With the increasing reliance on Computer and other micro-processor based equipment - the importance of protecting data and hardware cannot be stressed enough. There are many things that we can do in our homes and offices to ensure that our equipment and data are safe from the dangers lurking outside our four walls. Many people may already be familiar with the protection afforded by a UPS (Uninterruptible Power Supply), Firewall etc but ‘transient overvoltage protection’ is often overlooked. Often, the hardware damage, coupled with the loss of data can prove catastrophic to some companies and with 70% of organisations suffering major hardware damage folding within 18 months - the importance of covering all options cannot be overlooked, or deemed non-cost effective.

As one of the largest single specialist manufacturers of surge protection in Europe with over 50 years experience in this field, we are pleased to be able to offer a complete solution to this problem. Bowthorpe EMP is registered to ISO 9001 and supplies products which comply with the recently issued standard: BS6651: 1999, Annex C which identifies three different location categories in a typical building. They are: supply side of the main incoming power distribution board (Category C - Primary level): mains distribution system (Category B - Intermediate Level): and the load sides of socket outlets (Category A - Secondary Level Protection). Products specifically designed for categories A and B are dealt with in this publication.

Unlike many surge protection manufacturers Bowthorpe supply all surge protected socket strips and plug-in adaptors with ‘Thermal Overload Protection’, as standard. This essential safety feature is fitted so that should a continuous fault occur on the incoming supply line, rather than continue to clamp any resultant increase in voltage (causing the internal surge protection components to overheat and give risk to fire, or electric shock) the thermal device operates and disconnects the surge protection circuit.

All models have a failsafe arrangement of surge protection elements to guarantee the protective fuse blows indicating failure unlike the arrangement used by most of our competitors which could mean the loss of protection without indication thus leaving equipment exposed to future surge damage.

With products for nearly every Home, or business application, it makes sense to choose a UK manufacturer who specialises in surge protection and surge protection only. Please feel free to contact us by phone, fax, e-mail, or simply visit our web site at: www.bowthorpe-emp.com

Instant protection from surges caused by:
- Lightning
- Fluorescent lights
- Vacuum cleaners
- Lifts
- Central heating pumps
- Fan heaters
- Air conditioners
- Photocopiers
- Maintenance power tools etc
- Fridge freezers
- Welders
- Washing machines
- Electric kettles
- Switching of inductive and capacitive loads

Why Surge Protection?... Why Bowthorpe?

SURGE PROTECTION PRODUCTS FOR THE HOME, SMALL OFFICE/HOME OFFICE AND PROFESSIONAL GRADE

CLEAN POWER CONCEPT
Ideal for domestic applications, these products are normally used similarly to conventional plugs and sockets. These devices dissipate incoming and outgoing surges to or from domestic equipment. Power consumption is negligible and all reset automatically.

**APPLICATIONS**
- PC's
- Hi-Fi
- Audio Equipment
- Video Recorders
- Computer Games
- TV
- Microwave Oven
- DVD

**PULSE PROTECTOR PLUG - PPP**
The PPP offers the most cost effective form of protection. It is usually wired and used as an ordinary plug but can also be used without the need to hardwire. The PPP has a power protection status indicator light.
- Plug rated 13 Amps with 5 Amp fuse fitted.
- White nylon housing.
- Thermal overload protection.
- Neon indicator to denote protection operational.
- Complies with BS 1363, BS 5733, IEC61643 and the IT Safety Standard EN60950.

**SURGE PROTECTED ADAPTOR - TWA**
The TWA offers a convenient means of supplying three separate units with surge protection and is used in the same manner as an ordinary adaptor.
- 13 Amp fuse fitted.
- White flame retardant moulding.
- Intersocket protection.
- Thermal overload protection.
- Complies with BS 1363, BS 5733, IEC61643 and the IT Safety Standard EN60950.

**ELECTRONIC EQUIPMENT NOISE ADAPTOR - EENA**
The EENA offers the same level of surge protection as the EESA but additionally offers protection against mains borne Radio Frequency Interference (RFI mains noise).
- Rated 13 Amps.
- Thermal overload protection.
- Neon indication to denote protection operational.
- Beige housing
- Flame retardant moulding.
- Typical RFI Attenuation of -20dB.
- Complies with BS 5733, IEC61643 and the IT Safety Standard EN60950.

**ELECTRONIC EQUIPMENT SURGE ADAPTOR - EESA**
Plugged into a wall power socket the EESA provides a single socket which protects against transients on the mains electrical supply and so prevents your electronic circuits from misbehaving.

The EESA has a power protection status indicator light which indicates that protection is operational.
- Rated 13 Amps.
- Thermal overload protection.
- Neon indication to denote protection operational
- Beige housing.
- Flame retardant moulding.
- Approved to BS 5733 : 1995 and complies with the IT Safety Standard EN60950 and IEC61643.

**VIDEO GUARD SURGE ADAPTOR - VGSA**
The VGSA is similar to the EESA but also has a coax protection socket which makes it ideal for use with domestic audio-visual equipment. Connection is made by simply plugging in the appropriate power and coax leads of the device that requires protection. This model is suitable for single installations in the home and reduces the risks to equipment during thunderstorms while offering an automatic reset protection format, which is transparent to ensure signals are not distorted during non surge activity.
- Rated 13 Amps.
- Thermal overload protection
- Flame retardant moulding
- Neon indication to denote power protection operational
- Beige housing
- Supplied with 2 metre coax patch cable
- Approved to BS 5733 : 1995 and complies with the IT Safety Standard EN60950 and IEC61643.
This range of trailing socket strips are available with 4 or 6 socket outlets. They have either a 'surge protection active' neon indicator light or audible alarm to announce when the unit needs replacement (should the integral three mode surge protector be overloaded due to a severe surge). They allow power to continue to the connected equipment even when the protection device has been overloaded and the neon light or audible alarm has been activated. They are all tested to international standards, dissipate incoming and outgoing surges, and reset automatically. The unique moulding design as incorporated on the reverse of the product enables multi point cable entry as shown below and avoids unsightly cables whilst allowing the product to be wall mounted neatly.

Features
- 2 metre lead and UK type plug.
- ON/OFF switch with power 'ON' neon.
- Thermal overload safety protection.
- Suitable for floor or wall mounting.
- Available with 4 or 6 sockets.
- Rated 13 amps.
- Exceed the requirements of BS6651 and comply with IEEE C62.41, IEC 61643 and the IT safety standard EN 60950.
- Dissipates incoming and outgoing surges.
- Flame retardant moulding.

4 & 6 WAY SURGE PROTECTED SOCKET STRIPS

Provides surge protection for 4 or 6 BS1363 socket outlets. A power protection status light indicates that protection is operational.
- Surge protection active indicator light.
- For main characteristics see features list.

4 & 6 WAY SURGE & RFI PROTECTOR - 043Q & 068Q

Provides surge protection for 4 or 6 BS1363 socket outlets and additionally offers protection against mains borne Radio Frequency Interference (RFI mains noise). A power protection status light indicates that protection is operational.
- Surge protection active indicator light.
- Typical RFI Attenuation of -20dB.
- For main characteristics see features list.

4 & 6 WAY AUDIBLE ALARM SURGE PROTECTOR - 033Q & 053Q

Provides surge protection for 4 or 6 BS1363 socket outlets. Audible alarm indicates that protection has been overloaded.
- 70dB audible alarm.
- For main characteristics see features list.

---

**HOME USE**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Pulse Protector Plug</th>
<th>Surge Protected Adaptor</th>
<th>Electronic Equipment Surge Adaptor</th>
<th>Electronic Equipment Noise Adapter</th>
<th>Video Guard Surge Protector</th>
<th>4 &amp; 6 Way Surge Protector</th>
<th>4 &amp; 6 Way Surge &amp; RFI Protector</th>
<th>4 &amp; 6 Way Audible Alarm Surge Protector</th>
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<td>023Q</td>
<td>063Q</td>
<td>033Q 053Q</td>
</tr>
</tbody>
</table>

Bowthorpe Low Voltage Division Tel: +44(0) 1273 692 591 Fax: +44 (0) 1273 676 637 e-mail: LVsales@bowthorpe-emp.com
Designed for Small Office / Home Office applications where a cost-effective means of protecting often expensive and sensitive microprocessor based equipment is required. All units are designed to BS 6651:1999 Annex C location category B.

**APPLICATIONS**

- PC’s
- Colour Monitors
- Scanners
- Printers and Plotters
- Fax machines
- Telephone and Answering Machines
- Modems

**COMPUTER GRADE SURGE ADAPTOR - CGSA**

The CGSA surge protected adaptor has a telecom surge protected socket, which allows the user to protect telecommunications equipment, single modems, fax/telex and telemetry equipment against high current surges and induced lightning by the incorporation of high energy components with extremely fast reaction time. The protection format is transparent to data speed and protocol to ensure no data is corrupted during transmission. Pins 2 and 5 are protected. The electrical earth is commoned with the telecom circuit to provide complete protection from high voltage interference.

- Rated 13 Amps
- Thermal overload protection
- Flame retardant moulding
- Neon indication to denote power protection operational
- Beige housing
- Supplied with 1.5 metre telecom patch cable
- Approved to BS 5733 : 1995 and complies with the IT Safety Standard EN60950.

**4 & 6 WAY SURGE PROTECTOR - 423 & 623**

Comply with BS 1363 and BS 6396. Ideal for where up to six outlets require surge protection. These units are used in the same way as an ordinary socket strip. An easily accessible earth connection is provided to assist the user to comply with the requirements of BS 6396 and is also fitted with a 7 Amp fuse as per the BS specification covering office furniture. However both models are fully rated at 13 Amps for other applications.

- Rated 13 Amps with 7 Amp fuse fitted.
- Cool grey and dark grey coloured aesthetically pleasing housing.
- Thermal overload protection.
- 2 metres of cable supplied with UK type plug.
- Flame retardant moulding.
- Intersocket protection.
- Suitable for wall mounting via optional brackets.
- External earth connector.
- Neon indication to denote:
  a) Protection unit is intact.  b) Supply fuse is not ruptured.
- Solid busbar construction for high reliability
- Available with 4 or 6 socket outlets.

**4 & 6 WAY SURGE & RFI PROTECTOR - 443 & 643**

Comply with BS 1363 and BS 6396. Ideal for where up to six outlets require surge and RFI protection. An easily accessible earth connection is provided to assist the user to comply with the requirements of BS 6396 and is also fitted with a 7 Amp fuse as per the BS specification covering office furniture. However both models are fully rated at 13 Amps for other applications.

- Rated 13 Amps with 7 Amp fuse fitted.
- Cool grey and dark grey coloured aesthetically pleasing housing.
- Thermal overload protection.
- Typical RFI attenuation of -20dB.
The 423 GBD has a BT type surge protected socket which allows the user to protect telecommunications equipment, single modems, fax/telex machines and telemetry equipment against high current surges and induced lightning by the incorporation of high energy components with extremely fast reaction time. The protection format is transparent to data speed and protocol to ensure no data is corrupted during transmission. Pins 2 and 5 are protected. The electrical earth supply is commoned with the telecom circuit to provide complete protection from high voltage interference.

- Rated 13 Amps with 7 Amp fuse fitted.
- Cool grey and dark grey housing.
- Thermal overload protection.
- Flame retardant moulding.
- Intersocket protection.
- 2 metres of cable supplied with UK type plug.
- Suitable for wall mounting via optional brackets.
- Neon indication to denote:
  a) Protection unit is intact.
  b) Supply fuse is not ruptured.
- Fitted with 1.5 metre BT type patch lead.

**SOHO USE**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Computer Grade Surge Adaptor</th>
<th>4 &amp; 6 Way Surge Protector</th>
<th>4 &amp; 6 Way Surge &amp; RFI Protector</th>
<th>4 Way Modem/Telecom Protector</th>
<th>4 Way Multimedia Protector</th>
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<td>13,500 Amps (4,500)</td>
<td>13,500 Amps (4,500)</td>
<td>13,500 Amps (4,500)</td>
<td>13,500 Amps (4,500)</td>
</tr>
<tr>
<td>Average Attenuation DB Symmetric 1-30 MHz</td>
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<td>N/A</td>
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<td>N/A</td>
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<tr>
<td>Full Premium Three Mode Protection (L-N, L-E, and N-E)</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Voltage Protection Level</td>
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**MODEM/TELECOM PROTECTION**

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<tr>
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<th>Computer Grade Surge Adaptor</th>
<th>4 &amp; 6 Way Surge Protector</th>
<th>4 &amp; 6 Way Surge &amp; RFI Protector</th>
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**COAX PROTECTION**

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<th>Computer Grade Surge Adaptor</th>
<th>4 &amp; 6 Way Surge Protector</th>
<th>4 &amp; 6 Way Surge &amp; RFI Protector</th>
<th>4 Way Modem/Telecom Protector</th>
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<td>Line Impedance</td>
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The 423 GBD has a BT type surge protected socket which makes it ideal for the protection of all types of multimedia equipment.

The coax socket can be used with domestic audio-visual equipment and the telecom socket for modem, telephone and answering machines, giving complete protection against surges and spikes. The coax surge protected socket allows the user to protect TV, VCR and Audio equipment. Connection is made by simply plugging in the appropriate power and coax leads of the device that requires protection. This feature reduces the risks to equipment during thunderstorms, while offering an automatic reset protection format, which is transparent to ensure signals are not distorted during non surge activity.

- Fitted with 1.5 metre BT type patch lead and supplied with separate 2 metre coax patch cable.
- For main features see 423GBD
Ideal for business applications, these products are used similarly to conventional plugs and sockets. All dissipate incoming and outgoing surges to or from electronic equipment. Power consumption is negligible and all reset automatically. The internal surge suppressors are tested against ‘worst case’ conditions as defined in International Standards IEEE C62.41-1991 Cat B3 and comply with the recommendations of BS6651:1999 Annex C.

**APPLICATIONS**
- Multimedia Computers
- PC’s
- Process Controllers
- Electronic Cash Registers
- Printers and Plotters
- Network Controllers
- Fax Machines
- Automatic Tellers
- Factory Machinery
- Laboratory and Test Equipment
- Satellite Control Systems
- Communication Systems
- Recording Studio Systems
- Stage Lighting Control Panels and Sound Systems
- Medical Electronic Equipment
- Electronic Counting & Weighing Scales
- Telephone Exchanges
- Modem

**TRANQUIL PROTECTOR - TRANQ**
The Tranquil Protector offers an elegant solution to dirty mains. Ideal for modern office environments it is wired and used as an ordinary plug.
- Rated 10 Amps with 3 Amp fuse fitted.
- Grey flame retardant moulding
- Thermal overload protection.
- Approved to EN60950.
- Neon indication to denote:
  - Protection unit is intact.
  - Supply fuse is not ruptured.

**AUDIBLE ALARM SURGE ADAPTOR - AASA**
Plugged into a wall power socket the AASA provides a single socket which protects against transients on the mains electrical supply. The AASA has an audible alarm to announce when the unit needs replacing should the internal protectors be overloaded due to severe electrical surge. The audible alarm allows the AASA to be positioned out of sight.
- Rated 13 Amps.
- Thermal overload protection.
- Beige flame retardant moulding.
- 70dB @ 10cm audible alarm when protection is overloaded.
- Complies with BS 5733 and the IT Safety Standard EN60950.

**FILTER PLUG AND ADAPTOR - FP and FA**
The Filter Plug replaces a normal plug and provides low cost protection against the dangers of surge and Radio Frequency Interference (RFI). It allows you to permanently wire your equipment to a clean power supply. The filter Adaptor offers the same protection levels as the Filter Plug but allows you to connect your existing plug into a clean power unit.
- Beige flame retardant housing.
- Thermal overload protection.
- Filter plug is ideal for business applications where the Filter adaptor may be mislaid!
- 3 amp version is most commonly used for microprocessor based products.
- 7 amp version is most commonly used for telephone exchanges.
- 13 amp version is most commonly used for general business applications.
- Neon indication to denote:
  - Protection unit is intact.
  - Supply fuse is not ruptured.
- Complies with BS 5733, IEC61643 and the IT Safety Standard EN60950.
Comply with BS1363 and BS6396. These models are aimed at the business or industrial market where a unit is required to overcome both Surge and Radio Frequency problems. The unit is supplied in an attractive two-tone housing suitable for free standing or wall mounting. An easily accessible earth connection is provided to assist the user in complying with the requirements of BS6396.

- Rated 13 amps.
- Outlets protected from RFI and surges to ensure a clean power supply.
- 2 metres of cable supplied with a UK type plug.
- Power ON/OFF switch.
- Flame retardant moulding.
- Cool grey and dark grey coloured housing.
- Thermal overload protection.
- Typical RFI attenuation of -50dB.
- RFI protection in both common and transverse modes.
- External earth connector.
- Intersocket surge protection.
- Allows user to comply with BS 6396 by fitting a 7 amp fuse.
- Neon indicator to denote:
  - Protection unit is intact.
  - Supply fuse is not ruptured.
- Available with 4 or 6 socket outlets.
- Solid busbar construction for high reliability.

### 4 & 6 WAY SURGE AND RFI PROTECTOR - 431 & 631

Provides surge protection for ten IEC socket outlets.

- For main characteristics see features list.

### 8 WAY IEC 19” SURGE & RFI PROTECTOR - 838 IEC

Provides surge and RFI protection for eight IEC socket outlets.

- RFI protection in both common and transverse modes.
- Typical RFI attenuation of -50dB.
- For main characteristics see features list.

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**PROFESSIONAL GRADE**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Tranquil Protector</th>
<th>Audible Alarm Surge Adaptor</th>
<th>Filter Plug And Adapter</th>
<th>4 &amp; 6 Way Surge &amp; RFI Protector</th>
<th>10 Way IEC 19” Surge Protector</th>
<th>8 Way IEC 19” Surge &amp; RFI Protector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Current Rating</td>
<td>10 Amp</td>
<td>13 Amp</td>
<td>3, 7 and 13 Amp</td>
<td>13 Amp</td>
<td>10 Amp</td>
<td>10 Amp</td>
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<tr>
<td>Maximum Surge Current Handling</td>
<td>13,500 Amps</td>
<td>13,500 Amps</td>
<td>19,500 Amps</td>
<td>19,500 Amps</td>
<td>13,500 Amps</td>
<td>19,500 Amps</td>
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<tr>
<td>Average Attenuation dB</td>
<td>N/A</td>
<td>-55 (3A)</td>
<td>-50 (5A)</td>
<td>-45 (13A)</td>
<td>-50</td>
<td>N/A</td>
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<tr>
<td>Full Premium Three Mode Protection</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Voltage Protection Level</td>
<td>Up=900V@3kA 8/20us</td>
<td>Up=900V@3kA 8/20us</td>
<td>Up=900V@3kA 8/20us</td>
<td>Up=900V@3kA 8/20us</td>
<td>Up=900V@3kA 8/20us</td>
<td>Up=900V@3kA 8/20us</td>
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<tr>
<td>Protection Active Indicator Light</td>
<td>✓</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Audible Alarm Status Indicator</td>
<td>x</td>
<td>✓</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Power Consumption</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Negligible</td>
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<tr>
<td>Response Time</td>
<td>&lt;10ns</td>
<td>&lt;10ns</td>
<td>&lt;10ns</td>
<td>&lt;10ns</td>
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<td>BS6651:1999 Annex C Location Category</td>
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<td>A and B</td>
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<tr>
<td>Number Of Sockets</td>
<td>N/A</td>
<td>1</td>
<td>Plug - N/A Adapter 1</td>
<td>4</td>
<td>6</td>
<td>10</td>
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<tr>
<td>Dimensions (in mm)</td>
<td>L 90</td>
<td>80</td>
<td>93</td>
<td>93</td>
<td>406</td>
<td>515</td>
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<tr>
<td></td>
<td>W 60</td>
<td>50</td>
<td>63</td>
<td>63</td>
<td>45</td>
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<tr>
<td></td>
<td>D 40</td>
<td>35</td>
<td>55</td>
<td>63</td>
<td>75</td>
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<tr>
<td>Weight (in grams)</td>
<td>105</td>
<td>85</td>
<td>206/212 222/229 230/240</td>
<td>870</td>
<td>1645</td>
<td>1670</td>
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<tr>
<td>Order Code</td>
<td>TRANQ</td>
<td>AAAA</td>
<td>FP3/FA3 FP7/FA7 FP13/FA13</td>
<td>431</td>
<td>631</td>
<td>1028IEC</td>
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</tbody>
</table>

**19” RACK MOUNTED IEC STRIPS**

Designed for use in 19” rack applications, these power distribution socket strips provide a convenient means of distributing mains power to equipment installed in rack mounted systems. Units are supplied in a robust steel 2U high enclosure and are supplied with a 2 metre lead and BS1363 plug. These units are fused and are provided with a main power ON/OFF switch with neon indicator. Surge protection is fitted as standard and exceeds the requirements of BS6651: 1999 Annex C, location category B.

- Rated 10 Amps.
- Supplied with 2 metre lead and UK type plug.
- Robust steel powder coated 2U high enclosure.
- Illuminated power ‘ON/OFF’ switch and fused.
- Thermal Overload protection.
- Intersocket surge protection.

**10 WAY IEC 19” SURGE PROTECTOR - 1028 IEC**

Provides surge protection for ten IEC socket outlets.

- For main characteristics see features list.
FOR FURTHER INFORMATION
PLEASE PHOTOCOPY - FILL IN YOUR DETAILS - AND FAX BACK ON:

+44 (0) 1273 676 637

I am interested in learning how Bowthorpe can help minimise the risk from transient overvoltages.

☐ I have a project that I would like to discuss, please contact me.

☐ Please put me on your mailing list, I would like to receive updated information as it becomes available.

Name: ________________________________
Position: ______________________________
Company: ______________________________
Nature of Business: ______________________________
No. of employees: 1-25  25-50  50-100  100+
                        500+  1,000+

Systems requiring protection: ______________________________

Company Address: ________________________________________

Post Code: ________________________________________
Tel No: ________________________________________
Ext No: ________________________________________
Fax No: ________________________________________
e-mail: ________________________________________

Or Contact Our Authorised Distributor:

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East Sussex  England  BN2 2DF
Tel: +44 (0) 1273 692591
Fax: +44 (0) 1273 676637
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