Nexans

Databus and optical fiber cables for vital data links and new onboard video services

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.

Databus and optical fiber 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 provides a comprehensive range of high quality rolling stock cables and components, in addition to system integration, extensive customer service and innovative products for future needs. We supply both standard items and customized solutions wherever necessary, and reinforce system interoperability to meet the challenge of ERTMS and ETCS.

To meet the challenge of expanding data needs onboard you want high-speed databus and fiber optical solutions that can handle information protocols (e.g. MVB, WTB) for digital security and train management. Also, you need data capacity for passenger comfort, information and entertainment. All cables must meet rolling stock prerequisites, like vibration, and fire-safety standards. You are also concerned with easy connectivity, either through standard connectors or other customized solutions.

To help you achieve this, Nexans offers high-capacity **databus and optical fiber cables.**

Optical fiber cables
to carry vital onboard data

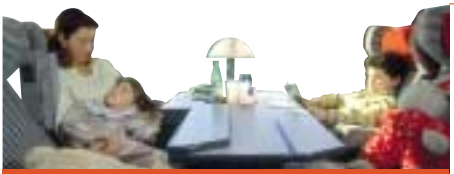
Databus cables
to assure surveillance and video liaisons

Databus and optical fiber cables: high digital capacity for security and entertainment

While fully meeting data transmission demands, Nexans databus and optical fiber cables also conform to special rolling stock requirements. For copper, these cables can exist in one or more pairs or quads. With 1Gbit/s capacity, Twinax and Profibus databus cables can handle all railway protocols used for signaling, management and control, while at the same time delivering the next generation of video services to passengers, like in-seat movies. Optical fiber cables provide the ultimate solution, up to 10Gbit/s. All cables are designed for compactness, high flexibility and superior fire performance.

This Nexans solution gives you:

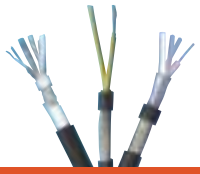
- Extremely wide range of cables which can accommodate present and future needs, including ERTMS and ETCS, and new video services
- Full compliance with rigorous railway criteria and standards
- Fire protection for people and equipment through Halogen-Free Fire-Retardant (HFFR) materials
- Vibration resistance by using tinned multi-stranded copper instead of a solid core
- High transmission capacity for digital data in both directions (equivalent to a Category 5 LAN cable for copper; up to 10Gbit/s for fiber)
- Connector compatibility using standard (RJ-45) or sturdy circular connectors to resist vibration; full connectivity for fiber, including fiber management boxes
- Flexibility because of pliable silicone-rubber construction



Nexans reinforces onboard data transmission in all rail modes

For a new metro being constructed by Alstom for France's RATP, Nexans provided databus cable for in-wagon video information. In a light-rail project, being built by Bombardier for the UK, Nexans supplied databus cables to connect onboard cameras to control automatic doors. Databus cables are being used widely for trains, metros, TGVs, either for video or for control and management links to the onboard computer. Also, Nexans is equipping buses for Ansaldo Transportation in Italy.

Databus cables



Product families	Product family names	Standards / Specs
MVB, WTB, Profibus… (Flamex halogen free databus)	**Flamex quad shielded:** **2PF146** 4 x 0.6 mm^2 - 100 ohms **2PE993** 4 x 0.5 mm^2 - 120 ohms **Flamex Twinax shielded:** **289779** 2 x 0.6 mm^2 - 120 ohms **2PF578** 2 x 0.75 mm^2 - 120 ohms **Flamex mixed (bus + energy):** **2PC352** 2 x (2 x 0.6 mm^2) - 120 ohms + 2 x 0.6 mm^2	• IEC 332-1 / 3, NFF 63808 / NFF 63826, DIN 5510-2, NFF 16101, NFC 32070
Multimedia & Bus… (Flamex halogen free databus)	**Flamex pairs:** **2PC912** 2 x (2 x 0.25 mm^2) - 100 ohms **2PC953** 4 x (2 x 0.25 mm^2) - 100 ohms **Flamex mixed (video + energy):** **2PF704** 1 x coax 75 ohms + 2 x 0.6 mm^2	• IEC 332-1 / 3, NFF 63808 / NFF 63826, DIN 5510-2, NFF 16101, NFC 32070

Optical fiber cables

Product families	Product family names	Standards / Specs
Optical fiber for onboard communication and data transmission	**Flamex optical fiber:** **2PG030** 2 x FO cores 62.5 μm **or 2PG031** 2 x FO cores 50 μm with Flamex halogen free insulation (NFF63808) on fiber cores & Flamex halogen free jacket (NFF63826)	• IEC 332-3 part C, NFF 63808 / NFF 63826, NFF 16101, NFC 32070

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