efi ELECTRONICS

Office Product
Surge Protection Devices

- Prevent Equipment Damage and Disruption
- Reduce Service Calls
- Improve Customer Satisfaction
- Improve Service Contract Profitability

a company of Schneider Electric

Office Product
Surge Protection Devices

Office equipment is your business, protecting office equipment is ours

EFI offers a complete line of Surge Protection Devices (SPD) for the office products dealer. Whether you need to protect a personal copier or a Segment 6 connected copier, EFI has a power protection solution for your application. Our broad line of surge protection devices cover the entire office products spectrum. The PowerTracker line of plugstrips, the RacGuard line of power distribution racks and the Digital Power Filters are designed for today's sophisticated connected copiers and office equipment. In addition to the most complete line of power protection systems, EFI also provides the exclusive ServiceTracker+ Board Repair Program that increases the profitability of service contracts by eliminating board repair costs while reducing service calls.

PowerTracker Digital Power Filter
for Digital Copiers and Other Connected Office Equipment

PowerTracker Floormount Series
for Copiers, Fax and Office Equipment

PowerTracker Wallmount Series
for Copiers, Fax and Office Equipment

RacGuard Rackmount Series
for Network and Power Distribution Racks and Office Equipment

PowerTracker Plugstrips
for Office Equipment

PowerTracker®
Digital Power Filter

for Digital Copiers and Connected Office Equipment

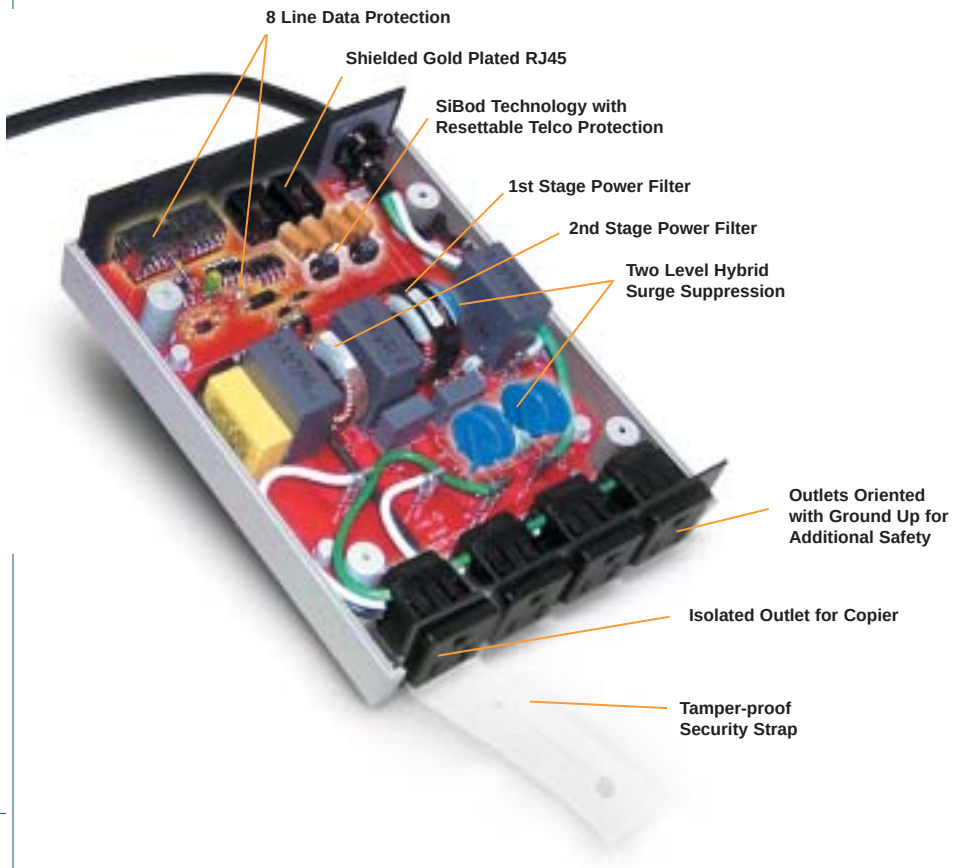
EFI's PowerTracker DPF

- Prevents customer downtime
- Reduces service calls and maintenance costs
- Prevents unexpected equipment failure
- Prevents interruptions in production
- Extends equipment life
- Increases reliability

Improved protection through EFI's Digital Power Filter

The innovative hybrid design of EFI's Digital Power Filter (DPF) assures the highest level of protection required for today's sophisticated digital copiers. Its surge suppression circuit is optimized through the use of a staged circuit that reduces transients through a second set of clamping devices and reduces the transient to a safe level.

The noise filtering circuit utilizes an LCR noise filter that provides excellent common mode and normal mode filtration. Filtration that not only reaches a performance level of over -65 dB but sustains a high attenuation level from 150 kHz to 30 MHz. This broad band noise filter exceeds the noise protection levels specified by equipment manufacturers.



The PowerTracker DPF provides a dedicated and isolated outlet for the copier with a second stage of filtration that prevents other peripheral devices from interrupting and/or corrupting the power supply to the copier. This assures that the most sensitive equipment is provided an extra degree of protection.

The PowerTracker DPF provides RJ11/RJ14 telephone protection with the latest SiBod technology for two telephone lines along with RJ45 8 line network protection. The network jacks are equipped with an RJ11 "keep-out" to prevent the telephone line from being inadvertently connected to the network circuit. This safeguards against telephone line high voltages from damaging the copier and network devices.

PROTECTED BY SERVICETRACKER WARRANTY
SERVICETRACKER
EFI ELECTRONICS

EFI's Exclusive Board Repair Service Program

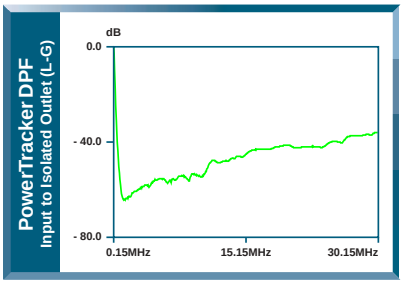
CONNECTED EQUIPMENT WARRANTY

PowerTracker® Digital Power Filter

for Digital Copiers and Connected Office Equipment

PowerTracker DPF Features

- Isolated outlet protects copier from other noise-generating devices
- Broad band noise filtration prevents equipment disruption and damage
- Two stage TVSS network prevents transient residual from interrupting operation
- 8 Line network protection compatible with 100Base T, TX and T4 applications
- RJ11 two-line protection provides and protects two fax / modem lines
- Resettable phone circuit keeps equipment operational through repeated surges
- Tamper-proof security strap secures power cord to protection device and prevents operating equipment without protection
- ServiceTracker+ program provides repair / replacement for all board damage regardless of cause



FCC bandwidth for domestic use is 150kHZ - 30MHz Class A Tested per Mil-STD 220A

Only PowerTracker DPF provides noise attenuation that eliminates 99.9% of common mode noise and normal mode noise that causes equipment disruption.

CONNECTED EQUIPMENT WARRANTY

Product Specifications

- UL Listed 1449 2nd Edition
- cUL Listed CSA C22.2 No. 0-M91 and No. 0-M1989
- Complimentary UL Listed UL 497A, UL 497B, UL 1363, UL 1283
- Designed to FCC 47 Part 68
- Designed to Bellcore GR-1089
- Complies with TIA / EIA 568-A

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Performance	
Technology	Hybrid Dual Stage
Response Time	< 5 ns
Surge Current Capacity	> 40 kA
Common Mode per Mil-STD 220A (input to isolated outlet)	
150 k - 300 kHz	> -40 dB
300 k - 2 MHz	> -60 dB
2 M - 10 MHz	> -50 dB
10 M - 20 MHz	> -40 dB
20 M - 30 MHz	> -35 dB
Normal Mode per Mil-STD 220A	
150 k - 2 MHz	> -60 dB
2 M - 14 MHz	> -30 dB
14 MHz - 30 MHz	> -20 dB
Sinewave Tracking	Yes
Filter Response Time	Instant - On
Filter Order	5th
Inductance - Common Mode	800 uH
Capacitance - Common Mode	0.0066 uF
Inductance - Normal Mode	15 uH
Capacitance - Normal Mode	7.6 uF
Operational Status Indication	Green Light - O.K.
Operating Frequency	60Hz
Mechanical Specifications	
Dimensions	7.5" x 5.6" x 2"
Weight (product)	2 lbs
Weight (shipping)	3 lbs
Electrical Cord Length	6 ft
Mounting Means	Velcro
Copier Outlet - Isolation From Other Outlets	
Common Mode per Mil-STD 220A	
150 k - 300 kHz	> -20 dB
300 k - 1 MHz	> -30 dB
1 M - 2 MHz	> -40 dB
2 M - 10 MHz	> -35 dB
10 M - 20 MHz	> -30 dB
20 M - 30 MHz	> -25 dB
Normal Mode per Mil-STD 220A	
150 k - 1 MHz	> -45 dB
1 M - 2 MHz	> -50 dB
2 M - 8 MHz	> -40 dB
8 M - 12 MHz	> -30 dB
12 M - 30 MHz	> -20 dB
Telco Protection	
Internet / Fax / Modem Connection	RJ11 / RJ14
DSL Ready	Yes
Lines Protected	2 Pair (2, 3, 4, 5)
Response Time	< 2 ms
Thru-put Resistance	20 Ohms
Clamping Voltage (UL 497A)	330 V
Resettable Circuit	Yes
Surge Current Capacity	
8 / 20 uS	250 A
10 / 700 uS	125 A
10 / 1000 uS	100 A
Power Cross (Bellcore GR-1089)	600 V
Network Protection	
Network Connection	Shielded RJ45
RJ11 Keep-out	Yes
Lines Protected	1, 2, 3, 4, 5, 6, 7, 8
Cat 5, 100Base-TX	Yes
Cat 3 / 5, 100Base-T4	Yes
Bi-directional protection	Yes
Response Time	< 1 ps
Protection Rated (UL 497B)	5-7 Vdc

DPF Model Description	120 V 15 A	120 V 20 A	208 V 15 A	208 V 20A
AC Protection	DPF12015	DPF12020	DPF20815	DPF20820
AC and Network Protection	DPF12015N	DPF12020N	DPF20815N	DPF20820N
Electrical Ratings				
Rated Line Voltage	120 Vac + - 10%	120 Vac + - 10%	208 Vac + - 10%	208 Vac + - 10%
Maximum Load Current	15 A	20 A	15 A	20 A
Overload Protection	15 A Fuse	20 A Fuse	15 A Fuse	20 A Fuse
Electrical Input Connections	NEMA L5-15	NEMA L5-20	NEMA L6-15	NEMA L6-20
Electrical Output Connections	NEMA R5-15	NEMA R5-20	NEMA R6-15	NEMA R6-20
Number of Receptacles	4	4	1	1
Connected Equipment Warranty	$25,000	$25,000	$25,000	$25,000

PowerTracker®
Surge Protection Devices

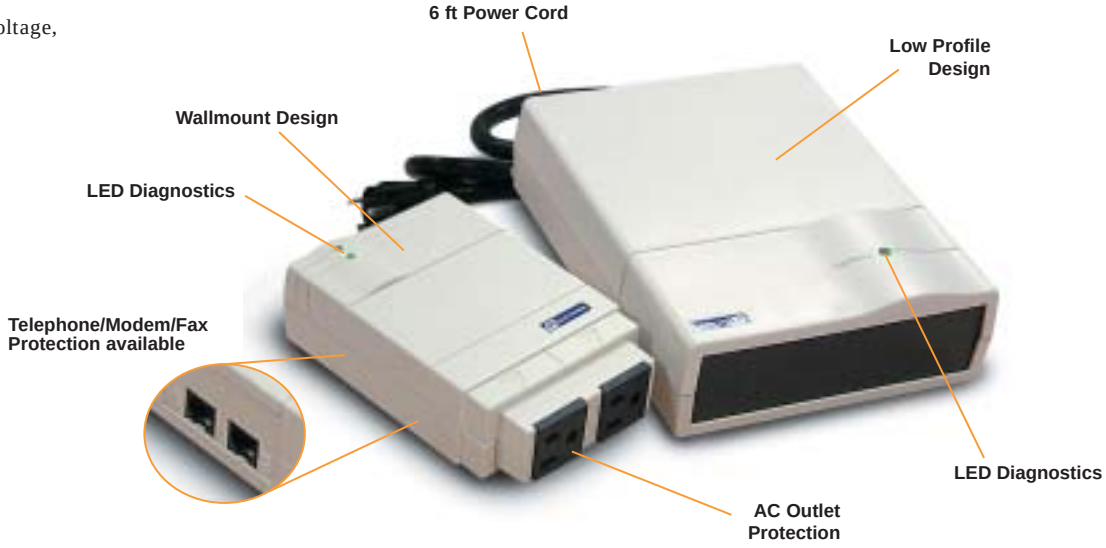
for Copiers, Fax and Office Equipment

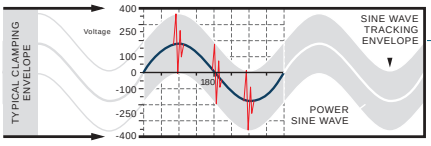
- Protection Working LED
- Wiring / Grounding LED
- < 5 ns Response Time
- 330 Volt UL 1449 Clamping Voltage*
- L-N, L-G, N-G Protection Modes*
- 50 - 60 Hz Frequency Range

* 220 V Floormount has
700 Volt UL 1449 Clamping Voltage,
L-L, L-G Protection Modes

Quality and performance in a compact design

The EFI line of wallmount and floormount surge protection devices offer superior protection for fax machines, printers and small copiers. EFI's patented Sine Wave Tracker technology provides unparalleled protection against surges by providing a remarkably tight let-through (clamping) voltage envelope for copier equipment.





Sine Wave Tracker® technology provides unparalleled protection against transients by providing a remarkably tight clamping envelope around the power line sine wave.

CONNECTED EQUIPMENT WARRANTY

PowerTracker Floormount Series

	120 V 15 A	120 V 20 A	220 V 15 A	220 V 20 A
AC Protection	F12015ES	F12020ES	F22015ES	F22020ES
AC and Telephone Protection	F12015ET	F12020ET	NA	NA
Physical Specifications				
Number of Receptacles	2	2	1	1
Electrical Input Connections	NEMA L5-15	NEMA L5-20	NEMA L6-15	NEMA L6-20
Electrical Output Connections	NEMA R5-15	NEMA R5-20	NEMA R6-15	NEMA R6-20
Electrical Ratings				
Rated Line Voltage	120 Vac	120 Vac	220 Vac	220 Vac
Maximum Load Current	15 Amps	20 Amps	15 Amps	20 Amps
Connected Equipment Warranty	$25,000	$25,000	$25,000	$25,000

PowerTracker Wallmount Series

	50 Series	100 Series	200 Series
AC Protection	W50ES	W100ES	W200ES
AC and Telephone Protection	W50ET	W100ET	W200ET
Physical Specifications			
Number of Receptacles	2	2	2
Electrical Input Connections	NEMA L5-15	NEMA L5-15	NEMA L5-15
Electrical Output Connections	NEMA R5-15	NEMA R5-15	NEMA R5-15
Electrical Ratings			
Rated Line Voltage	120 Vac	120 Vac	120 Vac
Maximum Load Current	15 Amps	15 Amps	15 Amps
EMI/RFI Noise Filtration	0 - 25 dB	20 - 40 dB	40 - 60 dB
Joule Rating	360	480	720
Peak Surge Current	27,000	36,000	54,000
Let-through Voltage	< 150	< 140	< 10
Connected Equipment Warranty	$2,500	$10,000	$25,000

RacGuard® & PowerTracker®
Surge Protection Devices

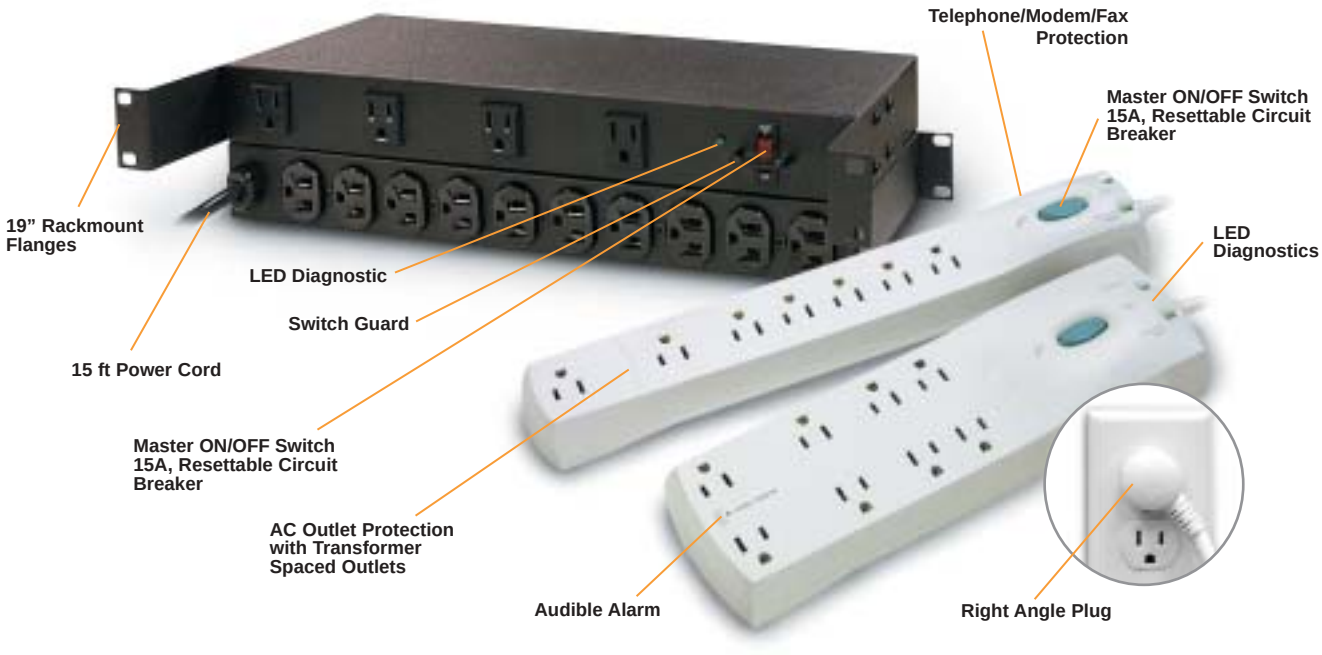
for Network and Power Distribution Racks and Office Equipment

- UL Listed 1449 2nd Edition
- 120 V Rated Line Voltage
- 15 Amps Maximum Load Current
- 50/60 Hz Operating Frequency
- L-N, L-G, N-G Protection Modes
- < 5 ns Response Time
- Diagnostics Status LEDs

Superior performance for computer protection

EFI's RacGuard family of surge suppressors provides the optimum protection for Telecom, MIS and other equipment connected to a 19" rack cabinet. The RacGuard SPDs feature state-of-the-art technology including sine wave tracking, multi-stage hybrid circuits, LED diagnostics, noise filtration and thermal fusing.

EFI's PowerTracker plugstrips put protection where they can do the most good to isolate and protect sensitive equipment. They can be conveniently installed at any standard power outlet to eliminate disruptive and damaging electrical disturbances. EFI provides a choice of solutions to best meet application needs.



RacGuard Rackmount Series

	No. of Outlets	Clamping Voltage	Single Pulse Energy Rating	Max Surge Current	EMI/RFI Noise Rejection	Connected Equipment Warranty
R-515ES8	8	330	1,100 Joules	72,000 Amps	< -20 dB	$10,000
R-2515ES8	8	330	1,295 Joules	84,000 Amps	< -60 dB	$25,000
R-515ES10	10	330	1,100 Joules	72,000 Amps	< -20 dB	$10,000
R-2515ES10	10	330	1,295 Joules	84,000 Amps	< -60 dB	$25,000

Non Surge Models: R-15ES10, R-20ES10

PowerTracker Plugstrip Series

	No. of Outlets	AC Protection	Phone Protection	Clamping Voltage	Single Pulse Energy Rating	Max Surge Current	EMI/RFI Noise Rejection	Connected Equipment Warranty
6000S	6	Yes	No	400	330 Joules	27,000 Amps	< -20 dB	$2,500
6000T	6	Yes	Yes	400	370 Joules	33,500 Amps	< -20 dB	$2,500
7000S	7	Yes	No	330	900 Joules	54,000 Amps	< -30 dB	$10,000
7000T	7	Yes	Yes	330	940 Joules	58,500 Amps	< -30 dB	$10,000
8000T	8	Yes	Yes	330	1,380 Joules	76,500 Amps	< -40 dB	$25,000

CONNECTED EQUIPMENT WARRANTY

EFI's Standard Limited Lifetime and Connected Equipment Warranty

We are so confident with the superior quality of EFI products that we back up every Office Product SPD with a lifetime product replacement warranty. If the surge protection device is damaged, we will replace it - for life. Every office product SPD also carries a connected equipment warranty. In the unlikely event that a surge gets through, the damaged equipment is covered by a ten-year connected equipment warranty.

The warranty coverage amount is secondary to any other applicable warranties, service contracts and insurance. For a period of ten (10) years after you purchase your EFI product, EFI will repair or replace (whichever is less), with like kind or quality, damaged equipment properly connected to the EFI product at the time of the occurrence that is directly damaged by an electrical surge, provided the EFI product (1) was plugged into a grounded, three-prong outlet and (2) was also damaged from the same electrical surge. EFI's liability to repair or replace damaged equipment shall not exceed the amount stated on the box in the aggregate. See Limited Warranty for details regarding coverage limits, requirements and limitations. Contact EFI Electronics for details.

EFI's ServiceTracker+™ Board Repair Program

ServiceTracker+ is an exclusive service program that will increase the profitability of service contracts by eliminating board repair costs. If a copier circuit board fails, regardless of reason, and it is protected by our exclusive Service Tracker program, we will repair or replace the board up to $1000 maximum claim limit. It's that simple. Used successfully by office product dealers for over ten years, the ServiceTracker+ program will help your business by preventing equipment damage, reducing service calls, improving customer satisfaction and the profitability of your service contracts.

ServiceTracker+ is provided only to office product dealers. This program helps to protect the office equipment dealer's investment in leased equipment as well as the profits from service contracts. The ServiceTracker+ program combines three valuable features:

1. **Printed Circuit Board Repair Program**
   Covers the cost to repair or replace (parts and labor only) damaged printed circuit boards, if repaired by an EFI Authorized Repair Center (ARC) when the connected equipment and the ServiceTracker+ SPD are both properly registered. This program is available in either three- or five-year time periods and at either $400 or $1,000 maximum claim limits. Choose the option that best fits the equipment being protected.

DSVC-3	Three (3) year, $1000 maximum per claim
DSVC-5	Five (5) year, $1000 maximum per claim
SVC-3	Three (3) year, $400 maximum per claim
SVC-5	Five (5) year, $400 maximum per claim

2. **Ten (10) Year $50,000 Connected Equipment Warranty**
   EFI will pay up to $50,000 to repair or replace (whichever is less), with like kind or quality, properly connected equipment that is damaged by an electrical surge provided the ServiceTracker+ SPD (1) was properly registered and (2) was plugged into a grounded, three-prong outlet and (3) was also damaged by the same electrical surge.

3. **Lifetime ServiceTracker+ Product Replacement Warranty**
   EFI will repair or replace any ServiceTracker+ SPD that is defective or damaged by an electrical surge for life.

See ServiceTracker+ Program for details regarding coverage limits, requirements and limitations. Contact EFI Electronics for details.

Schneider Electric

Merlin Gerin
Modicon
Square D
Telemecanique

Now there is a global source of products and expertise to assure absolutely reliable power for all commercial, institutional and industrial applications. Schneider Electric is the world's leader in power protection from circuit breakers to surge suppressors. Because electricity is our only business, no other company has more resources at its command to assure quality power than Schneider Electric. Schneider Electric has been in the power business for more than 100 years and has an annual revenue of over $10 billion. Obtaining your power protection needs from Schneider Electric provides you the confidence of dealing with a company that will be there to back up its products and warranties.

As the power protection arm of Schneider Electric, EFI Electronics has been advancing the technology of surge protection for more than twenty years. Today, EFI provides a complete portfolio of transient voltage surge suppression devices, from the simplest residential system to mission-critical commercial and industrial applications.

EFI Electronics is committed to providing its customers with products that deliver the maximum in performance and value. At its headquarters in Salt Lake City, Utah, EFI has created one of the worlds leading laboratories dedicated to testing and evaluating TVSS technologies. This unique LightningLab™ makes EFI one of the few locations in the world that can perform high-energy transient tests up to 175,000 amps to simulate true lightning conditions.

Expertise That Drives Design

The Schneider Electric family of Surge Protection Devices incorporates a wealth of electrical distribution and protection expertise. Over the past several years, we have dedicated extensive resources to advancing the power-quality industry, including:

- Studying the effects of transients and lightning on power systems
- Investing in SPD technologies and their coordination with the entire power system
- Defining appropriate product installation practices
- Driving improvements in the NEC, UL, IEC and ANSI codes and standards for the benefit of the industry and protection of users
- Designing product for improved performance
- Qualifying all SPD's under severe power conditions to improve end-of-life conditions

"Lightning Machine" in EFI's on-sight LightningLab™