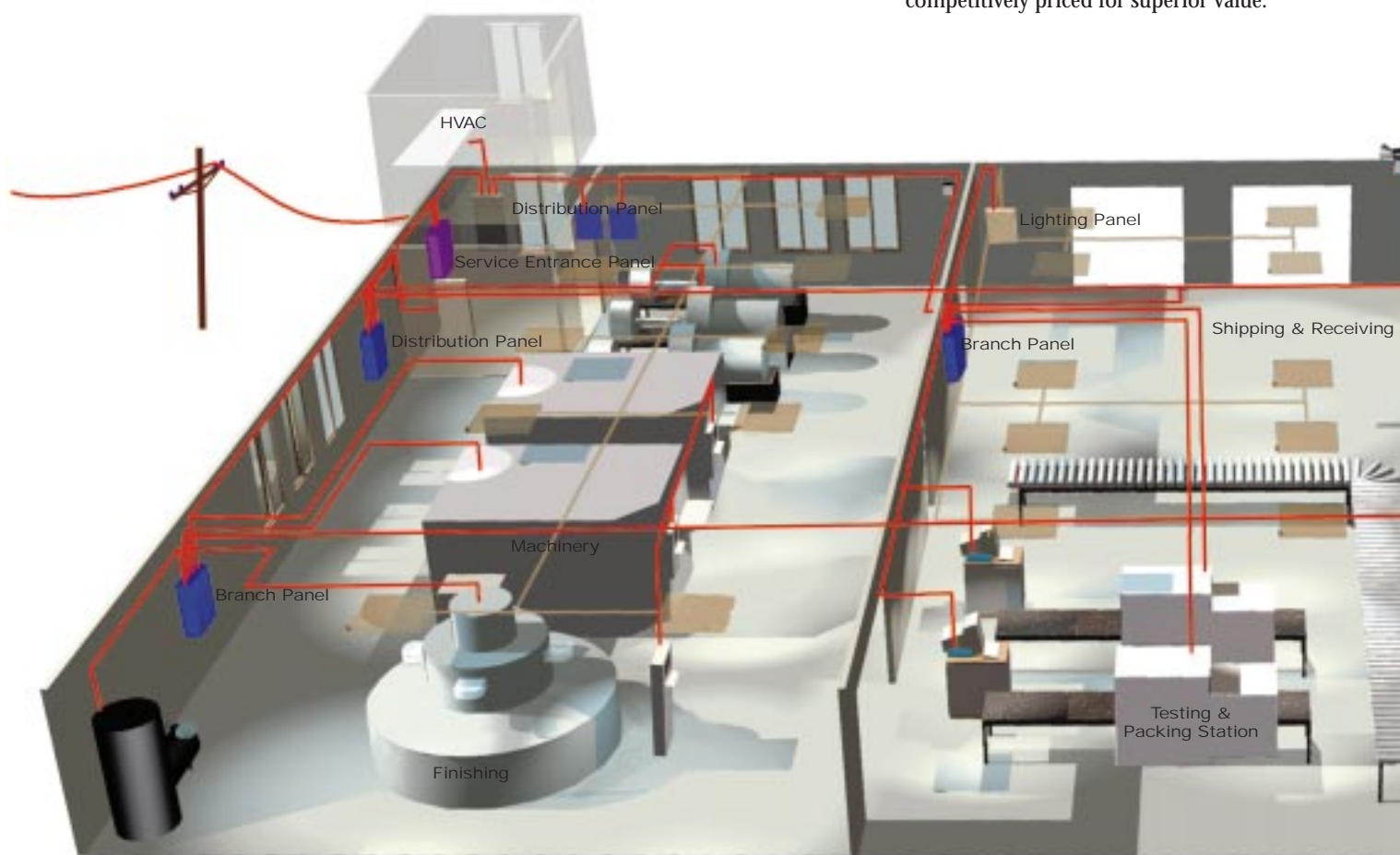
Hubbell offers a combination of leading-edge features you won't find anywhere else, starting with our new LightningTemp thermal fuse.

The LightningTemp thermal fuse is precision-designed to open within 5 degrees of its intended temperature, but has been tested to more than 100,000 amps of surge current—a level well above the exposure created by most lightning strikes. LightningTemp fuses are strategically positioned in Hubbell's new suppression circuits to provide quick and reliable operation for all

MOVs in all modes of protection. What's more, it means Hubbell TVSS devices fully protect the equipment they're supposed to protect. (Refer to information on UL standards on next page.)

In addition to superior protection, Hubbell SpikeShield surge suppression devices offer superior installation ease, convenience and speed. Our exclusive Hot Swappable capability for branch panels permits field replacement or service without power interruption.

While we pack all our surge suppression devices with protection-enhancing features, the name on the outside is your promise of quality and reliability in commercial and industrial electrical devices. Hubbell backs its surge suppression products with a limited 10-year warranty.* And, for all its built-in quality, Hubbell is competitively priced for superior value.



Manufacturing & Processing

Assembly & Packaging

* Except point-of-use devices.



At the service entrance level

Hubbell SpikeShield surge protection panels guard against lightning or switching transients created on utility systems. They're designed to suppress and filter the highest transients and have the capacity to suppress transients of up to 320KA. This broad product line covers all voltage configurations, and its compact design requires a minimum of space.

At the branch level

Hubbell SpikeShield surge suppression at the branch-circuit level guards against transients generated on other branch circuits within your facility. Like SpikeShield service entrance protection, Hubbell branch-circuit products suppress and filter the highest current transients, and come in a wide variety of configurations

covering all voltages. Our exclusive Hot Swappable technology results in convenience and ease of installation, repair and service. And, Hubbell can now provide the best service right off the local distributor's shelf.

At the point-of-use level

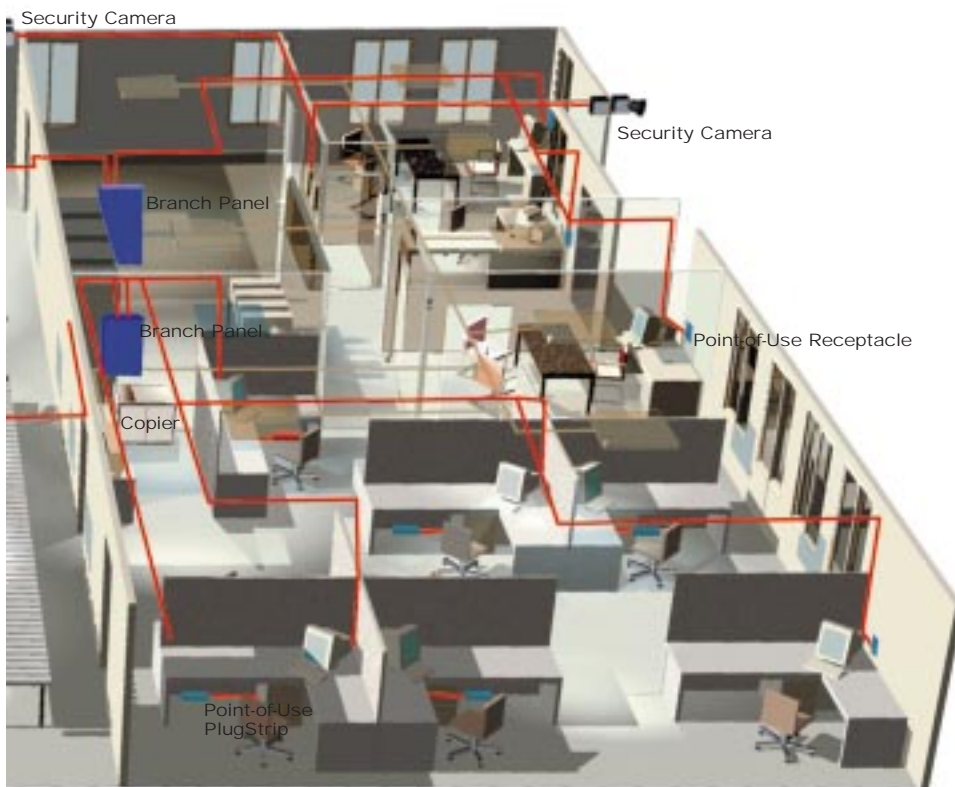
At the third level of protection, Hubbell SpikeShield point-of-use surge suppression devices on the branch circuit protects specific devices. Hubbell has the broadest line of TVSS receptacles in the industry. These point-of-use devices come in a wide range of colors and are available with LED-only and LED w/audible alarm models. With patented LightningTemp thermal fusing present even in plug strips, SpikeShield point-of-use devices provide the latest technology and the best protection.

UL 1449, 2nd Edition: What you need to know about the new industry standard

Underwriters Laboratory has updated UL 1449, the TVSS industry standard, to mandate safe failure conditions even when surge suppression devices are subjected to rare power conditions or fires in a key component, metal oxide varistors (MOVs).

The Hubbell SpikeShield line of surge suppression products meets the requirements of the newest standard, UL 1449, 2nd Edition, by employing an innovative thermal fusing design, our LightningTemp fuse, to ensure equipment and property safety.

This innovative new technology outperforms other thermal fusing methods because it is able to survive extremely high current levels. Competitive approaches prevent the suppressor from overheating but—a key fact you should be aware of—they also prevent the suppressor from eliminating these high currents because they take the MOV off-line, allowing the surge to enter the equipment.



Office Facility



Service Entrance Protection

The industry's most innovative service entrance protection system introduces new design methods and safety features. The Hubbell SpikeShield line of service entrance

surge protection utilizes the most unique and safest means of protecting your building from transients caused by lightning, utility grid switching, power line arcing or electrical accidents. The Hubbell service entrance protection system has a peak current rating of 320KA which exceeds the worst case requirements for high-exposure environments.

This new design by Hubbell achieves a new level of safety and performance not previously available. Improved performance is made possible through the use of a low-impedance design which incorporates bus-bar current carrying pathways and bolt-down modules. Increased safety for your equipment is designed into the product through individually fused MOVs, patented "Thermal Fusing" and fault-current fusing on the bolt-down modules.





SERVICE ENTRANCE PANEL PROTECTION

FEATURES

Thermal fusing

Compact design with bus-bar pathways

320KA peak amp capacity

Bolt-down modules

Fault-current fusing

LED & audible alarm status indicator

Sine wave tracking

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Allows installation in areas with space restrictions.

Minimizes connecting lead length which reduces impedance ensuring improved clamping performance.

Protects equipment under the worst electrical conditions.

Assures positive connection and allows for easy replacement.

Prevents excessive panel damage caused by internal short circuits or component failure.

Provides visual and audible indication of panel status. Green for operational, red for module failure. Audible alarm for module failure with silencing.

Provides uniform clamping throughout the sine wave.



HBL4P320



SEE PAGE 22 FOR SPECIFICATION INFORMATION.

All panel products are UL (cUL) Listed to Standard 1449, 2nd Edition.

ORDERING INFORMATION

Service entrance surge protection with 320,000 peak amperage capacity.*

VOLTAGE	PHASE CONFIGURATION	CATALOG #	REPLACEMENT MODULE
120/240V	1 ϕ	HBL3P320	HBL320M120
120/208V	3 ϕ Wye	HBL4P320	HBL320M120
240V	3 ϕ Delta	HBL5P320	HBL320M240
240/120V	3 ϕ Delta	HBL6P320	HBL320M120 & HBL320M240
220/380V	3 ϕ Wye	HBL7P320	HBL320M220
277/480V	3 ϕ Wye	HBL8P320	HBL320M277
480V	3 ϕ Delta	HBL9P320	HBL320M480
347/600V	3 ϕ Wye	HBL10P320	HBL320M347

*Surge Counter available, Catalog #HBLSC



HBL320M120



HBLSC



Branch Panel Protection

The SpikeShield line of branch panel surge protection offers a broad selection of products to meet the various requirements of industrial, commercial and institutional applications. No other surge suppression system can meet the flexibility, safety and performance standards set by Hubbell.

Hubbell offers surge suppression products which can handle peak amperage capacities of 65KA to 160KA. Led by the innovative PanelMaster™ series which incorporates a "Hot Swappable™" design, Hubbell offers a 160KA panel extension that eliminates long lead lengths while providing the most superior clamping levels.

The SpikeShield product line also includes an offering which is a modular series panel protector that features improved performance through the use of a low impedance bus-bar design and also comes with easily replaceable bolt-down modules.

The SpikeShield branch panel protection system includes the complete compact and economical 100KA series product offering. These products can be attached to branch panels, safety switches and load centers. The 100KA series is available either in a filtered and nonfiltered version, or in a NEMA 12 enclosure.

In addition, Hubbell also offers a 65KA series that can be attached as an appendage or flush mounted to a finished wall next to the panel. The versatility of the 65KA series products allows them to be used on branch panels, as well as main panel protection found in smaller commercial facilities.





PANELMASTER™ SERIES

The most innovative and flexible technology in the surge suppression industry today. The PanelMaster series is a 160KA rated product that mounts on top of your branch panel resulting in the best possible surge protection. The patented feed-through design of the PanelMaster series eliminates long lead lengths and achieves superior clamping levels.

In addition to this, the PanelMaster series by Hubbell also features the non-interrupting “Hot Swappable” design. This patented design allows the end user to replace modules without disconnecting power to the panel.

PanelMaster series’ flexibility allows it to be field-mounted to any manufacturer’s standard panel without consuming a breaker position or valuable wall space. The flexibility of the PanelMaster product line also eliminates delays on job sites caused by custom electronic grade TVSS panels. Only the PanelMaster series by Hubbell provides transient protection to the entire panel in a flexible, easy to install, field serviceable way.



HBL4PM160



HBL4PM160

FEATURES

Thermal fusing

Feed-through connection

Hot Swappable design

Fault-current fusing

LED and audible alarm indicator status

Sine wave tracking

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Eliminates connecting leads and provides superior clamping performance.

Allows modules to be replaced without power interruption. Eliminates facility downtimes.

Prevents excessive panel damage caused by internal short circuits or component failure.

Provides audible and visual indication of status. Green LED for operational; red LED for module failure.

Provides uniform clamping throughout the sine wave.

[SEE PAGE 22 FOR SPECIFICATION INFORMATION.](#)

All panel products are UL (cUL) Listed to Standard 1449, 2nd Edition.

ORDERING INFORMATION

PanelMaster panel extension with Hot Swappable modules and 160,000 peak amperage capacity.*

VOLTAGE	PHASE CONFIGURATION	CATALOG #	REPLACEMENT MODULE
120/240V	1ø	HBL3PM160	HBL160PMM120
120/208V	3ø Wye	HBL4PM160	HBL160PMM120
277/480V	3ø Wye	HBL8PM160	HBL160PMM277

*Surge Counter available, Catalog #HBLSC



HBL160PMM120



HBL4P160



HBL4P160



HBL160M120

MODULAR PANEL SURGE PROTECTION

The SpikeShield modular panel series offers a versatile and compact surge protection device designed to provide high-quality protection for industrial, commercial and institutional applications. This modular panel series by Hubbell provides a 160,000 peak amperage capacity and has easy to replace bolt-down modules.

This design incorporates bus-bar construction with bolt-down modules that improves performance and ease of maintenance. The device is able to deliver maximum protection because the advanced design reduces impedance. The product line also offers a high level of safety due to the use of fault-current fusing. This technology eliminates possible panel hazards.

FEATURES

Thermal fusing

Compact design with bus-bar pathways

160KA peak amp capacity

Bolt-down modules

Fault-current fusing

LED & audible alarm status indicator

Sine wave tracking

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Allows installation in areas with space restrictions. Minimizes connecting lead length and reduces impedance which ensures improved clamping performance.

Protects equipment under the worst electrical conditions.

Assures positive connection and allows for easy replacement

Prevents excessive panel damage caused by internal short circuits or component failure.

Provides visual and audible indication of panel status. Green for operational, red for module failure.

Provides uniform clamping throughout the sine wave.

[SEE PAGE 22 FOR SPECIFICATION INFORMATION.](#)

All panel products are UL (cUL) Listed to Standard 1449, 2nd Edition.

ORDERING INFORMATION

Branch panel surge protection with 160,000 peak amperage capacity.*

VOLTAGE	PHASE CONFIGURATION	CATALOG #	REPLACEMENT MODULE
120/240V	1ø	HBL3P160	HBL160M120
120/208V	3ø Wye	HBL4P160	HBL160M120
240V	3ø Delta	HBL5P160	HBL160M240
240/120V	3ø Delta	HBL6P160	HBL160M120 & HBL160M240
220/380V	3ø Wye	HBL7P160	HBL160M220
277/480V	3ø Wye	HBL8P160	HBL160M277
480V	3ø Delta	HBL9P160	HBL160M480
347/600V	3ø Wye	HBL10P160	HBL160M347

*Surge Counter available, Catalog #HBLSC



PANEL-MOUNTED SURGE PROTECTION

The SpikeShield line of branch panel surge suppressors provides a 100,000 peak amperage capacity series that includes a compact panel design.

This product line also incorporates the innovative thermal fusing and sine wave tracking features found in the larger-size panel protector products.

The panel series is designed to provide top-of-the line surge protection in areas that contain dust, dirt and noncorrosive dripping liquids. The panel series comes in a NEMA 12 enclosure that is compact in size and can be mounted adjacent to the branch panel in order to reduce lead lengths and improve protection.



HBL4P100



FEATURES

Thermal fusing

Compact design

100KA peak amp capacity

LED & audible alarm

Sine wave tracking

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Allows installation in areas with space restrictions and helps minimize connecting lead lengths which can cause impedance.

Provides high level of protection for equipment under severe electrical conditions.

Provides visual and audible indication of suppressor status.

Provides uniform clamping throughout the sine wave.

[SEE PAGE 23 FOR SPECIFICATION INFORMATION.](#)

All panel products are UL Listed (cUL) to Standard 1449, 2nd Edition.



HBL4P100



ORDERING INFORMATION

Panel-mounted surge protection with 100,000 peak amperage capacity.

VOLTAGE	PHASE CONFIGURATION	CATALOG #
120/240V	1 ϕ	HBL3P100
120/208V	3 ϕ Wye	HBL4P100
240V	3 ϕ Delta	HBL5P100
240/120V	3 ϕ Delta	HBL6P100
220/380V	3 ϕ Wye	HBL7P100
277/480V	3 ϕ Wye	HBL8P100
480V	3 ϕ Delta	HBL9P100
347/600V	3 ϕ Wye	HBL10P100



HBL4W100



HBL4W100



WIRED-IN SURGE PROTECTION

The wired-in surge suppression block design is ideal for areas where space is a major consideration. The surge block can be mounted directly to the panel through a chase nipple connection which will reduce lead length and impedance while increasing protection levels.

An optional version of this product is available without filtering for signal sensitive applications. The nonfiltered version will not interfere with clocking and power line carrier signals (for lighting controls) by allowing safe passage for the control signals while maintaining protection for the sensitive electronic system. The control signals, if filtered, could cause certain systems to go out of synchronization.

FEATURES

Thermal fusing

Compact design

100KA peak amp capacity

LED & audible alarm

Sine wave tracking

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Allows installation in areas with space restrictions and helps minimize connecting lead lengths which can cause impedance.

Provides high level of protection for equipment under severe electrical conditions.

Provides visual and audible indication of suppressor status.

Provides uniform clamping throughout sine wave. (Not included on nonfiltered version.)

[SEE PAGE 23 FOR SPECIFICATION INFORMATION.](#)

Wired-in products are UL Listed (cUL) to Standard 1449, 2nd Edition.

ORDERING INFORMATION

Wired-in branch panel surge protection with 100,000 peak amperage capacity.

VOLTAGE	PHASE CONFIGURATION	CATALOG #	WITHOUT FILTER
120/240V	1 ϕ	HBL3W100	HBL3W100NF
120/208V	3 ϕ Wye	HBL4W100	HBL4W100NF
240V	3 ϕ Delta	HBL5W100	HBL5W100NF
240/120V	3 ϕ Delta	HBL6W100	HBL6W100NF
220/380V	3 ϕ Wye	HBL7W100	HBL7W100NF
277/480V	3 ϕ Wye	HBL8W100	HBL8W100NF
480V	3 ϕ Delta	HBL9W100	HBL9W100NF
347/600V	3 ϕ Wye	HBL10W100	HBL10W100NF



WIRED-IN SURGE PROTECTION FOR INDUSTRIAL, COMMERCIAL, INSTITUTIONAL AND RESIDENTIAL APPLICATIONS

The Hubbell SpikeShield product line also includes the most versatile offering of wired-in surge suppressors for industrial, commercial, institutional and residential applications. This product offering provides a 65,000 peak amp capacity and can be mounted to the branch panel or inside a cabinet. This product offering also has a version that includes a mounting plate for installation on finished walls.

Hubbell has incorporated its top-of-the-line innovation into this compact and economical design. Thermal fusing protection on all modes and sine wave tracking are some of the features that make this the top product in its class.



HBL3W65



HBL3F65

FEATURES	BENEFITS
Thermal fusing	Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.
NEMA Type 3R housing	Provides rain and dust-tight protection for reliable outdoor use.
LED and audible alarm	Provides visual and audible indication of suppressor status.
Sine wave tracking	Provides uniform clamping throughout the sine wave.

[SEE PAGE 24 FOR SPECIFICATION INFORMATION.](#)

Wired-in products are UL Listed (cUL) to standard 1449, 2nd Edition.

ORDERING INFORMATION

Wired-in panel surge protection, 65KA peak amperage capacity.

VOLTAGE	CATALOG #
120V	HBL1W65
240V	HBL2W65
120/240V	HBL3W65

Flush-mount wired panel surge protection, 65KA peak amperage capacity.

VOLTAGE	CATALOG #
120/240V	HBL3F65



HBL1DR65



HBL1T65



OEM/SPECIALTY SURGE PROTECTION

The SpikeShield offering includes a selection of hard-wired surge suppressors that can be internally mounted inside equipment cabinets. These devices provide point-of-use protection for electronic cabinets that will be used in remote locations or in severe electrical environments. This product line has a 65,000 peak amp capacity and is offered with DIN rail* or terminal mounting** options.

Both products are ideal for panel builders, manufacturers and integrators of control or instrumentation cabinets for industrial, medical or commercial applications.

FEATURES

Thermal fusing

Compact design

LED indicator status

Sine wave tracking

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Allows installation in areas with space restrictions. Minimizes connecting lead length and reduces impedance which ensures improved clamping performance.

Provides visual indication of suppressor status.

Provides uniform clamping throughout the sine wave.

* DIN rail product comes with audible alarm.

** Terminal mount product comes with enhanced performance resulting from inductive series design.

[SEE PAGE 24 FOR SPECIFICATION INFORMATION.](#)

DIN Rail and terminal mounted products are UL recognized in accordance with Standard 1449, 2nd Edition.

ORDERING INFORMATION

VOLTAGE	CATALOG #
120V	HBL1DR65*
240V	HBL2DR65*

*DIN rail mounted, 65KA peak amperage capacity.

120V	HBL1T65**
240V	HBL2T65**

**Terminal series mounted, 65KA peak amperage capacity.



HOMEGUARD™ METER MOUNTED RESIDENTIAL SURGE PROTECTION

The SpikeShield TVSS offering from Hubbell also includes a product designed to provide “whole house protection” at the utility meter socket. The HomeGuard surge suppression system provides service entrance protection against lightning or other externally generated transients. This product has a 100,000 peak amp capacity for single phase 200 amp meter sockets. HomeGuard is designed to isolate your home from external events that affect power quality.



HBL65MPC



FEATURES

Thermal fusing

Meter socket adapter design

Audible alarm

BENEFITS

Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a patented Hubbell exclusive.

Mounts quickly and easily to the meter socket at the entrance.

Audible alarm for module failure.

[SEE PAGE 24 FOR SPECIFICATION INFORMATION.](#)

HomeGuard is UL (cUL) Listed to Standard 1449, 2nd Edition.

ORDERING INFORMATION

DESCRIPTION	VOLTAGE	CATALOG #
Meter-socket mounted, whole-house surge suppressor	120/240V	HBL65MPC

Hubbell HomeGuard meter-mounted surge suppression connected to local utility service* is shown below.



*HomeGuard meter mounted surge protection should be installed by your local utility service.



Point of Use TVSS Protection

Point-of-use surge suppression products are the most cost-effective means of protecting valuable electrical and electronic equipment. Surge suppression at the point of entrance guards against transients generated externally. Surge suppression at the branch circuit panel board

protects against surges generated on other branch circuits, but not against surges originating on the same circuit. To complete your protective network, look to Hubbell's complete line of SpikeShield point-of-use products—from permanently wired duplex and 4-Plex® receptacles to portable strips.





SURGE SUPPRESSION RECEPTACLES

Hubbell has the broadest offering of TVSS receptacles in the industry with technology that is unsurpassed. Inside Hubbell TVSS receptacles are matched pairs of four 18mm MOVs (two discs per package) providing 210 joules of surge protection in each mode. The nylon component shield protects the PC board from moisture and contaminants. An all-glass PC board provides superior moisture immunity for longer life in humid environments. Conformal coating is provided on PC board for additional moisture immunity.

Meets UL Standards 1449 2nd edition and 498; CSA Certified (NEMA 5-15 configuration only).

Damage-alert alarm sounds when surge protection is no longer functioning...and keeps sounding until the receptacle is replaced or muting screw is utilized.

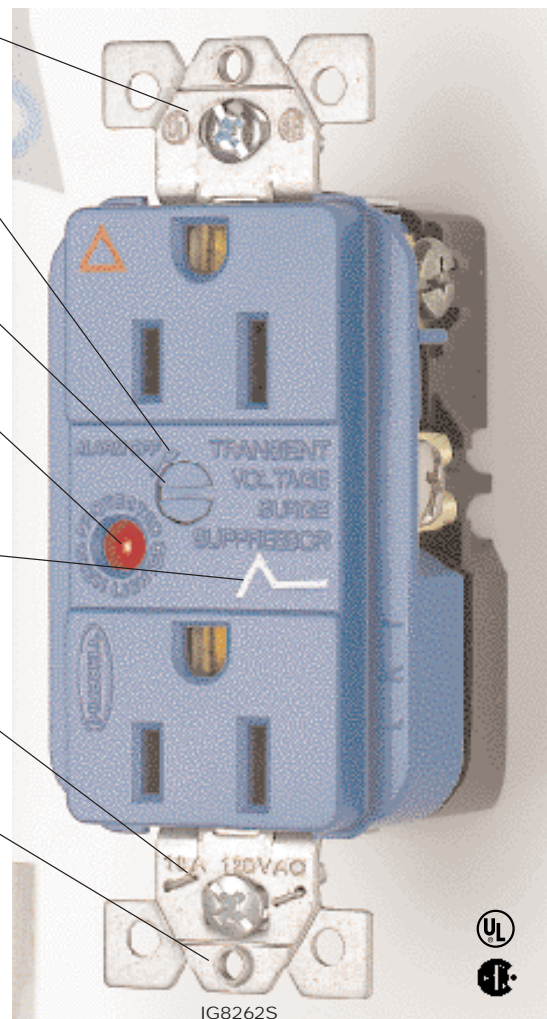
Muting screw allows damage-alert alarm to be silenced until device is replaced.

Power-on indicator light verifies instantly that power is available at the receptacle and the suppression circuit is fully functional; light off means power has been interrupted; flashing light indicates surge protection circuitry has been damaged.

Distinctive surge symbol provides quick visual identification of surge suppression receptacle. High-impact nylon face resists breakage.

Automatic grounding clip attached to bridge meets NEC Article 250-74, Exception No. 2.

Fits standard wall box.





SURGE SUPPRESSION RECEPTACLES

SEE PAGE 25 FOR SPECIFICATION INFORMATION.

ORDERING INFORMATION



HBL5260S



HBL5262GYS



IG5362OS

CATALOG #	COLOR	AMPERAGE	DESCRIPTION
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LED ONLY

HBL5260S	Blue	15 Amp	Led Only
HBL5260IS	Ivory	15 Amp	Led Only
HBL5360S	Blue	20 Amp	Led Only
HBL5360IS	Ivory	20 Amp	Led Only

LED & ALARM

HBL5262S	Blue	15 Amp	Led & Alarm
HBL5262IS	Ivory	15 Amp	Led & Alarm
HBL5262GYS	Gray	15 Amp	Led & Alarm
HBL5262WS	White	15 Amp	Led & Alarm
HBL5362S	Blue	20 Amp	Led & Alarm
HBL5362IS	Ivory	20 Amp	Led & Alarm
HBL5362GYS	Gray	20 Amp	Led & Alarm
HBL5362WS	White	20 Amp	Led & Alarm

ISOLATED GROUND

IG5262S	Blue	15 Amp	Isolated Ground with LED & Alarm
IG5262IS	Ivory	15 Amp	Isolated Ground with LED & Alarm
IG5262GYS	Gray	15 Amp	Isolated Ground with LED & Alarm
IG5262WS	White	15 Amp	Isolated Ground with LED & Alarm
IG5262OS	Orange	15 Amp	Isolated Ground with LED & Alarm
IG5362S	Blue	20 Amp	Isolated Ground with LED & Alarm
IG5362IS	Ivory	20 Amp	Isolated Ground with LED & Alarm
IG5362GYS	Gray	20 Amp	Isolated Ground with LED & Alarm
IG5362WS	White	20 Amp	Isolated Ground with LED & Alarm
IG5362OS	Orange	20 Amp	Isolated Ground with LED & Alarm

ISOLATED GROUND HOSPITAL GRADE

IG8262S	Blue	15 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8262IS	Ivory	15 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8262GYS	Gray	15 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8262WS	White	15 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8262OS	Orange	15 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8262RS	Red	15 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8362S	Blue	20 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8362IS	Ivory	20 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8362GYS	Gray	20 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8362WS	White	20 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8362OS	Orange	20 Amp	Isolated Ground Hospital Grade with LED & Alarm
IG8362RS	Red	20 Amp	Isolated Ground Hospital Grade with LED & Alarm

All receptacles are UL Listed and CSA Certified (15A only).



SURGE SUPPRESSION RECEPTACLES

SEE PAGE 25 FOR SPECIFICATION INFORMATION.

ORDERING INFORMATION

CATALOG #	COLOR	AMPERAGE	DESCRIPTION
HOSPITAL GRADE			
HBL8262S	Blue	15 Amp	Hospital Grade with LED and Alarm
HBL8262IS	Ivory	15 Amp	Hospital Grade with LED and Alarm
HBL8262GYS	Gray	15 Amp	Hospital Grade with LED and Alarm
HBL8262WS	White	15 Amp	Hospital Grade with LED and Alarm
HBL8262RS	Red	15 Amp	Hospital Grade with LED and Alarm
HBL8362S	Blue	20 Amp	Hospital Grade with LED and Alarm
HBL8362IS	Ivory	20 Amp	Hospital Grade with LED and Alarm
HBL8362GYS	Gray	20 Amp	Hospital Grade with LED and Alarm
HBL8362WS	White	20 Amp	Hospital Grade with LED and Alarm
HBL8362RS	Red	20 Amp	Hospital Grade with LED and Alarm

4-PLEX

HBL420HS	Blue	20 Amp	4-Plex Surge-Hospital Grade
HBL420HIS	Ivory	20 Amp	4-Plex Surge-Hospital Grade
HBL415S	Blue	15 Amp	4-Plex Surge
HBL415IS	Ivory	15 Amp	4-Plex Surge
HBL420S	Blue	20 Amp	4-Plex Surge
HBL420IS	Ivory	20 Amp	4-Plex Surge

ACCESSORIES

HBL4APBL	Accessories	Adapter Plate Blue
HBL4API	Accessories	Adapter Plate Ivory
HBL4PBI	Accessories	Portable Box Ivory

All receptacles are UL Listed and CSA Certified (15A only).

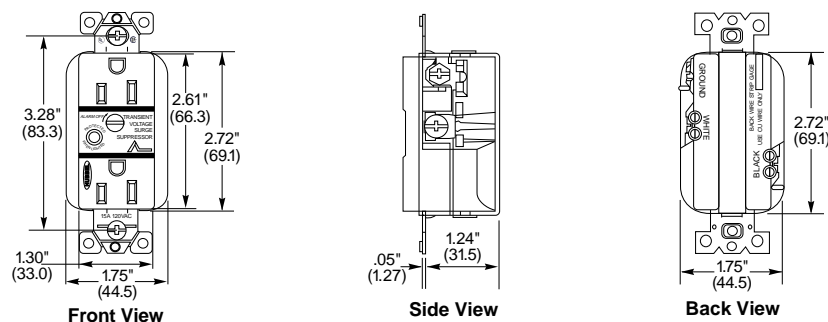


HBL8362RS

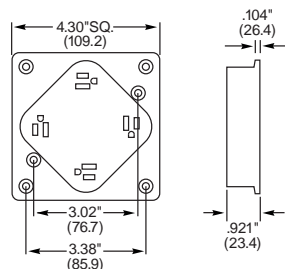


HBL420HS

DIMENSIONS



Duplex Receptacles

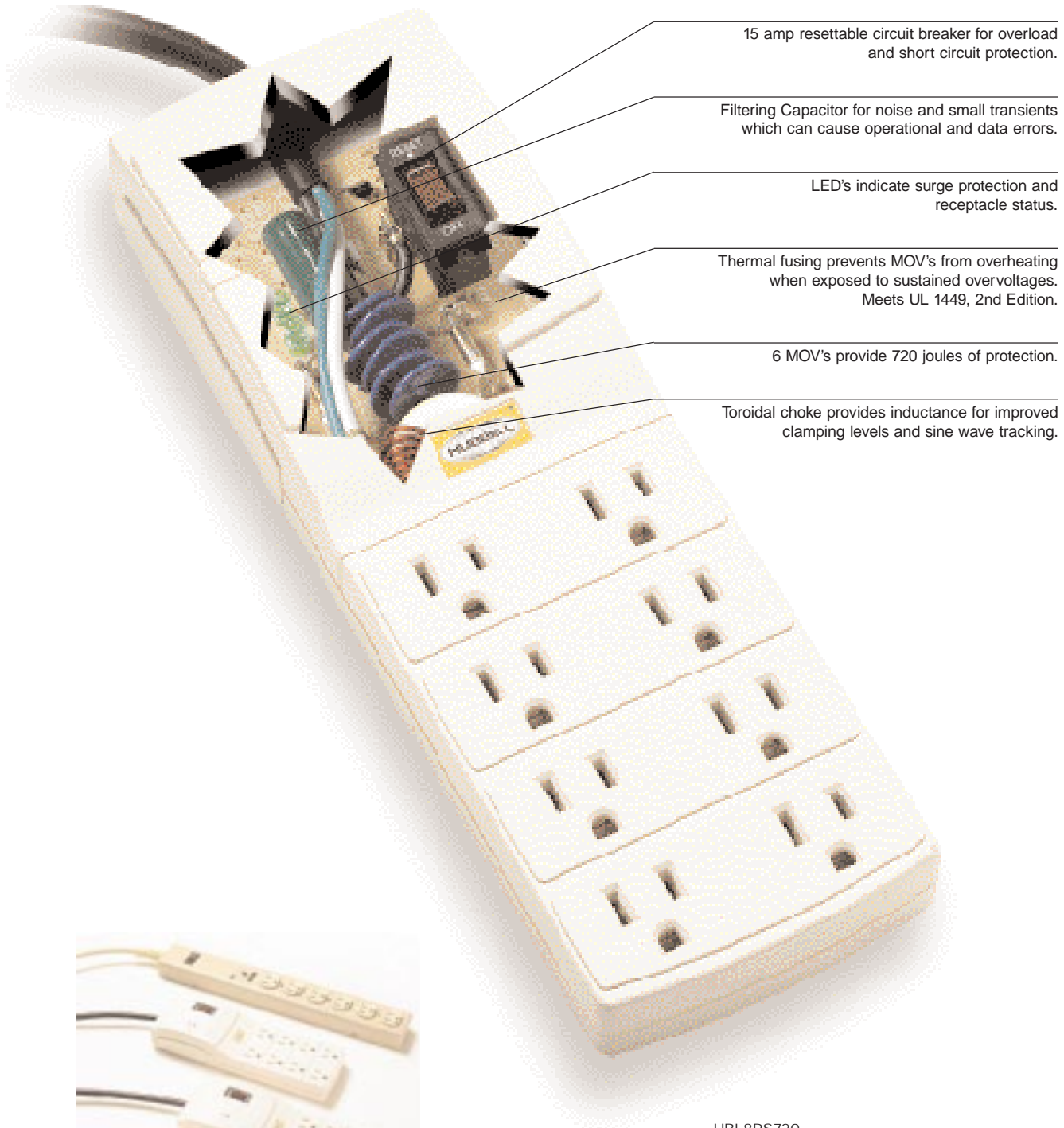


4-Plex Receptacle

Dimensions in inches (mm)



SPIKESHIELD SURGE SUPPRESSION PLUG STRIPS



HBL8PS720



SPIKESHIELD SURGE SUPPRESSION PLUG STRIPS

The SpikeShield TVSS family from Hubbell offers a line of plug strips which provides point-of-use protection against transients for any type of sensitive electronic equipment ranging from copiers to computers. The new plug strip product line not only meets UL 1449, 2nd Edition, but offers the innovation and reliability you expect from Hubbell.

The SpikeShield plug strip line incorporates the same technology that you find in the service entrance and branch panel surge suppression products. Features like thermal fusing, sine wave tracking, noise filtration and a UL 330 volt clamping level. These products are also available with 6 or 8 outlets, fax and modem connections, LED status indicators and a resettable 15 amp circuit breaker. All SpikeShield plug strips come with a lifetime warranty for both product and connected equipment.

SpikeShield plug strips provide protection from damaging transients and are ideal for use in offices, schools, hospitals and laboratories; anywhere sensitive electronic equipment is being used.



HBL8PS720M



SS6HG



FEATURES	BENEFITS
Thermal fusing	Thermal fuse remains functional to prevent the MOV from overheating when exposed to high current levels, a Hubbell exclusive.
Noise filtering circuit	Reduces high-frequency noise or interference which can cause operational or data errors.
Resettable 15 amp circuit breaker with overload and short-circuit protection	Full 15 amp connected load capacity.
LED status indicator	Provides visual indication of plug strip status.
Sine wave tracking	Provides uniform clamping throughout the sine wave*.

*Does not apply to HBL6PS360

SEE PAGE 25 FOR SPECIFICATION INFORMATION.

ORDERING INFORMATION

CATALOG #	APPLICATION/ DESCRIPTION	INPUT	# OF OUTLETS	CIRCUIT BREAKER	ON/OFF SWITCH	SURGE LED	STATUS ALARM	RATING
SS6HG	Plug strip w/filtering, surge protection, hospital grade receptacles & plug.	6' Power Cord (182.9cm)	6	Yes	Yes	Yes	Yes	15A, 420 joules
HBL6PS360	Plug strip w/ surge protection.	4' Power Cord (121.9 cm)	6	Yes	Yes	Yes	No	15A, 360 joules
HBL8PS480	Plug strip w/filtering & surge protection.	6' Power Cord (182.9 cm)	8	Yes	Yes	Yes	No	15A, 480 joules
HBL8PS480M	Plug strip w/modem, filtering & surge protection.	6' Power Cord (182.9 cm)	8	Yes	Yes	Yes	No	15A, 480 joules
HBL8PS720	Plug strip w/filtering & surge protection.	6' Power Cord (182.9 cm)	8	Yes	Yes	Yes	No	15A, 720 joules
HBL8PS720M	Plug strip w/modem, filtering & surge protection.	6' Power Cord (182.9 cm)	8	Yes	Yes	Yes	No	15A, 720 joules



Specifications

SERVICE ENTRANCE PANEL PROTECTION (FROM PAGE 7) HBL-P320 SERIES

	HBL3P320	HBL4P320	HBL5P320	HBL6P320	HBL7P320	HBL8P320	HBL9P320	HBL10P320		
Operating Specifications										
Nominal line voltage:	120/240	120/208	240	240/120	220/380	277/480	480	347/600		
Max. cont. operating voltage:	150/300	150/300	300	300/150	275/390	320/640	640	390/780		
Operating frequency:	50/60/400 Hz									
Max. surge current/phase:	320KA									
Max. surge current per mode:	160KA									
L-N, L-G, N-G										
Operating temperature:	14° to +140° F (-10° to +60° C)									
Diagnostics:	Red & Green Status LEDs, Diagnostic Test Switches, Dry Contacts, Audible Alarm, Optional Surge Counter									
Performance										
UL1449, 2nd edition										
Clamping voltage:	330 V	330 V	700 V	700/330 V	700 V	800 V	1500 V	1800 V		
ANSI/IEEE C62.41:										
Clamping voltage:										
Category A3 200A (Ringwave)	350	350	610	570/350	570	620	1280	660		
Category B3 500A (Ringwave)	430	430	710	660/430	660	720	1440	810		
Category C1 3000A (Impulse)	430	430	740	740/430	740	810	1600	1020		
EMI/RFI noise rejection:	Up to -50dB									
Thermal fusing:	Yes									
Fault current fusing:	200K AIC Fusing Per Mode									
Mechanical Description										
Dimensions:	6.32"D x 16.45"W x 25.25"H		Housing ratings:	NEMA 12, Metallic		Product weight:	30 lbs.		Connection method:	#2/0 AWG Terminal
Warranty										
Product: 10 Years										

PANELMASTER SERIES (FROM PAGE 9) HBL-PM160 SERIES

	HBL3PM160	HBL4PM160	HBL8PM160							
Operating Specifications										
Nominal line voltage:	120/240	120/208	277/480							
Max. cont. operating voltage:	150/300	150/300	320/640							
Operating frequency:	50/60/400 Hz									
Max. surge current/phase:	160KA									
Max. surge current per mode:	80KA									
L-N, L-G, N-G										
Operating temperature:	14° to +140° F (-10° to +60° C)									
Diagnostics:	Red & Green Status LEDs,	Diagnostic Test Switches, Dry Contacts, Audible Alarm, Optional Surge Counter								
Performance										
UL1449, 2nd edition										
Clamping voltage:	400 V	400 V	800 V							
ANSI/IEEE C62.41:										
Clamping voltage:										
Category A3 200A (Ringwave)	350 V	350 V	600 V							
Category B3 500A (Ringwave)	400 V	400 V	720 V							
Category C1 3000A (Impulse)	410 V	410 V	810 V							
EMI/RFI noise rejection:	Up to -50dB									
Thermal fusing:	Yes									
Fault current fusing:	200K AIC Fusing Per Mode									
Mechanical Description										
Dimensions:	5.75"D x 20.12"W x 17.5"H		Housing ratings:	NEMA 1, Metallic		Product weight:	27 lbs.		Connection method:	#250 mcm Terminals
Warranty										
Product: 10 Years										

MODULAR PANEL SURGE PROTECTION (FROM PAGE 10) HBL-P160 SERIES

	HBL3P160	HBL4P160	HBL5P160	HBL6P160	HBL7P160	HBL8P160	HBL9P160	HBL10P160		
Operating Specifications										
Nominal line voltage:	120/240	120/208	240	240/120	220/380	277/480	480	347/600		
Max. cont. operating voltage:	150/300	150/300	300	300/150	275/390	320/640	640	390/780		
Operating frequency:	50/60/400 Hz									
Max. surge current/phase:	160KA									
Max. surge current per mode:	80KA									
L-N, L-G, N-G										
Operating temperature:	14° to +140° F (-10° to +60° C)									
Diagnostics:	Red & Green Status LEDs, Diagnostic Test Switches, Dry Contacts, Audible Alarm, Optional Surge Counter									
Performance										
UL1449, 2nd edition										
Clamping voltage:	400 V	400 V	700 V	600/400 V	600 V	800 V	1500 V	900 V		
ANSI/IEEE C62.41:										
Clamping Voltage:										
Category A3 200A (Ringwave)	350	350	640	640/350	590	740	1510	630		
Category B3 500A (Ringwave)	410	410	700	700/410	730	900	1580	870		
Category C1 3000A (Impulse)	480	480	780	780/480	810	1000	1660	1000		
EMI/RFI noise rejection:	Up to -50dB									
Thermal fusing:	Yes									
Fault current fusing:	100K AIC Fusing Per Mode									
Mechanical Description										
Dimensions:	4.7"D x 10"W x 16.2"H		Housing ratings:	NEMA 12, Metallic		Product weight:	17 lbs.		Connection method:	#2/0 AWG Terminals
Warranty										
Product: 10 Years										



PANEL-MOUNTED SURGE PROTECTION (FROM PAGE 11)

HBL-P100 SERIES

	HBL3P100	HBL4P100	HBL5P100	HBL6P100	HBL7P100	HBL8P100	HBL9P100	HBL10P100
Operating Specifications								
Nominal line voltage:	120/240	120/208	240	240/120	220/380	277/480	480	347/600
Max. cont. operating voltage:	150/300	150/300	300	300/150	275/390	320/640	640	390/780
Operating Frequency:	50/60/400 Hz							
Max. surge current/phase:	100KA							
Max. surge current per mode: L-N, L-G, N-G	50KA							
Operating temperature:	14° to +140° F (-10° to +60° C)							
Diagnostics:	Red & Green Status LEDs, Diagnostic Test Switches, Dry Contacts, Audible Alarm, Optional Surge Counter							
Performance								
UL1449, 2nd edition								
Clamping voltage:	400 V	400 V	700 V	700/400 V	700 V	800 V	1500 V	900 V
ANSI/IEEE C62.41:								
Clamping voltage:								
Category A3 200A (Ringwave)	350	350	920	500/350	500	610	1480	700
Category B3 500A (Ringwave)	420	420	1090	660/420	660	740	1540	810
Category C1 3000A (Impulse)	450	450	1090	760/450	760	840	1620	950
EMI/RFI noise rejection:	Up to -50dB							
Thermal fusing:	Yes							
Mechanical Description								
Dimensions:			Housing ratings:		Product weight:		Connection method:	
4.7"D x 10"W x 16.2"H			NEMA 12, Metallic		17 lbs.		#2/0 AWG Terminals	
Warranty								
Product: 10 Years								

WIRED-IN SURGE PROTECTION (FROM PAGE 12)

HBL-W100 (NF) SERIES

	HBL3W100/ HBL3W100NF	HBL4W100/ HBL4W100NF	HBL5W100/ HBL5W100NF	HBL6W100/ HBL6W100NF	HBL7W100/ HBL7W100NF	HBL8W100/ HBL8W100NF	HBL9W100/ HBL9W100NF	HBL10W100/ HBL10W100NF
Operating Specifications								
Nominal line voltage:	120/240	120/208	240	240/1200	220/380	277/480	480	347/600
Max. cont. operating voltage:	150/300	150/300	300	300/150	275/390	320/640	640	390/780
Operating frequency:	50/60/400 Hz							
Max. surge current/phase:	100KA							
Max. surge current per mode: L-N, L-G, N-G	50KA							
Operating temperature:	14° to +140° F (-10° to +60° C)							
Diagnostics:	Green Status LED, Audible Alarm							
Performance								
UL1449, 2nd edition								
Clamping voltage:	400 V	400 V	800 V	700/400 V	700 V	800 V	1500 V	900 V
ANSI/IEEE C62.41:								
Clamping voltage:								
Category A3 200A (Ringwave)/NF	470/520 V	470/520 V	1460/1460 V	590/470/790/520 V	590/790 V	670/850 V	1620/1720 V	740/1010 V
Category B3 500A (Ringwave)/NF	620/650 V	620/650 V	1630/1630 V	780/620/910/650 V	780/910 V	810/970 V	850/1160 V	850/1160 V
Category C1 3000A (Impulse)/NF	650/650 V	650/650 V	1630/1630 V	920/650/1050/650 V	920/940 V	980/980 V	1080/1890 V	1080/1160 V
EMI/RFI noise rejection/NF:	Up to -40dB/Up to -20dB							
Thermal fusing:	Yes							
Mechanical Description								
Dimensions:			Housing ratings:		Product weight:		Connection method:	
2.6"D x 4.75"W x 10.6"H			NEMA 1, Metallic		3 lbs.		#10 AWG Wire leads	
Warranty								
Product: 10 Years								



Specifications

WIRED-IN SURGE SUPPRESSORS (FROM PAGE 13)

HBL-W65 SERIES

	HBL1W65	HBL2W65	HBL3W65	HBL3F65
Operating Specifications				
Nominal line voltage:	120	220	120/240	120/240
Max. cont. operating voltage:	150	320	150/300	150/300
Operating frequency:	50/60/400 Hz			
Max. surge current/phase:	65KA			
Max. surge current per mode:				
L-N, L-G:	32.5KA			
N-G:	16KA			
Operating temperature:	14° to +140° F (-10° to +60° C)			
Diagnostics:	Green Status LEDs, Audible Alarm			
Performance				
UL1449, 2nd edition				
Clamping voltage:	400 V	400 V	700 V	400 V
ANSI/IEEE C62.41:				
Clamping voltage:				
Category A3 200A (Ringwave)	330 V	420 V	330 V	330 V
Category B3 500A (Ringwave)	360 V	540 V	360 V	360 V
Category C1 3000A (Impulse)	500 V	710 V	500 V	500 V
EMI/RFI noise rejection:	Up to -40dB			
Thermal fusing:	Yes			
Mechanical Description				
Dimensions:	2.25"D x 2.99"W x 4.28"H		Housing ratings:	NEMA 3R, Non-Metallic
	7"x7" Flushmount Plate (HBL3F65)		Product weight:	1.0 lbs.
			Connection method:	#10 AWG Wire leads
Warranty				
	Product: 10 Years			

OEM/SPECIALTY SURGE PROTECTION (FROM PAGE 14)

	HBL1DR65	HBL2DR65	HBL1T65	HBL2T65
Operating Specifications				
Nominal line voltage:	120	240	120	240
Max. cont. operating voltage:	150	320	150	270
Operating frequency:	50/60/400 Hz			
Max. surge current/phase:	65KA			
Max. surge current per mode:				
L-N, L-G:	32.5KA			
N-G:	16KA			
Operating temperature:	14° to +140° F (-10° to +60° C)			
Diagnostics:	Green Status LED, Diagnostic Contact			
Performance				
UL1449, 2nd edition				
Clamping voltage:	400 V	800 V	400 V	600 V
ANSI/IEEE C62.41:				
Clamping voltage:				
Category A3 200A (Ringwave)	320 V	490 V	310 V	460 V
Category B3 500A (Ringwave)	340 V	800 V	350 V	580 V
Category C1 3000A (Impulse)	500 V	980 V	400 V	700 V
EMI/RFI noise rejection:	Up to -40dB		Up to -65dB	
Thermal fusing:	Yes			
Mechanical Description				
Dimension:	2.28"D x 2.82"W x 3.5"H		2.07"D x 3.55"W x 6.82"H	
Housing ratings:	NEMA 1, Non-Metallic		NEMA 1, Non-Metallic	
Product weight:	0.5 lb		1 lb	
Connection method:	#12 AWG Terminals			
Warranty				
	Product: 10 Years			

HOMEGUARD RESIDENTIAL SURGE PROTECTION (FROM PAGE 15)

	HBL65MPC
Operating Specifications	
Nominal line voltage:	120/240
Max. cont. operating voltage:	250
Operating frequency:	50/60/400 Hz
Max. surge current:	100KA
Max. surge current per mode:	
L-G:	50KA
Operating temperature:	14° to +140° F (-10° to +60° C)
Diagnostics:	Audible alarm
Performance	
UL 1449, 2nd edition	
Clamping voltage:	400 V
ANSI/IEEE C62.41:	
Clamping voltage:	
Category A3 200A (Ringwave)	600 V
Category B3 500A (Ringwave)	660 V
Category C1 3000A (Impulse)	690 V
EMI/RFI noise rejection:	Up to -20dB
Thermal fusing:	Yes
Mechanical Description	
Dimensions:	3.63"H x 8.73"D
Housing ratings:	NEMA 3R, Non-Metallic
Product weight:	2 lbs.
Connection method:	Meter Base
Warranty	
	Product: 10 Years

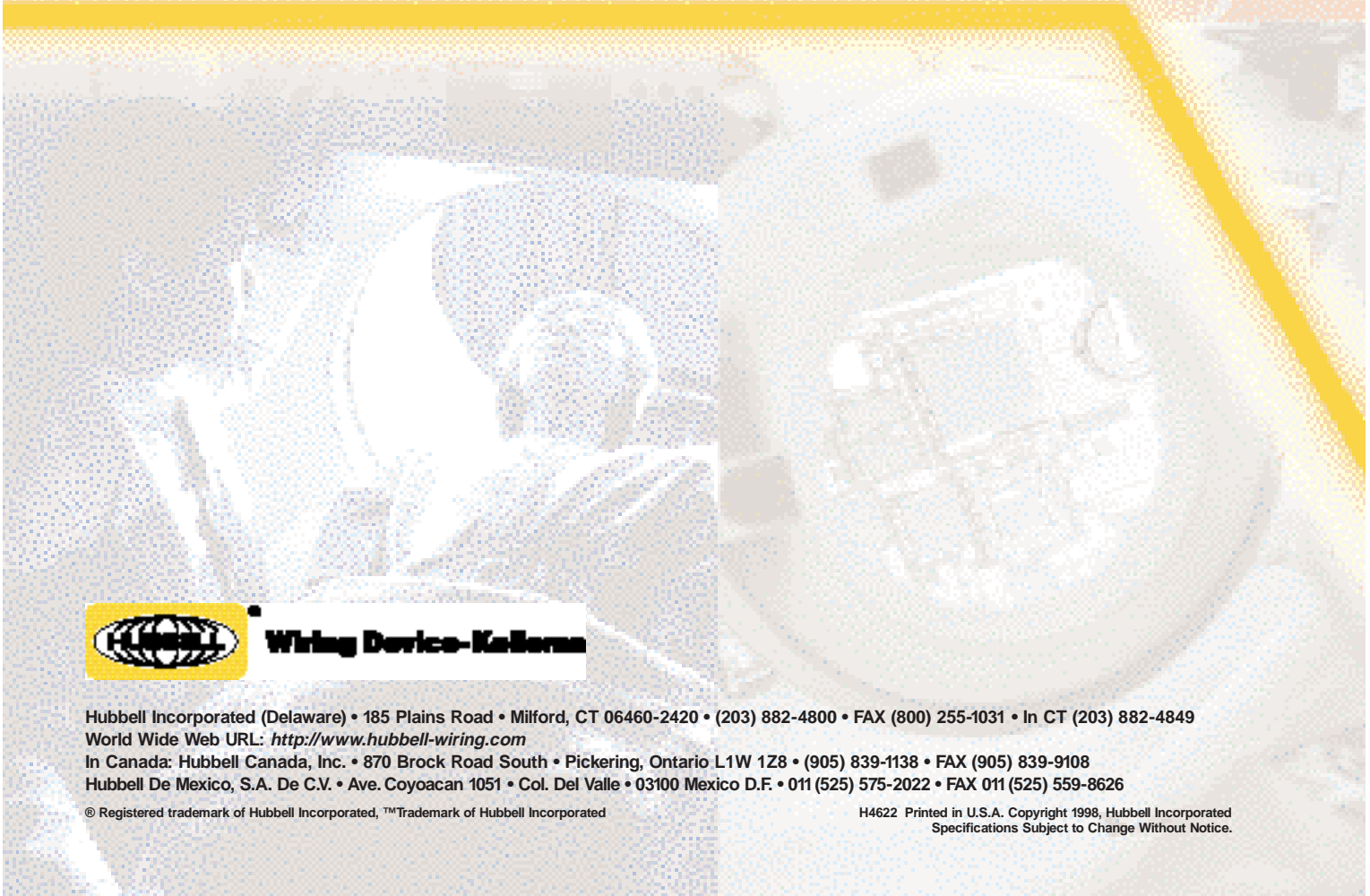


SURGE SUPPRESSION RECEPTACLES (FROM PAGES 18 AND 19)

	Part	Duplex	4-Plex
Typical Specification – HBL5262S/HBL5362S			
	Receptacle	15A/20A	15A/20A
	Top	Nylon	Lexan
	Base	Nylon	Lexan
Type – 2 Pole, 3 Wire, Grounding	Tandem Modified By-Pass	.031" (.8) Brass	.032" Brass Triple Wipe
	Power Contacts		Power Contacts
Rating – 15A, 125V/20A, 125V	Mounting Strap	.050" (1.3) Steel-Zinc Coated	–
Certification – UL Listed File E2186	Clamping Plate	.031" (.8) Brass	.031" Brass-Line Terminal Plate
Listed to UL Standards 498 Receptacles	Terminal Screws	Brass #8-32	.031" Brass Neutral-Terminal Plate
Meets UL1449, 2nd Edition Transient Voltage Surge Suppressors	Hex Hd. Grounding Screw	Steel (Green)	Brass (Green)
CSA Certified to Specification C22.2	Auto Grd. Clip	Stainless Steel	Ground Plate – .050"
No. 42M (15A only)			
ANSI/IEEE C62.41 (IEEE 587)	Mounting Screws	Steel-Zinc Plated	Brass
Installation Categories "A" (Ring Wave)	LED	Red	Green
"B" (Unidirectional Impulse)	Alarm Muting Screw	Nylon	–
Performance			
Electrical	Duplex		4-Plex
Operation Frequency:	60Hz.		60Hz.
Voltage:	120V AC +10%-15%.		120V AC +10%-15%
Response Time*:	Approximately 5 ns.		Approximately 5 ns.
Protection Modes:	Normal and Common Modes.		Normal and Common Modes.
Transient Suppression:	Peak Energy (10 x 100 µs)	Peak Current (8 x 20 µs)	Peak Energy (10 x 100 µs) Peak Current (8 x 20 µs)
Normal Mode (L-N):	210 joules	13000A	80 joules 6500A
Common Mode (L-G), (N-G):	210 joules	13000A	80 joules 6500A
Suppressed Voltage:			
UL Portable/Plug-In Test (8 x 20 µs 500A):	340V		412V
UL Permanently Wired Test (8 x 20 µs 3000A):	490V		530V
UL Listed:	500V max.		600V max.
EMI/RFI Attenuation at 50 Ohms Normal Mode:	40 dB	500kHz - 100MHz.	60 Hz
Operating Temperature:	32° to 140° F (0° to 60°C)		-40° to 140° F (-40° to 60° C)
Flammability:	UL 94-V2.		UL 94-V2.

SPIKESHIELD SURGE SUPPRESSION PLUG STRIPS (FROM PAGE 21)

	HBL6PS360	HBL8PS480(M)	HBL8PS720(M)	SS6HG
Operating Specifications				
Nominal line voltage:	120	120	120	120
Max. cont. operating voltage:	130	130	130	130
Operating frequency:	50/60/400 Hz			60 Hz
Max. surge current:	27KA	36KA	54KA	39KA
Joule rating	360	480	720	420
Operating temperature:	14° to +140° F (-10° to +60° C)			32° to 104° F (0° to 40° C)
Diagnostics:	Protection & Outlet Status LEDs			Audible Alarm with LED Status
Performance				
UL1449, 2nd edition				
Clamping voltage:	330 V	330 V	330 V	330V
ANSI/IEEE C62.41:				
Clamping voltage:				
Category A3 200A (Ringwave)	330	320	180	–
Category B3 500A (Ringwave)	380	340	190	330
Category C1 3000A (Impulse)	400	380	340	500
EMI/RFI noise rejection:	0-25dB	20-40dB	30-60dB	60-80dB
Thermal fusing:	Yes	Yes	Yes	–
Sine wave tracking:	–	Yes	Yes	–
Mechanical Description				
Dimension:	1.65"H x 2.17" W x 12"L (41.91 x 54.99 x 304.8mm)	1.70"H x 3.45"W x 10.52"L (43.21 x 87.63 x 267.11mm)	1.70"H x 3.45"W x 10.52"L (43.21 x 87.63 x 267.11mm)	1.16" x 2.25" W x 15.75" L (29.46 x 57.15 x 400mm)
Housing ratings:	Indoor use only			
Product weight:	1.02 lb. (.463kg)	1.09 lb. (.495kg)	1.10 lb. (.5kg)	2.90 lbs. (1.08 kg)
Warranty				
Product	Lifetime	Lifetime	Lifetime	
Downline	\$2,500	\$10,000	\$25,000	



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