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# INFRASTRUCTURE

Energy Systems Solutions for Infrastructure

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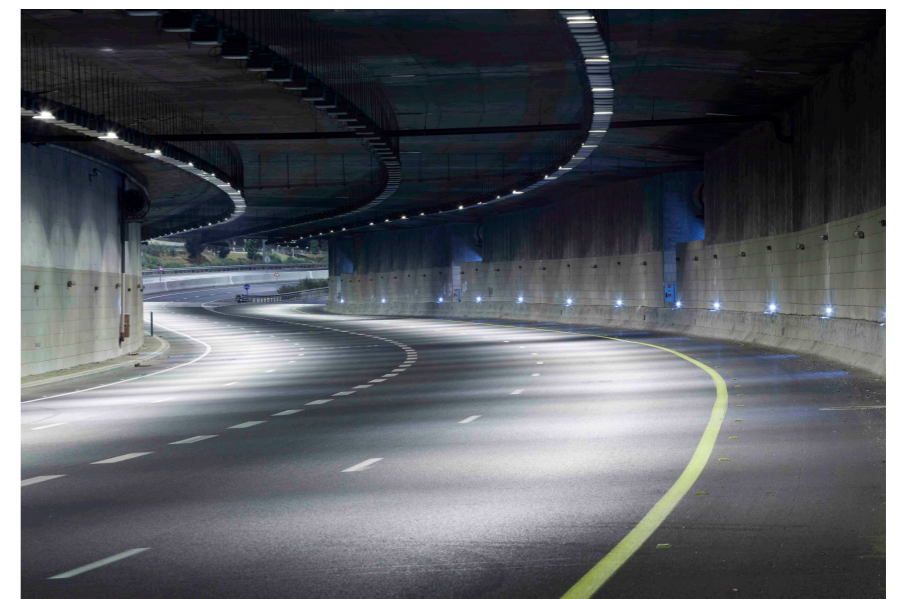


## Energy Systems Solutions for Infrastructure

Today, the worldwide infrastructure, in order to exponentially grow, requires much effort in construction to support and communicate with all organizations, people and systems that are necessary to move the economy.

Ekabel is committed to having this vision and understanding the customer's needs, so that we provide a big range of solutions to electrical infrastructure installations, such as airports, railways and highways.

The electrical solutions that Ekabel provides can include cables such as control, instrumentation, low, medium or high voltage, communication or fiber optic. Also grounding systems, cable trays, conduit pipes, and the accessories for a safe installation.



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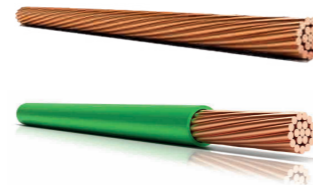
# INFRASTRUCTURE

Airport Solutions

## 1 Grounding Solutions

*SERIES SC, SERIES SW, SERIES SX*

Our grounding solutions includes high purity copper conductors and accessories that provide a safe and efficient way to discharge overcurrents, and faulty ground currents, they meet **ASTM-B1, ASTM-B2, ASTM B3.**



## 2 Mobile Installation Solutions – Flat Cables

*SERIES FF*

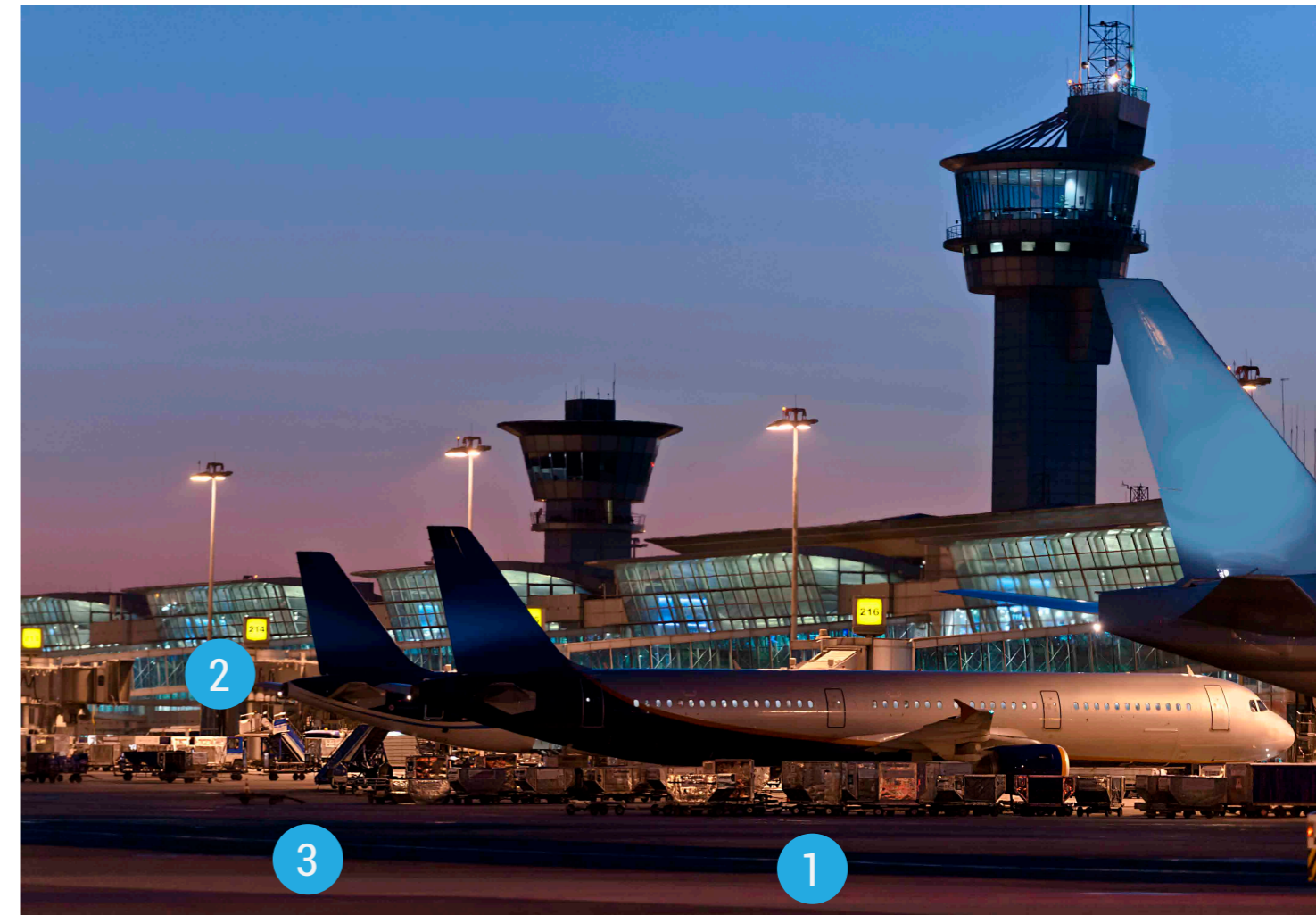
The Traveling Cable is a flat cable designed for power applications and control on bridges, cranes, gantries, monorail systems, equipment traveler's equipment that requires energizing and other mobile equipment. Approved for use in continuous operation at 105 ° C in humid and dry places. Manufactured under **UL 83, ASTM-B8 and certified as a traveling cable by CSA.**



## 3 Lighting Systems Solutions to Air Field

*SERIES PA*

Designed for airport applications where security is critical, specifically to illuminate the tracks during the maneuvers of takeoff and landing of aircraft. our cables used for lighting airports are manufactured with aviation authorities, such as **FAA-L-824, ICAO, BAA and M&E42.**



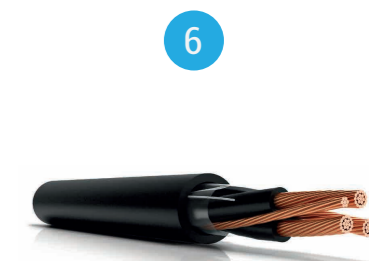
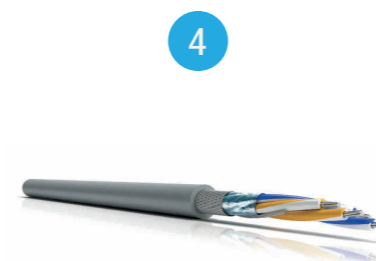
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# INFRASTRUCTURE

Airport Solutions

## 4 Communications and Video System Solutions SERIES ELC, SERIES EPD

The current generation airports require robust and secure platforms for their communication systems. Data and voice transmission requires high capacity networks for the interconnection of multiple devices, such as access control panels, door opening and closing systems, communication screens, face recognition, fingerprint readers, access cards, as well as **CCTV** security camera systems. These cable solutions are made with **LSZH**, Plenum compounds, suitable for these installations.



## 5 Variable Frequency Drive and Motor Solutions SERIES VF

The high demand for automated equipment for airport facilities entails the use of variable speed drive, which must be fed with specific conductors to avoid equipment malfunction due to interference or electromagnetic noise coming from other circuits. The VFD cables are manufactured in accordance with the requirements of **UL 1277 and IEEE 1202**.

## 6 Low Voltage Solutions SERIES CX.JZ

They are specially designed to power electrical circuits with **LSZH** compounds of low smoke emission and zero halogenated gases (toxic) according to international standards **IEC 60754 / IEC 61034**. Cables are widely used inside buildings or closed spaces where a significant amount of people, such as airport terminals, public restrooms, checkpoints and all general spaces of airports.



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# INFRASTRUCTURE

Airport Solutions

## 7 Fiber Optic Solutions

Our fiber optic solutions meet the highest demands of the industry for transmission and security of confidential data.

Ekabel broad portfolio of solutions includes fiber optic cables for indoor and outdoor installations, with or without mechanical protections. They are manufactured under **TIA-568-B, ITU-T and IEC 60793**.



## 8 Medium Voltage Solutions

*SERIES PU, PP, PR*

The voltage conductor's objective is to distribute the electrical energy to all the substations and main equipment of the airports. This is necessary to guarantee a safe and reliable energy transmission.

The medium voltage cables of Ekabel can be manufactured under various standards such as **UL 1072, IEC 60502, ICEA, VDE, AENOR** among others, at different voltage levels, from **2.4 kV to 35 kV**.

Different available insulators i.g. **XLPE, XLPE-RA, EPR** as well as different available sheaths like **PVC covers, CPE, LSZH**, and others.



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# INFRASTRUCTURE

Airport Solutions

## 9 Raceways and Support Systems Solutions

Ekabel channeling and support solutions, provide the appropriate means for the installation of all conductors and equipment of electrical installations and electronic devices. They are manufactured under various standards such as **IEC, UL 723**. They are also manufactured in various materials, from aluminum, stainless steel and fiberglass, among others.



## 10 Equipment and Accessories Solutions

All electrical installation requires certified accessories to guarantee the terminations and connections of the installed drivers. This is why Ekabel has a wide portfolio of these solutions, from cold-shrink and heat-shrink terminations and splices, shoes, couplings, connection boxes, splices and terminations of medium voltage, among others. Furthermore, Ekabel can supply equipment such as medium voltage cabinets, switches, tools and, in general, everything required to guarantee a safe and reliable installation. The accessories and equipment are manufactured under the international standards **IEEE 48, IEEE 404, DIN 53455, DIN 53495, UL 486D, CSA C22.2 No. 198.2**.



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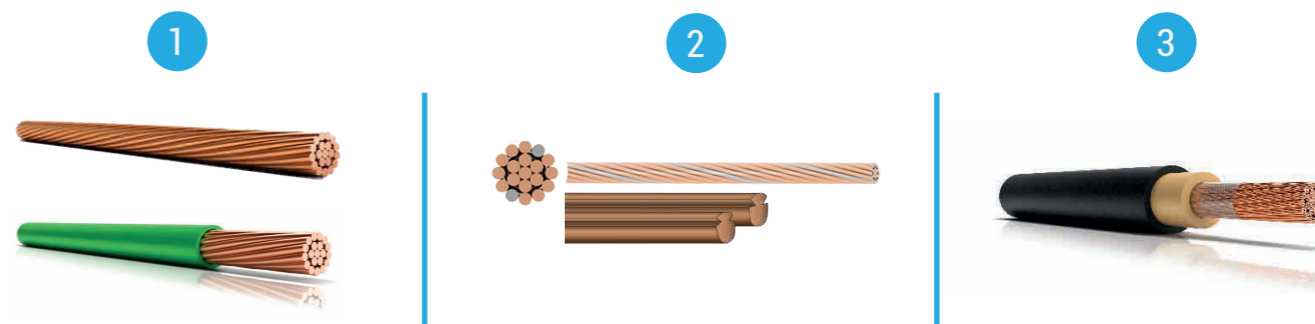
Railway Solutions



## 1 Grounding Solutions

*SERIES SC, SERIES SW, SERIES SX*

Our grounding solutions include high purity copper conductors and accessories that provide a safe and efficient way to discharge overcurrents and fault currents to the ground, they meet **ASTM-B1, ASTM-B2, ASTM B3**.



## 2 Overhead Feeder Solutions – Contact Wire and Catenary Wire

The Ekabel catenary wire is used to transmit the energy through an aerial conductor that connects to the contact wire. The catenary wire is manufactured in drawn in cold, hard-drawn copper with a total area a total area of 150 mm<sup>2</sup> and certified under international regulations such as **BS 7884**. The contact wire is made of copper and magnesium alloy, under **EN 50149, ASTM B-9** and **RoHS** certification.

## 3 Mobile Installation Solutions

*SERIES FDLO*

Our DLO (Diesel Locomotive) cables are manufactured to operate under the more extreme conditions demanded of the Railway Industry as is the transmission of energy between each of the railcars and the feeding and wiring of the engines to transmit information between the railcars. They provide excellent performance in terms of flexibility, mechanical and chemical resistance. Available for different voltage levels, from 600 V up to 2000 V.



# INFRASTRUCTURE

Railway Solutions

## 4 Communications and Video Systems Solutions SERIES ELC, EPD

The latest generation communication systems require robust and secure platforms. The transmission of data and voice requires high capacity networks for the interconnection of multiple devices, such as access control panels, systems for opening and closing doors, digital screens, face recognition, fingerprint readers, or access cards, as well as **CCTV** security camera systems. These cable solutions are manufactured in accordance with **LSZH**, Plenum compounds, suitable for these installations.



## 5 Variable Frequency Drive and Motor Solutions SERIES VF

Engines are an indispensable part they are needed for ventilation systems, air extraction, escalators, etc, and involve the use of variator equipment for frequency, which must be fed with specific drivers to avoid incorrect operation of the equipment due to interference or electromagnetic noise coming from other circuits.

The VFD cables are manufactured in accordance with the requirements of **UL 1277** and **IEEE 1202**.

## 6 Low Voltage Solutions SERIES CX.JZ

They are specially designed to power electrical circuits with low **LSZH** compounds emission of smoke and zero halogenated (toxic) gases according to **IEC** international standards **60754 / IEC 61034**. Cables are widely used inside buildings or enclosed spaces where a significant number of people can gather, such as platforms, public restrooms, stations, control rooms, parking lots, and all the general spaces for the operation and monitoring of the railway system.





# INFRASTRUCTURE

Railway Solutions



## 7 Fiber Optic Solutions

Our fiber optic solutions are to meet the highest demands of the industry for transmission and security of confidential data. Ekabel broad portfolio of solutions includes fiber optic cables for indoor and outdoor installations, with or without armor. They are manufactured under **TIA-568-B, ITU-T and IEC 60793**.



## 8 Medium Voltage Solutions

*SERIES PU, PP, PR*

The medium voltage conductors have the aim to distribute the electric power to all the substations and main equipment of the fixed installations of the system which should guarantee a safe and reliable energy supply. The medium voltage cables can be under various standards such as **UL 1072, IEC 60502, ICEA, VDE, AENOR** among others and at different voltage levels from **2.4 kV to 35 kV**. Different insulations available as **XLPE, XLPE-RA, EPR**, as well as various metallic reinforcements (CCW, SIA, etc.) and covered as **PVC, CPE, LSZH**, and others.

## 9 Radiofrequency Solutions – Radial Cable

Our radiofrequency solutions are ideal for transmitting signals in underground installations where conventional antennas fail to transmit information correctly. They are designed to operate in the **2.4 GHz** band, for **RF 802.11g and 802.11n signals**. In addition all its components are free of halogens (toxic).



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Railway Solutions



Furthermore,

## 10 Equipment and Accessories Solutions

All electrical installation requires certified accessories to guarantee the terminations and connections of the installed drivers, this is why Ekabel has a wide portfolio of these solutions, from terminals and cold-shrink splices, lugs, couplings, connection boxes, splices and terminations of medium voltage, among others. Furthermore, Ekabel can supply equipment such as medium voltage cabinets, switches, tools and in general, everything required to guarantee a safe and reliable installation. The accessories and equipment are manufactured under the international standards **IEEE 48, IEEE 404, DIN 53455, DIN 53495, UL 486D, CSA C22.2 No. 198.2.**



## 11 Raceways and Support Systems Solutions

Ekabel channeling and support solutions provide the appropriate means for the installation of all conductors and equipment of electrical installations and electronic devices. They are manufactured under various standards such as **IEC, UL 723.** They are also manufactured in various materials, such as, aluminum, stainless steel, fiberglass, among others.



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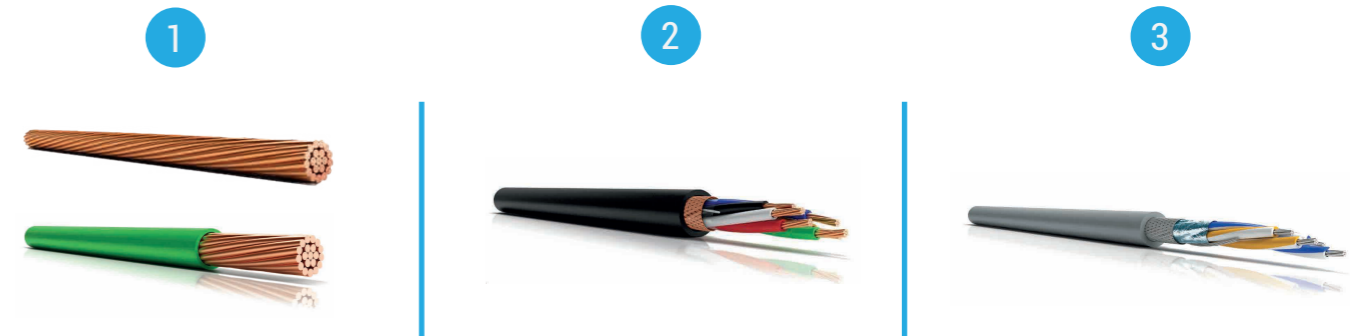
Highways Solutions



## 1 Grounding Solutions

*SERIES SC, SERIES SW, SERIES SX*

Our grounding solutions includes high purity copper conductors and accessories that provide a safe and efficient way to discharge overcurrents and fault currents to the ground, They meet **ASTM-B1, ASTM-B2, ASTM B3.**



## 2 Control and Signal Systems

The signaling of road infrastructure is vital for the safety of drivers and facilities. Ekabel cables are manufactured with **LSZH** compounds of low emission of smoke and zero halogens (toxic) according to international standards, **IEC and UL 1277, UL 44 and UL 83.**

## 3 Communication and Video Systems Solutions

*SERIES ELC, EPD*

The latest generation communication systems require robust and secure platforms. The transmission of data and voice requires high capacity networks for the interconnection of multiple devices such as access control panels, door opening and closing systems, digital screens, face recognition, fingerprint readers or access cards, as well as **CCTV** security camera systems. These cable solutions are manufactured with **LSZH**, Plenum compounds, suitable for these installations.



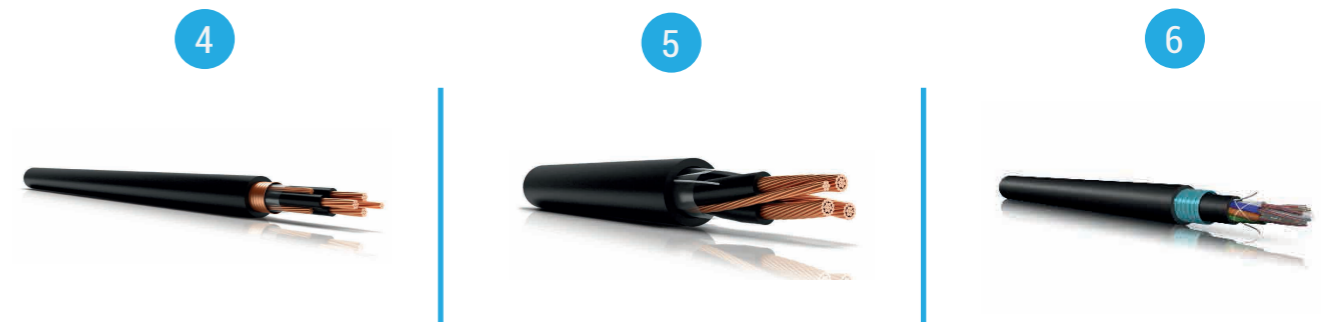
# INFRASTRUCTURE

Highways Solutions



## 4 Variable Frequency Drive and Motor Solutions *SERIES VF*

Engines are an indispensable part of tunnel installations, whether the system is ventilation, air extraction, etc. This involves the use of frequency variator equipment, which must be fed with specific conductors to avoid the malfunctioning of the equipment due to interference or electromagnetic noise from other circuits. The VFD cables are manufactured in accordance with the requirements of **UL 1277 and IEEE 1202**.



## 5 Low Voltage Solutions *SERIES CX.JZ*

They are specially designed to power electrical circuits. Made with compounds **LSZH** low smoke emission and zero halogenated (toxic) gases according to standards **IEC 60754 / IEC 61034** and **UL 44**. The cables are widely used within buildings or enclosed spaces where a significant number of people can gather such as in, tunnels, platforms, public restrooms and parking lots.

## 6 Fiber Optic Solutions

Our fiber optic solutions are to meet the highest demands of the industry for transmission and security of confidential data. Ekabel broad portfolio of solutions includes fiber optic cables for indoor and outdoor installations, with or without armor. They are manufactured under **TIA-568-B, ITU-T** and **IEC 60793**.



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# INFRASTRUCTURE

Highways Solutions

## 7 Medium Voltage Solutions SERIES PU, PP, PR

Medium voltage conductors aim to transmit and distribute electrical power along the entire road infrastructure. These conductors must guarantee an energy supply that is safe and reliable for the correct operation of the signaling and toll systems, among others. Ekabel's medium voltage cables, can be manufactured under various standards such as **UL 1072, IEC 60502, ICEA, VDE, AENOR** among others and at different voltage levels, from **2.4 kV to 35 kV**.

A variety of insulations are available, such as **XLPE, XLPE-RA, EPR**, as well as various metallic reinforcements (CCW, SIA, etc.) and armor is available in as **PVC, CPE, LSZH**, among others.

## 8 Raceways and Support System Solutions

Ekabel channeling and support solutions provide the appropriate means for the installation of all conductors and equipment of electrical installations and electronic devices. They are manufactured under various standards such as **IEC, UL 723**. They are also manufactured in various materials, such as aluminum, stainless steel, fiberglass, among others.

## 9 Equipment and Accessories Solutions

All electrical installation requires certified accessories to guarantee the terminations and connections of the installed drivers. This is why Ekabel has a wide portfolio of these solutions, from terminals and cold-shrink splices, lugs, couplings, connection boxes, splices and terminations of medium voltage, among others. Further Ekabel can supply equipment such as medium voltage cabinets, switches, tools and in general, everything required to guarantee a safe and reliable installation. The accessories and equipment are manufactured under the international standards **IEEE 48, IEEE 404, DIN 53455, DIN 53495, UL 486D, CSA C22.2 No. 198.2**.



## Who We Are

A team of professionals with vision of the future and action oriented.

We are passionate about designing solutions that respond to the needs of customers.

## Where We Are

With offices in Latin America, the United States, Australia & Spain, Ekabel has consolidated its rapid expansion and has participated in numerous important projects.

## What We Do

Based on expert knowledge, we design and integrate energy systems, telecommunications and automation to optimize results for our customer and protect their most value assets.





# Our Philosophy

## 360 Integration

When it comes to energy systems and connectivity networks, we've got you covered.

Our ability to integrate several products in a single proposal is the backbone of our service.

## Borderless Logistics

Streamlined delivery is part of our signature service in order to meet client needs.

## Brain HUB

Our team of top level engineers from around the world, with heavy expertise in the industries we serve, provides our clients expert advice on most challenging projects.

Global Service Team  
Experts devoted to help you.

Technology Transfers  
Specific training sessions in latest topics.

## Flexibility

Our geographic expansion allows us to offer competitive advantages on both small and large projects.

Global reach with local support.



# Contact Information

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