



NKT

Wind Power Solutions

NKT cables and cable accessories for
onshore wind parks

nkt.com



Hiko
Power Engineering

Our solutions for onshore wind parks

NKT offers LV, MV, and HV cables as well as cable accessories for grid connections and internal network between turbines. Wind-farms have specific requirements on the cable accessories because of harmonics and transients. To cope with this, cable accessories need to have an integrated electrical field control. NKT offers joints, connectors and terminations with this feature.

Medium Voltage Cables

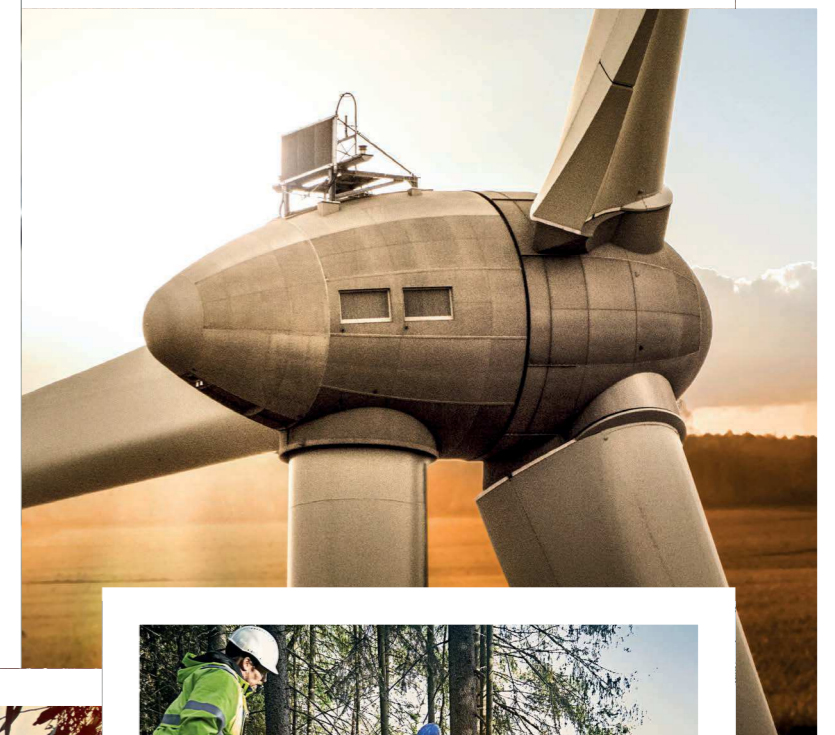
Our medium voltage category includes both ground cables as well as universal cables which can be used in ground, air and water. All products are adapted to be able to interact and deliver the greatest possible value for the network owner.

Cable Accessories

Within our cable accessories portfolio, we offer all applications up to 550 kV, optionally also as a modular component system. Our solutions include various technical versions of accessory systems such as cable joints and connector technology, dry-type technology and conventional technology with oil insulation.

Cable Service

We offer all services related to cables from a single source – also after completion of your cable project. From our repair preparedness to cable jointing and termination – with NKT you get all this from a single source.



Our solutions for onshore wind parks

As a premium supplier of power cables and cable accessories, we are committed to ensuring that our products meet the highest industry standards, also under challenging circumstances. Cables and cables accessories which connect wind turbines to the grid are exposed to voltages with high and fluctuating frequencies. This in turn can lead to dielectric losses, high local temperatures and ultimately to a breakdown. To avoid this we use a method called geometric field control in our cable accessories.

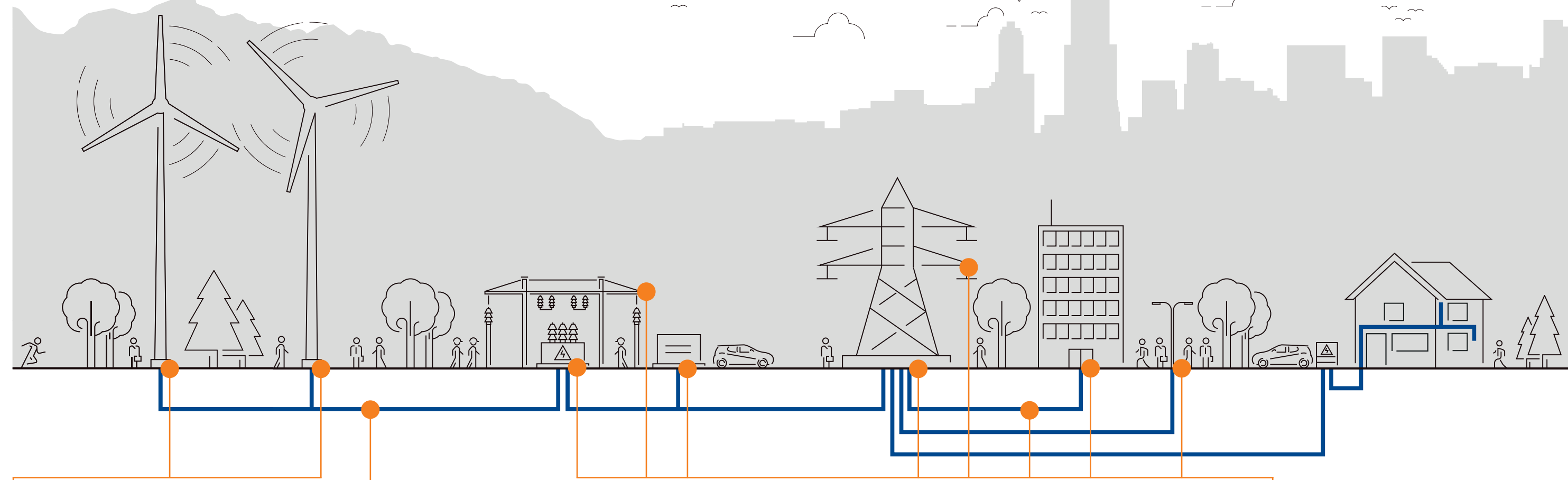
Cable accessories with geometric field control for your wind park project

Our cable accessories have an integrated field control element which enables them to cope with high and varied frequencies. As a result, our cable accessories offer various benefits:

- No dependency on frequencies
- Lower risk of overheating
- No additional ageing, therefore no premature failure of accessories
- Save valuable time and money



We are your one-stop-shop solution provider for onshore wind parks



MV cables to connect the wind turbine

MV cables are used to connect the wind turbine from the transformer to the grid. NKT manufactures premium medium voltage cables to meet your exact specifications. From 12 kV to 36 kV, single-core or multi-core, and with aluminium or copper conductors. We have a large cable portfolio for different markets, fitting all European standards and tested for a long service life.

Flexible solutions for tough conditions

AXAL-TT 3.0 Endurance 3-core 12-36 kV

Due to the unique and extra durable multilayer sheathing with a hard, outer layer in black PE composite and a shock-absorbing inner layer, the cable is suitable for installation in tough and rocky environments, at low temperatures and by use of large machines. The unique protective properties of the

cable design also provide the possibility for DSO's to look differently into the projecting and risk assessment phase of the cable trench: Laying and installation can be erected without external cable protection, which – from a total economic point of view – makes the innovative AXAL-TT cable technology a good investment.



AXALJ-TT 1-core 12-170 kV

Due to the multilayer sheathing with a hard, conductive outer layer in black PE composite, the cable is suitable for installation where testing of the sheath after installation is required. Testing of sheath can prove an intact sheath and a long life time of the cable, ultimately making the cable system an attractive long-term investment.



Our MV cable accessories up to 36 kV are characterised by safe solutions with reliable functions for long term operation

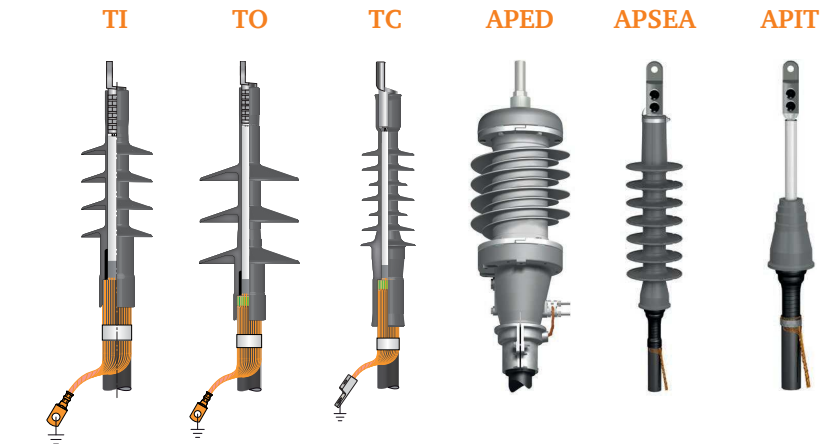
Our engineering experience and continuous product development enable us to offer products that meet future requirements for reliable systems. With cable accessories from NKT you are always on the safe side. The geometrical field control, which is used in our accessories, results in a reduced risk of fire or failure of the accessory. This ensures a high reliability.

We offer both medium- and high-voltage cable accessories, depending on your specific requirements. Thus we ensure the energy transmission all the way from your wind park to the consumer.

Our cable accessories range includes:

Terminations

- Essential for connecting the cables to air-insulated switchgear, transformers, overhead lines or busbars
- Indoor and outdoor terminations for 12-36 kV
- Straight connectors APIT and APSEA for transformers for the feeding circuit



Joints

- Cold-shrink joint JC or premolded joint SOJ for connecting cables together to secure the generated wind power in the grid



Connectors

- Screened elbow connector CSE-A or CB for connection of wind-tower, internal and external transformers



Coupling connectors

- Coupling connectors to combine additional cable systems at the same bushing of switchgear



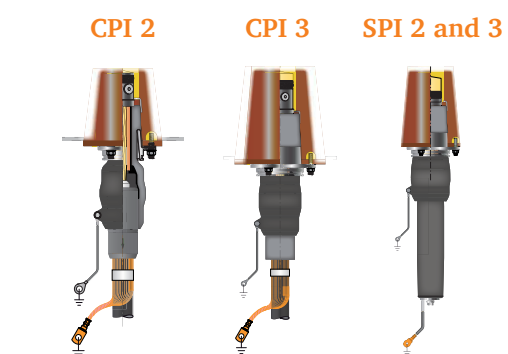
Surge arresters

- For the protection of electrical components against overvoltage or transients, surge arresters can be installed directly at the connectors



Inner cone plugs

- Pluggable connectors with their surge arresters for inner cone bushings to connect at switchgears of transformers



Cable branch cabinet

- Our cable branch cabinet serves as a branching point for cable systems at wind power networks
- For maintenance it provides a comfortable solution to sectionalise a test cable



Inquiries for cable
accessories:

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NKT is signatory of the Europacable
Industry Charter: A commitment
towards superior quality.