



ELECTRICOS
INTERNACIONAL SAS



**Overvoltage
Protection**



**Overcurrent
Protection**



**Aerial Overhead
Polymer Components**



**Straps & Buckles
Hookstick Switches**

**WE DESIGN,
MANUFACTURE,
AND HELP PROTECTING
YOUR VALUABLE ASSETS**



• Telecommunications



• Oil and Gas



• Utility Companies

• Lightning Protection
for Public Spaces

• Alternative Energy
Suppliers

• comunicaciones@electricosinter.com

• gerencia@electricosinter.com

• Calle 17 No. 42 A-69 Bogotá D.C. - Colombia

• www.electricosinter.com

OUR HISTORY

SINCE

1968

It all started in **Bogotá**, understanding that the reality of the network demands its **own solutions**.

Where engineering
made in Colombia
is born

1973

*Trust is earned in the field,
not in fancy speeches*

We test our engineering where
it truly matters: **on the grid**.



1980

*Growing to respond to a
market that demands more*

We grew, and with it,
our capacity to respond.

2



2006

Innovating from the territory

We redefined grounding as pioneers
in the use of stainless steel.



2012

*Comprehensive protection
against new threats*

We teamed up with **Arresterworks** as
consultants for the design and development
of the **Surge Arrester** line.



2014

Engineering for modern grids

We adapt to more ecological
aerial networks, without losing reliability.



2020

*When the world needed it,
we were there*

We responded when the
country needed it most.

 **1984**

A Colombian manufacturer is born with a technical vision

We choose to manufacture, to have control over what we protect.

 **1986**

Pioneers in electrical protection in Colombia

We clarified the way fuses are selected and understood within the country.

 **1988**

Evolving is also about integrating knowledge

We recovered our essence with the return of the **Luhfser** brand.

 **1990**

A Colombian company crossing borders

We took our electrical engineering beyond Colombia, backed by 22 years of experience.

 **1991**

Engineering is also operational efficiency

We vertically integrated to become more efficient, more precise, and stronger.

 **1998**

Quality stops being a promise and becomes a system

We committed to certified quality before it was a requirement.

 **2000**

Evolving is understanding how the grid changes

We evolve at the pace of an electrical system that never stops.

3

TODAY

Colombian engineering protecting complete systems

Today we design systems where each component fulfills its purpose.





Global
Reach



FROM COLOMBIA TO DISTRIBUTION LINES ALL OVER THE WORLD



Every solution we develop protects infrastructure beyond borders, bringing quality and reliability where it is needed.



Countries We Export To:



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Global Presence Link:

www.electricosinter.com/en/presencia-global/



Specialized
Manufacturing

SPECIALIZED MANUFACTURING



Manufacturers
with **100%**
Colombian quality.



Do you really know what
lies behind an electrical
protection system?

“ Quality does not start with the product.
It starts with everything behind it. ”

Manufacturing is **not** just about
assembling components.

**It is about controlling every single detail,
selecting the correct materials
and transforming years of experience
into real performance.**



Specialized manufacturing process.



Expert hands, precise results.



Behind each solution, there
are structured processes,
applied technology, and a
team that understands that
in electrical protection, there
is no margin for error.

**Because in electrical engineering, the result
depends on every single step of the process.**



Technology and precision in every manufacturing stage.

KINGS OF QUALITY

Before reaching the field, it has already been pushed to its absolute limit.



In electrical protection, manufacturing is not enough. For this reason, every solution we develop is validated to guarantee and demonstrate its performance under real-world conditions.

WE PERFORM TESTING AND VALIDATION

TEST AND TRIALS

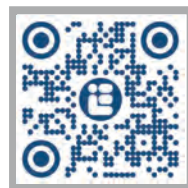
Proven before installation

For us, quality is not validated on a document; it is demonstrated in the field. That is why we go beyond the standard, incorporating tests that guarantee performance and real reliability.



OUR LABORATORY

Backed by Science

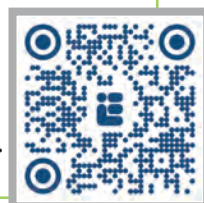


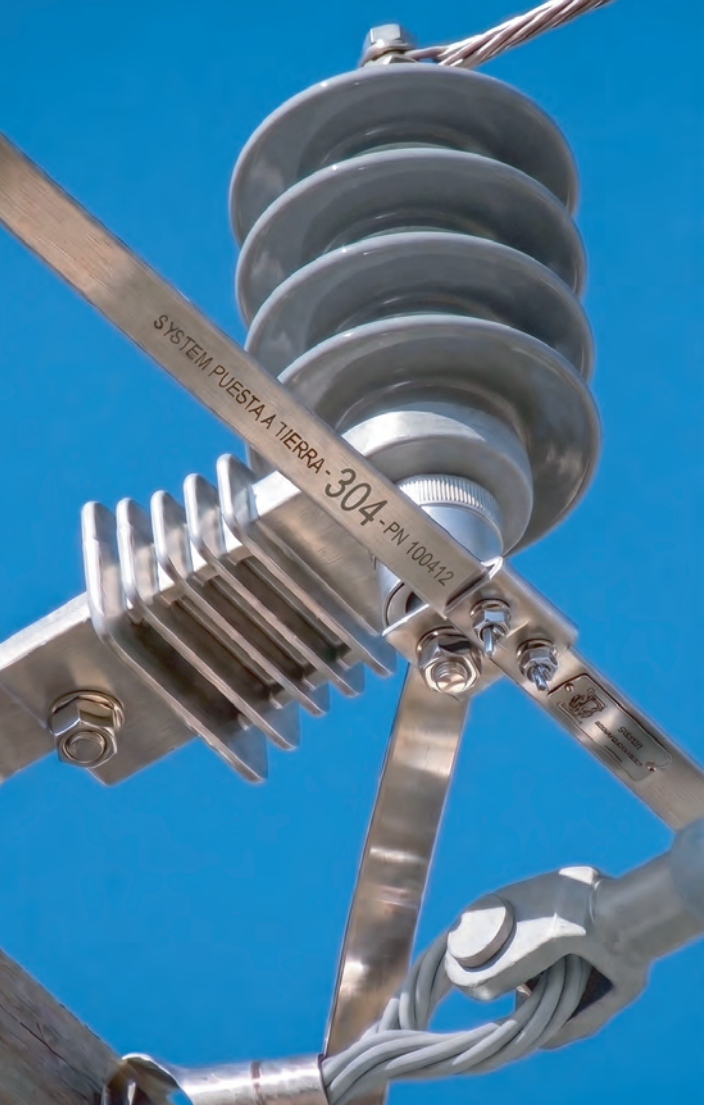
Our internal laboratory holds the ONAC accreditation, current to date, with accreditation code 12-LAB-055, under the ISO/IEC 17025:2017 standard. We validate the performance, reliability, and behavior of our products before they hit the market.

Certifications

Certified Quality, Not Declared

Our processes and products comply with rigorous standards that back consistency, safety, and performance—not just on paper, but in proven realities.





INNOVATION AND DEVELOPMENT / PATENTS / DIFFERENTIATION

We anticipated what the market is only beginning to understand today.

For years, the market prioritized the lowest cost without measuring the consequences over time. Therefore, in 2006, we developed and patented in Colombia a grounding system made of austenitic stainless steel that today protects **90% of the infrastructures in Bogotá, Colombia; La Paz, Bolivia; and Guayaquil, Ecuador.**



Why does choosing the right material matter?

What seems economical at first, often ends up costing more over time. That is why we understood the need for reliable grounding systems and developed an stainless steel solution designed to truly last and protect.

Accumulated Cost Projection (per 1,000 kg)

Expense Category	Galvanized Scenario (USD)	304 L Stainless Scenario (USD)
Initial Purchase	\$1,800	\$4,500
Maintenance and Painting	\$2,500 (every 10 years)	\$0
System Replacement	\$3,000 (at year 20)	\$0
Salvage Value	-\$150 (minimum)	-\$1,200 (high scrap value)
TOTAL EXPENSE AT 40 YEARS	\$8,350	\$4,100

Note: Upon request, we can provide this same chart applied to any of our specific solutions.



Surge / Overvoltage



Engineering
that Protects

Not all solutions
**protect
equally**

In the market, it is common to integrate components of different qualities as if they were a single system.

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Results in:

A protection that seems sufficient, but does it actually operate when it is truly needed?

“ A poorly integrated system does not protect. It only appears to do so. ”

Our products for Surge Protection:

***Secondary Distribution
Surge Protection Device***

Surge arrester drop out

***Grounding Systems
(Stainless Steel Kits GSK)***

Custom-made Kits

Lightning protection systems (LPS)

Low voltage Surge Protection (SPD)

Grounding Line Disconnectors (GLD's)

DH

*Distribution class
surge arresters*

**Everything starts here:
The first step in
power control.**

When an overvoltage occurs,
energy seeks a way to release itself.
If it does not find a controlled path,
it does so **through the equipment.**
That is why we develop **surge arresters**
that act reliably, protecting the equipment
right from the first critical point.

**“ It is not just
a device.
It is the first
real control
within a
protection system. ”**



Colombian
Manufacturing



Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.



**We manufacture
in a range from
3 kVa 36 kV**

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DROP OUT SURGE ARRESTER HOLDERS

The energy has already been diverted.

But a critical question remains:

*How is that protection
sustained over time?*

A Surge Arrester can be technically perfect, but when it fails, the entire system is left unprotected. Therefore, the **DROP OUT ARRESTER HOLDER** allows for clear visualization and quick replacement of the damaged ARRESTER **without disconnecting the grid.**

Protection does not only
depend on the device; it depends
on how it is installed.

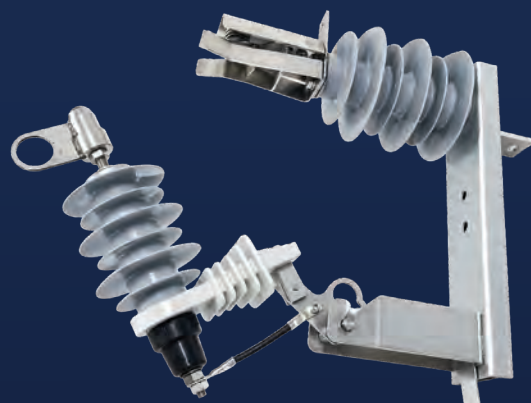
FUNCTION

Designed to ensure:

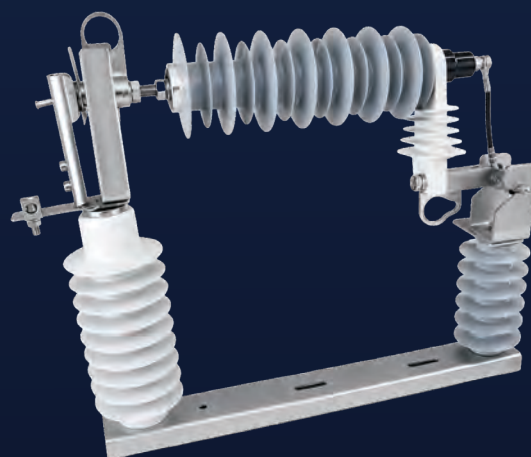
- ✓ Mechanical stability
- ✓ A firm connection
- ✓ Safe operation of the surge arrester

**Featuring high interchangeability
and operation under
demanding environments.**

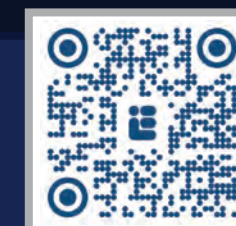
***Without
disconnecting the grid***



9 kV – 15 kV
Base for medium
range voltage networks



18 kV – 36 kV
Base for Higher
voltage power lines.



Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.

GROUNDING SYSTEM

Everything depends on how the overvoltages are grounded

You can have the best **surge arrester**, but if the **overvoltage** does not find a **reliable path** to the ground, the **protection is incomplete**.



That is why we developed a Grounding System in **Type 304 austenitic stainless steel** that today protects critical infrastructure in major cities such as:

- Bogota (Colombia)
- Guayaquil (Ecuador)
- La Paz (Bolivia)

**— WE ARE —
PIONEERS**



GROUNDING KITS (GKS)



Grounding System

It is not about **having the components.**
It is about **integrating them correctly.**

A well-thought-out system **does not adapt**; it keeps working throughout time. **!**

A complete set of elements that conduct and dissipate energy to the ground in a controlled and safe manner.

Our kits are manufactured in **Type 304 austenitic stainless steel**, offering a superior resistance that sets us apart in the market.

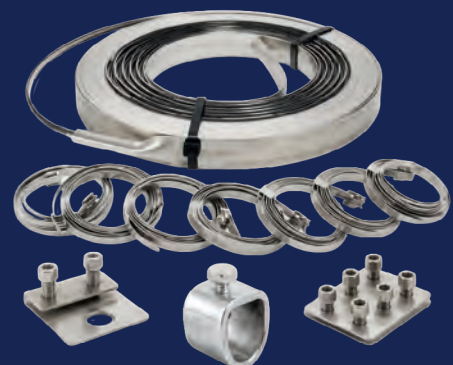
DISTRIBUTION OR RESIDENTIAL KIT:

Comprehensive grounding solution with insulating covering of XLPE or PVC that safely conducts electrical faults to the ground, protecting the continuity of the distribution grid.



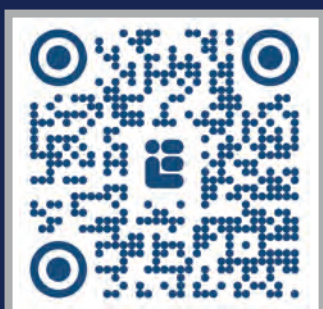
Being **PIONEERS** in the development and manufacture of kits for grounding systems.

MEDIUM AND LOW VOLTAGE DISTRIBUTION KIT.



HIGH VOLTAGE KIT FOR TELECOMMUNICATIONS.

Grounding system to protect towers, equipment, and critical telecom networks.



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.

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LPS

(Patented Products)

Comprehensive Lightning and Surge Protection System.

Real protection, when everything works as one.

A lightning bolt strikes as a single force, and the protection must respond in the exact same way. An LPS is not a mere collection of parts. It is engineered and designed to function as a whole.

DIFFERENTIATORS



- ✓ Type 304 Austenitic Stainless Steel.
- ✓ Patented components.
- ✓ Designed as a comprehensive system.

LPS components are engineered and designed to function as a whole.

Lightning rods

Designed to create a safe path for the possible strike in a controlled manner.

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FRANKLIN
LIGHTNING
ROD



FRANKLIN FLAT
LIGHTNING
EQUIVALENT ROD



BASE FOR
LIGHTNING ROD
FLAT CONDUCTOR



BASE FOR
LIGHTNING ROD ROUND
WIRE CONDUCTOR



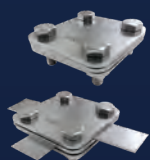
BASE FOR
5/8" - 10 MM
AIR TERMINAL



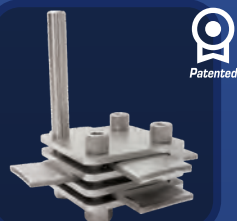
LIGHTNING RODS 10 MM
(60 CM TO 120 CM LONG) &
5/8" (60 CM TO 120 CM LONG)

LPS CONNECTORS

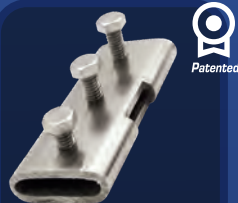
Conducts energy without interruptions. Guarantees real electrical continuity.



**PARALLEL
PLATES X3**



**MULTIPLE CONDUCTOR
CONNECTOR**



CROSS TYPE



C-TYPE



J-TYPE



HINGE TYPE



**U TYPE FOR
CONNECTING
GROUNDING RODS**



**3-BOLT 5/8"
J-TYPE**



**BENT 1/2"
J-TYPE**



**5/16" J-TYPE
FLAT CONDUCTOR
CONNECTOR**



**ROD / FLAT
CONDUCTOR
COMBO**



**ROD / FLAT
CONDUCTOR
COMBO**



**ROD / FLAT
CONDUCTOR
COMBO**



**T TYPE
CONNECTOR**



**5/8"
TAPE-TO-ROD**



**DOUBLE
EYELET TYPE /
SINGLE PERFORATION**



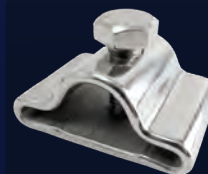
**10 MM
GROUNDING ROD
WEDGE TYPE**



**DOUBLE AND
SINGLE
BOLT EXTENSOR**



**PIPE/TUBE
CONNECTOR**



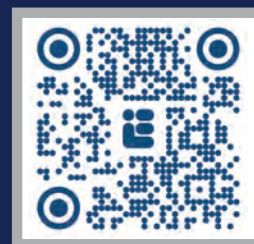
**FLAT-TO-PIPE
CONNECTOR**



**M-TYPE FOR
MESSENGER CABLE**



**CABLE-TO-ROD
ELECTRODE**



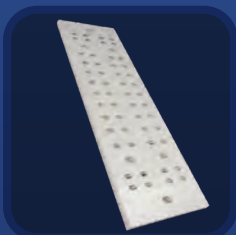
Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.

DOWNSPOUT-CONDUCTORS AND ACCESSORIES

Guarantees real electrical continuity



*DIFFERENT SIZES
FLAT CONDUCTORS*



*BUSBARS WITH
CUSTOM MADE
DIMENSIONS*



*OUTDOOR INSULATOR /
WEATHERPROOF INSULATOR*



*INSULATOR FIXING ARM
WITH BASE*



*PARALLEL PLATES
CUSTOM MADE*



*SHEAR NUT /
BREAKAWAY NUT*

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DISSIPATION

*Safely releases energy
into the ground*

Grounding electrodes



*AUSTENITIC STAINLESS
STEEL ELECTRODE:
10 MM, 1/2", 5/8"
(AVAILABLE FROM 1.50 M TO 2.40 M)*



*STAINLESS STEELPLATE
ELECTRODE:
(200 MM X 100 MM X 6.35 MM)*



*3/4" STAINLESS STEEL
TUBE ELECTRODE*

Protection does not end... it extends.

The energy has already been controlled, conducted, and grounded.

But across the network, protection must continue.

*Especially where exposure is
constant and risk remains present.*

Surge Protection Enclosure



Secondary Distribution SPD



Disconnecter for surge arresters



Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.



“ From the point of **impact**
to the **secondary grid**,
every point matters ”

“ And when everything is
properly integrated,
protection simply **works** ”



Overcurrent Protection

Not all fuses
**protect
equally**

*In a fault, there
is no margin
for error.*

You must act at the exact moment—neither before nor after. When a system fails, the operational consequence is huge, not just electrical.

**Damaged equipment,
outages, and losses.**

**It is not about the
fuse operating.**

**It is about operating
precisely when it should.**



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Manufacturers
with 100%
Colombian
quality.

We manufacture real protections. Not low cost “solutions”.

At **Eléctricos Internacional S.A.S.**, we not just assemble fuses; we engineer them. Our fuses are manufactured with **vulcanized fiber** and controlled processes to guarantee proper arc interrupting abilities.

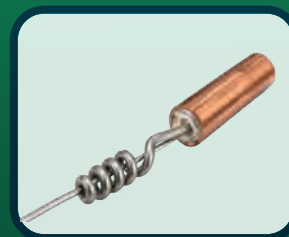
The Technical Secret: The performance of a fuse does not depend solely on the wire; it depends on the material that controls the electrical arc.

Vulcanized fiber extinguishes the arc by releasing gases that allow a safe interruption of the current.

*This is where the
fuse protects...
or fails.*



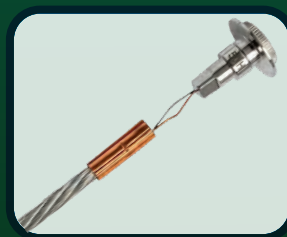
CRIMPED



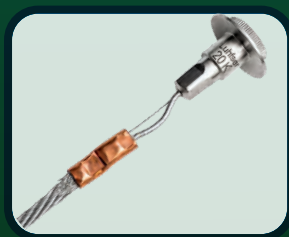
WELDED



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.



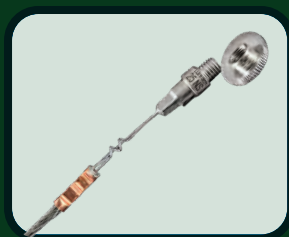
**TYPE H
EXPULSION FUSE**
1 to 100 A. Fuse
element material:
Copper.
Speed ratio: 4.7 to 1.



**TYPE K
EXPULSION FUSE**
1 to 200 A. Fuse
element material:
Tin or silver alloy.
Speed ratio: 6 to 8.1.



**TYPE T
EXPULSION FUSE**
1 to 200 A. Fuse
element material:
Tin or silver alloy.
Speed ratio: 10 to 13.1.



**TYPE NS
EXPULSION FUSE**
1 to 100 A. Fuse
element material:
Silver alloy.
Speed ratio: 7 to 8.5.



HIGH-END FUSES

*High-engineering
protection for
critical points*

**DUAL SR FUSE
(TRANSFORMER
PROTECTION)**

The Slow-Rapid fuse was designed to understand network operators' needs. The grid is not constant. It changes, strains, overloads... and keeps operating.

**OUR VALUE
PROPOSITION:**

The Dual SR Fuse goes beyond traditional protection. It reads network behavior and **responds with high precision.**

**SMART
DUAL ACTION:**

Slow Action:

Slow actuation coil over insulated tension wire with a copper solder junction for controlled operation.

Fast Action:

Steel and copper tension wire in parallel for a swift and safe response.

It acts instantly when the fault is real.
More continuity. Less risk.

**ENGINEERING
THAT COMPETES
GLOBALLY**

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Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.



TYPE VS FUSE – PRECISION THAT RESISTS THE STORM

Do you believe that rural protection works the same as urban protection?

In rural areas, the grid faces the uncontrollable: storms, lightning strikes, and constant fluctuations.

That is where many fuses fail.

The VS is designed to act **only when necessary**, maintaining service continuity in the field.



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.



“ When the environment is unstable, the protection cannot be. **”**





Overcurrent
protection

JOULE SENTRY

PROTECTION WITH ZERO MARGIN FOR ERROR

Why is it premium, even among high-end options?

It is not just made to work, but to **ONLY** fail when it matters most

It is reliable throughout the ups and downs of the real conditions of the grid and when the fault occurs, it will deliver flawless precision on its electrical behavior (TCC).

It acts exactly when it must.

“ When coordination requirements are at its peak, your protection must match it. ”

SR, VS, and Joule Sentry are not just part numbers. They are protection levels designed for real-world conditions:

when the **grid** gets **overloaded**
when the **environment** demands more
when the **fault** cannot escalate

***At Eléctricos Internacional,
we don't think of protection in pieces.***

We understand it completely.

From where the energy is born...

to where it actually impacts.

Because in the end,

It is at the final point where everything is put to the test.



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.



FUSE ENCLOSURE

PROTECTION TAKES SHAPE

It is the point where energy stops being chaos and starts having control and purpose. Here, the protection that sustains the system's continuity is organized.

Without structure, there is no protection.



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.

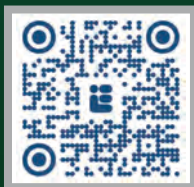


LOW VOLTAGE FUSES

THE ANSWER WHEN EVERYTHING IS DEFINED

When energy arrives, there is no room for error: protection acts just in time to prevent the fault from advancing.

Here, protection stops being a design... and becomes action.



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.



LOW VOLTAGE CBO FUSE

250 V for
lighting fixtures
(0 - 30 A)



QSQ FUSES

600 V for
lighting fixtures
(0 - 30 A)



**SINGLE FUSE
HOLDER BASE**



**DOUBLE FUSE
HOLDER BASE**

BIMETALLIC CABLE CONNECTOR

WHERE EVERYTHING IS SECURED

This component ensures firmness, continuity, and mechanical protection for real electrical continuity.



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.





COMPACT GRID

Aerial overhead
polymer components



*Manufacturers
with 100%
Colombian quality*

CONTROL THAT IS MAINTAINED

Everything moves...
the difference is on what stays in place.

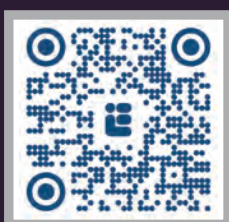
SPACER

THE DISTANCE IS DEFINED

The spacer maintains the exact separation between conductors, preventing contact and guaranteeing independent phase operation.

Manufactured with an **HDPE formulated by Dow Chemical**, it offers high resistance to impacts, extreme weather, UV radiation, and demanding line conditions.

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Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.



ANTI-SWAY ARM

STABILITY IS PRESERVED

The grid is in constant motion; wind and loads can destabilize it. This component limits displacement and maintains system geometry with reliable stability.

Manufactured in HDPE for **15 kV**, it reduces vibrations and withstands harsh environments.

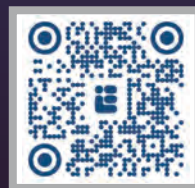
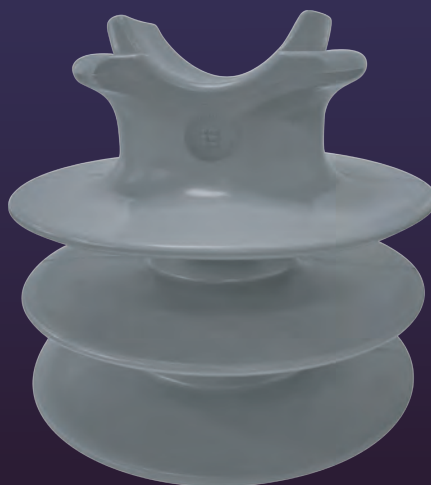


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PIN TYPE INSULATOR

The conductor needs a secure point to hold it and keep it isolated from the pole. It prevents flashovers, ensuring stable operation under outdoor conditions.

Resistant to UV rays, moisture, and thermal variations.



“ Because in a compact grid, energy is not just conducted... it is controlled. ”



Scan the **QR codes** to check the ranges, dimensions, protection levels, and Technical Datasheets.





STRAPS & BUCKLES HOOKSTICK SWITCHES

The grid is
physically
secured

There are components that
do not interrupt the current...
but they do prevent the entire
grid from losing stability.

A reliable installation
also depends on how each
connection point is fixed,
supported, and controlled.



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STRAPS & BUCKLES

*The strength that holds
infrastructure in place*

Designed to secure equipment,
accessories, and network
elements under real operating
conditions.

- ✓ High mechanical resistance
- ✓ Corrosion protection
- ✓ Firm and durable fit
- ✓ Manufacturing for field work



Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.

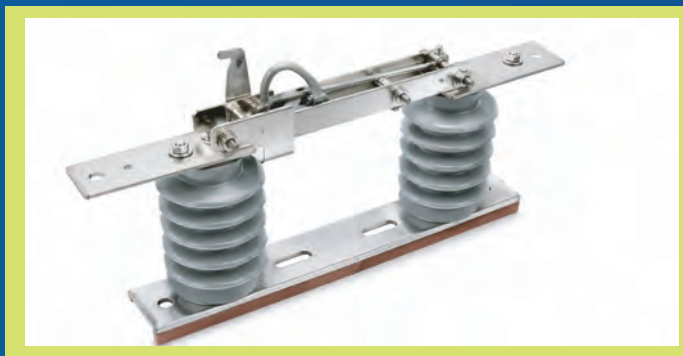




DISCONNECTORS

SINGLE-POLE DISCONNECTOR

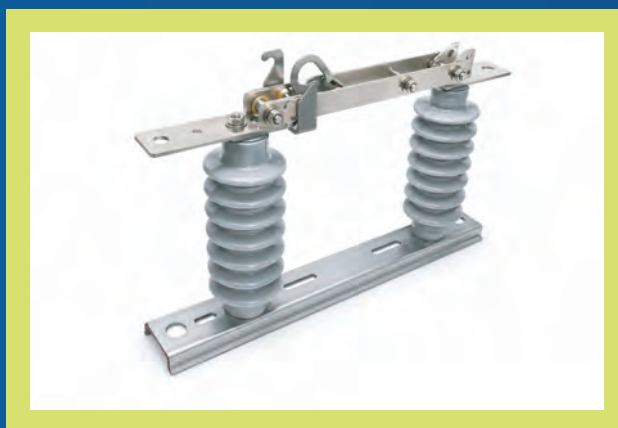
Individual control
with reliable and
precise operation.



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THREE-POLE DISCONNECTOR

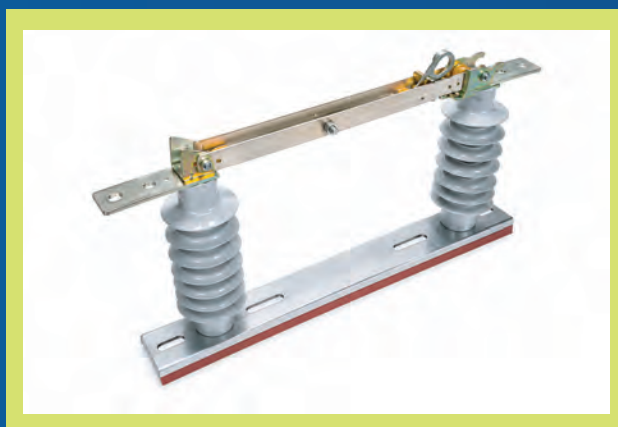
Individual control
with reliable and
precise operation.



LOAD-BREAK SWITCH

Safe operating capacity
even under energized
conditions.

***In an electrical
network, control is
also protection.***



Scan the **QR codes** to check
the ranges, dimensions, protection
levels, and Technical Datasheets.



WHEN EXPERIENCE TURNS INTO CONTINUITY



At Eléctricos Internacional, we design, manufacture, and maintain electrical energy security for continued service at the end of the supply chain.

For over 40 years, we have understood something key: network reliability does not depend on a single component; it depends on how everything works together.



WE WORK TO IMPROVE SAIFI

We develop solutions that directly reduce service interruptions, making your operation more stable.

WE TEST WHAT WE MANUFACTURE

In our internal laboratory, we perform **electrical tracking tests**, simulating real-world conditions of humidity, contamination, and electrical stress.

EXPERIENCE BACKED BY EACH SECTOR

Our engineering supports projects across:

1. Utilities/Energy
2. Telecommunications
3. Lightning Shielding



designing solutions that translate into real continuity.





ELECTRICOS
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