



inse

Group

*Specialized Electrical
Solutions for Mining*

www.inse.com.co

About Us

We are a Colombian engineering company founded in 2004 in Cucuta, Norte de Santander. We specialize in the commercialization of Specialized Electrical Solutions, with a strategic differentiation approach and a strong focus on added value.

We serve strategic sectors such as Mining, Energy, Oil & Gas, Ports & Shipyards, and Heavy & Light Industry in Colombia and Latin America.

Market Coverage

Strategic Partners

TKable

ADRIA
POWER SYSTEMS®

Littelfuse®

X-Glo
Safe • Robust • Durable

GRACE
TECHNOLOGIES

MARECHAL
ELECTRIC
MARECHAL® TECHNOR® MELTRIC®

POWERMAX
INNOVACION Y DESARROLLO

MegaResistors
Your best choice for power resistors

Our Clients

Zijin
CONTINENTAL GOLD
Minería Moderna

ANTIOQUIA
GOLD INC

ARIS MINING

Mineros
COLOMBIA

Grupo COQUECOL

PazdelRio
ES COLOMBIA

C.I. MILPA S.A.

CARBOMA

DRUMMOND COMPANY, INC.

ems

MINEXX

EXPLOMIN
Ltda.

Cerrejón
Minería responsable

MINER S.A.
INERA EL ROBLE

FURA
COSQUEZ S.A.

Carbones San Fernando

CARBONES ANDINOS
EL VALOR DE TRANSFORMAR

Minminer
El futuro comienza en nuestras minas

OPERADORA
MINERA
SOMA GOLD

INCARSA S.A.

STRACON

SOUTHERN
Cerro Matoso

LA MINERÍA S.A.

Our solutions comply with current RETIE regulations.



Special Cables

TF
Kable

eiserpro
cables especiales

 **PanElectric**
cabos elétricos especiais
O QUE NOS CONDUZ É O DESAFIO.


WANDACABLE

Special Cables



Special MV feeder cables for fixed use



MP-GC
5kV/25kV



MP-SWA
8kV/25kV



MV-105
5kV/35kV



MV-90
5kV/35kV



Mobile MV feeder cables for temporary power supply



SHD-GC
2kV/25kV



SH
5kV/35kV



Rubber cables for harsh chemical and physical environments



SOOW
600V



W
2kV



G
2kV



G-GC
2kV

Special Cables



Industrial cables, shielded, armored, halogen-free



FLEXTREME TC
600V



ARC-WELDING
600V



USE-2
600V



DLO
2kV



RW90-TC
2kV



Cables for Variable Frequency Drive (VFD) applications



FLAMEBLOCKER
600V



MC-HL
5kV/15kV



Submersible cables for pumps and ESPs



AQUAFLEX
2kV



ESP CABLE
5kV

Special Cables



Fixed and flexible cables for classified areas



UX
250V



BFOU
250V/1000V



RFOU
250V/1000V



SOOW
600V



W
2kV



G
2kV



MC-HL
5kV/15kV



SHD-GC
2kV/25kV



High Temperature Cables



EI-Therm
105°- 500°C



EI-MVTher
1.8kV/13.8kV

Portable Systems

inse
Group

ADRIA
POWER SYSTEMS®

Varelen

Portable Substations and Switchgear Trains



Portable Substations

They transform medium voltage to low voltage under demanding mining environment conditions.

- Input voltage: up to 38 kV.
- Output voltage: 480V, 600V, 1000V.
- Transformer capacity: up to 10 MVA.
- Standard distribution: 600V panel.
- Modular design: input, transformation, distribution, and control.



Switchgear Trains

Protection, measurement and sectionalizing equipment for underground electrical distribution systems.

- Input Voltage: Up to 38kV.
- Rated Current: 630Amp.
- Arc resistance.

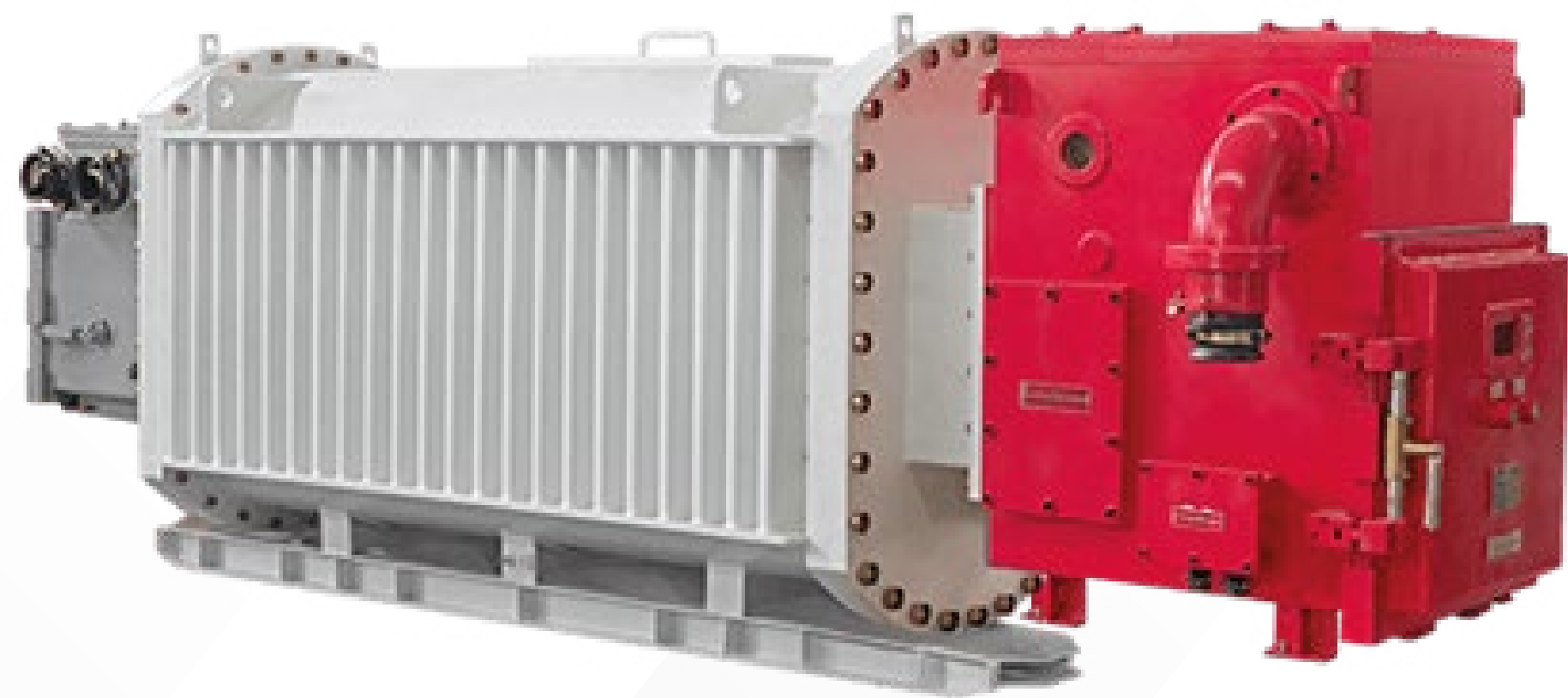
Portable Substations and Switchgear Trains



Ex Mining Substation

Designed to operate in demanding underground environments and hazardous areas. Excellent performance with explosion-proof capability and high mechanical strength.

- **Power:** 300 kVA to 1250 kVA.
- **Primary Input:** 4.16 kV to 13.2 kV.
- **Secondary:** 460 V.
- Certified for Group IIB, Zones 1 and 2.
- **Multiple protection functions:** overload, short circuit, leakage, ground-fault interlock, overvoltage, undervoltage, and overtemperature.



Electrical Panel



Safety Panel

Protects mobile equipment such as jumbos and continuous miners in mining operations. Equipped with G-GC cable, dual ground fault relay, and pilot wire, it detects faults and disconnects the breaker for enhanced safety under extreme conditions.



Centinela Panel

Designed for demanding mining operations, it offers fast disconnection and easy maintenance. Integrates the CheckVolt voltage indicator and Marechal socket, facilitating safe inspections and connections in the field.



Electrical Panel



NGR Panel

Limits ground fault current to protect the transformer and maintain operation. Equipped with SE-325 relay, it detects the fault and disconnects the system, facilitating fault location and reducing overvoltages.



Distribution Panel

Reliable solution for the management and protection of electrical networks. They enable safe and organized distribution, with the ability to adapt to different configurations and operational environments.



Electric Mining Locomotive



An efficient transport system for underground mining that reduces operating costs while improving safety and productivity. It operates with bidirectional motion, dynamic braking, and extended autonomy, making it ideal for complex and demanding environments.

- ⑤ Quick return on investment.
- ⑤ Specialized technical service.
- ⑤ Designed to meet the specific requirements of each operation.



Electrical Safety



SmodFire
Sistema de Detección y Extinción de Incendios
en Subestaciones y Sistemas Eléctricos



Littelfuse



MegaResistors
Your best choice for power resistors

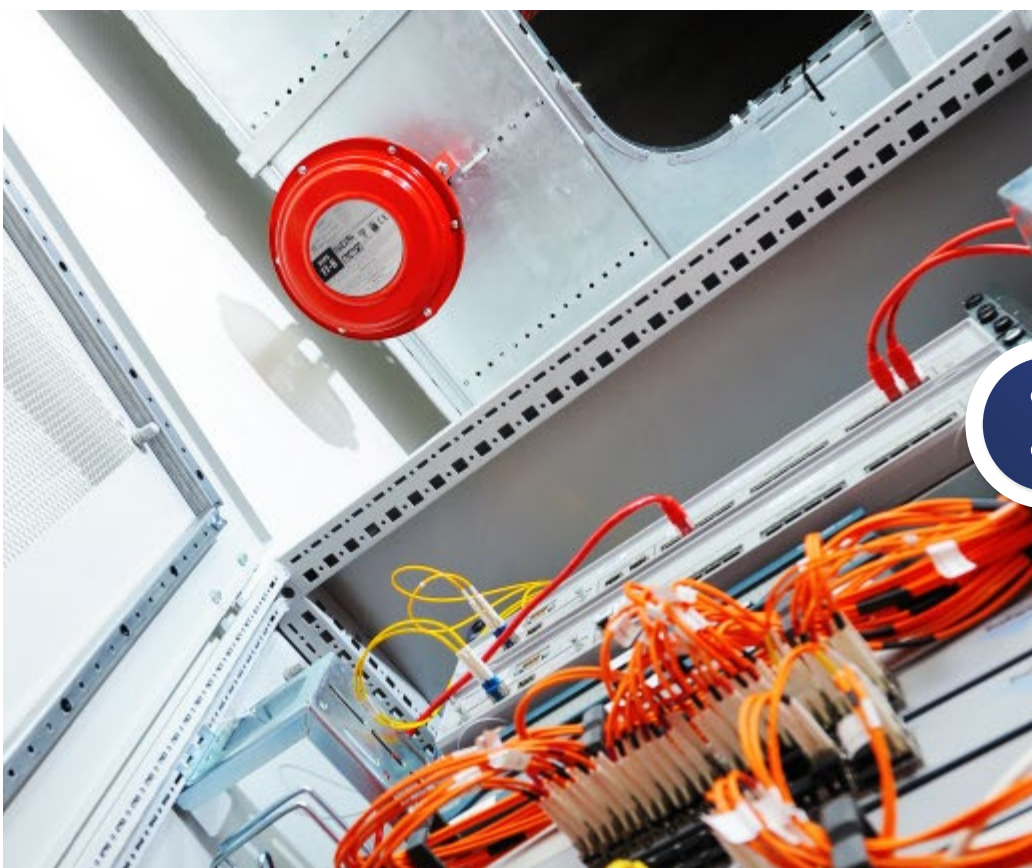


SmodFire

Fire Detection and Suppression System

Advanced solution for fire suppression in substations and electrical systems.

It incorporates compact and durable DSPA aerosol generators with a 15-year lifespan. They are designed to act quickly and safely in environments where gases, powders, or foams are ineffective or pose risks.

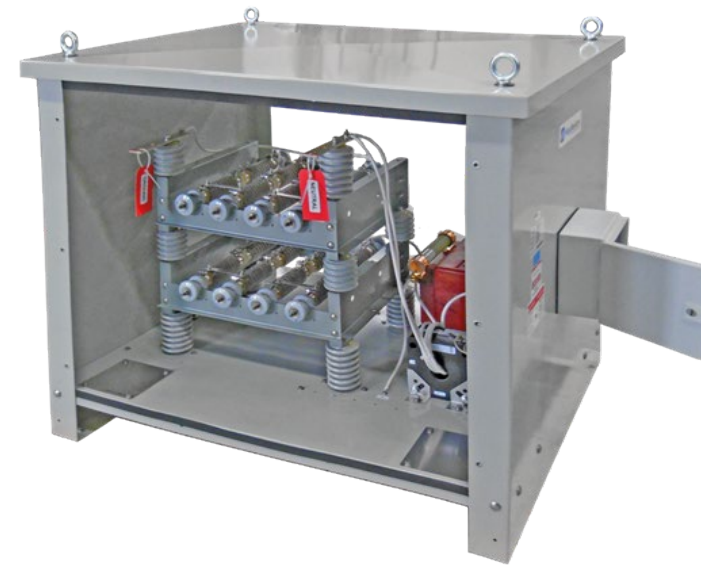




➤ Neutral Grounding Resistors - NGR

Limit the magnitude of ground fault current in an electrical system to protect equipment and personnel.

Low Resistance
Limits from 100 to 1000A



High Resistance
Limits from 5 to 10A



MegaResistors
Your best choice for power resistors

➤ Arc Flash, Ground Fault and NGR Relays

AF0100

Generator
Protection



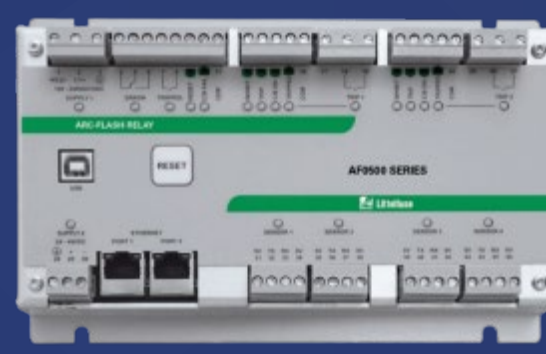
PGR-8800

Switchgear and Panel
Protection



AF0500

Protection for Switchgear
Trains and Substations



SE-105

Ground Fault
Monitoring



SE-135

Ground Fault
Monitoring



SE-325

NGR
Monitoring



SE-330

NGR
Monitoring



➤ Voltage Monitors for LV and MV

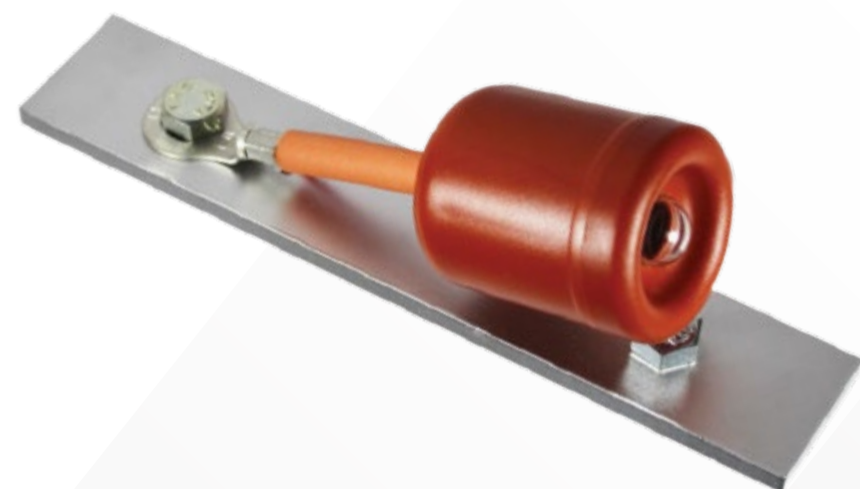
ChekVolt Device

Allows verification of voltage presence or absence without opening electrical equipment.



Medium Voltage Indicator

Alerts of voltage presence in starters, transformers, or substations.



➤ Continuous Temperature Monitors

Continuous temperature monitoring to detect hot spots and alert about failures that could impact operations.

Hot Spot Monitor



Industrial Resistors



MegaResistors
Your best choice for power resistors



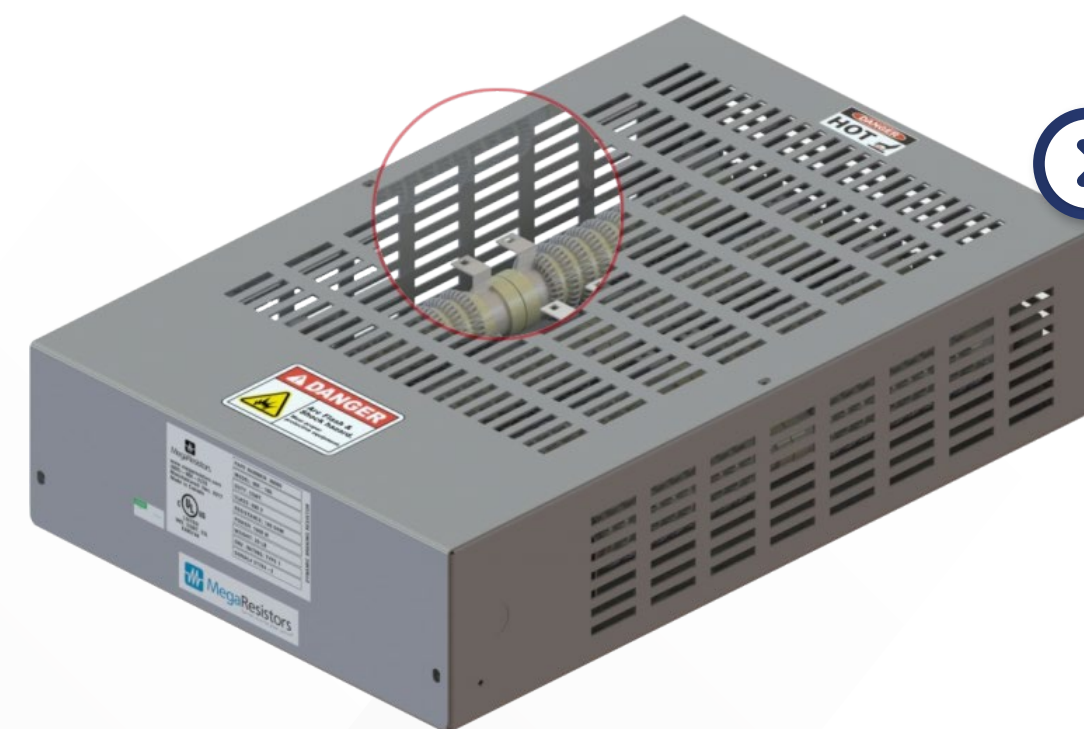
➤ **Discharge Resistors**

Dissipate the energy stored in capacitors or batteries to allow safe maintenance.



➤ **Load Resistors**

Simulate electrical loads to evaluate the performance, capacity, and stability of electrical systems under controlled conditions.



➤ **Braking Resistors**

Absorb the motor's braking energy and dissipate it as heat to control deceleration in variable frequency drives (VFDs).

Heavy-Duty Connectors



Low Voltage Industrial Connectors



Applications:

Mobile substations, distribution panels, critical motors, backup systems, temporary power distribution, and power generation plants.



20A > 63A

DSN
DECONTACTOR™



- ⦿ IP66 / IP67 / IP69
- ⦿ GRP enclosure
- ⦿ Built-in load-break capability
- ⦿ AC-22 and AC-23 ratings
- ⦿ Up to 4 auxiliary/pilot contacts



30A > 250A

DS
DECONTACTOR™



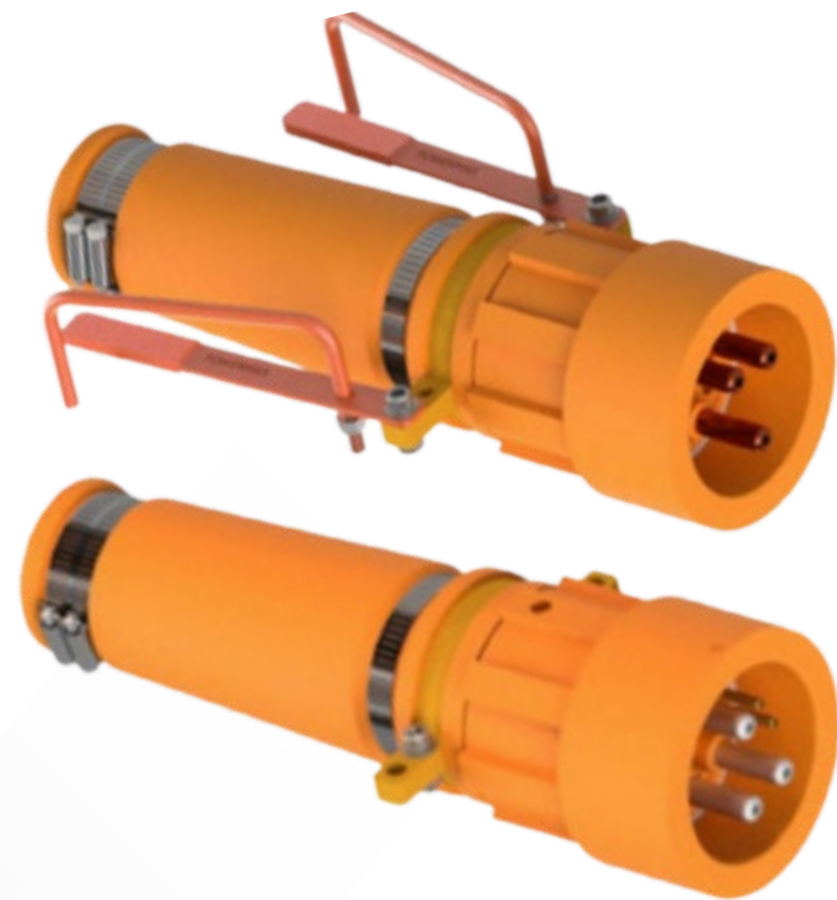
- ⦿ IP54/55 (IP66/IP67 from 90A and up)
- ⦿ GRP enclosure up to 150A
- ⦿ Metal enclosure from 90A to 250A
- ⦿ Built-in load-break capability, AC-22 and AC-23 ratings

Rubber Quick Connectors



SERIES C: SWIFT LOCK JOINT PLUGS

Fully protects cable joints, as the connection is made inside the connector and the cable jacket is secured from the cap using tightening clamps.



UNI-LOCK with Action Lever

Rugged rubber connector with secure coupling and sealing against water and dust. Prevents arcing and locking, ideal for demanding environments.



ATEX Low Voltage Connectors

Applications:

Refineries, dehydration plants, stations, gas plants, workover rigs, and drilling equipment.



20A > 63A
DXN
DECONTACTOR™



- ⚡ Ex II 2 G D Ex db eb IIC, Ex tb IIIC
- ⌚ IP66/IP67
- ⌚ Built-in load-break switch
- ⌚ GRP housing



30A > 200A
DX
DECONTACTOR™

- ⚡ Ex II 2 G D Ex de IIC, tD A21, IP65
- ⌚ Built-in load-break switch
- ⌚ Metal housing
- ⌚ Connection/disconnection interlock

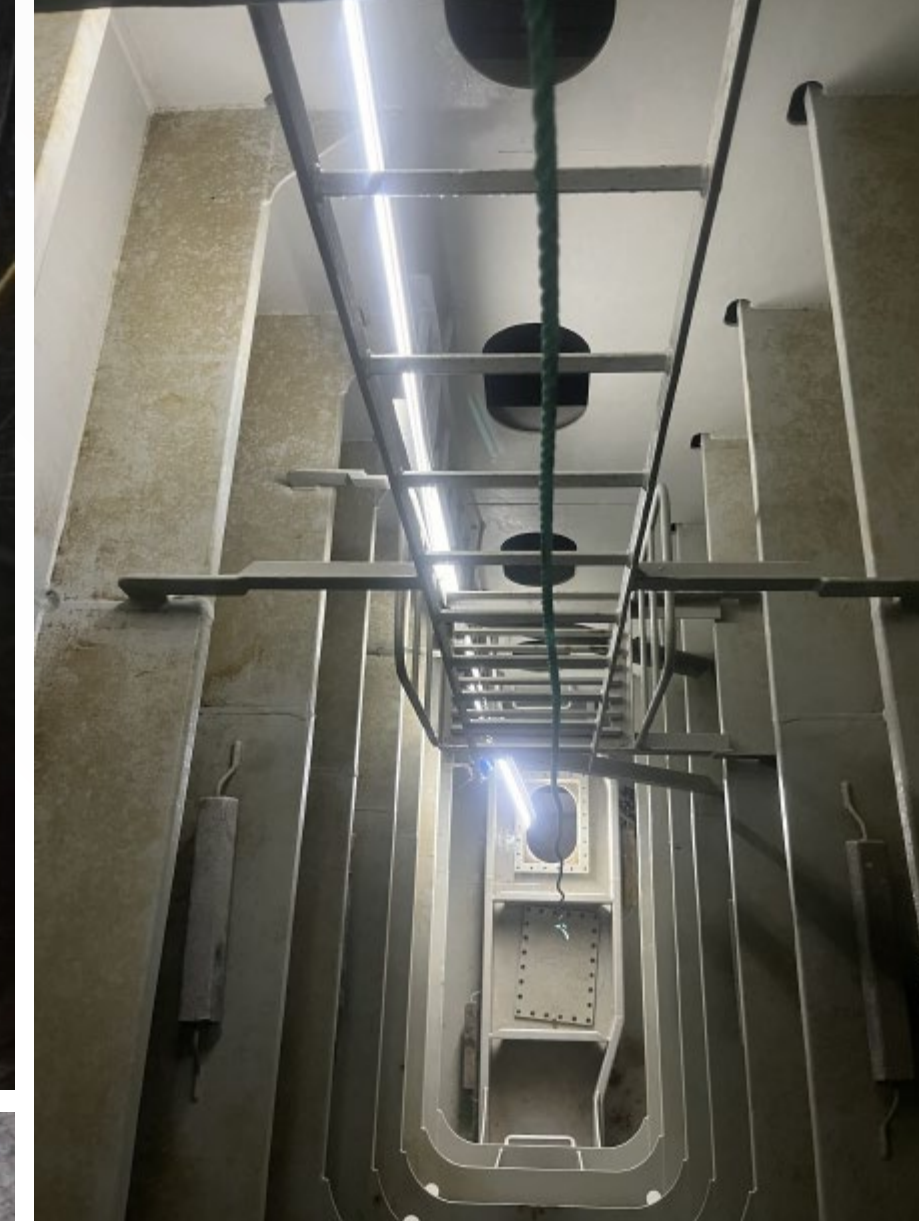
Special lighting



LED Light Strips

Designed to provide continuous, safe, and efficient lighting in demanding environments. Their robust construction ensures uniform light distribution, reducing dark spots and improving operational visibility.

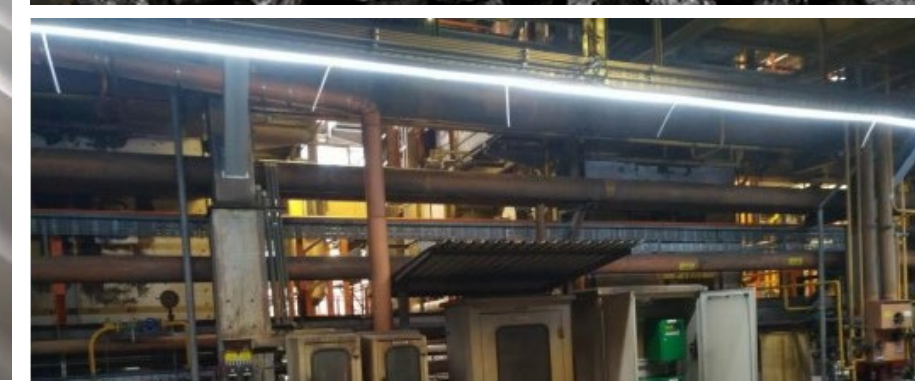
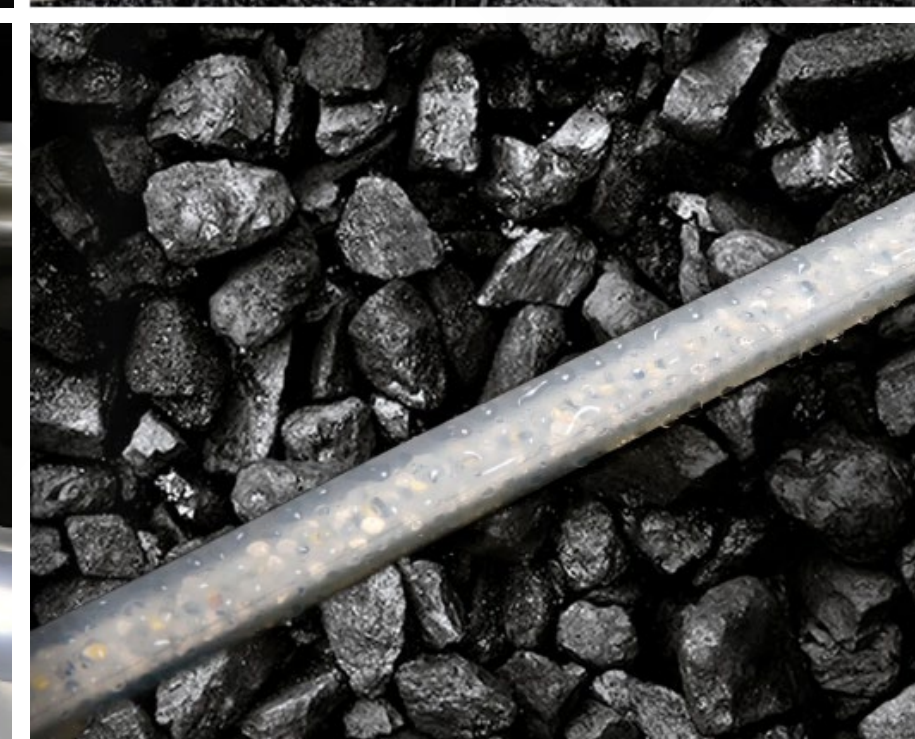
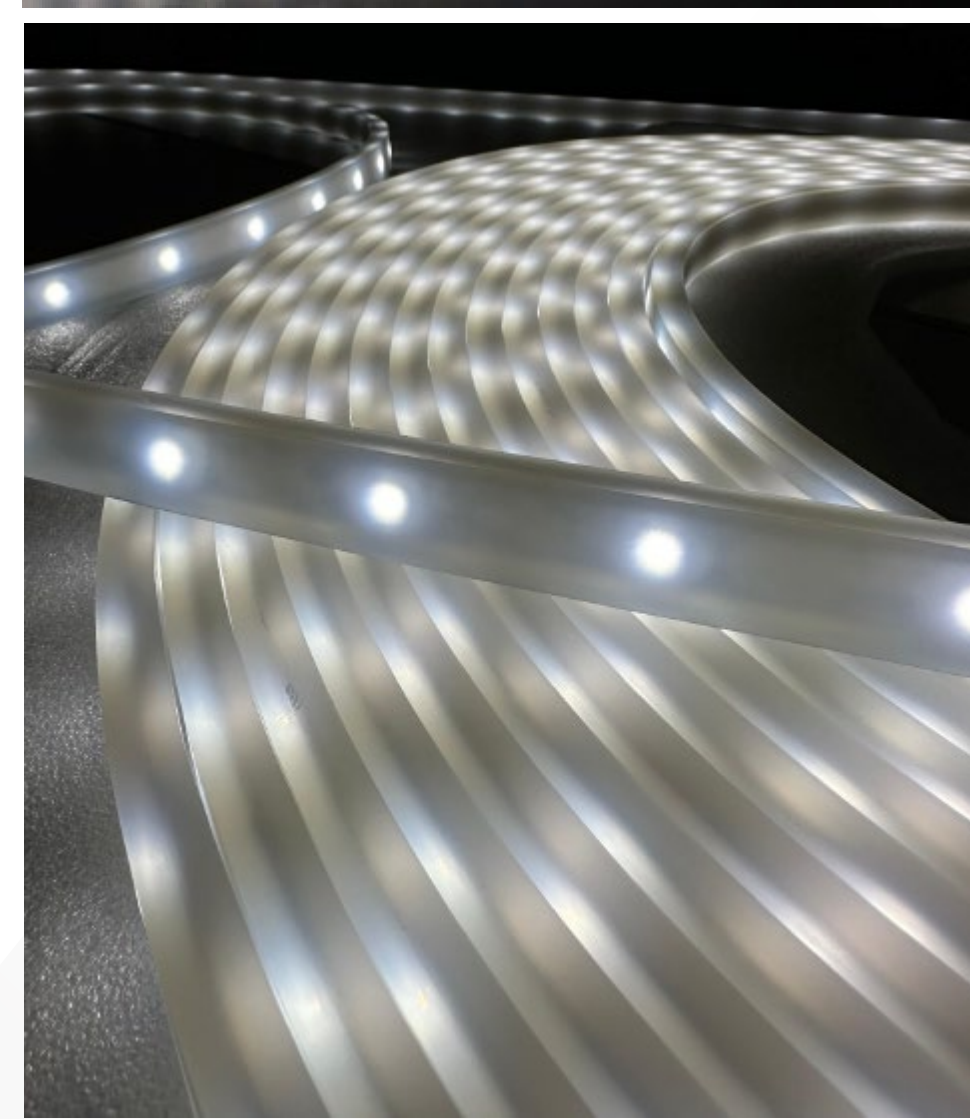
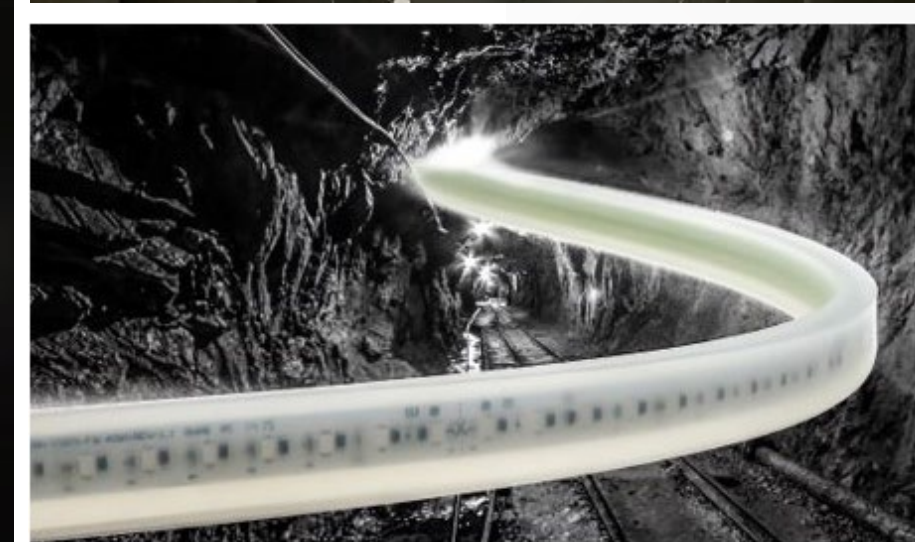
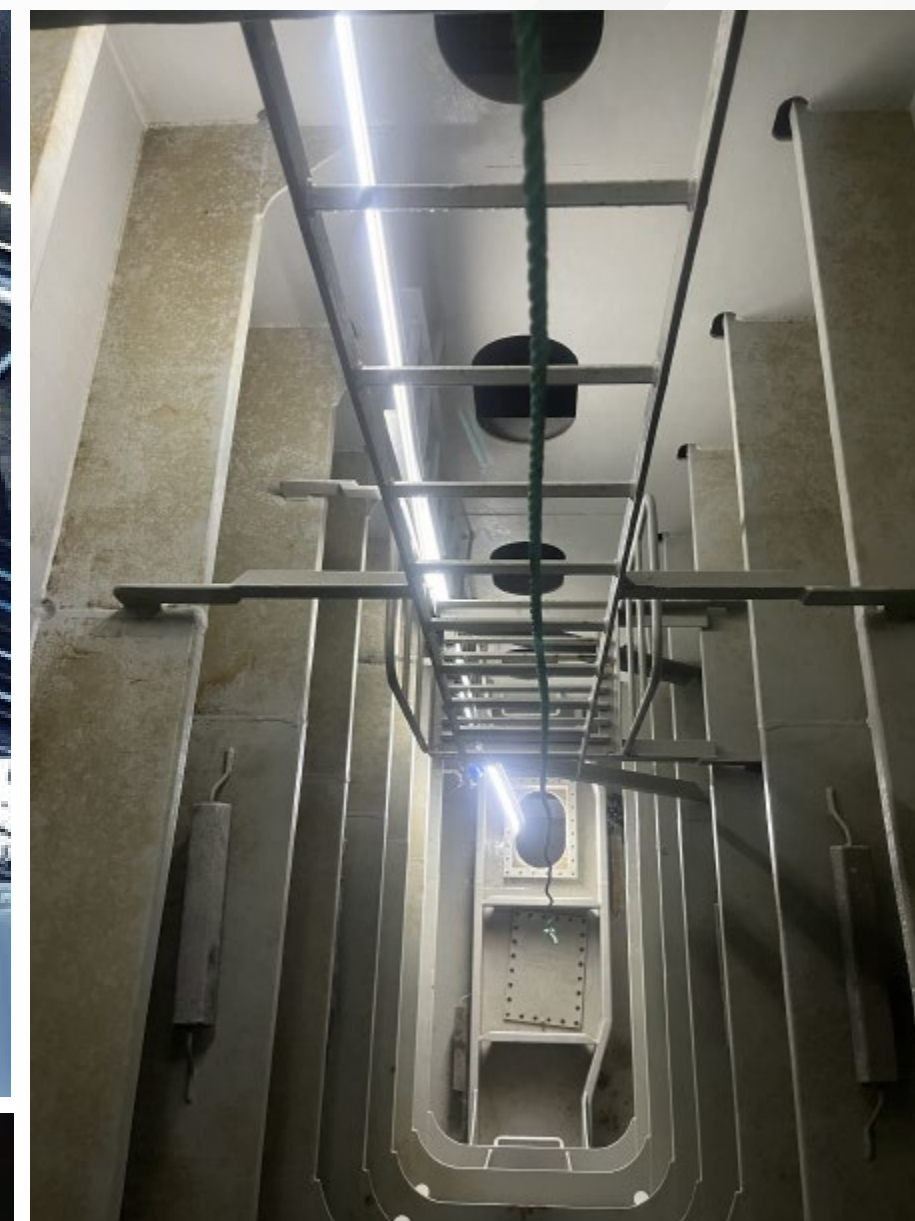
- ⤵ Lifespan of up to 5 years.
- ⤵ IP67 protection against water, dust, and chemical agents.
- ⤵ Quick installation with minimal maintenance.
- ⤵ Flame-retardant material with high mechanical resistance.
- ⤵ High energy efficiency with lower operating consumption.



LED Strips for Classified Areas

Designed to operate in underground and surface areas with explosion risk due to the presence of gas, dust, or flammable materials.

- High mechanical resistance.
- Maintenance-free.
- Energy efficient.
- Dust and water protection.
- Ultra flexible.
- 5 year warranty and over 50,000 hours of service life.



Specialized Services

inse
Group



***Annual preventive
maintenance for
electrical systems***



***Design and installation
of electrical safety
systems***



***Cold and hot
rubber cable
repair***

Leasing Operativo Machinery and Work Equipment

10X is a financial initiative developed in collaboration with Inse Group, aimed at strengthening commercial relationships and supporting the ongoing growth of our clients and suppliers.

Through 10X, Inse Group offers:

-  Leasing Operativo
-  Factoring - Confirming
-  Working Capital
-  Vehicle Financing

Operating Leasing Features



Contact



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