CATALOG
SURGE PROTECTION

Ethernet Surge Protection
Video Surge Protection
RS485 Surge Protection
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   Mode-B / Midspan
Ethernet Surge Protector

Features
1. IEC61000-4-5 and ITU-TK20&K21
2. The high response surge arresters
3. Clamping voltage and low loss against high speed signal
4. Designed by theory of current limited and voltage clamped, discharged to ground
5. Standard: 10Base-T/100Base-TX

Introduction
IEC61000-4-5 and ITU-TK20&K21 are the recognized standards for top quality surge protectors. It made by the high response surge arresters, the advantage allow clamping voltage and low loss against high speed signal, because it had a low capacitance. Designed to protect data communication lines in local and wide area networks up to 100Base-T transmission speeds.

Circuit Diagrams
Designed by the theory of current limited and voltage clamped, discharged to ground. When the data line exist surge, it is induced and worked, the lightning energy is discharged to ground, and the high surge voltage is clamped to low level, so our devices is protected.

Specification
Standard: 10Base-T/100Base-T standard
10/100M signal: IEC61000-4-5 and ITU-TK20&21
Nominal discharge current I(n): 6 KA(8/20μS)
Maximum Surge Protection Voltage: 4,500V or 4,5KV
Working voltage: 0-5V
Limit voltage: ≤40V
Apply Band rate: 100Mbps
Connector: RJ45 (F)
The line of protection: 4 lines (1, 2, 3, 6)
Insert consumption: ≤0.5dB
Delay time: ≤1ns (Surge Protection attack time)
Working temperature: -20 to 60°C
Storage temperature: -25 to 85°C
Humidity: Relative humidity 5% to 95% No power supply needed, No consumption
L×W×H: 72mm×42mm×25mm
Shell: Alnico
Color: Blue
Weight: 10g
Standard Compliance: FCC, CE, RoHS

Application
Usually is use in protecting the following device as below
Ethernet Exchange
Ethernet HUB or Switch
Router
Computer
Industrial control Device
Net Server for Video system

Order part Number
BC-5010 Ethernet Surge Protector
Video Surge Protection

Features
1. IEC61000-4-5 and ITU-TK20&K21
2. Clamping voltage and low loss against high speed signal
3. Low capacitance. Designed to protect the equipment and coaxial line, connect in series
4. Interface accord with BNC standard
5. Body steel
6. ISO9001 factory

Introduction
IEC61000-4-5 and ITU-TK20&K21 are the recognized standards for top quality surge protectors. It made by the high response surge arresters, the advantage is allowed clamping voltage and low loss against high speed signal, because it had a low capacitance. Designed to protect the equipment and coaxial line, connect in series. Interface accord with BNC standard.

Circuit Diagrams
Designed by the theory of current limited and voltage clamped, discharged to ground. When the signal line exist surge, it is induced and worked, the lightning energy is discharged to ground, and the high surge voltage is clamped to low level, so our devices is protected.

Specification
Coaxial signal: IEC6100-4-5 and ITU-TK20&21
Nominal discharge current(1n): 5 KA(8/20μS)
Working voltage: 0-2V
Limit voltage: ≤30V
Apply Band rate: 10Mbps
Connector: BNC
Insert consumption: ≤0.1dB
Delay time: ≤10ns
Working temperature: -20 to 60°C
Storage temperature: -25 to 85°C
Humidity: Relative humidity 5% to 95% No power supply needed,
No consumption
RACK protect: 9,12,16,24 choice
LxWxH: 72mmx42mmx25mm
Shell: Alnico
Color: Blue
Weight: 10g
Standard Compliance: FCC, CE, RoHS

Application
Usually is use in protecting the following device as below
Ethernet Exchange
Ethernet HUB or Switch
Router
Computer
Industrial control Device
Net Server for Video system

Order part Number
BC-5052 Video Surge Protector
RS-485 Surge Protector

Features
1. Three stages of protection on every data line
2. Protected signal ground connection
3. Easy to install, plug-and-play
4. 4500V surge protection

Introduction
IEC61000-4-5 and ITU-TK20&K21 are the recognized standards for top quality surge protectors. It has high respond speed, low output rudimental voltage, ascendance transfer performance. All have #10 ground screws which must be connected to a solid ground.

Circuit Diagrams
Designed by the theory of current limited and voltage clamped, discharged to ground. When the data line exist surge, It is induced and worked, the lightning energy is discharged to ground, and the high surge voltage is clamped to low level, so our

Specification
Standard: Accord EIA RS-485 standard
RS485 signal: IEC61000-4-5 and ITU-TK20&K21
Working voltage: 0-5V
Limit voltage: <15V
Maximum Surge Protection Voltage: 4,500V or 4.5KV
Apply Band rate: 1Mbps
Isolate signal: TXD, RXD, GND
Connector: Standard industrial terminal block
Insert consumption: <0.5dB
Delay time: ≤1ns (Surge Protection attack time)

Environment
Working temperature: -40 to 85C
Storage temperature: -25 to 85
Humidity: Relative humidity 5% to 95%
Standard Compliance: FCC, CE, RoHS

Power
Input powered: No power supply needed
Consumption: No consumption

Dimension
LxWxH: 80mmx25mmx22mm
Shell: Alinco
Color: Blue
Weight: 10g
Approvals: FCC,CE, RoHS approvals

Order part Number
BC-5053 RS-485 Surge Protector
Model : BC-PV101
Power-over-Ethernet Surge Protection (4KV)

Description
Ethernet and PoE connections both restrict cable distances to 100 meters between network ports. To overcome this distance limit, network installers can simply connect an PoE Extender in-line with the Cat-5e or Cat-6 cable.

With PoE Surge Protection, PDs (such as IP Security Cameras, VoIP telephones, wireless access points) can be protected the both PD equipments will again from Big Surge (4KV).

Features
- Compatible with IEEE802.3af
- RJ45 Jack to RJ45 Jack
- Power and signal line protection
- 10/100/1000Base-Tx Cat5/Cat5e compatible
- Application for PoE(Power over Ethernet) protection
- EMI standards complies with FCC, CE class B

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of channels</td>
<td>1</td>
</tr>
<tr>
<td>Pass Through Data Rates</td>
<td>10/100/1000 Mbps half/full duplex</td>
</tr>
<tr>
<td>Power over Ethernet Input</td>
<td>RJ45</td>
</tr>
<tr>
<td>Power over Ethernet Output</td>
<td>RJ45</td>
</tr>
<tr>
<td>Indicators</td>
<td>LED indicators are located on the RJ45 connector</td>
</tr>
<tr>
<td>Connectors</td>
<td>Network Indicator: RJ45 Jack &amp; RJ45 Jack</td>
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<tr>
<td>Network cables</td>
<td>Shielded category 5 (or higher)</td>
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<tr>
<td>Dimensions</td>
<td>130mm x 49mm x 35mm</td>
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<tr>
<td>Mounting</td>
<td>Wall of shelf</td>
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<tr>
<td>Environment</td>
<td>Indoor</td>
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<tr>
<td>Environmental Conditions</td>
<td>Operating Ambient Temperature:-10 to 45°C</td>
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<tr>
<td></td>
<td>Operating Humidity: Maximum 90%, Non-condensing</td>
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<tr>
<td></td>
<td>Storage Temperature:-20 to 70°C</td>
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<tr>
<td></td>
<td>Storage Humidity: Maximum 95%, Non-condensing</td>
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<tr>
<td>Regulatory Compliance</td>
<td>IEEE 802.3af (PoE), FCC, CE, RoHS</td>
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<tr>
<td>Standard Compliance</td>
<td>FCC Part15, Class B</td>
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</tbody>
</table>

Order part Number
BC-PV101 Power-over-Ethernet Surge Protection (4KV), 10/100/1000Mbps Ethernet
**10/100Mbps POE Surge Protections (SPD) Mode-B / Midspan**

**Product Description**

Introduction
POE Network lightning arrester is a surge protection device designed especially for appliance ports and circuits which transmit data through POE. The product has applied the ESD and the malfunction self-recovery, which can provide thorough protection for signal and power supply. By the mean time, with the adoption of special touch-ground isolation design, it can avoid the influence of ground crosstalk, thus making the operation more stable and safer.

**Specifications**

<table>
<thead>
<tr>
<th>Type</th>
<th>BC-S100POE Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal operating voltage $U_n$</td>
<td>Power 48V DC, 60V DC</td>
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<tr>
<td>Maximum continuous operating voltage $U_c$</td>
<td>1kA</td>
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<tr>
<td>Nominal discharge current (8/20μs) $I_n$</td>
<td>2kA</td>
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<td>Maximum discharge current $I_{max}$</td>
<td>160V</td>
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<td>Protection level UP</td>
<td>10M/100MBit</td>
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<tr>
<td>Rates</td>
<td>1ns</td>
</tr>
<tr>
<td>Response time $t_R$</td>
<td>RJ45</td>
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<tr>
<td>Protection port</td>
<td>-40°C ~ +80°C</td>
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<tr>
<td>Operating temperature</td>
<td>IP20</td>
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<td>Outer casing protection grade</td>
<td>GB 18802.1-2011</td>
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<td>Testing standard</td>
<td>DIN</td>
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<td>Installation mode</td>
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<tr>
<td>Protective</td>
<td>1,2,3,6</td>
</tr>
</tbody>
</table>

**Order part Number**

BC-S100POE 10/100Mbps POE Surge Protections (SPD) Mode-B / Midspan

Standard Compliance: FCC, CE, RoHS