



**Rolling stock power cables
for secure energy at all operational levels**

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.



Rolling stock power cables 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.

As an OEM, you want to provide your railway customers with future headroom by already meeting European Norms (EN) and international standards. You need a wide range of power cables, and expect your supplier to provide precise logistics and delivery. Since you are increasingly outsourcing, you want value added to the cable, moving from pre-cut cables, to systems and eventually complete modules. Concerned with public safety and security, you want all cables to conform to exacting railway conditions.

To help you achieve this, Nexans offers high-performance **rolling stock power cables**.

Rolling stock power cables
for power needs
of locomotives and drives



Rolling stock power cables: safe and reliable power wherever you need it



Nexans provides a full range of railway-specific power cables from 300 V to 6 kV in diameters of 0.5 to 400 mm². All cables meet strict technical requirements in terms of electrical safety, fire-performance (low-smoke and toxicity, continuous operation in the event of fire). These class 5 class conductors are extremely flexible, and easy-to-install in the compact rolling stock environment. As more than just a cable supplier, Nexans is often called upon to provide technical advice, especially concerning environmental and electrical conditions, so as to provide the right cable for the right application.

This Nexans solution gives you:

- **Long-life** because of many years of experience in designing railway-specific power cables.
- **Fire protection** for people and equipment through Halogen-Free Fire-Retardant (HFFR) materials
- **Wide range of power cables** including HV, MV and LV to provide energy for virtually every onboard function
- **Compatibility** with international and new European Norms (EN)
- **Durability** because of cross-linked rubber compounds that can resist heat, oil, vibration, chemical aggression, etc.
- **Full technical support** including specifications, custom designs, data sheets and detailed test information
- **Logistics** for efficient delivery and assembly



Power cables for Deutsche Bahn's biggest ever order

For the BR 185 1 & 2 project, Nexans supplied power cables to outfit

over 400 multi-system locomotives being built by Bombardier in Germany. This is, in fact, the largest single order that Deutsche Bahn has ever given to an original equipment manufacturer, although a number of the units will also be sold to private institutions, like Thyssen (for mining operations).

Rolling stock power cables



Product families	Product family names	Standards / Specs
NFF 63826 / EN 50264 (Standard wall insulation)	HFFR medium voltage, monoconductor class 5 0.5 kV (0.6 / 1 kV) 1 to 16 mm ² 1 kV 1.5 to 120 mm ² 1.5 kV (1.8 / 3 kV) 1.5 to 240 mm ² 3 kV (3.6 / 6 kV) 2.5 to 240 mm ²	<ul style="list-style-type: none"> • NFF 16101, BS 6853, IEC 332-1 / 2 • NFF 16101, BS 6853, IEC 332-1 / 2 • NFF 16101, BS 6853, IEC 332-1 / 2 • NFF 16101, BS 6853, IEC 332-1 / 2
NFF 63826 / EN 50264 (Multicore cables)	HFFR medium voltage multicore class 5 0.5 kV (0.6 / 1 kV) 2, 4, 7, 13, 19, 37 x 1.5 mm ² 2, 4, 13, 19 x 2.5 mm ²	<ul style="list-style-type: none"> • NFF 16101, IEC 332-1 / 2...
Flamex 750 (Medium wall insulation)	HFFR medium voltage class 5 0.75 kV 1.5 to 120 mm ²	<ul style="list-style-type: none"> • NFF 16101, BS 6853, UIC 895...
NFF 63296 (Standard wall insulation, gasoil resistant)	Medium voltage class 5 monoconductor 0.5 kV (0.6 / 1 kV) 1 to 16 mm ² 1 kV 1.5 to 120 mm ² 1.5 kV (1.8 / 3 kV) 1.5 to 240 mm ² 3 kV (3.6 / 6 kV) 2.5 to 240 mm ²	<ul style="list-style-type: none"> • NFC 32070 • NFC 32070 • NFC 32070 • NFC 32070

Product families	Product family names	Standards / Specs
NFF 63296 (Multicore cables, gasoil resistant)	Medium voltage multicore class 5 0.5 kV 2, 4, 7, 13, 19, 37 x 1.5 mm ² 2, 4, 13, 19 x 2.5 mm ²	<ul style="list-style-type: none"> • NFC 32070
VDE, EN (Medium voltage, halogen free)	Rubber cables medium voltage NSHXAF0E EN 1.8 / 3 kV 4GKW-EN 1.8 / 3 kV NSHXAF0E EN 9GKW 3.6 / 6 kV	<ul style="list-style-type: none"> • VDE, EN • VDE, EN • VDE, EN
NFF 63808 / EN 50306 (Singlecore, halogen free)	Crosslinked polyethylene, low voltage thin-wall Flamex 20 series 0.3 / 0.5 kV 0.38 to 6 mm ²	<ul style="list-style-type: none"> • NFF 63808, EN 50306, NFF16101, NFC332/1 & 3, BS 6853...
NFF 63808 / EN 50306 (Multicore, halogen free)	Crosslinked polyethylene, low voltage thin-wall Flamex 20 series 0.3 / 0.5 kV 2, 3, 4, 7, 13, 19, 37 x 0.38 to 6 mm ² . Many configurations	<ul style="list-style-type: none"> • NFF 63808, EN 50306, NFF 16101, NFC 332 / 1 & 3, BS 6853...
VDE, EN (Low voltage, singlecore)	Rubber cables low voltage, halogen free (N)HXFAF 0.3 / 0.5 kV (N)HXAF 0.6 / 1 kV	<ul style="list-style-type: none"> • VDE, EN • VDE, EN
VDE, EN (Low voltage, multicore)	Rubber cables low voltage, halogen free (N)HXSLOE, (N)HXCSLOE 0.3 / 0.5 kV and 0.6 / 1 kV	<ul style="list-style-type: none"> • VDE, EN



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