Surge Protector Series

PoE Surge Protector
Ethernet Surge Protector
Phone line, E1/V35

SP-POE-01

Power Over Ethernet 1-Port Surge Protector

The SP-POE-01 is a single port, Ethernet surge protector designed to protect all 8 lines used in a standard CAT5e cable. The product is compatible with 10/100Base-T(X) networks and 48V Power-over-Ethernet systems. The Standard 802.11af allows the methods of implementing PoE: The SP-POE-01 applies data to the pairs (pins 1/2 and pins 3/6) and power to the unused pairs (pins 4/5 and pins 7/8). The SP-POE-01 offered protection is provided on all 8 Ethernet pins (6.8V clamping on Data pins 1,2,3,6 and 53V clamping on POE pins 4,5,7,8). Network connections are made via standard female RJ45 connectors. Grounding is accomplished via a ground wire.

Features

- 10/100Mbps data rate
- Compatible with 48V power over Ethernet systems
- 6.8V Data / 53V PoE clamping voltage

- 5KA surge discharge current
- CAT5 and CAT5e compatible. All 8 pins protected.
- Integral mounting feet and separate ground wire (SP-POE-16, SP-POE-24)
- Shielded RJ45 jacks and metal enclosure for EMI noise suppression

Specifications

Voltage	Data 5V ; PoE 48V
Clamping Voltage	6.8V Data (Pins 1,2,3,6) 53V PoE (Pins 4,5,7,8)
Max Surge Discharge Current	5KA (8/20uS)
Peak Pulse Current	100A (10/1000uS)
Pins Protected	Data : 1, 2, 3, 6 PoE : 4, 5, 7, 8
Insulation Lost	< 0.5dB (10Mbps)
Data Rate	10/100 Mbps

Response Time	line/line <1 ns; line/ground < 100ns
Operating Temperature	-20 ~ +75°C
Storage Temperature	-40 ~ +85°C
Operating Humidity	0% ~ 95% non condensing
Dimensions (D x W x H)	38 x 106 x 26 mm (1-port)
	73 x 143 x 44 mm (8-port)
	73 x 483 x 44 mm (16/24-port)
Weight	75 g (1-port), 435g (8-porte), 1.4kg (16/24-port)
Certification	IEC 61643-21:2000

Ordering Information

Model Name	Description
SP-POE-01	1-port RJ45 10/100Base-TX PoE Ethernet Surge Protector (Data: 1,2,3,6. PoE: 4,5,7,8)
SP-POE-24	24-port RJ45 10/100Base-TX PoE Ethernet Surge Protector (Data: 1,2,3,6. PoE: 4,5,7,8)

SP – POE – ☐☐

Example: SP – POE – 01

SP-GPOE-01

Single Port, Gigabit Ethernet PoE Surge Protector

The SP-GPOE-01 is a single port, Gigabit Ethernet PoE surge protector designed to protect all 8 lines used in a standard CAT5e cable. The product is compatible with 1000Base-T networks and 48V Power-over-Ethernet systems. The Standard 802.11af allows the methods of implementing PoE: The SP-GPOE-01 applies data to the pairs (pins 1/2 and pins 3/6) and power to the unused pairs (pins 4/5 and pins 7/8). The SP-GPOE-01 offers protection is provided on all 8 Ethernet pins (6.8V clamping on Data pins 1,2,3,6 and 53V clamping on POE pins 4,5,7,8). Network connections are made via standard female RJ45 connectors. Grounding is accomplished via a ground wire.

Features

- 1000Mbps data rate
- Compatible with 48V power over Ethernet systems
- 63V PoE clamping voltage

- 1.5KA surge discharge current
- CAT5 and CAT5e compatible. All 8 pins protected.
- Integral mounting feet and separate ground wire
- Shielded RJ45 jacks and metal enclosure for EMI noise suppression

Specifications

Operating Voltage	UN	63V
Max. continuous operating voltage peak current line to line (8/20us)	Imax	1.5KA
Max. continuous operating voltage peak current line to ground (8/20us)	Imax	1.5KA
Voltage protection level (line to line)	UP	≤ 120V
Voltage protection level (line to ground)	UP	≤ 120V
Insertion Loss		< 0.5dB

Data rate	1000Mbps
NM Surge response time	≤ 1ns
Connector	RJ45
Data lines protected	1-8
Operating Temperature	-40 ~ 80°C
Dimensions	38 x 106 x 26mm (D x W x H)
Certification	IEC 61643-21:2000

IN · Network line · SP-GPOE-01 · OUT · Patch cable · Network equipment · Ground

Ordering Information

Model Name	Description
SP-GPOE-01	Single Port, 1000Base-T GE PoE Surge Protector

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

SP-GE-01

Gigabit Ethernet 1-Port Surge Protector

The SP-GE-01 Series is designed to work on Category 5e Gigabit Ethernet (GE) transmission lines as well as Category 6 applications. They are ideal to protect expensive equipment against surges and transients entering a building on exposed transmission lines. Available in both Single unit and Rack mountable surge protectors with female to female RJ-45 connectors.

Features

- Ethernet 10/100/1000Base-T Data line protection
- Exceeds CAT 5 & 6 Transmission Values
- Fast energy absorption when over-voltage occurs
- Low series resistance and minimal capacitance values to preserve the data information

Specifications

Operating Voltage	Un 5V		**Transmission Speeds**	Vs 10/100/1000Mbps
Max. continuous operating voltage	Uc 6V		**Bandwidth / Insertion Loss**	fG 250Mhz ; Ae < 0.5dB
Peak Current Normal Mode (line to ground, 8 /20uS)	In 2.5KA		**Connector / Data Lines Protected**	RJ45 ; 8
			Operating Temperature	-40 ~ 80℃ degree
Peak Current Common Mode (line to line, 8/20uS)	In 300A		**Dimensions**	38 x 106 x 26 mm (1-port) 73 x 148 x 44 mm (8-port) 73 x 480 x 44 mm (16/24-port)
Voltage protection level (line to ground,10/700uS)	Up <=500V		**Weight**	75g (1-port); 0.44kg (8-port); 1.4kg (16/24-port)
Voltage protection level (line to line,10/700uS)	Up <=30V		**Certification**	IEC 61644-1
NM Surge Response Time (ns)	tA <1ns			

Ordering Information

Model Name	Description
SP-GE-01	1-port RJ45 10/100/1000Base-T Ethernet Surge Protector (pin 1,2,3,4,5,6,7,8)
SP-GE-24	24-Port RJ45 10/100/1000Base-T Ethernet Surge Protector (pin 1,2,3,4,5,6,7,8)

SP – GE – □□
Example: SP – GE – 01

SP-ETH-01

Fast Ethernet Surge Protector

A surge protector is an appliance designed to protect electrical devices from voltage spikes. A surge protector attempts to regulate the voltage supplied to an electric device by either blocking or by shorting to ground voltages above a safe threshold. The SP-ETH-01 will ensure the reliable operation of RJ-45 twisted pair based networking equipment running Ethernet. Single unit and rack mountable surge protectors are both available.

Features

- Ethernet 10/100Base-TX Data line protection
- Fast energy absorption when over-voltage occurs
- Low series resistance and minimal capacitance values to preserve the data information

Specifications

Un	5V		**Attenuation in dB**	< 0.5dB (100MHz)
Uc	6.8V		**Capacitance**	< 40pF
Isn(discharge current)	2.5KA		**Dimensions**	38 x 106 x 26 mm (1-port) 73 x 143 x 44 mm (8-port) 73 x 480 x 44 mm (16/24-port)
Imax	5KA			
Ures	< 30V		**Weight**	75g (1-port) ; 440g (8-port) ; 1.38kg (16-port) ; 1.40kg (24-port)
tA (Response time)	< 1ns		**Certification**	IEC 61644-1
Protected Cores	SP-ETH-08: 8 pins SP-ETH-01-8: 8 pins SP-ETH-16: 8 pins SP-ETH-01-4: 4 pins SP-ETH-24: 8 pins			

Ordering Information

Model Name	Description
SP-ETH-01-4	1-port RJ45 10/100Base-TX Ethernet Surge Protector (pin 1,2,3,6)
SP-ETH-01-8	1-port RJ45 10/100Base-TX Ethernet Surge Protector (pin 1,2,3,4,5,6,7,8)
SP-ETH-08	8-Port RJ45 10/100Base-TX Ethernet Surge Protector (pin 1,2,3,4,5,6,7,8)
SP-ETH-16	16-Port RJ45 10/100Base-TX Ethernet Surge Protector (pin 1,2,3,4,5,6,7,8)
SP-ETH-24	24-Port RJ45 10/100Base-TX Ethernet Surge Protector (pin 1,2,3,4,5,6,7,8)

Port Number
SP – ETH – □□ – □
Example: SP – ETH – 01– 4

TSP-10
Phone Line Surge Protector

A surge protector is an appliance designed to protect electrical devices from voltage spikes. A surge protector attempts to regulate the voltage supplied to an electric device by either blocking or by shorting to ground voltages above a safe threshold. The TSP-10 will ensure the reliable operation of POTS based equipment such as telephones, FAX machines and dialup modems.

- rotect FAX and dialup modems from surges on telephone lines
- Control transient over voltage to a low level to ensure maximum protection for your equipment
- LED indicator flashes for ring indication and lights during device off-look operation

Specifications

Surge current	8 x 20u sec of 500A
DC spark over voltage	160 ~ 240VDC

Dimensions	80 x 30 x 27mm (D x W x H)
Weight	20g
Compliance	UL 1449 (2nd Edition)

Ordering Information

Model Name	Description
TSP-10	In Line Telephone Surge Protector with RJ-11 Jacks

SP-SE-B01
E1 Surge Protector

A surge protector is an appliance designed to protect electrical devices from voltage spikes. A surge protector attempts to regulate the voltage supplied to an electric device by either blocking or by shorting to ground voltages above a safe threshold. The SP-SE-B01 will ensure the reliable operation of coaxial based networking equipment running ArcNet, Satellite/CCTV and 75 ohm E1 communication systems.

- Protect E1 Access Units using coaxial cable from transient surge voltages
- Compact in-line installation
- Low shunt capacitance to reduce signal loss
- Maximum system up time
- State of the art, avalanche diode technology

Specifications

Type	SP-SE-B01
Connection	BNC
Un	10V
U-max	18V

Discharge current	10KA
Response time	< 10ns
Insertion loss (40MHz)	0.5dB
Dimensions	38 x 68 x 27mm (D x W x H)
Weight	70g
Compliance	IEC 61644-1, draft 98

Ordering Information

Model Name	Description
SP-SE-B01	75 ohm, BNC, 1 port Coax cable surge protector

SP-V35-01
V.35 Surge Protector

The SP-V35-01, V.35 Data Line Surge protector, prevents damage to V.35 data ports and data errors due to electrical surges. These surges originate from a wide variety of sources, including lightning strikes, static charge buildup, electric motors, fluorescent lights or the normal AC power protection equipment. Data line transients can be damaging to V.35 hardware. The surge protector intercepts harmful data line transients and diverts them safely to chassis ground through a grounding wire. The SP-V35-S01 plugs directly into an M/34 data port. All standard data, clocking and control signals on the ITU-T V.35 interface are protected. The SP-V35-S01 uses sophisticated circuits, which allow the unit to operate at the data rates up to 10 Mbps. The SP-V35-S01 can take repeated surge "hits" without degrading in performance or letting harmful energy through to the data port.

- Standard V.35 data Lines on the M/34 cable adapter
- Data Rates up to 10 Mbps
- Plugs Directly into V.35 Port (One Male, One Female M/34 cable adapter)
- Diverts Harmful Transients to Chassis Ground through Braided Metal Strap
- Able to take Repeated Surges without Degrading in Performance
- Prevents equipment in case of a Severe Surge
- Surge Handling Capacity of 1,500 Watts

Specifications

Interface	V.35
Maximum Data Rate	10 Mbps
Connectors	• 34-pin M-block male • 34-Pin M-block female
Leads/Signals Protected	All V.35 leads/signals
Capacitance	< 40pF
Maximum Surge Protection	(Current, 8 x 20 μs at Standard Clamp Voltage) 370 amps
Standard Clamp Voltage	30 volts
Series Resistance	None

Temperature	- 40 ~ 85℃
Humidity	10 ~ 90% relative, non-condensing
Dimensions	120 x 52 x 30 mm (D x W x H) plus 50 cm of cable (fully extended) on either side for a total length 70 cm
Weigh	300g

Ordering Information

Model Name	Description
SP-V35-01	V35 Data line surge protector

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