



CITEL

Reliability in Surge Protection



New Surge Protectors ranges

AC / DC



CITEL

www.citel.fr

OUR OBJECTIVE

the safety of your equipment for 80 years



A LONG HISTORY...

As a family company, our philosophy since its creation and still today has been to offer innovative and reliable surge protectors to be the closest possible to the market demand.

With our international presence (6 subsidiaries in the world), our testing laboratories (3 sites: France, USA, China), our R & D (cutting edge technology and innovation), our products (reliability, robustness, certification), our goal is to ensure the safety of your equipment and that for 80 years.

1937

CITEL founded



1985

CITEL USA



1988

CITEL Germany



1992

Reims factory



1996

CITEL Shanghai



Factory & Sales

1944

Manufacture of the first surge arrester

1988

1st AC modular surge protector



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A UNIQUE COMPETENCE

Our only business is the surge protector, we are the only ones to manufacture our own component «gas discharge tube» that we integrate into our protection modules. With our know-how we have developed our own range of protection modules (sold to millions of units worldwide) then in constant search for innovation we have designed the VG technology, this exclusive and patented technology is based on the use of specific gas discharge tube.

1997

- AC surge protector new range «DS» series
- Technology VG for AC surge protector

2010

CITEL Russia



2012

CITEL India



2017

CITEL Thailand



2012

Implementation of
a test laboratory in
Reims

2019

AC / DC
new range

2017

New test laboratory
240 kA
Citel China



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PROTECT YOUR INSTALLATIONS

against transient overvoltages due to lightning strikes and switching operations



Surge protector is an essential element of the protection strategy of our low voltage and photovoltaic powerline installations. It guarantees the safety and durability of the equipment and therefore contributes to a certain economy.

CITEL has completely renewed its product ranges in order to respond to the different sectors of the market activities and to different standards increasingly demanding.

New ranges for AC / DC networks



Energy



Photovoltaic



Led lighting



Telecom



Radiocom



Industry



Datacenter



Security



Internet
of things



GDT
& GSG



Renewable
energies



Smart
city



CITEL

INTERNATIONAL COLLABORATION OF OUR TEAMS



DESIGNED IN EUROPE, USA & CHINA

In collaboration with an industrial design specialist, we have designed and created a more reliable, efficient, ergonomic and practical module to anticipate the needs of our customers.

REALIZED IN FRANCE

Our research and development teams worked in collaboration: research of the best materials, global technical design, tests in our various laboratories, follow-up of the certifications in order to design a range that meets all the international requirements.

MANUFACTURED IN FRANCE AND CHINA

Manufactured, tested, controlled in our own factories in France and China, with strict quality system and our own tools.

CERTIFIED IN GERMANY AND USA

The necessary certification of the new ranges have been carried out in the German and US accredited laboratories. Thank to our expertise in surge tests, some certification processes have been performed in our own labs, under control of certification bodies.



THE NEW SPD GENERATION

Safer than ever !



SECURITY

The SPD is the safety element of the installation. Its role is to protect the equipment against transient overvoltages without failure. However, the SPD can be subjected to maximum attack conditions and must be able to support them in safety disconnection mode. As the leader of surge protection, we have designed surge arresters that meet the most extreme constraints, beyond the normative requirements.

PERFORMANCE

In order to ensure total safety during the use of our surge protectors, we have focused on :

- Safety disconnection
- Resistance to fire and short circuits
- Mechanical robustness

EXCLUSIVE KNOW-HOW

CITEL is a specialist in the internal components of surge protectors : the gas spark gap (GSG) and the varistors used are of our own design and we adapt them to obtain the best performances.

DESIGN AND ERGONOMICS

With its new design, CITEL surge protectors are easily identifiable in your installation.

WARRANTY

Sure of our products, their warranty is extended to 5 years!



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A NEW TECHNOLOGY

STRENGTHENING OF INTERNAL PARTS

The robustness of the surge protection is essential to support the electromechanical forces generated during the passage of transient currents. We have reduced the internal impedances, improved the contacts, simplified and reinforced the conductive parts.

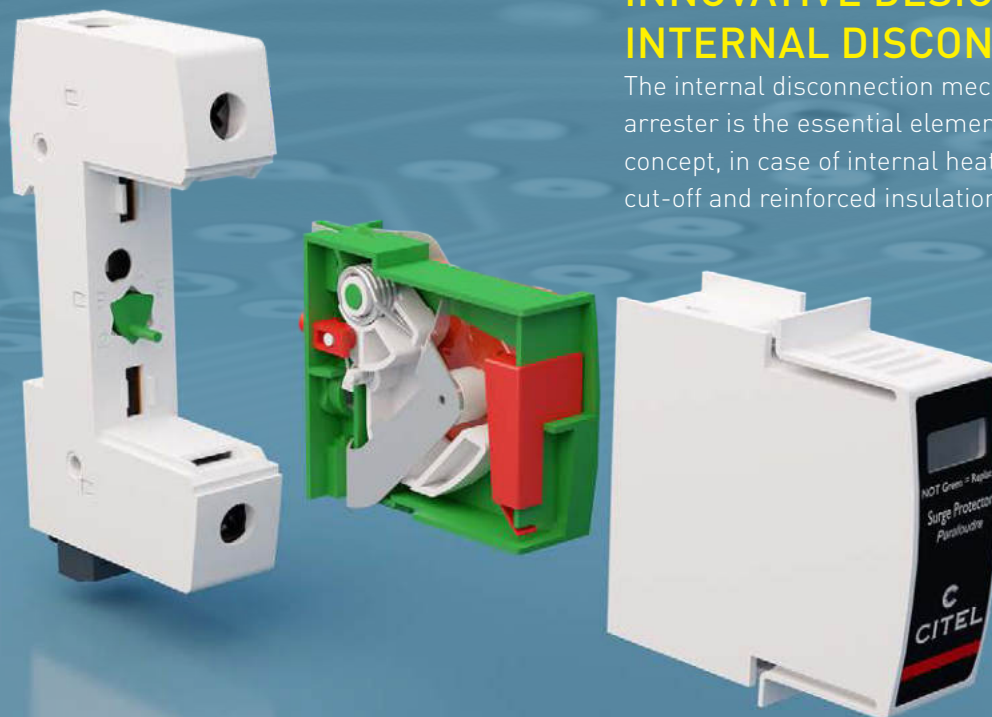
INCREASED QUALITY OF PLASTIC MATERIALS

The choice of plastic materials is guided by :

- Normative compliance (fire resistance, environment)
- Mechanical robustness
- Aesthetics

INNOVATIVE DESIGN OF INTERNAL DISCONNECTION

The internal disconnection mechanism of the arrester is the essential element of safety. The new concept, in case of internal heating, allows faster cut-off and reinforced insulation.



VG TECHNOLOGY

The exclusive VG Technology by CITEL offers unique hybrid technology and multiple benefits not found in traditional surge protection solutions. The patented design incorporates a combination of MOV and Gas filled Spark-Gap (GSG) technology to maximize the SPD's performance level and reliability. VG technology is optimized for robustness and network stability, providing the highest level of protection available.



BENEFITS OF VG TECHNOLOGY



NO AGEING



NO FOLLOW CURRENT



HIGH SURGE
CURRENT CAPABILITY



INCREASED TOV
WITHSTAND

BETTER USER EXPERIENCE

Products even more adapted to your needs

DIN RAIL MOUNTING

The modular format and symmetrical DIN rail mounting make the surge protector compliant with all installations.

VOLTAGE SELECTOR

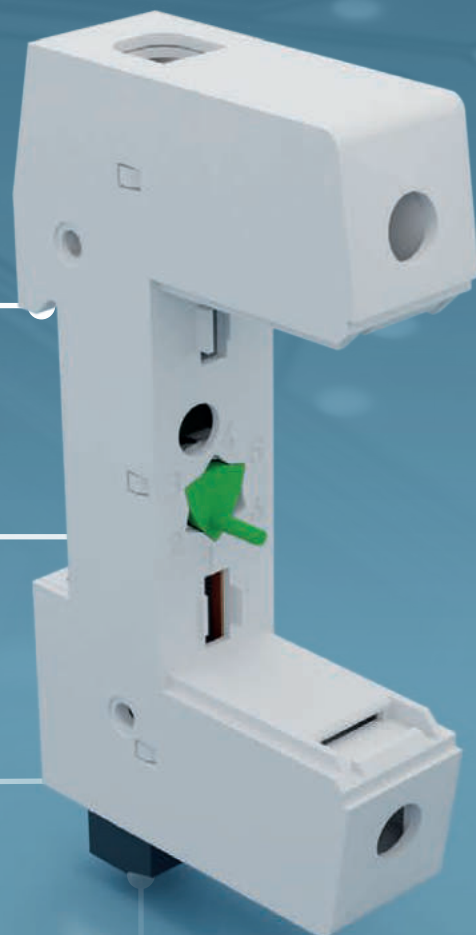
Voltage selector avoid mistakes when replacing module.

CONTACT QUALITY

Surge protectors must conduct very high impulse currents and the plug-in contacts must take these constraints. Quality of materials, increased surface area, optimized elasticity and specific surface treatment are used to meet these requirements.

REMOTE SIGNALING

This option, to indicate the state of the arrester remotely, is recommended when the arrester is not easily accessible. In case of safety disconnection of one or more modules, the internal contact switches and can activate any remote device.



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EASY PLUGGABLE

The plugging and unplugging operation is greatly improved thanks to the quality of the module / base contacts. The extraction of the pluggable modules in case of maintenance is largely facilitated.

DISCONNECTION INDICATOR

At the end of its life, the surge arrester disconnects from the network and must indicate its state. The indicator clearly informs user about the need to replace the out-of-service module.



Green = OK



Red or Not green = disconnected

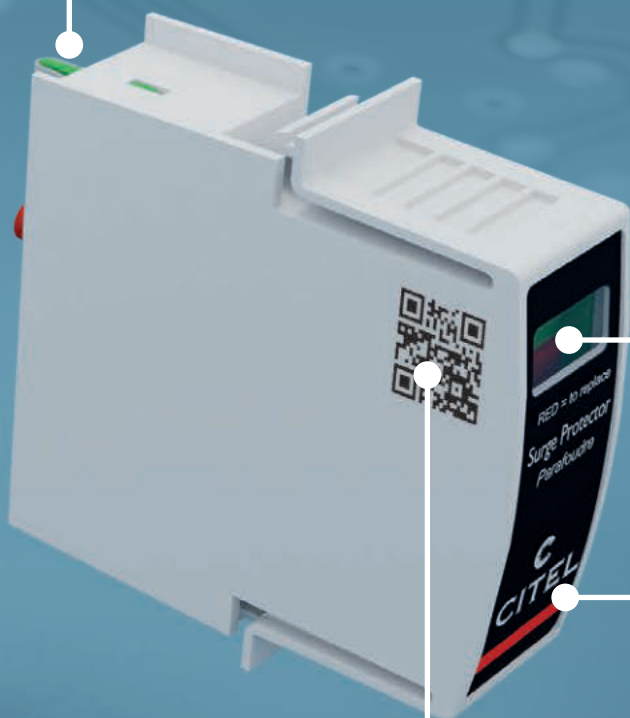
IDENTIFICATION

The colored band on the front of the module makes it possible to identify its use or its type. Grey for AC type 1, Red for AC type 2, Blue for AC type 3, Orange for DC, Green for N/PE branch (GDT).



QR CODE

The QR code refers to the product installation instruction allowing a permanent availability of this essential document.



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A CERTIFIED RANGE

for the standards of today and tomorrow



STANDARDS

Surge Protection standards are changing and constraints are tightening with each new edition. Several CITEL experts, members of national and international committees, are involved in the development of these standards, to be close to the requirements of the market.

This range has been designed to last and therefore to anticipate future changes in standards.

INTERNAL TESTS

All the technological choices of our ranges were first tested in our testing laboratories, to validate compliance with current standards, but also by providing a functional margin beyond the requirements and anticipate future developments.

CERTIFICATIONS

The final step is certification provided by the official certifications organizations. Because our expertise in surge tests, a part of the process has been performed in our own facilities, under control of official bodies.



OUR MEANS OF TESTING

In order to test its products internally for standards compliance and to evolve toward greater reliability, CITEL has several test sites (France, USA, China) equipped with:

- Current impulse generators up to 240 kA - 8/20 μ s
- Current impulse generators up to 100 kA - 10/350 μ s
- 1.2/50-8/20 μ s hybrid wave generators up to 20 kV/10 kA
- 400 Vac 3-phase low voltage network-Isc 1.5 kA/phase for coupling with current impulse
- HT fast digital oscilloscopes
- Materials for test environment (damp heat, climate, shock)
- Ultra-fast camera



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THE SPD WHICH PROTECTS your equipment and our planet



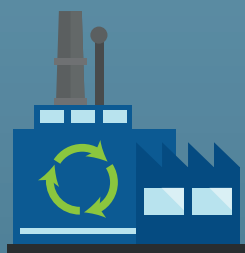
Besides our constant work on the quality of our products, we take into account the ecological issues of our planet.

This is why CITEL is working to optimize its production equipment in order to reduce the impact on the environment. We have chosen for our new range high quality raw materials.

Our products use **HALOGEN FREE** material and comply with **RoHS** regulations.

CITEL is **ISO 14001** certified and meet the requirements of the **WEEE** directive.

Production respecting environmental standards



Purchase of materials compliant with the environmental regulations



Commitment for recycling



DAC50

Type 2 AC Surge Protectors

The pluggable surge protectors Type 2 DAC50, are designed to protect AC powerline at the main switchboard of the installation.

These SPDs are based on high energy varistor equipped with thermal disconnecter and failure indicator, to comply with standards and to provide a maximum protection

efficiency, an high impulse current capability and a improved reliability.

The surge protectors DAC50 are available in multipolar version and in several voltages to protect single or 3-phase networks.



- Pluggable
- In : 20 kA
- I_{max} : 50 kA
- EN 61643-11/IEC 61643-11



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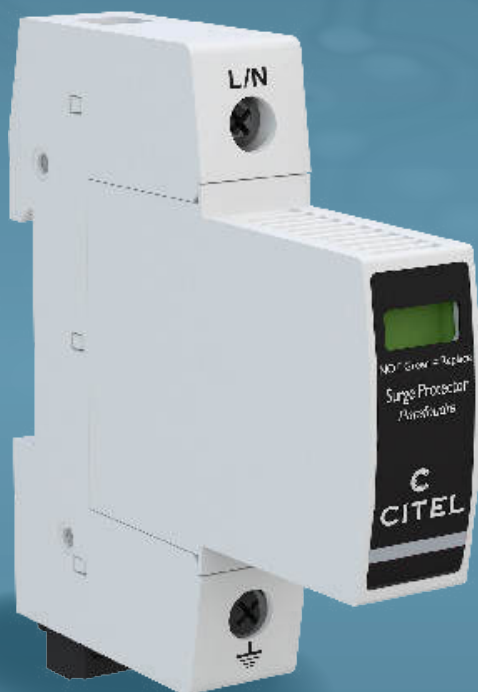
DAC1-13

Type 1 + 2 AC Surge Protectors

The DAC1-13 is an extreme duty Type 1+2 pluggable SPD designed to protect AC powerline at the main switchboard of an installation equipped with lightning rod.

The technology "Multi-varistor" allows a very high discharge current capability in small dimensions and the best possible behavior to the AC network (no follow current).

Despite their high discharge capability, the DAC1-13 surge protectors are especially compact and are available in multipolar versions to protect single or 3-phase AC networks.



- Pluggable
- In : 20 kA
- Iimp : 12,5 kA
- EN 61643-1 / IEC 61643-11





DAC50VG

Type 2 + 3 AC Surge Protectors

VG TECHNOLOGY

The exclusive VG Technology by CITEL offers unique hybrid technology and multiple benefits not found in traditional surge protection solutions.

The patented design incorporates a combination of MOV and Gas filled Spark-Gap (GSG) technology to maximize the SPD's performance level and reliability.

VG technology is optimized for robustness and network stability, providing the highest level of protection available.

THE BENEFITS



NO AGEING



NO FOLLOW CURRENT



HIGH SURGE
CURRENT CAPABILITY



INCREASED TOV
WITHSTAND

The pluggable surge protectors Type 2+3 DAC50VG, are designed to protect AC powerline at the main switchboard of the installation.

Equipped with the exclusive CITEL's VG technology, the range achieves an improved protection level and a total absence of leakage current, guaranteeing a maximum protection

efficiency, a simplification of use (no additional SPD required) and a maximum lifetime.

The surge protectors DAC50VG, are available in multipolar version and in several voltages to protect single or 3-phase networks.



- VG Technology
- In : 20 kA
- No leakage current
- Optimized to TOV
- EN 61643-11/ IEC 61643-11



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DAC1-13VG

Type 1 + 2 + 3 AC Surge Protectors

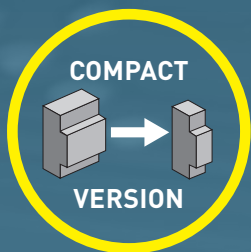
The DAC1-13VG is an extreme duty pluggable Type 1+2+3 SPD designed to protect AC powerline at the main switchboard of an installation equipped with lightning rod. Equipped with exclusive CITEL's VG technology, the range achieves an high protection level, guaranteeing a maximum protection efficiency, a absence of follow and leakage currents, a simplification of use (no additional

lightning arrester required) and a maximum lifetime. The DAC1-13VG surge protectors are especially compact and available in multipolar versions to protect single or 3-phase AC networks, which makes them the best surge protection solution for Type 1 requirements..



- **VG Technology**
- **In : 20 kA**
- **Iimp : 12,5 kA @ 10/350µs impulse**
- **No leakage current**
- **Optimized to TOV**
- **EN 61643-11/IEC 61643-11**





DACC

Type 2 Compact AC surge protectors.

The pluggable compact surge protectors Type 2 or Type 3 DACC, are designed to protect electrical installation at the main switchboard or at secondary panels..

Their compact format allow to install it in limited space.

This SPD is based on high energy varistor equipped with thermal disconnecter and failure indicator, to comply with standards. guaranteeing a maximum protection efficiency,

an high impulse current capability and a improved reliability.

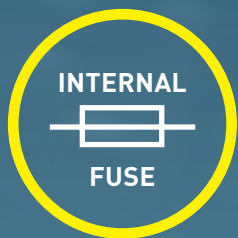
DACC surge protectors are available in 2 impulse current versions (DAC15C et DAC40C), in multipolar configuration and in several operating voltages to protect all kind of single or 3-phase AC networks.



- Compact and Pluggable
- In : 20 kA
- I_{max} : 50 kA
- IEC 61643-11 / EN 61643-11



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DACF25

Type 2 AC surge protectors with integrated fuse.

Type 2 DACF25 SPDs are used mainly for primary surge protection of single and 3-phase AC networks at the main switchboard.

In addition to their thermal disconnecter, the range is equipped with an internal fuse against short-circuit currents, which avoids the use of an external fuse or circuit-breaker as requested by standard.

The operation of one of the both disconnectors will activate the indicator and the remote signalling (option). This compact solution simplifies the implementation and minimum space.

The DACF25 surge protectors are designed to be used in a multipolar configuration to protect single-phase, 3-phase.



- No external fuse required
- Pluggable
- In : 15 kA
- I_{max} : 25 kA
- IEC 61643-11 / EN 61643-11



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ZPAC1

Type 1+2+3 AC surge protector - 3-phase+N

The ZPAC1 range is a type 1 + 2 + 3 pluggable surge protector for 230/400 3-phase AC network, intended to be integrated into electrical panels equipped with standard 40mm busbars.

The solution is available in two impulse current (Iimp) of 12.5 kA or 8kA. Compact, economical and ultra fast implementation, it is intended for business/household buildings equipped with lightning rod.

Equipped with exclusive CITEL's VG technology, the

range achieves an high protection level, guaranteeing a maximum protection efficiency, a absence of follow and leakage currents, a simplification of use (no additional lightning arrester required) and a maximum lifetime.

The pluggable configuration (quick and easy maintenance) and VG technology (maximum protection efficiency) used by ZPAC1 make it the most relevant choice for electrical contractors and users.



- for 40mm busbar systems
- Pluggable
- VG Technology
- In : 20 kA
- Iimp : 12,5kA
- Iimp total : 50 kA on 10/350µs impulse
- No leakage current
- Optimized to TOV
- EN 61643-11 / IEC 61643-11



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DDC

Type 1 and Type 2 DC surge protector

The DDC range is type 1 + 2 pluggable surge protectors designed for equipment connected to DC powerlines. The technology based on high energy varistor equipped with thermal disconnection mechanism offers protection

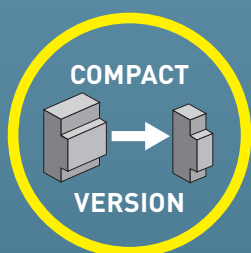
efficiency and a maximal reliability. The Type 2 version DDC30C is especially compact and available in 12 and 350 Vdc operating voltages.



- Surge protector for DC powerline
- Type 1 + 2
- In: 15 kA / I_{max}: 40 kA
- I_{imp}: 4kA
- prIEC 61643-41 compliance

DDCC

Type 2 Compact DC surge protector



- From 12 to 350 Vdc DC powerline
- Type 2
- Compact design
- I_{max}: 20 to 40 kA
- prIEC 61643-41 compliance



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