

ARE YOU READY?

CATV Surge Suppression Products





Cable Innovations' Commitment to quality

We believe that excellence in Quality is the foundation for the management of our business and the cornerstone of our goal of customer satisfaction.

We believe that Quality is measured in satisfied customers and that continuous improvement of our products will result in meeting and exceeding customers' needs.

We believe that Quality is the key to providing the best possible reliability in the field to our customers.

Michael J. Aquino President From it's inception, Cable Innovations has earned it's reputation as the CATV surge suppression experts. Cable Innovations has never wavered in its commitment to providing the toughest, most reliable surge suppressors ever made available to the CATV industry.

Engineering Support

Our engineering staff is committed to supporting our customer's engineering and training staffs with design, application information, on site support and assistance in finding a solution to their surge or overvoltage related problem. Our engineers are available to answer questions from 8:00 am to 5:00 pm Mon.-Fri. EST by calling 770-962-5146 or e-mailing at engineer@cableinnovations.com. Additional technical notes, installation instructions and product specifications are available on our web site at www.cableinnovations.com

Products

Using state-of-the-art equipment, each product is designed to meet or exceed the customers' requirements. Our surge suppressors incorporate the latest protection devices and our patented designs. Each component of our products is selected for its precision and long term reliability.

Systems throughout the US and the world rely on Cable Innovations' line of products to keep their system up and running, no matter what mother nature or the local power company puts on the cable line.





"...the toughest power inserter/surge suppressor ever built."



SURGE SUPPRESORPower Inserter

Developed and patented by Cable Innovations, the CLPS Power Inserter series combines the latest surge suppression technology (Sidactor®) with Cable Innovations' patented design to create the toughest power inserter/surge suppressor ever built. Combining this surge suppression design with the superior specifications of a power inserter makes the CLPS PI series unequaled in the industry.





Currently Available Models

MODEL#	CLPS-6009PI	CLPS-5009PI	CLPS-8009PI	CLPS-1800PI
Description	Power Inserter w/Surge Suppression	Power Inserter w/Surge Suppression	Power Inserter w/Surge Suppression	Power Inserter w/Surge Suppression
Surge Protection	5000 Amps 8 X 20 μs ₃	5000 Amps 8 X 20 μs	5000 Amps 8 X 20 μs ₃	5000 Amps 8 X 20 μs
Power Rating	30 Amps. AC, 60/90 Volts, 60 Hz	25 Amps. AC, 60/90 Volts, 60 Hz	30 Amps. AC, 60/90 Volts, 60 Hz	25 Amps. AC, 60/90 Volts, 60 Hz
Power Selectable	Yes 1	No	Yes 1,2	No
Switching Voltage	155V Peak Min. 220V Peak	220V Peak Min. 300V Peak	220V Peak Min. 300V Peak	220V Peak Min. 300V Peak
Response Time	Less than 1 nanosecond			

¹ The CLPS-6009PI and CLPS8009PI allow for the interruption of power on each signal port without sacrificing protection.

FEATURES

- Sidactor® Device The CLPS-power inserter series incorporates the newest solid state Sidactor technology. Eliminating the need for SCR type surge suppressors.
- Overvoltages Taken off Center Conductor Overvoltages go directly to ground from the center conductor before damage can occur to trunk or feeder electronics.
- Superior Grounding The CLPS-power inserter series grounds from a clamp (located on the bottom of
 case) using a No. 6 ground wire to make a sweeping bend to pole vertical. Grounding to the strand (the
 method used by "kits") should not be attempted because the overvoltage may be induced back onto the
 center conductor defeating the purpose of the device.
- High Current Handling
- Surge Testing ANSI C-62.41 (IEEE 587)
- **ISO 9001** The CLPS PI Series is manufactured in an ISO9001 facility .
- Two (2) Year Warranty
- 100% Voltage tested Each unit is individually tested for voltage continuity before it leaves our plant.

Specifications subject to change without notice.





² CLPS-8009PI power selection without interrupting power or RF

³ Each port.



CLPS PI Series SURGE SUPPRESOR

Power Inserter

The CLPS Power Inserter series protects trunk line electronics by utilizing Sidactor technology. A Sidactor is a solid state crowbar device designed to protect equipment during hazardous transient conditions. In the standby mode the Sidactor appears transparent to the circuits it protects, but upon application of a breakover voltage exceeding 135V for the 6009PI, and 220V for the CLPS-5009PI and 8009PI the Sidactor will crowbar and simulate a short circuit condition which will divert the overvoltages to ground. Once clear of the high transient condition the Sidactor will reset and return to its normal high off-state impedance.

CLPS-6009PI Typical Performance

Frequency (Mhz)	5-9	10-54	55-550	551-870	871-1000	1000-1218
Insertion loss (<) dB	0.6	0.4	0.4	0.6	0.7	1.1
Return loss (>) dB	25	27	22	22	22	19
Isolation (>) dB	85	85	75	65	65	60
EMI shielding (>) dB	110	110	110	110	110	110
Hum modulation @ 15 Amps/90V (>) dB	55	60	60	60	60	55

CLPS-5009PI Typical Performance

Frequency (Mhz)	5-9	10-54	55-550	551-870	871-1000	1000-1218
Insertion loss (<) dB	0.2	0.2	0.5	0.5	0.6	0.7
Return loss (>) dB	16	29	30	30	27	26
Isolation (>) dB	84	84	84	84	66	59
EMI shielding (>) dB	110	110	110	110	110	110
Hum modulation @ 15 Amps/90V (>) dB	73	71	71	71	71	71

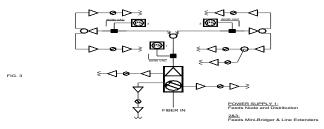
CLPS-8009PI Typical Performance

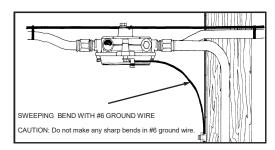
Frequency (Mhz)	5-9	10-54	55-550	551-870	871-1000	1000-1218
Insertion loss (<) dB	0.8	0.7	0.7	0.8	1.0	1.4
Return loss (>) dB	23	25	29	24	25	19
Isolation (>) dB	90	87	87	87	87	66
EMI shielding (>) dB	110	110	110	110	110	110
Hum modulation @ 15 Amps/90V (>) dB	73	71	71	71	71	69

CLPS-1800PI Typical Performance

Frequency (Mhz)	5-7	8-400	401-870	871-1000	1001-1218	1219-1825
Insertion loss (<) dB	0.5	0.5	0.5	0.6	0.7	1.0
Return loss (>) dB	15	20	20	20	17	16
Isolation (>) dB	65	70	70	70	60	50
EMI shielding (>) dB	110	110	110	110	110	110
Hum modulation @ 15 Amps/90V (>) dB	70	60	70	70	70	65

Fiber Installation

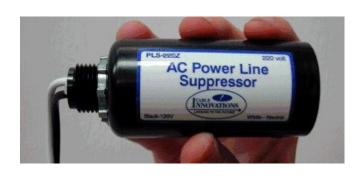




Power Stop Amp. Power

CABLE INNOVATIONS

4737 Hwy 332, Suite 21 Hoschton, GA 30548 770-962-5146 www.cableinnovations.com



The PLS-125P will fit in the smallest places

2 Inches



PLS-SERIES

Power Line Surge Suppressors

Cable Innovations' PLS series of power line surge suppressors reduces outages and customer complaints by **eliminating breaker outages**, blown fuses in power supplies, and damage to power supplies due to voltage transients, surges, spikes and lightning. The PLS-125Z, 220Z and 225Z are each wired into the breaker panel. The PLS-125P is designed for ease of installation, and may be plugged into a 110 volt outlet inside the power supply enclosure.

Currently Available Models

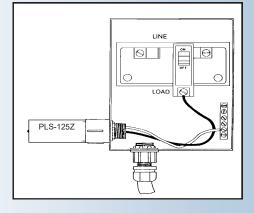
MODELS	PLS-125Z	PLS-220Z	PLS-225Z	PLS-125P
Line Voltage	120 VAC	220 VAC	Dual 120 VAC	125VAC
Peak Current (8/20 ms)	80,000 Amps	80,000 Amps	80,000 Amps*	36,000 Amps
Response Times	<1 nanosecond	<1 nanosecond	<1 nanosecond	<1 nanosecond
Frequency	50,60,400 HZ	50,60,400 HZ	50,60,400 HZ	50,60,400 HZ
Maximum Clamp Voltage	340 VAC	650 VAC	340 VAC	330 VAC
Energy (10/1000ms)	1120 Joules	2200 Joules	1120 Joules**	540 Joules
Maximum Leakage Current	<1.0 mA	<1.0 mA	<1.0 mA	<1.0 mA
Operating Temp. Range	-40 to 140 °F	-40 to 140 °F	-40 to 140 °F	-40 to 140 °F
Capacitance	15200 pF	7880 pF	15200 pF	11820 pF
Wiring	14 awg 18" Long	14 awg 18" Long	14 awg 18" Long	Plug in
Protection	L-N	L-N	L-N-L	L-G-N

**Total for circuit

FEATURES:

- Greater current handling capacity
- On Line LED Indicator
- Shock Proof Case
- No Maintenance UL-94rated case
- May be installed inside power supply





Specifications subject to change without notice. *The PLS Series is manufactured in an ISO9001 facility.

ISO 9001*

Two (2) Year Warranty





DLPS-15D_{Series}

Solid State Drop Line Surge Suppressors

Developed and patented by Cable Innovations the DLPS-15D series protects drop line electronics from damaging faults due to surges, transients, spikes and lightning. The DLPS-15D series using solid state Sidactor technology, protects in both directions from the house and from the cable drop line. With a response time of one nanosecond, the DLPS-15D series will virtually eliminate damage to drop line electronics caused by overvoltages.

If you are currently relying on "6 KV" protection, gas discharge tubes, or just a ground block, you are taking unnecessary risks with your equipment and with your subscriber's electronics. The DLPS-15D series offers longer life, greater current handling capacity, and faster response than any other type of protection.

MODEL#	DLPS-15D/15C	DLPS-15DP*
Application	Drop Protection	Drop Protection
Surge Protection	500 Amps (2 x 10μs)	500 Amps (2 x 10μs)
Power Passing	Up to 1 amp	Up to 1 amp
Switching Voltage	135V Peak Min.165V Peak Max.	135V Peak Min.165V Peak Max.
Response Time	Less than 1 nanosecond	Less than 1 nanosecond

^{*}The DLPS-15DP utilizes the same circuitry as the DLPS-15D, but with a different orientation of F-ports

SPECIFICATIONS Guaranteed Minimum Performance						
FREQUENCY (MHZ)	5-15	15-250	250-550	550-900	900-1000	1000-1250
Insertion Loss	0.5	0.4	0.4	0.4	0.6	0.7
Return Loss	24	25	25	25	22	20
EMI Shielding	>120dB	>120dB	>120dB	>120dB	>120dB	>120dB

FEATURES

- **Sidactor**® **Device** The DLPS-15D series incorporates the newest solid state Sidactor technology which responds faster than any other type of drop line surge suppression.
- Longer Life THE DLPS-15D series' performance will not degrade during repeated overvoltage conditions. A gas tube device's performance rating is degraded each time an overvoltage occurs. You can count on the DLPS series on the 1st surge or the 5000th surge.**
- Overvoltages Taken off Center Conductor Patented design takes overvoltages directly to ground from the center conductor, before damage can occur to drop line electronics
- Temperature Range -40 to +140 °F -40 to +60 °C
- Surge Testing ANSI C-62.41 (IEEE 587)
- ISO 9001 The DLPS series is manufactured in an ISO 9001 facility
- Two (2) Year Warranty
- Meets NEC 830
- Compatible with RG-6 and RG-59 RG-7 and RG-11 require connectors with center conductor seizure pins.

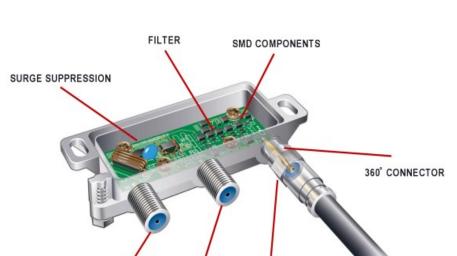
**As long as surge rating is not exceeded

**As long as surge rating is not exceeded

**DATIONS

CATV SURGE PROTECTION

Save time and money while improving performance and reliability



TV PORT(S)



DATA/MODEM PORT

DIU SERIES SURGE SUPPRESSOR

Digital Interface Unit

The Digital Interface Unit (DIU) is a low cost, efficient and compact unit that combines drop clutter into a single unit

The DIU may be configured into any combination of components needed. Cable Innovations currently has many different designs of DIU's and is continuing to develop more. We can also design a unit to fit your exact requirements.

Each DIU contains Cable Innovations patented solid state surge suppression circuit which not only protects the DIU but also protects other drop components including the subscribers electronic equipment.

The DIU's combination of efficiency, simplicity of installation, and superior surge protection makes it the clear choice when installing cable modem service.



DOCSIS 3.1 5-1218 MHZ

FEATURES

INPUT

- Voltage Blocking Capacitors on all ports to prevent ferrite core saturation
- Dual adjustable mounting tabs for easy installation
- Chromate zinc housing for superior corrosion resistance
- Patented surge suppression, other patents pending
- Soldered brass back plate to prevent rusting and provide superior EMI
- SCTE compliant "F" ports with 360 degree contact
- Surge testing ANSI C-62.41 (IEEE 587)

- SCTE approved grounding screw and ground wire connection
- Operating temperature (Ambient) -40 to +140 Degrees Fahrenheit 40 to +60 Degrees Celsius (Centigrade)
- Two (2) Year Warranty
- SMD Components for more precise specs and superior digital performance
- Meets NEC 830-30
- ◆ ISO 9001*

See back for further specifications and applications.







DUI-SERIES

Digital Interface Unit

Surge Specifications

Switching Voltage	135V Peak Min 165V Peak Max
Response Time	Less than 1 nanosecond
Current Suppression	1000 Amps (2 x 10us)

Currently Available Models

MODELS	PORTS (Output)	FILTER	S/DC	SURGE PROTECTION
DIU-15D-1	2	HPF	S	Y
DIU-15D-1-3P	3	HPF	S	Y
DIU-15D-1-4P	4	HPF	S	Υ
DIU-15D-2	2	8-10	S	Υ
DIU-15D-2-3P	3	8-10	S	Υ
DIU-15D-2-4P	4	8-10	S	Υ
DIU-15D-3	2	5-13	S	Υ
DIU-15D-3-3P	3	5-13	S	Υ
DIU-15D-3-4P	4	5-13	S	Υ
DIU-15D-4	2	HPF	DC-6	Υ
DIU-15D-4-3P	3	HPF	DC-6	Y
DIU-15D-4-4P	4	HPF	DC-6	Υ
DIU-15D-5	2	8-10	DC-6	Υ
DIU-15D-5-3P	3	8-10	DC-6	Υ
DIU-15D-5-4P	3	8-10	DC-6	Υ
DIU-15D-6	2	5-13	DC-6	Υ
DIU-15D-6-3P	3	5-13	DC-6	Υ
DIU-15D-6-4P	4	5-13	DC-6	Υ
DIU-15D-7	2	HPF	DC-9	Υ
DIU-15D-7-3P	3	HPF	DC-9	Υ
DIU-15D-8	2	8-10	DC-9	Υ
DIU-15D-9	2	5-13	DC-9	Y
DIU-15D-10	2	none	DC-6	Y
DIU-15D-10-3P	3	none	DC-6	Y
DIU-15D-10-4P	4	none	DC-6	Y
DIU-15D-11	2	none	DC-9	Y
DIU-15D-12	2	none	S	Y
DIU-15D-12-3P	3	none	S	Y
DIU-15D-12-4P	4	none	S	Y
DIU-15D-15	2	10.4 -12.4	S	Y
DIU-15D-16	2	10.4 -12.4	DC-6	Y
DIU-15D-17	2	10.4 -12.4	DC-9	Y

HPF= High Pass Filter S=Splitter DC=Directional Coupler Specifications subject to change without notice.

Specifications for each DIU may be obtained by calling Cable Innovations at 770-962-5146 or on the web at www.cableinnovations.com

CABLE INNOVATIONS

4737 Hwy 332 Suite 21 Hoschton, GA 30548 www.cableinnovations.com

Specifications subject to change without notice. *The DIU Series is manufactured in an ISO9001 facility



DLPS-15 MoCa **SURGE SUPPRESSOR**W/MoCA POE filter

The easy to install DLPS-MoCA protects drop line electronics from surges, transients, spikes and lightning with the added benefit of an integrated MoCA POE filter. The DLPS-MoCA, using solid state Sidactor technology, protects in both directions from the house and from the cable drop line.

The DLPS-MoCA offers <u>longer life</u>, <u>greater</u> <u>current handling capacity</u>, and a <u>faster response</u> than any other type of protection.



SOLID STATE SURGE SUPPRESSION **DOCSIS 3.1** 5-1218 MHZ

SPECIFICATIONS					
Frequency	Pass Band 5-1000 MHz Stop Band 1125-1625 MHz				
Surge Life	10A (10 x 1000μs) Infinite surges 1000A (10 x 1000μs) Infinite surges				
Power Passing	Up to 1 amp				
Switching Voltage	135V Peak Min. 165V Peak Max.				
Response Time	Less than 1 nanosecond				
Current Suppression	500 Amps (2 x 10μs)				

PERFORMANCE					
Frequency	5-750 MHz	750-871MHz	871-1000 MHz	1125-1200 MHz	1201-1625 MHz
Insertion loss	< 0.5dB	< 0.5dB	< 1.5dB	> 35dB	>40dB
Return loss	> 20dB	> 18dB	> 18dB	-	-
EMI shielding	> 120dB	> 120dB	> 120dB	> 120dB	> 120dB

FEATURES

- Replaces ground block The DLPS-MoCA is installed in place of a ground block.
- Longer Life THE DLPS-MoCA performance will not degrade during repeated overvoltage conditions. A gas tube device's performance rating is degraded each time an overvoltage occurs. You can count on the DLPS-MoCA on the 1st surge or the 5000th surge.
- Sidactor® Device The DLPS-MoCA incorporates the newest solid state Sidactor technology which eliminates the need for gas tube type surge suppressors.
- Overvoltages Taken off Center Conductor Patented design takes overvoltages directly to ground from the center conductor, before damage can occur to drop line electronics
- ISO 9001 The DLPS series is manufactured in an ISO 9001 facility
- Surge Testing ANSI C-62.41 (IEEE 587)

Meets NEC 830

Specifications subject to change without notiCe







DLPS-15C SURGE SUPPRESSOR Drop Line

The easy to install DLPS-15C protects drop line electronics from surges, transients, spikes and lightning. The DLPS-15C, using solid state Sidactor technology, protects in both directions from the house and from the cable drop line.



SOLID STATE
SURGE SUPPRESSION

DOCSIS 3.1 5-1218 MHZ

SPECIFICATIONS				
Power Passing	Up to 2 amps			
Switching Voltage	135V Peak Min. 165V Peak Max.			
Response Time	Less than 1 nanosecond			
Current Suppression	500 Amps (2 x 10μs)			

PERFORMANCE					
Frequency	5-15 mhz	15-250 mhz	250-550 mhz	550-900 mhz	900-1000 mhz
Insertion loss	< 0.75dB	< 0.5dB	< 0.5dB	< 0.5dB	< 0.75dB
Return loss	> 21dB	> 21dB	> 21dB	> 21dB	> 21dB
EMI shielding	> 120dB	> 120dB	> 120dB	> 120dB	> 120dB

FEATURES

- Attaches to ground block The DLPS-15C design allows for quick installation to the subscribers ground block.
- Longer Life THE DLPS-15C performance will not degrade during repeated overvoltage conditions. A gas tube device's
 performance rating is degraded each time an overvoltage occurs. You can count on the DLPS-15C on the 1st surge or
 the 5000th surge.
- Sidactor® Device The DLPS-15C incorporates the newest solid state Sidactor technology which eliminates the need for gas tube type surge suppressors.
- Overvoltages Taken off Center Conductor Patented design takes overvoltages directly to ground from the center conductor, before damage can occur to drop line electronics
- High Current Handling DLPS-15C Handles 1000 Amps.
- ISO 9001 The DLPS series is manufactured in an ISO 9001 facility
- Surge Testing ANSI C-62.41 (IEEE 587)

- Two (2) Year Warranty
- Meets NEC 830

Specifications subject to change without notice.

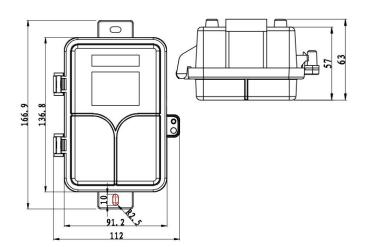






ST-POE-1000 Outdoor Cat 5/5e POE Data Line Surge Protector





The ST-POE-1000 is an outdoor ethernet surge protector designed to protect sensitive data equipment connected to a power over ethernet network from transient overvoltages. The dual surge protection circuit consists of high energy gas tubes and sharp clamping silicon avalanche diodes to guarantee a fast response to incoming transients. The ST-POE-1000 combination of efficiency, simplicity of installation, and superior surge protection makes it the clear choice when protecting data line networks.

FEATURES:

- 40000 amps surge suppression (total)
- 1000 mbp/s data rate
- Protection on all four pairs. (8 wires)
- UL497B Listed
- Shielded RJ45 Connectors





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SPECIFICATIONS			
Data Transmission Rate			1000 Mbp/s CAT 5e
Connections	-Input / -Output		RJ45 shielded / RJ45 shielded
Pinout			8 wires + shielding
Max Voltage on Pins [1-2] [3-6]	[POE and Data]	[4-5] [7-8]	60V
Nominal Discharge Current 8/20us	-Line/Lines		500A
	-Line/Ground		5,000A
Breakdown Voltage	-Line/Lines		68
	-Line/Ground		90
Enclosure / Dimensions			IP65 Plastic / 6.5 x 4.5 x 2.5 in
Standard Compliance			UL497B, IEEE-802-3t, IEC-61000-4-5

Specifications subject to change without notice.

www.surgetechco.com





FEATURES

- 32,000 AMPS maximum spike current
- Full 3 line surge protection
- 980 Joules
- Diagnostic LEDs
- 3 AC outlets
- 15 amp

Distributed Exclusively by:







The PSB-3S is a 980 joule,3 outlet subscriber premise surge suppressor. The PSB-3S provides protection for set top boxes, modems, and subscriber connected equipment.

Diagnostic LEDs

Two diagnostic LEDs (GROUNDED & PROTECTED) show power and protection status, The GROUNDED LED verifies that the PSB-3S is connected to a properly grounded wall outlet. The PRO-

TECTED LED indicates that surge protection is functioning.



Technical Specifications		
Electrical Rating:15A,125VAC,60Hz,1800 Watts	Surge Lines Protected (3-Line) : (L-N, L-G, N-G)	
Clamping Voltage :L-N 550V,L-G 550V,N-G 550V	Surge Energy Joule Rating: 980 Joules	
Maximum Spike Current :32000A (3 Line Total)	Response Time:<1 Nanosecond	
Maximum Spike Voltage :6KV EMI/RFI Noise Filter Frequency:150KHz~100MHz		
Certified CSA STD C22.2NO.42 - Conforms UL STD 498A and UL1449-ETL Listed		

Specifications subject to change without notice.

www.surgetechco.com





FEATURES

- 144000 AMPS maximum spike current
- Full 3 line surge protection
- 2160 Joules
- EMI/RFI noise filter
- 8 AC outlets
- 15 amp overload resettable circuit breaker
- Cable Innovations' quality, reliability and support

The PSB-2160X is a 2160 joule, 8 outlet subscriber premise surge suppressor. The PSB-2160 provides protection for set top boxes, modems and subscriber connected equipment.

Reduce Complaints

Many subscribers have no form of surge suppression on their TVs and Computers. When a surge enters through the power line and harms the subscriber's TV who do they call to complain to ,The Cable Company. Installation of the PSB-2160X will eliminate most of these types of complaints.





Specifications	
Electrical Rating :15A, 125 VAC, 60Hz, 1800 Watts	Surge Lines Protected (3-Line) : (L-N, L-G, N-G)
Clamping Voltage : L-N 400V , L-G 400V , N-G 500V	Surge Energy Joule Rating: 2160 Joules
Maximum Spike Current :144000A (3 Line Total)	Response Time :<1 Nanosecond
Maximum Spike Voltage : 6KV	EMI/RFI Noise Filter Frequency :150KHz~100MHz
Attenuation : Up to 60dB	TEL/FAX Protection Jack Type : RJ11

Specifications subject to change without notice.

www.surgetechco.com