



**High-voltage connection cables,
bushings and connectors
for reliability, safety, and easy maintenance**

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.



HV connection cables, bushings and connectors from Nexans, a wide range of products covering diverse railway standards

The rolling stock industry is now at a crucial point in its development. New challenges must be met due to long-awaited equipment upgrades, booming freight traffic and high-speed train projects, and the growing need for conventional subways, fully-automated metros, and light-rail suburban vehicles worldwide.

Nexans manufactures a complete range of rolling stock cables and components, meeting national and international standards, in addition to providing system integration, extensive customer service and innovative products for future needs. We supply both standard items and customized solutions, and reinforce system interoperability to meet the challenge of ERTMS and ETCS.

Since any train's performance is 100% dependent on the power source, you want fully-tested onboard HV cables and accessories for drives and locomotives that can operate securely at up to 45 kV. Capable of withstanding oil, vibration, and extreme temperatures, they must be easy-to-install in confined spaces. For the safety of maintenance personnel, you want a totally insulated "dead break" system, with connectors that can be connected and disconnected quickly and effortlessly. Reliability and durability are essential; you want to simply fit and forget about it.

To help you achieve this, Nexans offers easy-to-connect **high-voltage connection cables, bushings, and connectors.**

HV connection cables and connectors to carry electricity from the pantograph to the transformer



High-voltage connection cables, bushings and connectors: assuring constant and secure electrical feed



Single-core high-voltage cables connect the pantograph and the onboard transformer, providing vital, non-stop electrical energy for locomotives and drives. Nexans manufactures both the cable and the transformer-end connectors and bushings, with the entire system rigorously tested according to current cycle, basic insulation level, partial discharge, etc. up to 45 kV. Connectors use a thick rubber housing to enclose the cable and stress-relieving screen, making it easy to plug and unplug into the specially-adapted bushing. The system provides constant and secure levels of electrical feed.

This Nexans solution gives you:

- **High reliability** since the items are fully tested, far beyond current norms
- **Safety** for train maintenance personnel, with fully-screened connectors deemed safe to touch in accordance with Cenelec standards
- **Cost savings** since full-screening means that more connectors can be installed in a given space, without requiring air clearance between terminals
- **Connection ease** through bolt/unbolt technology which makes it easy to test either the transformer or the cable side
- **Long lifetime** through rigorous testing and proven performance (for the full life of locomotives, typically 40 years)
- **Interoperability** because of universal connector and bushing design
- **Ruggedness and resistance** to oil, dampness, vibrations, extreme heat and cold




Nexans supplies complete connection sets worldwide

Through Euromold/Elastimold, Nexans has been serving a worldwide


market, which includes customers in the US, the UK, Spain, France, Sweden, Germany, Korea, Japan, etc. Original Equipment Manufacturers include Alstom, Bombardier, Rotem, Melco and Toshiba. Nexans is also supplying connector sets for various OEMs such as Kinkisharo.

High-voltage connection cables



Product families	Product family names	Standards / Specs
Roof rubber cable high voltage	30 / 52 kV	<ul style="list-style-type: none">• SPC
Roof rubber cables high voltage, flexible	95 30 / 52 kV flexible	<ul style="list-style-type: none">• SNCF
Rubber cables high voltage, halogen free	(N)TMCGCHXOE 18 / 30 kV (N)TMCGCHXOE 26 / 45 kV	<ul style="list-style-type: none">• VDE• VDE

Bushings, connectors



Product families	Product family names	Standards / Specs
Cable sets	Cable sets with high-voltage cables, bushings and connectors	<ul style="list-style-type: none">• Customer specification



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