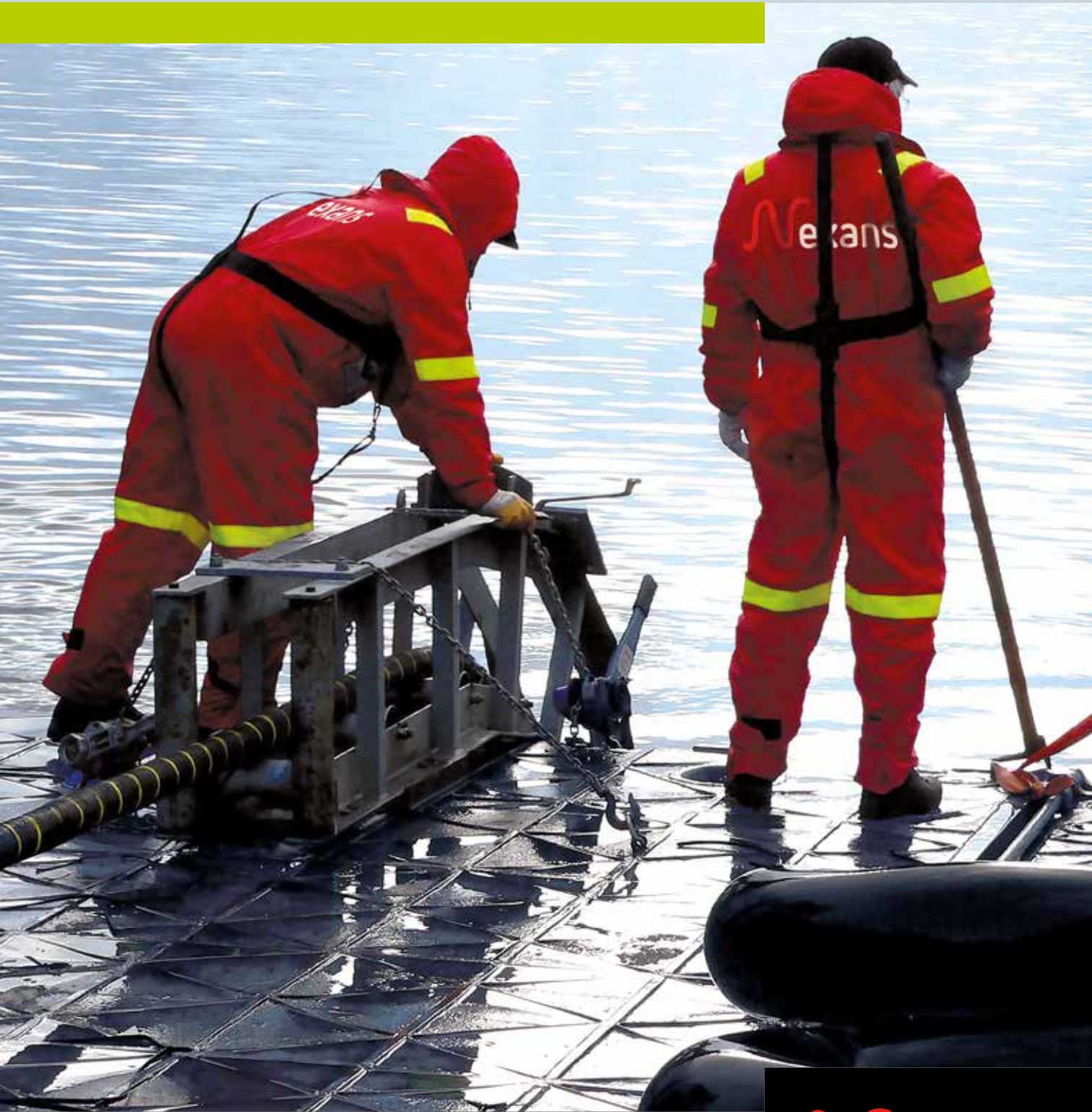


PRODUCT RANGE





INNOVATIVE CABLES AND CABLE SOLUTIONS FOR YOUR APPLICATION

HIGH VOLTAGE & UNDERWATER CABLE

UTILITIES

As a globally active company in the cable industry, Nexans puts energy at the center of its business and offers a comprehensive range of cables and cable system solutions.

By offering innovative, high-quality products, we are creating added value for our business customers and end users in the private sector through increased productivity, greater security, more stable networks and improved quality of life. Our focus is on the sectors energy infrastructure, industry, construction and local data networks. In addition, we are developing solutions for energy, transmission and telecommunications networks, petrochemistry, the automotive industry, railway applications, ships, aeroplane construction, the electronics industry and the fields of handling and automation.

True to our focus on market areas, our German and European customers receive the full range of cable solutions from Nexans, such as high-capacity cables, systems and components for the telecommunications and energy sectors. They also benefit from superconducting materials and components, liquid gas transfer systems and special machines for the cable industry. Thanks to its close integration with the Nexans Group, Nexans Deutschland utilises synergies in all areas of the Group. This applies to global projects as much as it does to R&D and the exchange of expertise.

You engineer:

- High and extra high voltage transmission networks with underground cables or overhead lines
- Energy cable systems in urban areas and industry
- High Voltage links for onshore wind farms
- Offshore wind farms and require medium-voltage submarine cables to link them to windmills or export submarine cables for grid connection to land
- Or operate power utilities and smart grids, railway technology as well as switchgear and transformer manufacturing requiring connection technology and cable accessories

Your business is in:

- Energy supply networks
- Connection and integration of wind capacity onshore
- Internal windfarm infrastructure for onshore applications

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ENERGY NETWORKS

Medium voltage cables

Underground power cables for distribution with aluminium or copper conductor and XLPE or EPR insulation, screen and on request longitudinal watertight screen with fibre optics and polymer laminated aluminium foil. PE, PVC or halogen free flame retardant sheath, **directly layable in ground.**

Special cables

Submarine medium voltage cables for offshore wind farms, river- or lake crossings and island connections

Pipe Type cables, XLPE insulated, substituting paper insulated pipe cables

Temporary Site Cables for use in high voltage substations and networks

Mining and shaft cables Halogen-free fire retardant cables Armoured cables

Special cables to national or international standards and customer specifications

Medium Voltage cable with integrated FO-cable in screen area for cable monitoring

Electro filter cables ELCUFILT 111 kV

Hybrid cables

Medium voltage cables open triplex with integrated HDPE tubes for after laying fiber optic cable distribution.

High voltage cables

Extra High Voltage AC cable systems for tunnel or partial undergrounding solutions

Long distance HVDC cable systems for energy highways

High Voltage cables for On- or Offshore wind-farms or regional reinforcements of transmission and distribution networks

Integration of fiber optics for temperature monitoring

Low flammability High Voltage Cables

Overhead lines for high voltage and extra high voltage

High performance overhead lines with steel or carbon core for highest current carrying capacity

Surface treatments to reduce losses, corrosion, visibility and noise

Accessories

Terminations, joints and grounding equipment for high voltage cable systems

Design, laying, installation and testing of cable systems as well as supervision

Complete cable systems for offshore and onshore wind farms

System solutions and services for distribution and transmission networks

LOSAG®



NEXANS POWER ACCESSORIES

Mechanical connectors with shear-off-head bolts and cable lugs

for low and medium voltage

- for Copper and Aluminium conductors of all types and cross-sections from 1,5 mm² up to 1200 mm²
- tested acc. to IEC 61 238-1 class A

for high voltage

- dedicated to conductor cross-sections up to 2500 mm²
- tested acc. to IEC 61 238-1

Compression joints and cable lugs

Connection and branch terminals

Overhead line terminals

- Copper and Aluminium
- acc. to DIN for conductor cross-sections up to 1000 mm²

Clamps

- Universal overhead line clamps
- Dead-end clamps
- ISO Tap-off clamps
- Parallel groove clamps for tap-off connection

Low voltage cable accessories

- Connection joints acc. to DIN V-47640

Medium voltage accessories

- in cold-shrink, heat-shrink and slip-on technology
- materials: silicone/EPDM/polyolefin
- up to 1200 mm²
- up to 42 kV
- separable connectors for interface A to F 250 - 2500 A

High voltage accessories

- materials: silicone/EPDM
- up to 2500 mm²
- up to 400 kV

Equipment bushings

- for interface A to F

Ready-made medium-voltage cables and lines with a test certificate

Services

- Customized solutions
- Assembly tools
- Training courses and seminars

GPH® · EUROMOLD®



CRYOGENIC & SUPERCONDUCTING SYSTEMS

Vacuum insulated flexible CRYOFLEX Transfer-Systems for static applications and cryogenic temperatures from minus 160 up to minus 269 °C

- Standard pipes for liquid nitrogen and oxygen
- Permissible pressure 20 bar
- The inner and outer tubes ensure bendability of the Cryoflex transfer system. Modifications of the line system can basically be implemented.
- Both, the vacuum insulation, as well as the multiple super insulation, by means of two-sided vapoured PET sheeting, guarantees a low heat invasion for the pipes
- The vacuum integrity is guaranteed for 2 years as a result of the high degree of cleanliness observed during production and from the use of specially selected getter material inside the vacuum space
- The terminations include: burst disc, pumping port, spinning rotor gauge measurement port to allow ideal functionality and safety at its best
- Standard pipes for LNG Design and production of special transfer systems according to customer requirements for all cryogenic gases
- Johnston couplings, Tconnections, safety relief valves and shut-off valves complete the product offering
- Cryostats for superconducting cable
- Plug and Play system. No welding and pumping of vacuum is necessary on site. The systems are ready configured, leakage tested and vacuum insulated, which allows for cost-efficient set-up time at place of action

Vacuum insulated highflex Transfer-Systems for dynamic applications and cryogenic temperatures from minus 160 up to minus 269 °C

- Same scope of delivery like CRYOFLEX transfer systems
- Standard types 08/25 bis 65/125
- Permissible pressure 40 bar
- Dependent on the type the lengths are limited
- Little minimal bending radius for easier installation of the pipe

Superconducting Cable Systems (HTS)

- for AC and DC applications
- for Medium and High Voltage applications
- for High Current systems

Superconducting Fault Current Limiters

- for Medium Voltage applications

Superconducting Systems

- Combination of superconducting cable and fault current limiter for medium voltage, e.g. to save space in dense urban areas

CRYOFLEX®



CABLING SOLUTIONS

LAN solutions/LAN systems LAN components and cable

LANmark – Copper cables and systems

Symmetrical, plastic insulated data cables
Single and multiple screens according to ISO/
IEC 11801: A1 2011 and IEEE 802.3an
10GBaseT

Cat 5, 6, 6A, 7 and 7A
Horizontal cables
Patch cords

LANmark-OF – Fibre optic cables and systems

Outdoor cables with single mode or graded
index fibres
Indoor cables with single mode or graded
index fibres
Pigtails
Patch cords
OM3, OM4

LANmark Connectivity

Modular outlets
Modular patch panels
Snap-in-connectors for modular
outlets and patch panels
for Cat. 5, 6, 6A, 7 and 7A (GG45)
and LC, SC and MPO
according to
ISO/IEC 11801: 2011

Modular outlets for fibre optic system
Patch panels for fibre optic systems
Fibre optic couplers for SC, SC-Duplex,
LC, and MPO-cassettes
MPO F/O cabling system
Quick Mount cabinet

LANsense – Intelligent Infrastructure Management System

Data cables

Cu-Data cables
Cat. 5, Cat. 6, Cat. 6A, Cat. 7 und Cat. 7A



NEXANS ADVANCED NETWORKING SOLUTIONS

LANactive – FIBRE TO THE OFFICE NETWORKS FOR OFFICE ENVIRONMENTS

High-performance voice-/data networks (LAN
networks) for the inhouse area based on a
future-proof fiber optic infrastructure (FTTO –
Fibre To The Office). Solution is particularly rele-
vant to large scale infrastructures of Universities,
Hospitals, Airports, Banks & Insurances, Public
Administration, Police & Defense.

Products:

GigaSwitch, GigaSwitch Desk, GigaSwitch
Medical Click-In Power Supplies, Mounting Kits,
FO Infrastructure Components (Cable, Panels,
Coupler, Patchcords etc.)

Features:

Reduction of infrastructure and service costs,
building a redundant network infrastructure,
FTTO-Switches for cable ducts or floor boxes,
international 45 mm form factor / no tools
needed for installation, EEE – Energy Efficient
Ethernet and standby function, Connection of up
to four users (Gigabit Ethernet, Fast Ethernet or
Ethernet), SFP or fibre optic interfaces, extensive
security features and IPv6 ready, Power over
Ethernet (PoE+) and redundancy.

SWITCH SYSTEMS FOR HARSH ENVIRONMENTS

Networking of substations, control of wind
turbines or pumped storage hydro power
stations, security applications (e.g. access
control, video surveillance etc.) as well as traffic
telematics and industrial automation

Products:

iGigaSwitch 1604/1608/160C, iSwitch
G1042/G1043, iGigaSwitch 542

Features:

Extended operating temperature range (-40 °C
... +85 °C), IEC 61850 compliance and KE-
MA-tested, IEC 61850 server, Web, SNMP and
Telnet management, SFP or fibre optic interfaces,
Monitoring of optical fibers, Redundancy (RSTP,
MSTP, MRP or HSR), Memory card for storage
of configuration, Security functions, Multiple
redundant power supply, Power over Ethernet
Plus (PD and PSE), DIN rail mounting



TELECOM NETWORKS

Copper cables

Symmetric plastic- and paper insulated telecom
cables
Coaxial cables
Differential protection cables
Signalling and control cables
Balise cables
Installation cables
Patch cords
Railway track cables
Universal cables

Fiber optic cables

In- and outdoor cables with single
mode or multi mode fibres
Self-supporting aerial cables
Preconnectorized cords
Fiber optic and copper hybrid cables
Sea and lake cables

Cable accessories

Fibre optic splice cassettes and modules with
individual fiber management
Fibre optic splice closures
Fibre optic termination cabinets

Network engineering and services

Turnkey delivery, planning, systems enginee-
ring, installation, commissioning, training and
maintenance world wide for:

Telecommunication cabling for the long distance
and access networks in copper and fiber optic
technology

Telecommunication trunk cabling for railways,
highways, waterways, power utilities, pipeline
enterprises and mining industry

DUOTRACK® – The all-in-one system solution for
the trunk cabling of regional railway lines

RHEYRAL® – Cable with anti-theft construction



MACHINES & AUTOMATION

Machines

Customized Forming and Welding Lines and components for tube manufacturing, smooth and corrugated metal cable sheathing, glass fiber in stainless steel tubes with newest LASER and TIG technology for continuous longitudinal and cross welding.

- Low Volume Manufacturing FIMT
- Tests and Prototype
- Installation, Commissioning and Training
- Inspection, Maintenance, Repair and Upgrades

NanoWEMA®

Compact Laser manufacturing line for very thin SST tubes e.g. pre product for cannulas and electronic parts
WT 0.06 to 0.15 mm / OD 2 to 4 mm

MicroWEMA®

Modular Laser and TIG manufacturing line with integrated process monitoring e.g. SST, Cu, Al for FIMT, HF cable sheathing, special cable
WT 0.1 to 0.3 mm / OD 2 to 25 mm

DeciWEMA®

Standard Laser and TIG manufacturing lines for cable sheathing, tubes and tape processing
WT 0.3 to 1.0 mm / OD 20 to 60 mm

UNIWEMA®

Laser and TIG production line for tubes or metallic sheathing of cables e.g. Al, Cu for HV cable sheathing, corrugated SST tubes
WT 0.5 to 3.0 mm / OD 60 to 650 mm

UNICross 170 L/T®

Mobile and semi-automatic LASER/TIG cross welding machine for process reliable connection of Al, Cu or SST strips WT 0.06 to 0.4 mm

Digitalisation / Industry 4.0

UNltherm®

Thermo scanner for online control of welding seam quality

UNlsupport®

The fastest technical process support via digital service

UNlconnect®

Optimisation of data management and transfer via digital interface (server)

UNlvision®

Visual management and interaction between man and machine

Components

Forming tools, Strip Pay-off, Fiber Pay-off, Strip Preparation, Jelly Filling Unit, Clamp Capstan, Belt Capstan, Drawing unit, Disc Capstan, Take-up and Accessories, Spare parts

NANOWEMA® · MICROWEMA®
DECIWEMA® · UNIWEMA® · UNITHERM®
UNICROSS 170 L/T® · UNIVISION®
UNISUPPORT® · UNICONNECT®



INDUSTRY CABLES

Shipboard cables

Communication and control cables, BUS cables, (Power cables, medium voltage cables)

Aerospace cables

Airbus, Airbus Helicopter, Boeing, Rolls Royce, Tornado, Eurofighter, ESA, according to EN, NSA, ABS, BS, BMS, RMS, ESW&RTS, MIL, VG95218, FX

Military cables

Navy installation cables (RHEYHALON®), navy coaxial cables, special harnesses, cables for military vehicles

Cables for renewable energies

Cables for wind turbines and photovoltaic applications

Power plant cables

Comprehensive range of cables, accessories and solutions for a reliable electrical power supply, control of the processes and transmission of interference-free analogue/digital instrumentation signals in nuclear, fossil (coal, oil, gas) and renewable power plants as ground-based photovoltaic, concentrated solar-, hydroelectric-, geothermal, biomass power plants and onshore wind farms.

Medical cables

Invasive cables (catheter/pacemakers), micro-cables/microcoaxcables, endoscopic cables for CCD- and CMOS-cameraapplications, cables for ultrasonic applications, general medical cablerange

Special cables

Special cables for medical applications, oil & gas, nuclear power plants and others

Sensor cables

Applications: Measurement of pressure, vibration, flow, load, fill level, distance, temperature, etc.

Handling cables

Complete range of material handling cables

Mining cables

Complete range of mining cables

SHIPLINK® · WINDLINK®
KEYLIOS® · RHEYHALON® · ENERGEN®
POWERMINE®



INDUSTRY AUTOMATION

MOTIONLINE® BASIC, MOTIONLINE® ADVANCED, MOTIONLINE® PREMIUM

MOTIONLINE® facilitates the classification of cables for industrial automation in terms of required drag chain capability. Robot cables, Chain cables, Servo Motor cables, encoder cables BUS/Ethernet cables (Profibus, PROFINET, AS-Interface, CAN BUS, Industrial Ethernet, hybrid BUS), Sensor cables, control cables

Rolling Stock Cables

Power and control cables in accordance with international standards (EN, NFF, BS, DIN, UIC, NFPA, RDSO...), Control cables (EN 50306) – shielded/unshielded, single and multi-wire; with insulation maintenance EN 50200 and power cables 1 kV-45 kV (EN 50264), cables also compliant with EN 45545 highly-flexible cables (jumper cables / system cables), coax & data bus cables Ethernet, MVB, WTB, CAN, UIC High-temperature cables (EN 50382), Ready-made cables

High temperature applications

(PTFE, FEP, ETFE, fluoropolymers)
Control cables, wire wrap,
Solid hook-up wires, stranded hook-up wires,
Diesel engine cables (for ships)

FLAMEX® · MOTIONLINE®



METALLURGIE

NEXANS AUTOELECTRIC

Mobile Communication

High frequency
(PE, Foam-PE, Teflon, ELCURIGID)
RET BUS cables, AISG

Heating cables

Resistance heating cables, parallel heating cables and self limited heating cables

ALSECURE® RHEYHALON®

Security cables with fire integrity
JE-H(ST) H E30, JE-H(ST)H E30 - E90
(regarding to the lying)

Security cables

Installation cables without circuit integrity
N2XH E0, N2XCH E0
Installation cables with circuit integrity
N2XH E30/E60/E90,
N2XCH E30/E60/E90

Cordsets

Single core cables (harmonised PVC types, halogen free types), multi core types
(UL/CSA-types halogen free PVC types)

Compounding

HFFR-compounding, PVC-compound

Customized special cables Motion Application Centre

Copper wire rod

Produced by the "Dip-Forming" process
Quality Cu-OF1 acc. EN 1977
Cu-OFE acc. ASTM B 49
Diameter: 8,0 mm, 9,5 mm und 12,5 mm
Oxygen content: ≤ 10 ppm

TWN	= Standard quality
TWF	= Fine wire quality
TWD	= Optimized for cold forming processes
TWH	= Improved hydrogen resistance; Cu-OFE acc. EN 1977
TWS	= Silver alloyed quality; 0,03 % - 0,1 % Ag

Round copper wires

Bare	hard:	0.05 mm to 7.0 mm
	soft:	0.10 mm to 4.5 mm
Tin plated	pre-drawn:	1.30 mm to 2.70 mm
	drawn:	0.30 mm to 0.80 mm
Silver plated:	pre-drawn:	1.30 mm to 2.30 mm
	drawn:	0.10 mm to 1.80 mm

Copper multi-wires and strands

Bare, tin-, nickel- and silver plated copper conductors, bunched, concentric unilay or rope lay construction with a single wire diameter between 0.05 mm and 0.70 mm up to a cross section of 35 mm²

Bare, tin-, nickel- and silver plated Multi-wire, dimension 0.05 mm to 0.70 mm and 0.05 mm to 0.20 mm

Special products

CCS, CCA, cadmium free alloys and Bimetallic wires made of several copper alloys

Engineering/service

- Innovative product und process engineering
- product design and documentation using standardized and customer specific systems,
- virtual and real testing,
- rapid prototyping,
- project management, etc.

Vehicle electrical systems

- Engine harnesses for cars and commercial vehicles, from 4 to 12-cylinder engines,
- main harnesses,
- wire harnesses used for special applications,
- low-voltage and high-voltage cabling for hybrid electric vehicles,
- inherently stable cabling for demanding installation situations, etc.

Components for active and passive safety systems

- Connectors and mechanical/electronic components for cars and commercial vehicles that withstand extreme stress (e.g. for ABS systems, temperature sensors, electrical parking brake),
- clock springs for the precise transmission of signals for the airbag and various functions of steering wheels.

Mounting and system parts, micro-switch applications

- Mounting and system parts for the entire chassis and engine area (e. g. plastic components, rubber components, integrated concepts, stamping and bent components),
- micro-switch applications for position identification.



INDUSTRY

You are an industrial manufacturer in the following areas:

- Ship construction and marine
- Aerospace
- Renewable energies
- Medical technology
- Industrial automation
- Automotive
- Railway vehicles

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INFRASTRUCTURE & INDUSTRIAL PROJECTS

You plan major industrial projects with different products at different locations that require seamless process, for example:

- Onshore/offshore (wind, oil and gas)
- Petrochemistry
- Power plants (bio, water, solar, wind, coal, nuclear)
- Mining/tunneling
- Handling
- Building and underground construction
- Railway networks
- Airports involving a range of different products at various locations, which require seamless coordination

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DISTRIBUTORS & INSTALLERS

You are:

- Wholesalers specialising in reselling cables and electrical equipment
- Electrical fitters (also for IT cable systems and building management)

CONTACT

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 Phone +49 511 676 2771
 Fax +49 511 676 2778
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CABLING & ADVANCED NETWORKING SOLUTIONS

You are:

- Planner of LAN networks
- Installer of network technology
- Wholesaler of data connectors, data cables and system solutions
- System integrator for LAN networks

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AUTOMATION · AUTOMOTIVE · BUILDING · ENERGY NETWORKS
HANDLING · OIL & GAS · RAILWAYS · RENEWABLE ENERGY
ROLLING STOCK · SHIPBUILDING & NAVY · TELECOM NETWORKS