Total Submarine Cabling Solutions
Nexans Norway
- Submarine Fibre Solutions

Nexans Norway’s optical-fibre submarine cables are designed for both unrepeatered and repeatered systems and have almost unlimited capacity over long distances. Nexans Norway has a solid technology base, gained from completing more than two hundred projects worldwide and has provided more than 25,000 km cable in total.

Nexans Norway cables are used for several applications: linking islands, countries, continents, between platforms, FPSOs and across and along fjords and rivers. For every application we provide tailor-made, cost-effective solutions to meet customer and market demands. Our customers encompass telecom providers, oil and gas companies, and the Public sector.

The basis of our successful design is the fibre in a steel tube technology. It is unique in the industry and there are three main advantages: provides a more robust cables system, an extended design lifetime and simplifies sealing and termination.

Our unrepeatered and repeatered cable families, URC-1, ROC-1 and ROC-2 contain a wide range of mechanical design options for various water depths and operational conditions.

Nexans Norway holds the world record for the number of fibres installed in one single submarine cable – 768

Quality, Environment, Health and Safety Management System

Nexans Norway has a continuous focus on application-oriented Research and Development in the form of theoretical studies, test manufacturing, laboratory testing and full scale testing. New and innovative cable designs demand new termination methods and Nexans Norway has made advancements within the range of accessories.

Our customers’ challenges and our participation in large complex projects often demands innovative solutions from our R&D team. In addition, our internal goal of maintaining our position as a manufacturer of reliable, robust, and innovative cables motivates our quest for improved designs, materials, and manufacturing processes.

Through Nexans Norway’s Quality Management System, we strive to achieve and maintain our quality standards by concentrating on verification and qualification testing, as well as testing according to recognised international standards. Our standard internal testing includes mechanical, electrical, and optical testing and upon request we provide additional third party testing. Our written quality standards cover all aspects of our activities from raw materials, process controls and finished product to final documentation. Nexans Norway is ISO 9001, 18001 and 14001 compliant.

Nexans Norway’s focus on health and safety management meets the most demanding external requirements by the oil and gas operators. All materials are carefully selected with respect to environmental impacts during manufacturing, handling and after service.
The URC-1 family of optical-fibre submarine cables have been in production since 1995 and has a history of no failures in design, materials and workmanship. It is designed specifically for communication distances up to 500 km.

The URC-1 design
- Laser welded steel tube comes in 3 different diameters to hold different fibre counts. Single tube designs offer a maximum of 96 fibres, whereas multi tube design allows for 384 fibres.

- The steel tubes can be equipped with a 7 ohm/km copper layer/conductor for fault location and electroding
- The cable core has a diameter of 10 mm for all single tube cable alternatives
- There are 13 different armouring designs in order to satisfy the magnitude of different deployment conditions
- Outer serving is either polyethylene (PE) sheath or polypropylene (PP) yarn

The Nexans proprietary URC-1 Joint Box is intended to provide optical and mechanical continuity between cable sections and serve as repair joint for maintenance. All fibre counts are covered for and can be jointed within 24 hours. In addition, all cables are Universal Quick Joint (UQJ) qualified up to 48 fibres (maximum fibre numbers for UQJ).

Nexans Norway URC-1 cable is the cable that is tying in the most oil and gas platforms in the world
Repeatered Optical Cable – 1

Repeatered Optical Cable No. 1 (ROC-1) is the Nexans cable for systems with lengths between 500 km and up to 3 000 km.

Cable design:
- Laser welded steel tube which can hold a maximum of 16 fibres
- Copper wire for power and signal feeding. 1,4 ohm/km
- Polyethylene inner sheath covering the steel tube
- Armouring from light weight, single armoured to double armoured for mechanical protection
- Outer serving is either polyethylene (PE) sheath or polypropylene (PP) yarn to optimise crush and impact properties

Suriname Guyana Submarine Cable System - SGSCS

Repeatered Optical Cable – 2

The ROC-2 is designed to go to lengths beyond 10 000 km and at depths down to 8 000 m.

Cable design:
- Laser welded steel tube which can hold a maximum of 16 fibres
- Steel wire in vault design between steel tube and copper tube for power and signal feeding. 1 ohm/km
- Polyethylene acting as isolator on top of copper tube
- Armouring from light weight protected, light weight armoured, single armoured to double armoured for mechanical protection
- Outer serving is either polyethylene (PE) sheath or polypropylene (PP) yarn to optimise crush and impact properties

Both ROC-1 and ROC-2 are Universal Joint (UJ) qualified
Accessories and services – tying your systems together

Nexans Norway is continuously developing new products and techniques which complement the operation and installation of our cables both onshore and offshore. Areas of use: Platform topside, seabed, protection and onshore including beach manhole.
About Nexans – global expert in cables and cabling systems

Since its foundation in 1915, Nexans Norway has been the main supplier of underground and submarine cables in Norway. Nexans Norway produces and installs power cables and advanced umbilicals for the transmission of power, signals and fluids for the management and control of production wells on the seabed. Our product range also covers special purpose cables for direct heating of flowlines, seismic surveys and for the control of remotely operating vehicles. Nexans Norway is part of the Nexans group, one of the world’s leading cable manufacturers with an industrial presence in 32 countries and commercial activities worldwide Nexans is listed on the Paris stock exchange.

Rognan – the manufacturing site

The manufacturing site of our customised submarine optical-fibre cables is in Rognan, on the coast of northern Norway. This modern plant has an almost 40 year long history of building specialised telecom cables.

The plant has highly skilled personnel and it has access to clean water, stable power supply.

The infrastructure encompasses rail, roads and the deepwater quay, Rognan International Harbour.

Certificates

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