

Composite Insulator Termination
TES 245/55
System voltage: 300kV

Page: 1/3

Date: 07th/Aug/2017

PRODUCT DESCRIPTION

BASIC TERMINATION COMPONENTS

- Composite type insulator with glass fiber reinforced epoxy resin tube and silicon rubber sheds
- Shed color: light grey
- Top and bottom flanges glued and sealed to the Composite Insulator
- Corona shield fixed on the top plate with 4pcs screws
- Pre-moulded and 100% factory-tested EPR stress cone
- Solid tinned rod top connector
- Al base plate
- End bell with "O" ring fixed on the base plate avoids the insulation oil going down inside the cable, and earthing lug provided for bonding leads
- Support insulators
- Plumbing + HST for electrical connection, sealing and mechanical protection with armor tape
- 47V 50cst silicon oil with excellent dielectric strength.

ADDITIONAL OPTIONS

- Optical fibre outlet
- PD sensor
- Arcing horns
- Aerial lugs

RECOMMENDATIONS FOR AERIAL LUGS

Aerial lugs are not included in the accessory kit. Depending on the conductor material of the cable, the advised aerial lugs are specified below.

Aluminum lug

Copper (bronze) lug

Transition lug (copper to aluminum)

In all cases, contact grease must be used between the top connector of the outdoor termination and the aerial lug.

APPLICABLE STANDARDS:

- IEC 62067
- GB18890.1-18890.3/2002

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Page: 2/3

Date: 07th/Aug/2017

TECHNICAL SPECIFICATION

APPLICATION RANGE

Maximum system voltage	300kV
Cable conductor cross section range	
Copper round stranded or Milliken	400mm ² - 2500mm ²
Aluminum round stranded	400mm ² - 2500mm ²
Aluminum round solid	400mm ² - 2500mm ²
Maximum cable insulation diameter (Prepared)	116mm

ELECTRICAL DATA

IEEE 48 = 10 sec AC Wet withstand voltage	445kV
IEEE 48 = 1 min AC Dry withstand	460kV
Impulse withstand voltage (10+/10- impulses) (IEC62067)	1050kV
Maximum partial discharge level (IEC62067)	<5pC at 190kV

Stress cone electrical routine test in factory

AC voltage withstand test	400kV for 30min
Partial discharge test	<5pC at 280kV

Current capacity

Nominal operating current	Limited by cable spec.
Short circuit current	Limited by cable spec.

Support insulator withstand voltages

AC voltage	10kV
DC voltage	20kV
Impulse voltage (10+/10- impulses)	40kV

MISCELLANEOUS

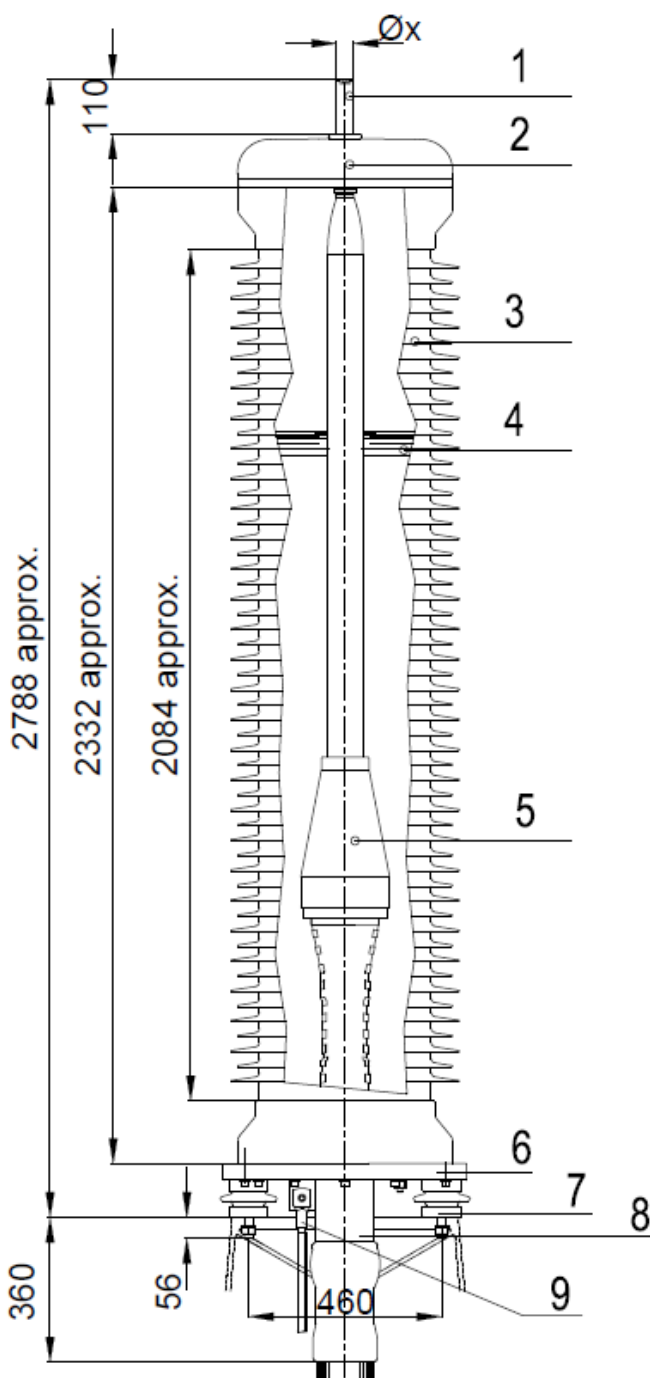
Minimum guaranteed flashover distance	2084mm
Minimum guaranteed creepage distance	7850mm
Maximum allowed inclination in vertical	30°
Approximate weight	440kg
Total height	2788mm
Maximum allowed (horizontal) force on top connector	>2000 N
Deviating (cable) specifications are possible on request.	

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Page: 3/3

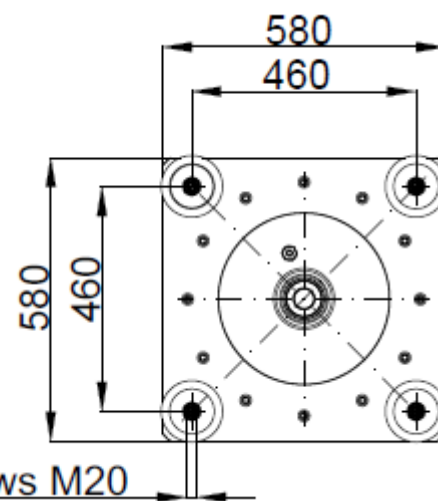
Date: 07th/Aug/2017

TYPICAL DRAWING



PARTS LIST / 部件清单

- 1 - TOP CONNECTOR (Tinned copper) / 压接杆 (镀锡铜)
- 2 - CORONA SHIELD (Al alloy) / 铝屏蔽罩
- 3 - INSULATOR (Composite insulator) / 复合套管
- 4 - INSULATING COMPOUND (Silicone compound) / 绝缘硅油
- 5 - PREMOULDED STRESS CONE (EPR) / EPR应力锥
- 6 - BASE PLATE (Al alloy) / 铝底板
- 7 - STAND-OFF INSULATORS (Glazed porcelain) / 支撑绝缘子
- 8 - SEGREGATION TUBE / END BELL (Al alloy) / 铝尾管
- 9 - EARTHING LUG (Tinned copper) / 接地点



Pressure method:

- * Stranded copper conductor: Circular compression
- * Milliken copper conductor: Punching
- * Al conductor : Welding