Renewables



Prysmian Group

Linking the Future

CONNECTING THE WORLD. TODAY AND IN THE FUTURE





We specialise in underground and submarine cables and systems for power transmission and distribution, special cables for applications in many different industries, and medium and low voltage cables for the construction and infrastructure sectors.



systems.

For the telecommunications industry, the Group is the world's largest provider of cutting-edge cables and accessories for voice, video and data transmission, offering a comprehensive range of optical fibres, optical and copper cables and connectivity



We are committed to environmental responsibility in our production processes, the protection of the global environment, and the responsible management of relations with the local communities in which we work.



For us, innovation means meeting the needs of our customers and communities by understanding their business drivers as quickly as they do. To do that, our team of over 900 Research & Development professionals is constantly looking to the future, predicting and identifying emerging trends in each of our industries and sectors. Acting on this intelligence from 25 R&D centres around the world, we're constantly close to our customers in their own local markets.

Wind Farms

To meet an ever-growing need for power, the world is increasingly turning to renewable and sustainably sourced energy.

In response to this demand, Prysmian's cables are helping wind turbine manufacturers around the globe to harness the true po-tential of this natural power source.

Always aware of our responsibility to the planet, we're constantly aiming to help renewable industry partners by delivering cables that benefit the future of both our world and their businesses. And so, reflecting this commitment to sustainability, we offer premium quality products for wind turbines, proven in the field with long-lasting and trouble-free attributes.

Our certified quality management with a worldwide focus ensures that product quality is always at the highest level, from the procurement and production processes, right through to the delivery process. With a focus on sustainable and environmentally friendly production processes, the Prysmian Group ensures that the funda-mental principles of sustainable energy concepts are also implemented in its own company.

Wind Products

Offerings Up to 33kV with excellent water tree resistant XLPE insulation to guarantee a longer life time. Medium UV & water protection mechanical robust HDPE sheath. Optional water block performance Voltage and Termitex Single Core Flexible: X-90 XLPE insulated and PVC sheathed cable to AS/NZS 5000.1. Both materials are customized with extra flexibility. Low Voltage PVC Insulated and 5V-90 PVC Sheathed. These standard cables are manufactured in accordance with AS/NZS 5000.1. Control: Multicore copper with earth, V-90 PVC insulated and 5V-90 sheather. According to Control and AS/NZS 5000.1 Instrumentation: INFORM@X® Rated 110V, stranded copper conductor with PVC insulation Instrumentation and sheath, Pairs and triples with individual screen and collective screen are available. Prysmian offers a comprehensive optical fibre cable solution of both active and passive components for the renewable industry. Combining state-of the-art glass technology, with advanced coating and buffer technology in an industrialized manner and paving the way Optical Fibre towards unprecedented performances and new applications: High-Temperature coatings, Radiation hardened optical fibre, and tight geometry optical fibres.

Prysmian Termitex®

Prysmian's Termitex® is a revolutionary cable protection solution, that provides resistance to any termite attack. It is the result of years of research conducted in Prysmian laboratories, in collaborations with organisations such as CSIRO.

This solution utilises additives, which are incorporated into the HDPE sheath of a cable. As well as providing at least 30 years of protection against termites, it also offers a number of benefits over traditional methods of termite protection, including: ease of handling and installation, cost effectiveness and compliance to health, safety and environment regulations. Resulting in reduction of the Total Cost of Ownership.

Through including the additives to the HDPE sheath, it means that the original cable design, does not necessarily need additional layers. This results in a smaller cable dia-meter than that of the traditional methods.

This smaller diameter results in cost savings in labour and materials, due to:

- Smaller bending radius
- The cable being lighter and easier to handle/ install shorter installation time
- Longer lengths possible on drum, so there may be less joints and joint pits required – shorter installation time and less manpower
- Reduction in Civil Costs

Offshore Wind farms

The global expertise Prysmian offers allows for research efforts to focus on a number of objectives relating to offshore wind farms including:

- cables that can be installed at ever greater depths and in any marine environment, even reaching a depth of 3,000 metres; ever longer interconnections, to link countries that are far apart;
- cables for the wind farms furthest from land (e.g. floating wind farms), located in the most windswept areas;
- increase the intrinsic reliability of cables, limiting their dispersion, and equipping them with sensors capable of monitoring the system;
- increase cable productivity, contributing to a significant reduction in system installation costs. In particular, more productive and reliable cables help to optimise installation costs (fewer trenches)

Solutions for the Solar Industry

Always aware of our responsibility to the planet, we're constantly driving innovation in our industry, aiming to help renewable industry partners deliver projects with benefits for the future of both our world and their businesses. And so, reflecting this commitment to both innovation and sustainability, we offer a full range of quality solar and photovoltaic products, renowned in the field for their easy installation, reliability and longevity attributes and complying with all major international standards.

Our customers

Our technologies are hard at work across the renewables sector, supporting the operations of contractors, developers, grid oper-ators, PV panel makers, PV power generation system integrators and even entire solar parks. In recent years, Prysmian Group has supplied components and services to worldwide solar installations

tight geometry optical fibres.

from residential installation to large scale utility projects. The total equipment supplied exceeds a generation capacity of 40 GW.

DOMESTIC APPLICATION SOLAR CABLES

Our Solar Cables comply with the H1Z2Z2-K standard. These low smoke zero halogen cables can withstand temperatures from -40°C to +120°C. Tough enough for the harshest environments in Australia, they are also resistant to ozone, UV-light, acids, alkalis and abrasions.

Despite being tough, these solar panel cables are easy to install due to easy stripping, extraordinary flexibility and a smaller outer diameter. These have conductors that are made of electrolytic tinned copper class 5 in accordance with IEC 60228, for better durability and better conductivity over the life of the PV unit.

Solar Products

Optical Fibre

Cables

Offerings PV Cables designed for the interconnection of various elements in **PV Cables** photovoltaic systems, including panel interconnection, between panels **TECSUN** and string boxes or from string boxes to the inverter. They are suitable for **PRYSUN** applications indoor and/or outdoor, resistant to UV and harsh environments. longer life time, UV & water protection mechanical robust HDPE sheath. Option on Water block performance and Termitex Earths: copper conductor, PVC insulated 1.5kV DC SDI: Special design to withstand 1.5kV DC with GUARANTEED great cable design life. Low Voltage Multi-core Circular Cables: 2, 3 and 4 Core plus Earth Circular, Copper Conductor, V-90 PVC Insulated and 5V-90 PVC Sheathed. These standard cables are manufactured in accordance with AS/NZS 5000.1. Control: Multicore copper with earth, V-90 PVC insulated and 5V-90 sheather. According to AS/NZS 5000.1 Instrumentation: INFORM@X® Rated 110V, stranded copper conductor with PVC insulation and sheath, Pairs and triples with individual screen and collective screen are available. Prysmian offers a comprehensive optical fibre cable solution of both active and passive components for the renewable industry. Combining state-of the-art glass

technology, with advanced coating and buffer technology in an industrialized

manner and paving the way towards unprecedented performances and new

applications: High-Temperature coatings, Radiation hardened optical fibre, and



Other Solutions

Battery Storage

Battery Storage is an emerging market in the renewables space. An energy storing innovation; batteries offer an opportunity to store unused power. This technology has to potential to be stored when demand for power is low and distributed when demand is high. The flexible nature of the product has the potential to revolutionise the renewable industry creating more accessible power.

Prysmian offers a comprehensive range of flexible cable solutions with Class 5 conductors for fixed installations. With Flexible XLPE and Fire Performance cables, Prysmian has a full suite of cables for the Renewable Market.



Flexible Single Core

For mains, submain and sub circuits unenclosed, enclosed in conduit, buried or in underground ducts for building and industrial plants where not subject to mechanical damage. Suitable where space is at a premium and/or where conditions of over-load may occur. Green star accredited.

Products

90°C, flexible cable, with crosslinking Polyethylene insulation and PVC sheath with good UV resistance and flame retardant performance.

110°C, flexible cable, with customized enhanced thermal stability, crosslinking Polyethylene insulation and robust PVC sheath with good UV resistance and flame retardant performance.

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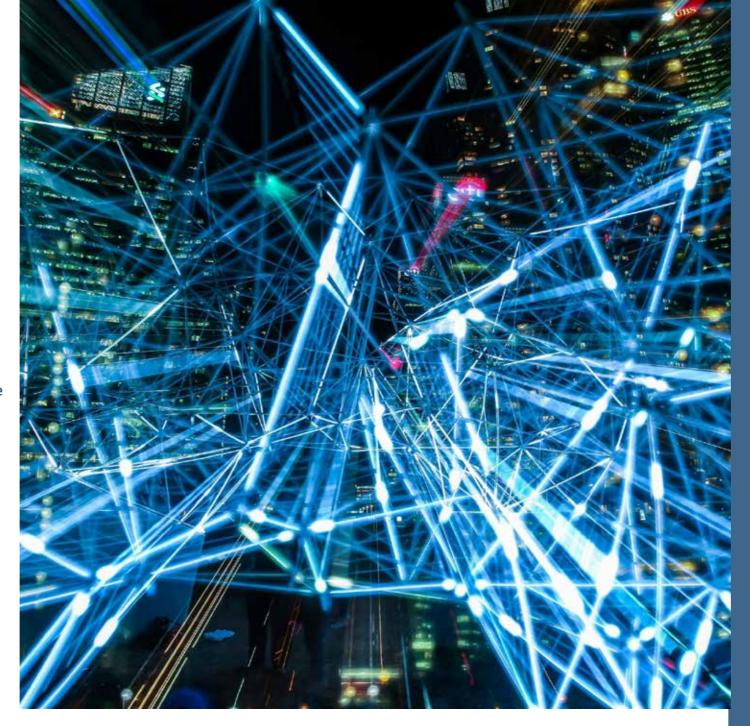
Network Components

Our Network Components keep your cable systems intact. To link the cable systems and provide communities with a continuous flow of power, you not only need reliable cables, you need dependable components to keep it all together, too. Built on decades of experience we develop state-of-the-art joints, terminations and connectors that'll give your MV network long-lived stability – and you peace of mind

Accessories play a vital role in a power system. Prysmian has gained expertise in the design, manufacture and testing of products across all voltages during many years of partnership with customers.

We can offer you a comprehensive range of accessories for glanding, jointing, connecting and terminating MV systems. The range includes joints (also transition, trifurcating and branch joints), terminations (both for indoor and outdoor use) and separable connectors.

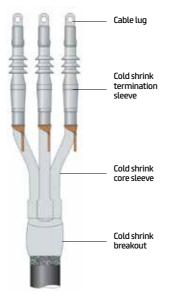
In addition we can provide you with engineering services capable of fulfilling any power system specifications or requirements and of delivering customised solutions.



TERMFIT™- COLD SHRINK TERMINATION

Plastic net tape and resin Ecospeed joint sleeve High permittivity tape Resin injection valve Connector Armoured Copper Mesh transparent adhesive PVC tape

ECOSPEED™-COLD SHRINK JOINT



SEPERABLE CONNECTORS ELBOW CONNECTOR



Asset Management

PRY-CAM grids for wind turbine application A revolution in monitoring, condition assessment and asset management of electrical systems. The worlds of monitoring, condition assessment and asset management of electrical systems are undergoing a revolution that can help prevent failures and interruptions, increasing uptime and safety, enhancing assets' longevity and significantly reducing maintenance costs and risks.

PRY-CAM PORTABLE is an integrated portable instrument for the automatic acquisition, processing and classification of pulse signals generated by PD phenomena occurring in insulating materials of Medium and High Voltage electrical systems and equipment, such as transformers, electrical machines, cables systems and switchgear.

For data-driven power





A Brand of Prysmian Group

EKIMETI - COLD SUKTINK LEKIMTINALION

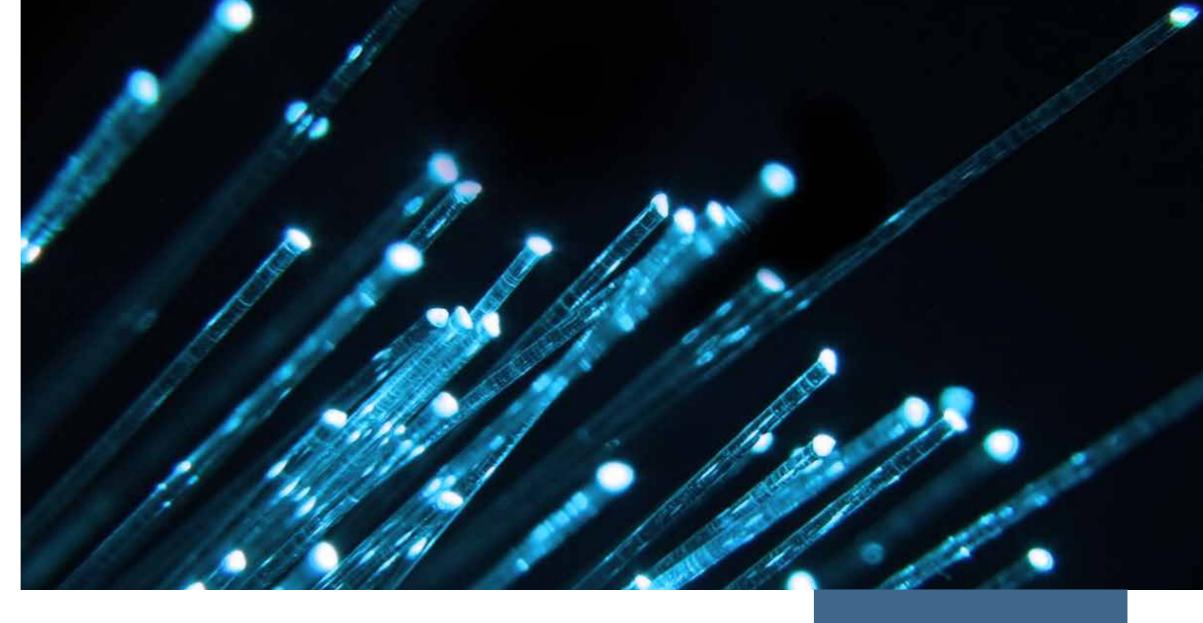
Fibre Optic Cables

Prysmian is dedicated to bringing its expertise and product innovation to the specialty fibre market segment, with a comprehensive product range offering solutions for the Renewable Industry for active and passive components. We're combining state-of the-art glass technology, with advanced coating and buffer technology in an industrialized manner and paving the way towards unprecedented performances and new applications: High-Temperature coatings, Radiation hardened optical fibre, tight geometry optical fibres, and many more.

Quality optical cables start at the fibre

Prysmian Group's Optical Fibre division has over 35-year history of service to the telecoms industry. With innovative products for the full range of applications, spanning longhaul, metropolitan, access, FTTx, and premises applications. Prysmian Group's modelling and design expertise, together with our proprietary technologies and production processes secured for premium and innovative optical fibres, is reflected in complementary sets of optical fibre product lines covering single-mode, multi-modes and specialty fibres.

For all these various fibre types, Prysmian Group brings a superior level of dedicated customer service, support and delivery options, while maintaining the best-in-class product quality.



QUALITY OPTICAL CABLES START AT THE FIBRE



Products LoR@t

Prysmian dielectric LoR@t fibre optic cables are a lightweight rodent resistant cable for use in areas occasionally exposed to rodents. LoR@t cables are lightweight, flexible and easy to handle. Australian made? Yes, of course. Prysmian designed this cable in Australia for Australian conditions. It provides a short-term level of resistance to smaller rodents but is not completely rodent proof.

Hse EXTRA@CORE

If you are after a product that can withstand any attack, look no further than Hse EXTRA@CORE. It's the toughest direct burial High Strength cable yet. The HSE EXTRA@CORE is qualified using enhanced Axial Compression Resistance (ACR) Test method. It's small light weight and available in lengths up to 10.5km.

LoR@t Features and Benefits

- Hard jacket for termite resistance
 provides resistance to short term exposure from small rodents
- Direct burial reduces the cost of installation
- Non-metallic design allows installation in areas of high electromagnetic interference field and removes the risk of susceptibility to lightning strike.
- Smaller Diameter reduces the space needed to install



Prysmian Draka **General Cable**

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