

Cable accessories and connectors

## 145 kV Fluid filled termination

Porcelain housed TOP145 and  
Composite housed TOC145

# 145 kV Fluid filled termination

## Porcelain insulator termination TOP145

## Composite insulator termination TOC145

### Application

Suitable for 123 kV or 145 kV copper\* Conductor XLPE insulated metal sheath cable, installed in the fixed connection point position and high pollution level of the occasion.

### Standard

Designed to meet the requirements of international accepted standards, IEC 60840 and China standard GB/T 11017.

### Features

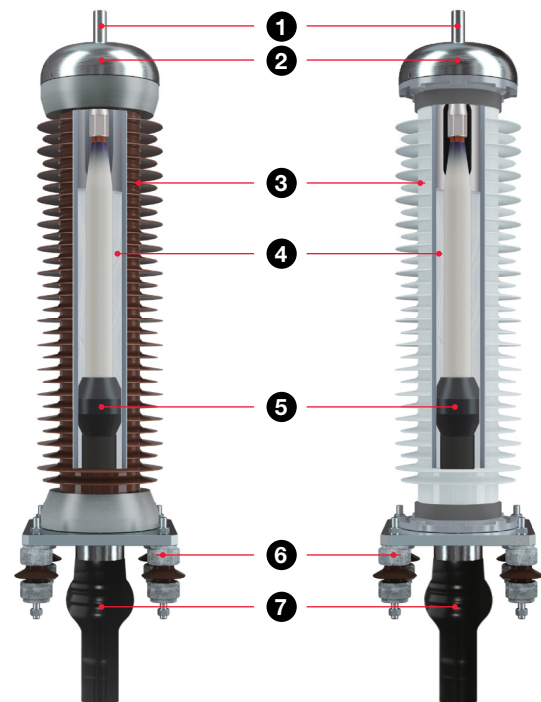
- 1 Top bolt: Crimping connector\*\*, available for copper\* conductor cables
- 2 Shielding cover: High-quality aluminum alloy, good rainproof and uniform top corona performance.
- 3 Insulator: Porcelain or composite insulator, good hydrophobicity and corrosion resistance, up to 145 kV 4 level of pollution conditions
- 4 Insulating oil: Insulator filled with high quality polyisobutylene insulating oil
- 5 Stress cone: The raw material liquid silicone rubber (LSR), enables a more compact structure. Different sizes are designed to fit cables with different cross-section area, to ensure optimal interface pressure between stress cone and cables, as well as the excellent electrical and insulation performance. All stress cone pass the routine test
- 6 Supporting insulator High strength electric porcelain
- 7 Cable gland provides good sealing and grounding for the termination

**NOTE:**

\* Please contact Hitachi Energy in case of aluminum conductor cable.

\*\* Please contact Hitachi Energy, if bolt connectors are required.

\*\*\* All joint bodies pass the routine test.



TOP145 Porcelain insulator termination

TOC145 Composite insulator termination

### Main electrical properties

Standard, IEC 60840, GB/T 11017	Type test kV	Routine test*** kV
Highest voltage for equipment, $U_m$	145	145
Rated voltage, U	132	132
Value of $U_0$ for determination of test voltage	76	76
Heating cycle voltage test, $2 U_0$	152/20 cycles	/
Partial discharge test <math>< 5 \text{ pC}, 1.5 U_0</math>	114	114
Switching impulse voltage test	+/-650	/
AC-voltage test, $2.5 U_0$	190, (15 mins)	190, (30 mins)
Visual inspection	Preformed	Preformed

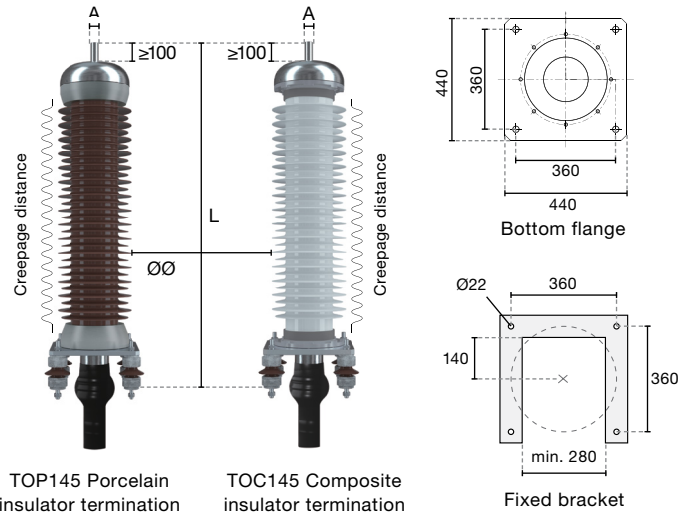
# Technical specification

## Porcelain insulator termination TOP145

## Composite insulator termination TOC145



High-voltage test



TOP145 Porcelain insulator termination

TOC145 Composite insulator termination

Fixed bracket

### Size information

Type	Creepage distance	Dimensions(mm)	
		L	$\varnothing$
TOP145	$\geq 3960$	$\sim 1750$	$\sim 375$
TOP145	$\geq 4945$	$\sim 1950$	$\sim 375$
TOC145	$\geq 4350$	$\sim 1750$	$\sim 398$
TOC145	$\geq 5000$	$\sim 1950$	$\sim 398$

### Top bolt dimensions

Type	Conductor (mm <sup>2</sup> )	A (mm)
TOP145	240-400	$\varnothing 30$
	500-1200	$\varnothing 40$
TOC145	240-400	$\varnothing 30$
	500-1200	$\varnothing 40$

### Cable range applicable

Cable type*	126 kV	145 kV
	XLPE $\varnothing$ (mm)	57-84
Conductor (mm <sup>2</sup> )	240-1200	240-1200
Oversheath $\varnothing$ (mm)	$\leq 120$	$\leq 120$

\*Please contact Hitachi Energy for 66 kV XLPE cables.

### Options

Name	Conductor (mm <sup>2</sup> )	Pitch-row (mm)	diameter (mm)
Outlet splint	240-400	40 x 40	4 x $\varnothing 14$
	500-1200	50 x 50	4 x $\varnothing 18$

### Packaging information

Type	Weight (kg)	Dimensions (mm)
TOP145	$\sim 150$	$\sim 2200 \times 600 \times 500^*$
TOC145	$\sim 120$	$\sim 2200 \times 600 \times 500^*$

\*For further information, please contact Hitachi Energy.



### Storage

When stored in original, unopened status at normal and dry conditions:

- The joint body has a shelf life of five years from the date of manufacture

- Tape and grease have a shelf life of three years
- Filling compound has a shelf life of one year from the date of manufacture
- Metal parts have no shelf life limit

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