

Nexans



Shipboard cables
Safety for passengers and merchant ships

With dramatic increases in global trade and travel, the world's ship operators are continuing to find ways of lowering costs, and improving safety and performance, while respecting environmental concerns. Cables are vital in achieving these goals bulk carriers, passenger ships, merchant ships and service vessels of all kinds. Specifically designed for the marine environment, ship cables can improve every aspect of shipboard operations and safety.

The special needs of ships

Shipbuilders and owner/operators look to advanced cabling to achieve substantial gains. Since nothing can replace a total loss, or risk to human lives, the overriding concern is safety and security on the high seas. A broad range of quality products must not only be readily available, but they must also have proven fire-performance characteristics. There is also the question of weight and reduced volume to save precious cargo and passenger space. Cables must be able to endure the marine tough environment and also answer the increasing complexity onboard: from navigation, communications and control to providing multipurpose electricity for everything from lights to propeller systems. Finally, they must conform to the highest international norms, such as IEC standards.



A full-range of shipboard cables from



Ships, from cruise liners to chemical tankers, have a wide-range of voice, data and power functions which are all dependent on specific marine cables.

Instrumentation and control cables assure that various navigational, trim, ballast and control operations continue to function securely in all weather and sea conditions. Telephone, data and coaxial cables assure the constant flow of information, including non-essential commercial services, like passenger telephone services.

For larger cruise ships, an onboard "central station" electric plant turns the vessel into a self-contained power utility for propulsion and various services, including passenger entertainment. An entire range of low and high-voltage cables and connectors are essential to this floating power plant.

No matter what kind of ship, all systems have to function in crisis situations to assure navigability, communications, pumping and emergency operations. In the case of an open fire, these vital systems must survive intense heat for a given period. Gases, fumes and heavy smoke must be reduced to a minimum to protect crew, passengers, and equipment.

Nexans has designed a full-range of cables to meet critical ship requirements demanded by shipowners, shipyards, and classification bodies.

- **Instrumentation (250 V):**

Collectively or individually screened twisted pairs for good transfer impedance and electromagnetic compatibility (EMC)

- **Control (250 V – 0.6/1 kV):**

armoured or unarmoured with black printed number on white insulation for easier, faster installation; greatly reduced volume. (Cross-section from 0.75 to 2.5 mm²)

- **Telephone (< 100 V):** compact and light-weight 0.35 mm² according to CEI 60092-374 cables for important space gains

- **Data:** Category 5E or 6 twisted, multipair copper cables for multi-gigabit data speeds with maximum reliability (shipboard LANs)

- **Coaxial:** a precision shielded cable with strictly defined norms for marine conditions

- **Power (0.6/1 kV):** armoured or unarmoured wide-diameter, low-weight cables especially for a large, sector-shaped cross-section (3 cores 70, 95, 120 mm²)

- **High Voltage (1.8/3 kV – 3.6/6 kV – 6/10 kV – 8.7/15 kV):** a full-range, complete with HV terminations



keeps ships sailing right on course



TX (I) – 60 V-250 V



Coaxial



TCX (C) – 60 V-250 V



MPRXCX 250 V-0.6/1 kV




IEC 60332-3



IEC 60331



IEC 61034 Low smoke

 Nexans MPRX-F

Safety aboard with



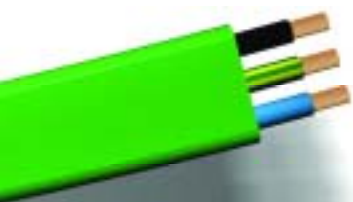
MPRXCX - 0.6/1 kV



MPRX - 0.6/1 kV



MPRXCX H. V.
3.6/6 kV - 6/10 kV - 8.7/15 kV



Nexans cables ensure top fire-performance:

- reduced smoke, low or no halogen, and minimum toxicity
- enhanced fire-retardant and/or fire-resistant characteristics
- essential energy and data keep flowing in emergencies
- enhanced protection for crew, passengers, equipment and ship structure

Seafaring service

Nexans knows the marine environment well, and has been a supplier to major shipbuilders for many decades. Our service commitment begins at the planning stage, finding you the right cable for the right purpose. We are masters of shipyard project management, based on our experience in our plants in Mönchengladbach (Germany), Lyon (France) and supported by our Shanghai and Korean logistics centers. Moreover, we can guarantee delivery to the seven seas, and provide pre-cut cable ready to be installed onboard, including terminations, and with customer markings, boat name, and reference numbers



Safety on the high-seas with



Whether for tugboats, merchant ships and ferries, or large cruise liners, tankers and container carriers, Nexans provides a comprehensive range of onboard instrumentation, control, telecom, coaxial and power cables (both low and high-voltage). Our range is not only known for its safety and security, but also for its reduced weight and volume for important savings. For enhanced naval safety we have developed advanced fire-performance cables to fully protect crew, passengers and equipment. And to assist installation and maintenance, we have adapted our own plant production to meet your shipyard needs, in terms of deadlines, delivery and custom-tailored and pre-conditioned products.

Ultimate tests and standards

Because passenger, crew, cargo and ship are at stake, Nexans marine cables are subjected to rigorous testing. Even under scorching conditions, they continue to function, while smoke and destructive halogen gas emissions are vastly reduced. Nexans cables not only meet fire-resistant requirements of IEC standards, they also provide for environmental and human safety. And they are approved by numerous world certification bodies: ABS, BV, CCS, DNV, GL, LRS, RINA.

Cables for marine conditions

- a complete range of marine cables provided by a single supplier
- reliability in rigorous conditions: heat, cold, humidity, oil, vibration, salt corrosion, etc...
- a global presence and fast delivery wherever you are located
- reduced weight and volume through advanced XLPE cable design
- manufacturing flexibility and custom-tailored solutions
- meet strict IEC standards, including 60093-350 and the following: 60332-3 Cat A or C, 60331, 61034 and 60754-1/60754-2, tests
- proven fire-performance capability in emergency situations

Nexans MPRX-F



The future runs through Nexans



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