



# IXOSIL EST SUB with Surge Arrester

Dry Type Self Supporting Cable Termination with Surge Arrester

**The new dry type self supporting cable termination IXOSIL EST SUB is now available with an integrated surge arrester. This combined product is available for voltage classes 123 kV – 170 kV, according to IEC 60840 and IEC 60099.**

The new integrated surge arrester solution enables a compact and cost effective installation. The surge arrester is used as the fixing point for the cable termination and eliminates the need of any additional supporting or connecting devices. The surge arrester and supporting elements can be installed separately on the steel structure, while the termination can be fitted on the ground and mounted to the surge arrester afterwards. The surge arrester is of a standard cage type and the termination itself is the same as the well proven **IXOSIL ESF** and **IXOSIL EST** type.

An optional "surge counter" kit is available.

The **IXOSIL ESF / EST** dry cable termination range now includes:

**IXOSIL ESF** 52-170 kV. The dry flexible.

**IXOSIL EST SUB** 52-170 kV. Dry self-supporting for substations.

**IXOSIL EST** 72-170 kV. Dry self-supporting for towers.

**IXOSIL EST SUB SA/SAC** 123-170 kV. Dry self-supporting with integrated surge arrester.

# The Data – The Details

## Cable Termination

Description		EST123 C31 SUB SA/SAC	EST145 C37 SUB SA/SAC	EST170 C43 SUB SA/SAC EST123 C39 SUB SA/SAC	EST145 C45 SUB SA/SAC
Max. operating voltage	U <sub>m</sub> [kV]	123	145	170	
Standards		IEC 60840:2011 IEC 60815:2008	IEC 60840:2011 IEC 60815:2008	IEC 60840:2011 IEC 60815:2008	
Rated voltage	U [kV]	110 - 115	132 - 138	150 - 161	
Rated lightning impulse withstand voltage (BIL)	[kV]	550	650	750	
Partial discharge measurement	[pC]	< 5	< 5	< 5	
Conductor cross-section area	[mm <sup>2</sup> ]	115 - 2500	240 - 2500	240 - 2000	
Diameter across cable insulation (prepared)	[mm]	46 - 115	46 - 115	52 - 115	
Minimal creepage distance	[mm]	3075 / 3814	3625 / 4495	4250	
Pollution class		3 / 4	3 / 4	3	
Pollution class	[mm/kV]	25 / 31	25 / 31	25	

## Integrated Surge Arrester

### Solid earthed grid (SA)

Rated voltage	U <sub>r</sub> [kV]	96	120	144
Continuous operating voltage	U <sub>c</sub> [kV]	77	96	115

### Coil earthed grid (SAC)

Rated voltage	U <sub>r</sub> [kV]	154	181	212
Continuous operating voltage	U <sub>c</sub> [kV]	123	145	170

### Common data (SA/SAC)

Nominal discharge current	[kA]	10	10	10
High current impulse (4/10)	[kA]	100	100	100
Long duration current impulse		1000 A / 2000 μs	1000 A / 2000 μs	1000 A / 2000 μs
Line discharge class		3	3	3
Rated short circuit current	[kA]	max. 63	max. 63	max. 63
Specified energy withstand acc. IEC 60099-4	[kJ/kVU <sub>r</sub> ]	6.7	6.7	6.7

## The Advantages

- Oil- and gas-free, low weight
- Leak-proof
- Compensation of cantilever forces
- Enables installation on the ground, no mounting frames required
- Time savings of up to 50% during cable preparation thanks to new technology

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the power connection