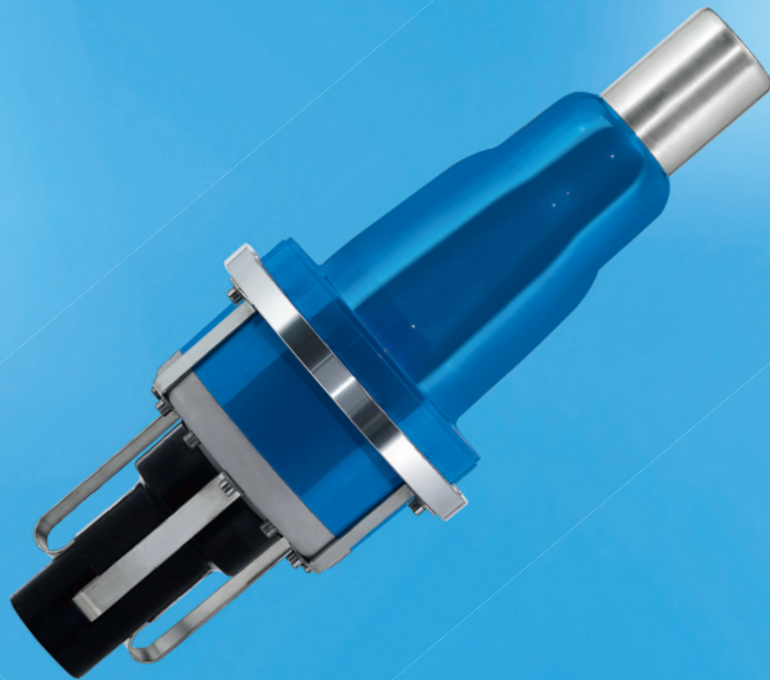


Plug and Power: Dry type plug-in terminations from Brugg Cables.



Flexible and Reliable.

Dry type plug-in terminations from Brugg Cables provide the highest degree of flexibility. Combining with polymer cables from any manufacturer and all GIS-suppliers, they ensure maximum reliability hand in hand with Brugg Cables quality.

Brugg Cables Quality

Stress cones are vital for field grading within dry type plug-in terminations, much more so than in traditional terminations. This makes the presence of high quality stress cones essential for long-term reliability. Brugg Cables' dry type plug-in terminations profit from our outstanding properties of the pre-fabricated and pre-tested one-piece silicone rubber slip-on stress cones. These stress cones and all similar types have produced outstanding results in various products at numerous applications.

Dry type plug-in terminations for GIS & transformers

In most cases, the dry type plug-in terminations are applied to connect high voltage cable systems to gas insulated switchgears (GIS). This type of Brugg termination is called «TFD». However, dry type plug-in terminations can also be applied to connect high voltage cable systems to transformers. This type of Brugg termination is called «TTD».

Standards

All terminations are designed and tested according to international standards, such as IEC 62271-209 (GIS standard), IEC 60840 (≤ 170 kV) and IEC 62067 (> 170 kV). In addition, our insulators meet all the necessary standards according to IEC 60071-1 (insulation coordination).

Product range

Profit from the advantages of our high quality products and our experiences. All our dry type plug-in terminations can be used with any type of high voltage polymer cable or cable manufacturer up to 245 kV. The outstanding design of the termination fits into GIS according to IEC standard as well as into GIS with smaller dimensions. For further information, just contact our experts.

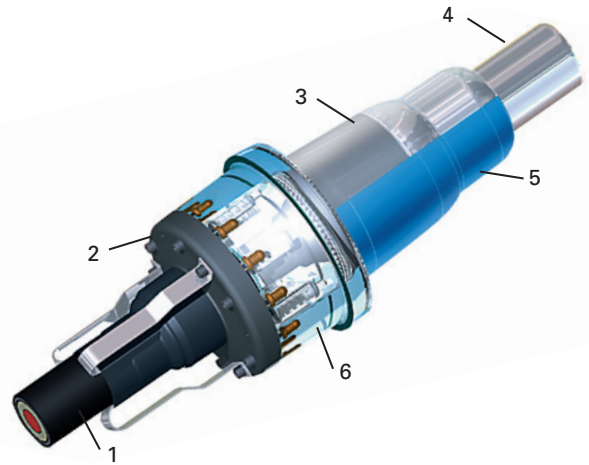
Features	Advantages	Your benefit
Pluggable	No work at GIS gas room required during and after cable installation	Easy handling and fast installation due to separate GIS- and cable installation
Dry type	No insulation oil filling and control required	No maintenance or effort required after installation
Insulator tested according IEC 60071-1	Insulator can be inserted and tested at the GIS supplier	GIS-installation and cable installation can be performed separately
Dimensions according IEC 62271-209 standard or if necessary adapted between GIS and cable supplier	Independent use of all GIS suppliers	Maximum flexibility for the customer
Can be used for all polymer cables independently of any manufacturer	Independent use of all cable manufacturers	Provides cost effective solutions
Pre-tested silicone stress cone of highest quality	Proper working stress cone	Long lifetime and reliability for the whole system

Insulator meets plug-in part on site.

An additional test at the insulator according to IEC 60071-1 provides the GIS supplier with the possibility of pre-installing the insulator during GIS manufacturing and including it in the routine test. The plug-in part is then delivered to the site.

Termination design

The design of the dry type plug-in termination to connect the XLPE cable (1) includes the cable screen connection (2), the silicone rubber stress cone (3), the connection bolt including pluggable current contact (4), the insulator of epoxy resin (5) and the spring assembly (6).



Item	Application
Complete termination	Is delivered on site for installation
Insulator with cover plate	Can be delivered directly to the GIS manufacturer, cover plate is applied for dust protection
Insulator with testing plate	Can be delivered directly to the GIS manufacturer, cover plate is applied for dust protection
Plug-in part of termination	Can be delivered directly to the GIS manufacturer, test plate is applied for GIS-SF6 testing.
Elongation for standard type GIS	Can be delivered on site for installation and will be used to plug the cable into the GIS.



Installations and references

The dry type plug-in terminations from Brugg Cables allow a shorter installation time, in comparison to standard terminations. This has been successfully proven at different installation sites all around the world.

Technical data of dry type plug-in terminations for polymer cables.

Max. operating voltage kV	Ø over insulation mm	Max. conductor cross-section (Cu/Al) mm ²	Max. Ø over outer sheath mm	Type	Application
170	43 - 100	2500	150	TFD 1.170-11	GIS
245	74 - 126	2500	150	TFD 1.245-11	GIS
170	43 - 100	2500	150	TTD 1.170-11	Transformers
245	74 - 126	2500	150	TTD 1.245-11	Transformers

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