
TRANSPORTATION
METRO AND LRT CABLES
TecniKabel
SPECIAL ELECTRICAL AND OPTICAL CABLES
WWW.TECNIKABEL.COM

INTRODUCTION

Tecnikabel manufactures a comprehensive range of power, signalling and telecommunication cables specifically engineered for the Urban Mass Transit sector. Besides traditional communication, data cable and optical fiber/copper cables for metropolitan area networks, we customise our engineering for the most innovative and modern railway systems.

Countries are investing heavily in either modern metro and railway lines, or light rail, tramways and intermodal solutions, involving punctual trains, accurate real-time information, easy ticketing and wireless connectivity both in station and in motion. These complex networks demand high safety standards, improved fire-performance in tunnels, stations and public areas, intense Signalling and LAN infrastructures for supervisory control and data acquisition.

PRODUCT LINES

- TRANSPORTATION
- OIL / GAS & PETROCHEMICALS
- TELECOMMUNICATION
- OPTICAL
- AUTOMATION
- BUILDING TECHNOLOGY
- SUBMARINE
- AUDIOVIDEO
- NAVAL
- GREEN ENERGY

QUALITY SYSTEM

Since 1978, constant commitment to Quality has awarded Tecnikabel approval from American and European Authorities, complying with the most demanding international manufacturing and quality standards.

cert. number: 2017010103948372

PRODUCT MARKING LICENCE NO: 226/001

FIRE PERFORMANCE

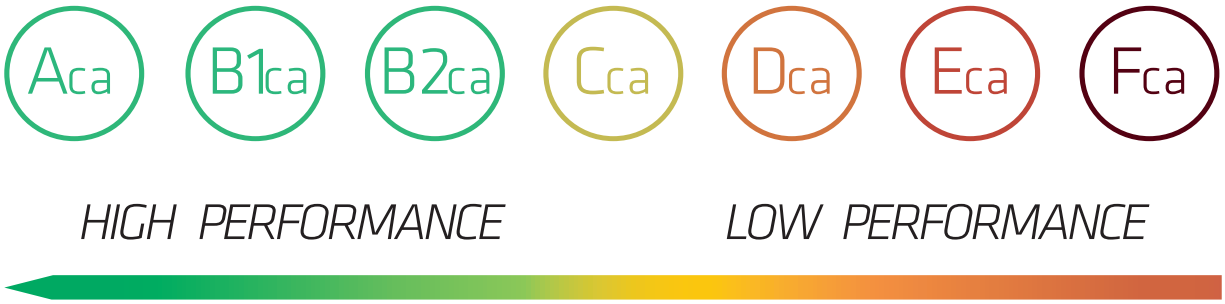
- **IEC 60332-1-2 / EN 50265:**
  Fire propagation on a vertical single cable
- **IEC 60332-3 / EN 50266 / EN 50305 9.1:**
  Fire propagation on a vertical cables bundle
- **IEC 60331 / EN 50200 / EN 50362:**
  Fire test resistance
- **IEC 61034-1/2 / EN 50268-1/2:**
  Measurement of smoke density of cables burning under defined conditions
- **IEC 60754-1 / EN 50267-2-1/2:**
  Test on gases evolved during combustion of materials from cables - Determination of the halogen acid gas content
- **IEC 60754-2 / EN 50267-2-2:**
  Test on gases evolved during combustion of materials from cables - Determination of acidity (by pH measurement) and conductivity

CONSTRUCTION PRODUCTS REGULATION

Regulation No. 305/2011 (Construction Products Regulation, or CPR) of the European Parliament and of the European Council is a regulation of 9 March 2011 that lays down harmonised conditions for the marketing of construction products and replaces Construction Products Directive (89/106/EEC). The EU regulation is designed to simplify and clarify the existing framework for the placing on the EU market of construction products.

The main objective of the CPR is the removal of technical barriers to trade in order to guarantee the free movement of construction products within the common internal market due to differing product and test standards, approval processes and conformity documents in the various member states.

After the transition period, which ended on 1 July 2017, the Construction Products Regulation governs cables intended to be incorporated in construction works (permanent installations) in both buildings and civil engineering.
CPR Euroclasses are: Aca, B1ca, B2ca, Cca, Dca, Eca, Fca.



SECURITY VIDEO SURVEILLANCE

Video surveillance for people security has become a key issue for the Mass Urban Transit sector and Rolling Stock operators. Intense investments in enhanced CCTV networks comprises monitoring lines, tunnels, stations and wagons and is supported by cables with enhanced fire-performance and LSZH characteristics. Our wide range of customised hybrid copper/fiber cables ensure the highest possible level of public safety. To meet security concerns of tunnels and urban metro systems, we also produce metallic armoured and dielectric fire-resistant fibre optical and copper cables.

TELECOMMUNICATION SYSTEM

Advanced train control telecommunications comprise a wide range of systems, such as Broadband Radiometers, Automatic Number Plate Recognition, Time Distribution, Panel Information, Access Control, Public Announcement and TN/ECB. Our high technology range of fiber optical, multi-pair telephone and data-transmission cables serve backbone, Wi-Fi and GSM-R communication solutions. All cables are engineered to meet the most stringent security standards for tunnel, urban metro, long distance supervision, and communication systems. The enhanced performance of our fire-resistant cables ensures the continuous flow of data during emergencies, and critical operational conditions.

CONTROL ROOM

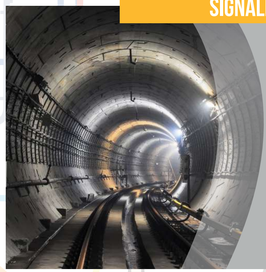
Advanced Railway Traffic Automation Management & Information Systems automatically detect conflict and propose operational solutions. All cables for public areas and tunnels are Low Fire Hazard and ensure low toxicity and minimal smoke to enhance survival, fire-fighting and emergency operations during fire.
Nowadays, innovative CBTC systems accurately indicate the exact train position of a train compared to traditional signalling systems. Communication, data-transmission and optical fiber / copper cables support this safe efficient way to manage railway traffic.

EMERGENCY SYSTEM & PUBBLIC ANNOUNCEMENT

Public Address Systems are intended to provide passengers with address voice announcement of routine, situational, security and emergency communications on the stations and in concourses.
The PAS transmission is based on dedicated networks with several interface options to other systems like Fire Alarm, Access Control, Global Positioning and Passenger Information's.
Guaranteeing service continuity during fire is a key characteristic of our cables: fire-resistance ensure system integrity and the low emission of corrosive toxic gases create a safer environment for people. These cables can also provide low-voltage energy for alarms and smoke evacuation signals.

TICKET VALIDATION AND FARE COLLECTION

Our copper, fiber optical and hybrid cables are installed worldwide for metro and station fare collection systems. Multimodal collection, ticketing validation equipment, integrated car park, contactless card and smart phone payments all work together to make passenger movement quick and easy.



SIGNALLING SYSTEM

Whether refurbishing legacy systems, increasing passenger and freight network capacity, or planning and building future networks, Tecnikabel supports operators with cutting-edge cables capable of withstanding extreme conditions, temperatures, humidity, oil and ultraviolet light. Our products ensure smooth and safe train movements for both the common European standard ETCS signalling system, or abroad, where signalling systems are customised under national standards. Tecnikabel cables can manage traditional signalling switches, route and street-level signals, level crossings and other network elements, together with modern traffic management and infrastructure Communication-Based Train control (CBTC) with its control, axle counter and EMC balise cables.

PASSENGER INFORMATION SYSTEM

Passenger Information Systems supply real time on-board and on-platform communication and connectivity solutions. Despite increased traffic loads, our LAN, copper and fiber optical cables support visual, audio, CCTV, and data management systems to provide passengers with accurate punctual information.

ROLLING STOCK

Train manufacturers are increasingly concerned about safety and comfort at high speeds. Our end-to-end Cat. 7A Jumper cable is the innovative plug-in solution for on-board train communication, connecting the entire train through a Snap and Pull safe-release connector and offering connectivity to the PIS with real-time on board information and in-motion wireless connectivity. Train and diagnostic system management preserves the connection between coaches from unattended or emergency operated disengagement. Connectivity performance is guaranteed under the ISO/IEC 11801FA standard and highly resistant to extreme dynamic travel conditions, exposure to extreme temperatures, oils and aggressive chemical substances. Tecnikabel products also operate HVAC, sliding door and braking systems as well as power supply, lighting, and other minor applications.

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