

Accessories - Order sheet

valid for: PFISTERER Kontaktsysteme GmbH, Winterbach, Pfisterer Switzerland AG, Altdorf

responsible: Josef Zemp, ALT

Client		Installation instruction: language	
Delivery address		Status	
Project		Parts from Kadan allowed	
Project-No.		issued by / date	
Order-No.		processed by / date	

Production planning	Options	Pos.	Pos.	Pos.	Pos.	Pos.
To be filled only by project coordination	Accessories	Article-No.				
	Operation plan	Op-No.				
	Installation instruction	Remark				
	Confirmed EXW date (compl. packed)	Date				

Cable	Description / Type	Pos.	Pos.	Pos.	Pos.	Pos.
Cable 1 *)	mm ²					
Cable 2 *)	mm ²					
Cable 3 *)	mm ²					
Cable 4 *)	mm ²					
Cable 5 *)	mm ²					
Single Bonding cable	mm ²					
Concentric Bonding cable	mm ² / mm ²					

*) please enclose one cable data sheet per cable (form: Cable Data Sheet PMS-FO-C3-105-ML)

Accessories	Options					
Description	Quantity	unit				
	Voltage U _m (U)	kV				
	Type	Description				

Packing / Schedule	Options					
Delivery	Transportation	Variant				
	Requested delivery date	EXW				
Inspection	Factory acceptance test	no / yes				

One-Piece Slip-On Cable Joints MSA

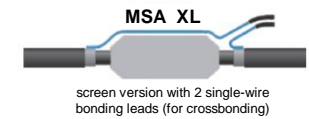
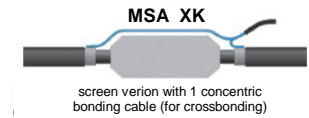
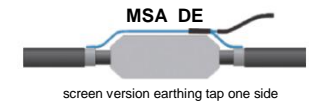
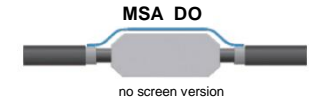
The IXOSIL MSA slip-on joints are available for the entire voltage range from 72.5 kV to 550 kV - each in different screen interruptions, with and without bonding or earthing cable. IXOSIL joints are water-resistant and available with a choice of a rigid metal, plastic or shrink housing. The well proven slip-on technology permits fast installation and the secure connection of cables.



Ordering Example:

MSA 123 - DO M S OP TE

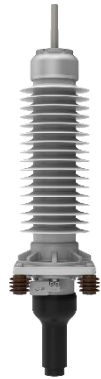
- 123:** Voltage (in kV)
- DO:** screen version (see above right)
- M:** additional water vapor barrier (optional):
 - M: Cu metal housing
 - F: aluminum foil
- S:** Housing (see below right):
 - S: shrink tubing (tight)
 - R: repair version (not tight)
 - G: PP housing (tight)
- OP:** LWL Sensor (optional):
 - OP: Version for LWL
- TE:** with TE/PD Sensor (optional):
 - TEOP version for LWL & TE/PD-sensor



Muffe MSA	Optionen					
Description	screen version					
	water vapor barrier & housing					
Connection Technology	bolted (SICON) / hex. compressed					
Options	LWL-Conductor (OP)					
	TE/PD-Sensor					

Remarks / Special

Outdoor Cable Termination ESS (Silicone)



Proven, fluid-filled outdoor cable termination from 72.5 kV to 550 kV consisting of a glass fibre reinforced tube equipped with silicone sheds with different creepage distances. Optionally also available with splice box for fibre optic conductors.

Outdoor Cable Termination ESP (Porcelain)



Outdoor cable termination in traditional porcelain technology for voltages from 123 kV to 420 kV. The silicon stress control unit is the same as used in the ESS series.

ESS / ESP	Options					
Creepage distance	class					
Head armature	conductor connection	bolt \varnothing / length				
Level-control	for isolation fluid	no / yes				
Arcing horn / corona ring	version	below / above / cor.				
Installation	location (interior of country = standard)	costal / desert				
Base armature	base plate (C) / hole distance (D)	mm				
Filling compound	Insolation fluid (cold = standard)	cold / hot				
Screen pot	version	Type				
Connection technology	bolted (SICON) / hex. compressed					
Options	LWL-Conductor (OP)					
	TE/PD-Sensor					

Remarks / Special

Flexible Dry Outdoor-Terminations ESF and EST / EST Sub

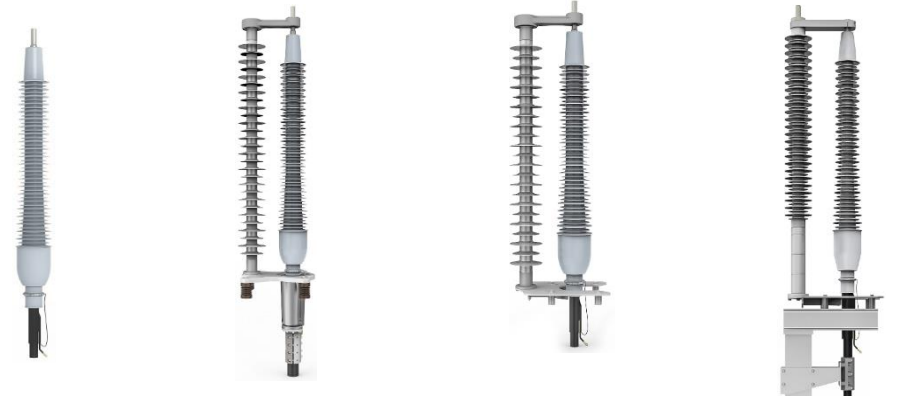
The modular cable terminations ESF and EST are oil- and gas-free, dry type slide-on types, easy to install and very cost-effective. Thanks to their silicon stress control units, they are ideal for outdoor and indoor applications.

These terminations are available for voltages from 52 kV to 170 kV and can be connected to the ground without a scaffold and then finally assembled at a height of up to 6 metres.

The flexible ESF design has to be mounted on a mechanically stable fixing point. It is also perfectly suited for flexible quick-installation multiple-use applications in testing or temporary site cables.

The EST version for use on high-voltage transmission towers is additionally equipped with a self-supporting insulator.

The EST Sub version is specially designed for substations. Alternatively, the self-supporting insulator can also be constructed as a surge arrester (EST Sub SA/SAC).



ESF

EST

EST Sub

EST Sub SA/SAC

ESF / EST / EST Sub	Options					
Creepage distance	class					
Connection bolt	conductor connection	bolt \varnothing / length				
Optional ESF	cable lug	\varnothing 13 / 17 / 21mm				
Base Armature EST	hole distance (D)	mm				
Installation	location (interior of country = standard)	costal / desert				
EST Sub SA / SAC	rated voltage	Ur [kV]				
	continuous operating voltage	Uc [kV]				
	nominal discharge current	In [kA]				
Connection technology	bolted (SICON) / hex. compressed					
Options	LWL-Conductor (OP)					
	TE/PD-Sensor					

Remarks / Special

GIS Cable Termination ESG



The ESG terminations are used for the direct insertion of polymer insulated high voltage cables in gas-insulated switchgears. They are available in nearly identical versions as vertical, horizontal or upside-down designs for voltage ranges from 72.5 kV to 245 kV. The slide-on silicone control unit is surrounded by a cast resin insulator, which safely separates the GIS from the cable system. The insulator is additionally filled with an insulating compound.

Transformer Cable Termination ESU



The ESU terminations are used for the direct insertion of polymer insulated high voltage cables in oil-insulated transformers. They are available in nearly identical versions as vertical, horizontal or upside-down designs for voltage ranges from 72.5 kV to 245 kV. The slide-on silicone control unit is surrounded by a cast resin insulator, which safely separates the transformer from the cable system. The insulator is additionally filled with an insulating compound.

ESG / ESU	Options					
Installation	position					
Compatibility	standards					
	flange	standard				
Construction pattern (H)	expansion box position	amount / type				
Optional accessories	field control cap	without / with				
	take off bolt compl.	without / with				
	clamping ring	type (Art. No.)				
Screen pot	variant	type				
Connection technology	bolted (SICON) / hex. compressed					
Options	LWL-Conductor (OP)					
	TE/PD-Sensor					

Remarks / Special

CONNEX - Connection-System for Cables, Transformers and GIS

The fully encapsulated CONNEX connection system with solid insulation makes power transformers and gas-insulated switchgear (GIS) more flexible than ever before: in terms of design, set-up, and application. With CONNEX, systems become compact all-rounders, ideally equipped for new requirements in the future.

CONNEX is a pioneering plug connector for transformers and GIS in open-air and building-based applications. Furthermore, it is the only connection system to have received certification for off-shore applications from the DNV GL classification company, making it ideally suited for use on open-sea platforms and wind farms.

CONNEX offers the widest product portfolio on the market: from pluggable surge arresters to pluggable connection and branch sleeves to blind caps and test accessories.

The CONNEX connection system is available as MV version from 24 kV to 52 kV (size 1 to 3-S) and as HV version from 72.5 kV to 550 kV (size 4 to 9).



Connex	Options					
Size	CONNEX Cable connector					
Application	Indoor / outdoor / offshore / soil resistant					
Installation position	standard (from below or horizontal) / from above (↓)					
Altitude (above sea level)	up to 2500 m ASL (standard) / above 2500 m ASL					
Ambient temperature	down to -25°C (standard) / down to -45°C (low temp. version)					
System grounding	solid (standard) / isolated (for linkbox)					
Cable design	single core cable / three core cable (only CONNEX 1 to 3-S)					
Capacitive voltage tap	no / yes (only CONNEX 1 to 3-S)					

Remarks / Special