

**HV and MV power accessories
for reliability, safety, and interconnectivity worldwide**



Global expert in cables and cabling systems

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Nexans, worldwide leader in cables and cabling systems

As a global expert in cables and cabling systems, Nexans brings an extensive range of advanced copper and optical fiber solutions to three key sectors of the economy: **infrastructure, industry and buildings.**

Its cables and systems can be found in every area of people's lives, from rolling stock and railway infrastructure to telecommunications and energy networks, aeronautics, aerospace, automobiles,

petrochemicals, windmills, medical applications, etc.

The presence of Nexans in over 65 countries gives it a full mastery of both national and international standards. Its 10 Competence Centers and International Research Center work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions.



Power accessories to assure your infrastructure growth

The efficiency of any train system is dependent on an infrastructure which provides reliable energy for rolling stock, and data and telecommunications for train management and control. Whether for a tramway, subway or high-speed train, operators are anxious to streamline costs, future-proof their systems, upgrade customer services, and assure a high level of public safety.

Nexans produces a wide range of energy and telecommunication cables and components specifically adapted to the various rail environments, many with enhanced fire-performance characteristics. We also give expert advice about network architecture and evolving standards, and can provide customized engineering, installation and maintenance worldwide.

As a train infrastructure operator, you are concerned with safety and reliability. For high and medium-voltage, this depends on the smooth functioning of all power accessories, whether it is for energizing catenaries, or providing the complex power functions of a complete station or platform. Often joints, terminations and connectors must operate in humid tunnels, or endure extreme conditions and industrial pollution. As mainline interoperability is becoming a European-wide objective, and mass transit turnkey projects are being exported worldwide, you want available, universal, easy-to-connect solutions.

To help you achieve this, Nexans offers reliable **high and medium-voltage power accessories**.



Power accessories
for medium and high-voltage applications

High and medium-voltage power accessories: reliable power along the track, in tunnels and terminals



Nexans provides a full range of accessories for the HV and MV rail infrastructure environment, including thermal retractable, cold-shrink and pre-molded terminations and joints, and pre-molded plug-in connectors. For catenary systems, all elements are integrated into a customized pre-molded terminations which is compact and easy to slip onto the cable. Hundreds of those terminations are used to power overhead contact wires for intercity catenaries. Also, various joints are used to connect the backbone energy cables buried trackside. Finally, a wide range of accessories (mainly cold-shrink technology) is used to connect transformers and equipment within substations to power everything from signaling, fixed installations, and step-down transformers for diverse railway needs.

This Nexans solution gives you:

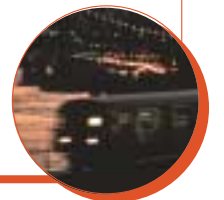
- **High reliability** since the design is always adapted to suit special train infrastructure and conditions
- **Security** guaranteed by the replacement of porcelain with silicon and EPDM, which are gun-safe and non-explosive
- **Easy installation** with flexible terminations matching the curve and characteristics of the cable
- **No maintenance**, apart from removing industrial pollution deposits
- **Longevity** for up to 30 years of uninterrupted service
- **Interconnection** with all rail power infrastructure systems worldwide
- **Customization** for special environments like tunnels, and urban installation
- **A choice of technologies** whether thermal retractable, cold-shrink or pre-molded



Nexans provides joints and terminations for maglevs and Swiss tunnels

For Shanghai's Transrapid Maglev Line, the world's first high-speed (430 km per hour) commercial commuting system

using electromagnetic levitation technology, Nexans provided the hundreds of cold-shrink joints required to feed 36 kV to the 30 km of double-track. Nexans supplied the Long Stator Winding cables as well. Also, Nexans provided 300 special watertight terminations for the 35-km-long Lötschberg railway tunnel in Switzerland, the longest in Europe.



High and Medium-Voltage joint closures

Product families	Product family names	Standards / Specs
 HV joint with pre-molded body <small>MP/SMP</small>	Pre-molded Joint 76/132 kV MP/SMP	<ul style="list-style-type: none"> • IEC 60840/62067
 HV joint closures with heat-screen body <small>CMP-LOP</small>	Joint 26/45 kV 1 x 150/800 AL Joint 36/66 kV 1 x 150/800 AL	<ul style="list-style-type: none"> • HD629 - UNE21115 • HD629 - UNE21115
 HV joint with cold-shrink body <small>CMP</small>	Joint 72 kV CMP	<ul style="list-style-type: none"> • IEC 60840
 MV mechanical joint closures <small>MV disconnectable joint</small>	Joint 3,3 kV 2 x 35 AL Joint 12/20 kV 1 x 150 AL 1 x 240 AL	<ul style="list-style-type: none"> • RENFE 03.354.006.3 HD629 - UNE21115 • RENFE 03.354.006.3 HD629 - UNE21115 • RENFE 03.354.006.3 HD629 - UNE21115
 MV cold-shrink joint closures <small>Cold-shrink 24 kV</small>	Joint 12/20 kV 1 x 150 AL 1 x 240 AL 1 x 150 Cu Joint 18/30 kV 1 x 240 Cu Joint 18/30 kV pre-molded 1 x 240 Cu	<ul style="list-style-type: none"> • RENFE 03.354.006.3 HD629 - UNE21115 • RENFE 03.354.006.3 HD629 - UNE21115 • HD629 • HD629

High and Medium-Voltage terminations

Product families	Product family names	Standards / Specs
 HV terminations <small>HV termination outdoor</small>	Termination 26/45 kV 1 x 150/800 AL Joint 36/66 kV 1 x 150/800 AL Termination outdoor with composite insulator FR Termination outdoor with porcelain insulator TE/SOA Termination outdoor dry type F/FM Termination for GIS and transfo. TF/TT/SFY/STY Termination for GIS and transfo. dry plug in type DTF/DTT	<ul style="list-style-type: none"> • HD629 - UNE21115 • HD629 - UNE21115 • IEC 60840/62067 • IEC 60840/62067 • IEC 60840 • IEC 60840/62067 • IEC 60840/60859
 MV terminations <small>MV termination outdoor</small>	Termination 3,3 kV (Heat-shrink) 2 x 35 AL Termination 12/20 kV (Heat-shrink) 1 x 150 AL 1 x 240 AL Termination 12/20 kV 1 x 150 AL 1 x 240 AL 1 x 150 Cu Termination 18/30 kV 1 x 240/400 mm² AMV-ITK 36, AMV-FTK 36 Cold-shrink AMV-AIN 36, AMV-AFN 36 Slipon	<ul style="list-style-type: none"> • RENFE 03.354.006.3 HD629 - UNE21115 • RENFE 03.354.006.3 HD629 - UNE21115 • RENFE 03.354.006.3 HD629 - UNE21115 • HD629 • HD629 • HD629 • HD629 • HD629.1S1 • HD629.1S1