

# Connex offshore-certified connection system for up to 550 kV and -50°C

**The Connex dry-type, pluggable connection system can now be used for high voltages up to a maximum of 550 kV. The universal cable system that can withstand the toughest weather conditions is the only one to possess certification for offshore applications from the DNV GL classification society. As a high-capacity special HV solution, it connects the switchgear, transformers, etc. on the substation of the Global Tech I wind farm in the North Sea.**

Developed originally in 1975 for low and medium voltages, Connex now covers all voltage levels from 12 kV to 550 kV. In medium voltage applications, MV-Connex is characterized by its versatility. The range includes conventional plug-and-socket combinations, multiple sockets, busbar couplings, surge arresters, and voltage testing systems. Instead of using permanently fitted cable terminations, Connex is simply plugged in. This considerably reduces the installation time and simplifies the work on site. This is of particular advantage in offshore applications and high-voltage networks. When making connections with HV-Connex, it is no longer necessary to open the cable terminal compartment when installing and commissioning transformers and gas-insulated switchgear. This eliminates the associated expensive gas and oil operations. In offshore projects, Connex has been used for a long time with offshore-standard flange bells made of resistant aluminum alloys on the drilling platforms of the North Sea and the Baltic. This experience, together with the DNV-GL certification, resulted in the first German wind farm, Alpha Ventus, being equipped with Connex as early as 2009.

## Flexible for all cable types

With the invention of the pluggable connection systems, Pfisterer laid the foundation for the standards IEC 60840 (plug) and IEC 60137 (socket). Today, all standardized connectors for medium voltage are based on the Pfisterer design and have the same shape and contact principle. No other system is as flexible as Connex for cable connection. Regardless of the type – solid or stranded, aluminum or copper – all types of cable can be connected. The field of applications is equally universal. The socket can be used in GIS switchgear, as well as in transformers in mineral oil, natural or synthetic ester. Connex is suitable for both indoor and outdoor use, it is saltwater-resistant, submersible, and withstands extreme temperatures down to -50°C. The connector system is currently being exposed to such conditions in an oil drilling project on the Jamal peninsula in northwest Siberia.

## Protection by pluggable HV surge arresters

To ensure proper installation of the connections, Pfisterer offers training for medium voltage systems, and also installation by qualified fitters for HV and EHV systems. Assembly accessories and tools tailored specifically to Connex simplify



Thanks to its easy and time-saving assembly, the HV-Connex dry-type, pluggable connection system is particularly suitable for offshore projects and high-voltage networks.



The surge arrester series from the HV-Connex program is the only pluggable and contact-proof overvoltage protection up to 145 kV available for metal-encapsulated switchgear and transformers.

## Link/download

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the installation work. The broad portfolio of additional equipment also includes the pluggable and touch-proof HV surge arrester for rated voltages of up to 145 kV – currently the only one available on the market. It is used for protecting metal-encapsulated switchgear or transformers that are equipped with HV-Connex device connection components. The surge arrester is attached directly to the switchgear or transformer and prevents the break-in of unacceptably high overvoltages.

***About PFISTERER***

PFISTERER Holding AG, headquartered in Winterbach near Stuttgart, with around 1,400 employees and an annual turnover of around 250 million euros, is one of the world's leading technology companies for system solutions and components in energy transmission. Established in 1921, this family-owned German-Swiss company is one of very few in the world to offer solutions for the complete transmission chain of low, medium, and high-voltage for outputs of between 110 V and 850 kV. The Group operates technology, distribution, and training centers at a number of locations in Germany and Switzerland; it has several manufacturing facilities in Europe, Argentina, and China, and is represented with sales offices in 19 countries throughout Europe, Asia, South America, and the USA. As an innovating force and supplier of key technologies with a complete range of products, as well as consulting, installation, and training services, PFISTERER AG is in demand globally as a partner for energy supply utilities, network operators, technology companies, rail transport operators, and other infrastructure companies.