

SURGE PROTECTORS

www.citel.fr

All the safety devices used in your facilities are very sensitive and vulnerable to lightning and switching surges.

The cost of fully surge protecting an industrial or commercial facilitie is limited and provides peace of mind that your system will be operational when you need it most.

If these systems are damaged by transient voltages, then the entire protection strategy could be compromise : surge protection is highly recommended.



SURGE PROTECTORS FOR SURVEY CAMERAS

COMBINED SURGE PROTECTORS FOR ANALOG CAMERA

The MSP-VM-2P series is designed to protect Pan Tilt Zoom security cameras connected to a security network from transient overvoltages, available in various versions : it can provide up to triple protection for video signal, 24 V or 230 Vac power supply and RS485 data signal lines.



| CITEL model | MSP-VM24-2P | MSP-VM230-2P |
|---|------------------|------------------|
| Max. video line voltage | 6 Vdc | 6 Vdc |
| Max. data line voltage | 8 Vdc | 8 Vdc |
| Max. power line voltage | 30 Vac/Vdc | 255 Vac |
| Nominal discharge current (In) 8/20µs impulse - 10 times | 5kA/10kA (video) | 5kA/10kA (video) |

POE SURGE PROTECTOR FOR IP CAMERAS

The CRMJ8-POE-C6A is an outdoor PoE surge protector designed to protect sensitive equipment, like IP cameras, connected to a PoE (Power over Ethernet) network, from transient overvoltages. These SPDs are now qualified with the maximum transmission speed and cabling category used for these Ethernet networks: 10Gigabit Ethernet and Category 6A. Obviously, These new SPDs are applicable for the Ethernet networks with lower categories.

The CRMJ8-POE -CA6 surge protector is deployed close the IP camera to protect and is equipped with high quality shielded RJ45 connectors.



| CITEL model | CRMJ8-POE-C6A |
|-------------------------------------|-------------------------------|
| Network | POE ++ and 10Gigabit Ethernet |
| Max. frequency | 500 MHz |
| Line/PE Nominal discharge current | 2 kA |
| Line/Line Nominal discharge current | 500 A |

BNC SURGE PROTECTORS

CXC surge protectors are designed to protect sensitive equipment, connected to coaxial lines as video-transmission, against transient surge voltages and disturbances created by lightning. The scheme of CXC, made with gas tube/clamping diode association, allows heavy discharge current and low residual voltage.



| CITEL model | CXC06-B/FM |
|---|-----------------|
| Max. line voltage | 6 Vdc |
| Nominal discharge current (In) 8/20µs impulse - 10 times | 10 kA |
| Connectors | BNC Female/Male |

CAT6A AND POE++ SURGE PROTECTORS

The MJ8-POE-C6A is designed to protect sensitive equipment connected to a POE++ (Power over Ethernet) network from transient overvoltages. This SPD is qualified with the maximum transmission speed and cabling category used for these Ethernet networks: 10Gigabit Ethernet and Category 6A. Obviously, it is applicable for the Ethernet networks with lower categories. The surge protector is housed in a shielded enclosure with high quality RJ45 shielded jacks. The transient protection circuit is based on high energy gas discharge tubes (GDT) and a network of fast response silicon avalanche diodes (SAD) to achieve sharp clamping of very large surge events.



| CITEL model | MJ8-POE-C6A | MJ8-C6A |
|--|---------------|------------------|
| Application | POE++ | Ethernet Cat. 6A |
| Max. line voltage | 60 Vdc | 8 Vdc |
| Nominal discharge current (In) (line/PE @ 8/20µs) | 2 kA | 2kA |
| Connectors | Shielded RJ45 | Shielded RJ45 |

SURGE PROTECTORS FOR CONTROL ROOMS

The RAK series for 19" rack mount or wall mount standoff protectors will ensure the reliable operation of networked equipment connected to 10/100/1000BaseT Ethernet, Cat5, Cat6, PoE and most other communication interfaces.



| CITEL model | RAK16-BNC | RAK16-E-C6 | RAK16-POE-A |
|---------------------------|---------------------|----------------|-------------|
| Typical application | Coaxial video lines | Ethernet lines | POE lines |
| Number of ports | 16 | 16 | 16 |
| Maximum line voltage | 7.5 Vdc | 7.5 Vdc | 60 Vdc |
| Nominal discharge current | 300 A | 400 A | 300 A |
| Connectors | BNC | RJ45 | RJ45 |

DATALINE SURGE PROTECTORS DIN RAIL MOUNTING

DLA surge protectors are designed to protect, against surge voltages due to lightning, terminals equipment connected to industrial buses, telecom lines or datalines. These surge protectors must be installed on symmetrical DIN rail and are available for most of the transmission lines: line voltage from 6 to 170V, bitrate up to 10 Mbit/s. These products are 1-pair surge protectors with removable module for easy maintenance.



| CITEL model | DLA-06D3 | DLA-12D3 | DLA-24D3 | DLA-48D3 |
|---------------------------|--------------|---------------|---------------|---------------|
| Typical application | RS422 | RS232/RS485 | 4-20mA | 48 V line |
| Configuration | 1pair+shield | 1 pair+shield | 1 pair+shield | 1 pair+shield |
| Nominal line voltage | 6 V | 12 V | 24 V | 48 V |
| Max. line current | 300 mA | 300 mA | 300 mA | 300 mA |
| Nominal discharge current | 5 kA | 5 kA | 5 kA | 5 kA |
| Maximum discharge current | 20 kA | 20 kA | 20 kA | 20 kA |
| Mounting | DIN rail | DIN rail | DIN rail | DIN rail |

AC POWER SURGE PROTECTORS

AC TYPE 1 SURGE PROTECTORS

The DAC1-13VGS is an extreme duty Type 1+2+3 pluggable SPD designed to protect AC powerline at the main switchboard of an installation equipped with lightning rod. The "VG"technology from CITEL allows a very high discharge current capability in small dimensions and the best possible behavior to the AC network (no leakage current, no ageing). Despite their high discharge capability, the DAC1-13VGS surge protectors are especially compact and are available in multipolar versions to protect single or 3-phase AC networks.



| CITEL model | DAC1-13VGS-31-275 |
|-----------------------------------|---------------------|
| Network | 230/400 V 3-phase+N |
| Type of SPD | Туре 1+2+3 |
| Max. AC operating voltage L-N | 275 Vac |
| Nominal discharge current | 20 kA |
| Maximum discharge current | 50 kA |
| Wiring for remote signaling | 1.5 mm² max |
| Mounting | DIN rail |
| Remote signaling of disconnection | Yes |

AC TYPE 2/3 SURGE PROTECTORS

The pluggable compact surge protectors Type 2 or Type 3 DACxxC, are designed to protect electrical installation at the main switchboard or at secondary panels.. Their compact format allows to install it in limited space. This SPD is based on high energy varistor equipped with thermal disconnector and failure indicator, to comply with standards. guaranteeing a maximum protection efficiency, an high impulse current capability and a improved reliability. DACxxC surge protectors are available in 2 impulse current versions (DAC15C et DAC40C), in multipolar configuration and in several operating voltages to protect all kind of single or 3-phase AC networks.



| CITEL model | DAC40C-11-275 | DAC40C-31-275 |
|---------------------------|--------------------|------------------|
| AC network | 230 V Single-phase | 230 V 3-phase +N |
| Type of SPD | Type 2/3 | Туре 2/3 |
| Max. operating voltage | 275 V | 275 V |
| Nominal discharge current | 20 kA | 20 kA |
| Maximum discharge current | 40 kA | 40 kA |
| Wiring | Screw terminal | Screw terminal |
| Mounting | DIN rail | DIN rail |
| Remote signalling | Option | Option |

LED LIGHTING SURGE PROTECTORS

The DLPM range is a series of DIN-mount AC surge protector designed to be installed inside the cutouts of LED lighting pole: his compact size and lower height make it compatible with the DIN rail mounting of its enclosures. This range has a mechanical disconnect indicator.



| CITEL model | DLPM1-230L |
|---------------------------|--------------------|
| AC network | 230 V single-phase |
| SPD type | Туре 2 |
| Nominal discharge current | 5 kA |
| Maximum discharge current | 10 kA |
| Wiring | Screw terminal |
| Mounting | DIN rail |

Head office

France Tél. : +33 1 41 23 50 23 e-mail : contact@citel.fr Web : www.citel.fr

Factory

Reims Tél. : +33 3 26 85 74 00 e-mail : contact@citel.fr

Germany

Bochum Tél. : +49 234 54 72 10 e-mail : info@citel.de Web : www.citel.de

USA

Miramar Tel : (954) 430 6310 e-mail : info@citel.us Web site : www.citel.us

China

Sales department Shanghai

Tél. : +86 21 58 12 25 25 e-mail : info@citelsh.com Web : www.citel.cn

Factory Tél. : +86 21 58 12 80 67

Russia

Moscou Tél. : +7 499 391 47 64 e-mail : info@citel.ru Web : www.citel.ru

India

New Delhi Tél. : +91 11 4001 81 31 e-mail : indiacitel@gmail.com Web : www.citel.in

Thailand

Bangkok Tél. : +66 (0) 2 104 9214 Web : www.citel.fr



