

# ***Raycap***

## **RaySTC**

Screened Separable Connector





## About Raycap

With more than three decades of experience and R&D in materials technology, Raycap's cable accessories cover the need for easy installation, reliability and long life time. The combination of scientific design with innovative material properties enables Raycap's cable accessories to operate successfully under even the most harsh environments, often exceeding the life span of the cables themselves.

Raycap's screened elbow connectors cover the complete range of bushing interfaces, up to 1250A and 36kV. Our connectors are made of silicone rubber, and offer high temperature stability, elasticity and endurance.

Supported by a vertically integrated organization, Raycap has R&D facilities, manufacturing and kitting operations in Europe and the United States. This enables Raycap to carefully control the full manufacturing process.



## **RaySTC** Screened Separable Connectors

RaySTC screened separable connectors have been type tested according to IEC 60502-4.

### **RaySTC Features**

Rated current 630 to 1250A, for maximum operating voltage up to 36kV.

- The thick outer screen layer provides a safe-to-touch screen, ensuring personnel safety.
- The screen break design enables the cable's outer sheath to be tested without removing or dismantling the connector.
- The overall and cut-back dimensions are designed to require minimum space in the termination box, even double connections fit within most standard boxes.
- Suitable for both indoor and outdoor installations. Both single-core or three-core (with installed trifurcation kit) are available.
- Prior to shipment, each separable connector is tested for AC withstand and partial discharge.

### **RaySTC**

Connects the polymeric cable to transformers, switch gears and other equipment.



### **RaySTC-E**

Designed for dual or triple cable configurations.



### **RaySTC-A**

Surge arrester 10kA up to 36kV.



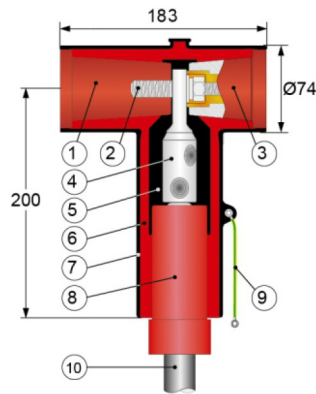


# Screened Separable Connector Design

## Components

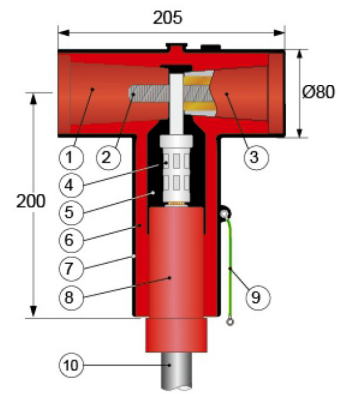
- ① Type C1 & C2 Bushings
- ② Stud, Nut & Washers
- ③ Insulating Back Plug
- ④ Cable Lug
- ⑤ Inner Screen Layer
- ⑥ Insulation Layer
- ⑦ Outer Screen Layer
- ⑧ Stress Cone
- ⑨ Earthing Wire
- ⑩ Cable Core
- ⑪ B Type Connecting Rod

24 kV  
630 A

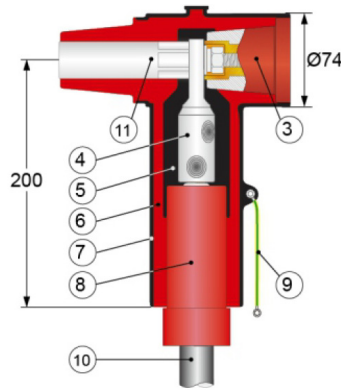


RaySTC 20-630

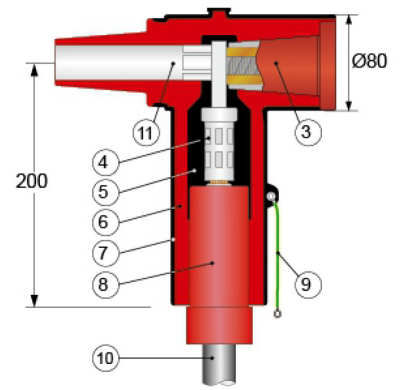
36 kV  
1250 A



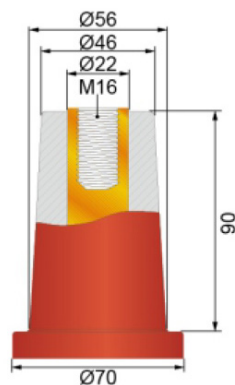
RaySTC 30-1250



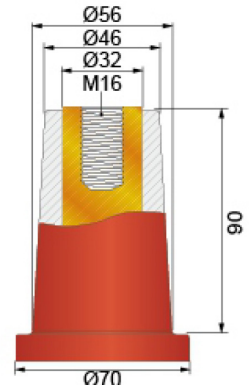
RaySTC-E 30-1250



RaySTC-E 30-1250

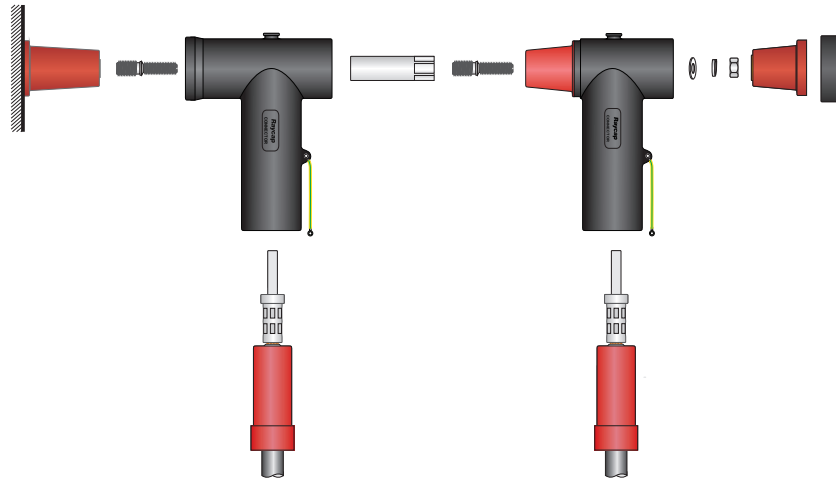


Interface C1 Bushing

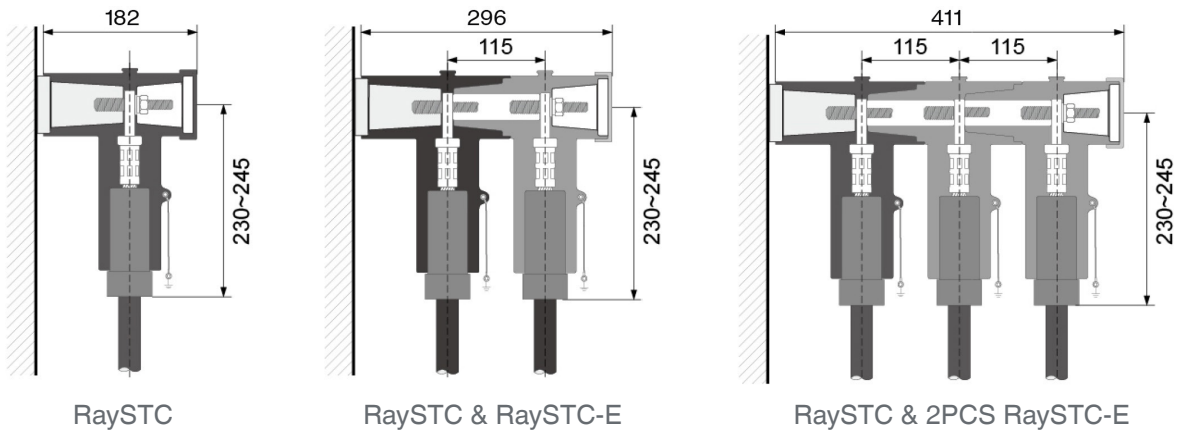


Interface C2 Bushing

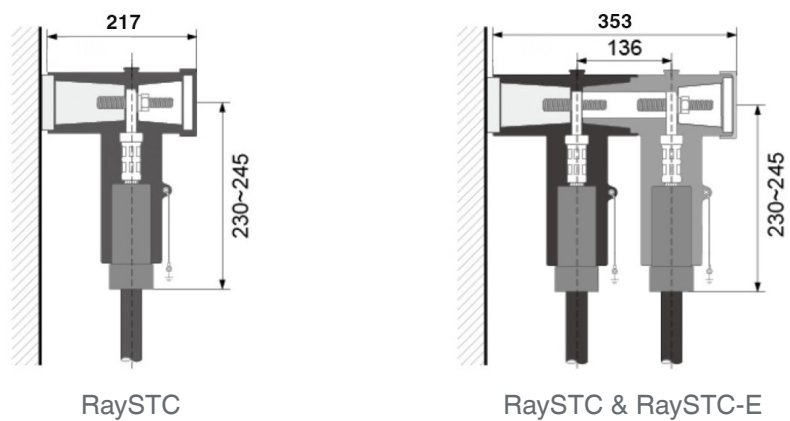
**RaySTC Installation**



**RaySTC 20-630**



**RaySTC 30-1250**





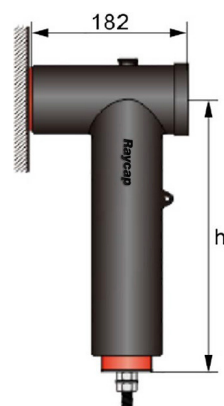
## 10kA Separable surge arrester connector up to 36kV

RaySTC-SAD and -SA are surge arresters designed to protect medium voltage components, including transformers, equipment, cable and accessories from high voltage surges resulting from lightning or switching.

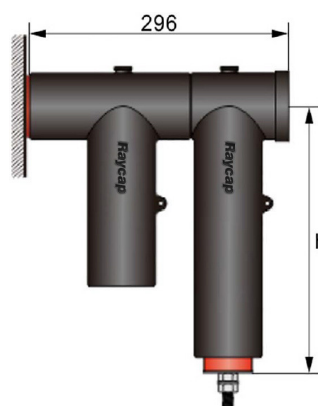
The RaySTC-SAD is a screen T-shaped surge arrester, designed for application on direct connections with type C exterior cone bushings, in accordance to EN5018 0 and EN50181.

The RaySTC-SA are screen coupling surge arresters, designed for application on couplings with 24kV and 36kV separable T connectors using RaySTC and RaySTC-E for coupling.

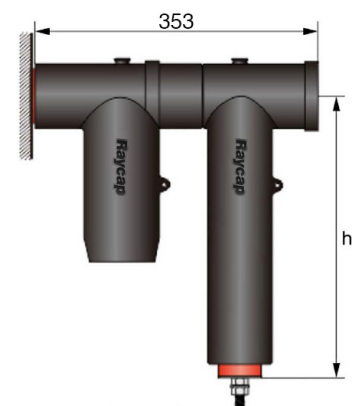
Test Item	Unit	Surge Arrester core type	
		20-C1	30-C2
Rated voltage ( $U_r$ )	kV	30	40
Continuous operating voltage ( $U_c$ )	kV	24	36
AC reference voltage ( $U_{1mA}$ )	kV	$U_{1mA AC} \geq 30$	$U_{1mA AC} \geq 45$
DC reference voltage ( $U_{1mA}$ )	kV	$\geq 43$	$\geq 64.5$
Leakage current under DC $0.75U_{1mA}$	$\mu A$	$\leq 50$	$\leq 50$
Nominal discharge current	kA	10	10
Steep current impulse residual voltage (peak value)	kA	$\leq 98$	$\leq 146.5$
Lightning impulse residual voltage (peak value)	kV	$\leq 85$	$\leq 127.5$
Switching impulse residual voltage (peak value)	kV	$\leq 64.9$	$\leq 108.5$
Long-duration current impulse, 2ms	A	400	400
4/10 $\mu s$ high current impulse	kA	100	100
Height (h)	mm	318	450



RaySTC-SAD 20-C1



RaySTC-SA 20-C1



RaySTC-SA 30-C2



## RaySTC Selection Guide

### 12/20(24) kV 630 A Single-core, with compression lug

Front Connector	Rear Connector	Diameter over XLPE insulation Ø (mm)	Conductor Cross Section (sq.mm)	Compression lug material	
				Cu conductor cable	Al conductor cable
RaySTC 20-630-25	RaySTC-E 20-630-25	16.5-23	25	Cu	Bimetallic
RaySTC 20-630-35	RaySTC-E 20-630-35	16.5-23	35	Cu	Bimetallic
RaySTC 20-630-50	RaySTC-E 20-630-50	16.5-23	50	Cu	Bimetallic
RaySTC 20-630-70	RaySTC-E 20-630-70	16.5-23	70	Cu	Bimetallic
RaySTC 20-630-95	RaySTC-E 20-630-95	23-28	95	Cu	Bimetallic
RaySTC 20-630-120	RaySTC-E 20-630-120	23-28	120	Cu	Bimetallic
RaySTC 20-630-150	RaySTC-E 20-630-150	23-28	150	Cu	Bimetallic
RaySTC 20-630-185	RaySTC-E 20-630-185	28-36	185	Cu	Bimetallic
RaySTC 20-630-240	RaySTC-E 20-630-240	28-36	240	Cu	Bimetallic
RaySTC 20-630-300	RaySTC-E 20-630-300	28-36	300	Cu	Bimetallic
RaySTC 20-630-400	RaySTC-E 20-630-400	36-40	400	Cu	Bimetallic
RaySTC 20-630-500	RaySTC-E 20-630-500	36-40	500	Cu	Bimetallic
RaySTC 20-630-630	RaySTC-E 20-630-630	40-45	630	Cu	Bimetallic

### 12/20(24) kV 630 A Single-core, with mechanical lug

Front Connector	Rear Connector	Diameter over XLPE insulation Ø (mm)	Conductor Cross Section (sq.mm)	Mechanical lug
RaySTC 20-630-2	RaySTC-E 20-630-2	23-28	95-150	Cu or Al conductor
RaySTC 20-630-3	RaySTC-E 20-630-3	28-36	185-300	Cu or Al conductor

### 36 kV 1250 A Single-core, with compression lug

Front Connector	Rear Connector	Diameter over XLPE insulation Ø (mm)	Conductor Cross Section (sq.mm)	Compression lug material	
				Cu conductor cable	Al conductor cable
RaySTC 30-1250-35	RaySTC-E 30-1250-35	23-28	35	Cu	Bimetallic
RaySTC 30-1250-50	RaySTC-E 30-1250-50	-11-	50	Cu	Bimetallic
RaySTC 30-1250-70	RaySTC-E 30-1250-70	-11-	70	Cu	Bimetallic
RaySTC 30-1250-95	RaySTC-E 30-1250-95	28-36	95	Cu	Bimetallic
RaySTC 30-1250-120	RaySTC-E 30-1250-120	28-36	120	Cu	Bimetallic
RaySTC 30-1250-150	RaySTC-E 30-1250-150	-11-	150	Cu	Bimetallic
RaySTC 30-1250-185	RaySTC-E 30-1250-185	-11-	185	Cu	Bimetallic
RaySTC 30-1250-240	RaySTC-E 30-1250-240	36-40	240	Cu	Bimetallic
RaySTC 30-1250-300	RaySTC-E 30-1250-300	-11-	300	Cu	Bimetallic
RaySTC 30-1250-400	RaySTC-E 30-1250-400	40-45	400	Cu	Bimetallic
RaySTC 30-1250-500	RaySTC-E 30-1250-500	-11-	500	Cu	Bimetallic
RaySTC 30-1250-630	RaySTC-E 30-1250-630	44-49	630	Cu	Bimetallic

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