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 1250 A and 36 kV. 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 1250 A, for maximum operating voltage up to 36 kV.

- 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

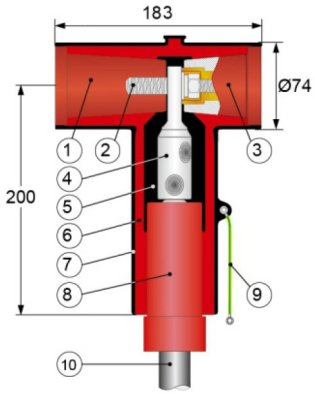
Surge arrester 10 kA up to 36 kV.

Screened Separable Connector Design

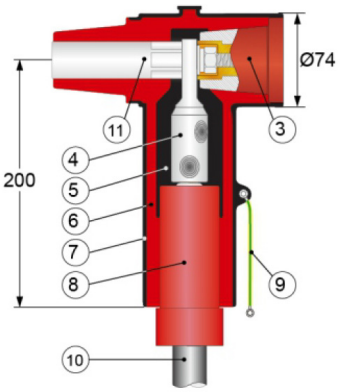
Components

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

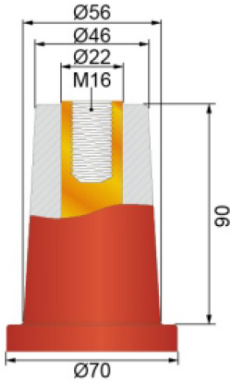
24 kV
630 A



RaySTC 20-630

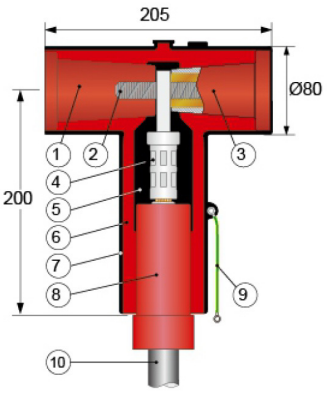


RaySTC-E 30-1250

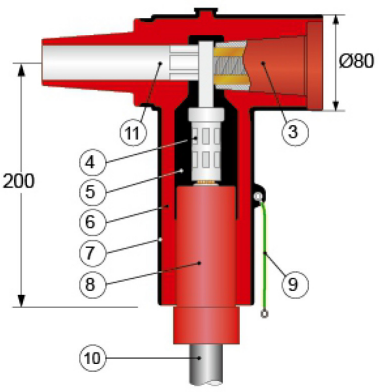


Interface C1 Bushing

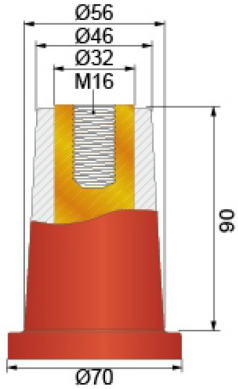
36 kV
1250 A



RaySTC 30-1250

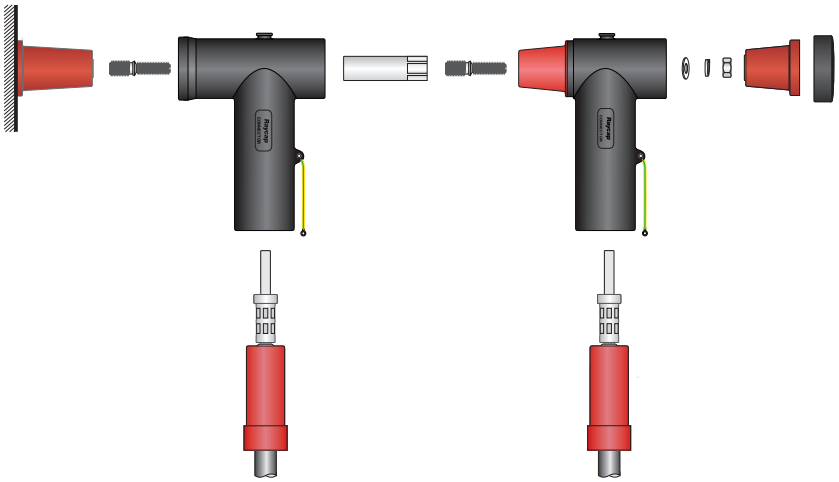


RaySTC-E 30-1250

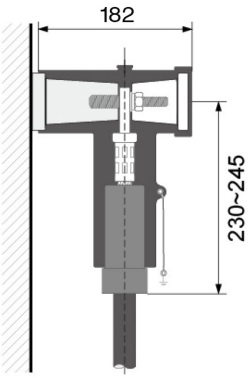


Interface C2 Bushing

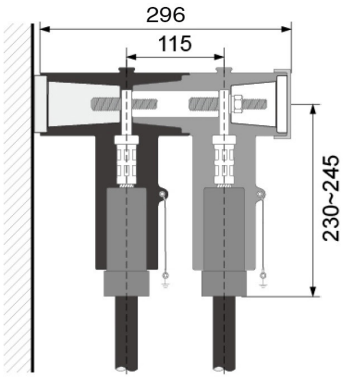
RaySTC Installation



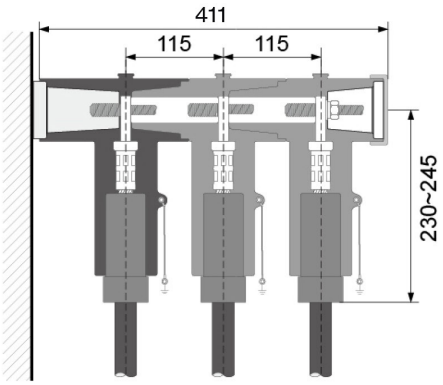
RaySTC 20-630



RaySTC

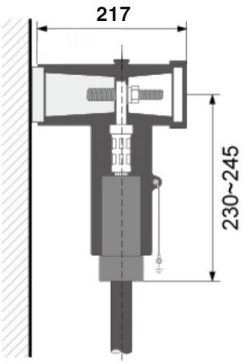


RaySTC & RaySTC-E

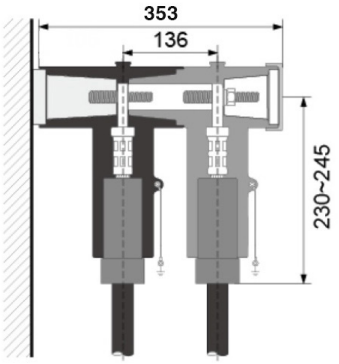


RaySTC & 2PCS RaySTC-E

RaySTC 30-1250



RaySTC



RaySTC & RaySTC-E

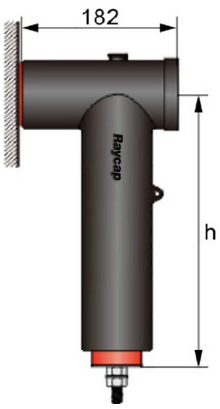
10 kA Separable surge arrester connector up to 36 kV

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.

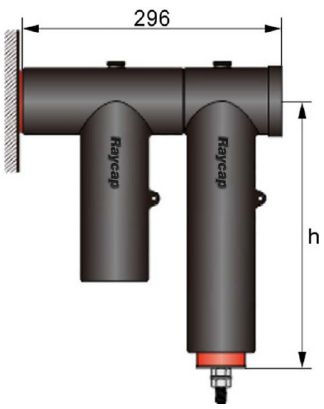
The RaySTC-SAD is a screen T-shaped surge arrester, designed for application on direct connections with type C exterior cone bushings, in accordance to EN5018 0 and EN50181.

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

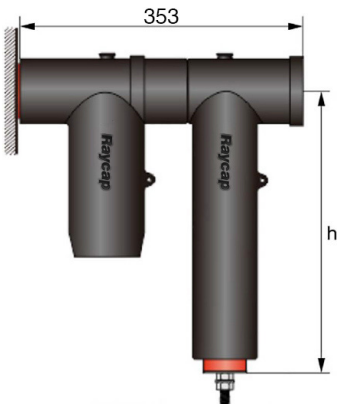
Test Item	Unit	Surge Arrester core type	
		20-C1	30-C2
Rated voltage (Ur)	kV	30	40
Continuous operating voltage (Uc)	kV	24	36
AC reference voltage (U_{1mA})	kV	$U_{1mA\ AC}$≥30	$U_{1mA\ AC}$≥45
DC reference voltage (U_{1mA})	kV	≥43	≥64.5
Leakage current under DC 0.75U_{1mA}	µA	≤50	≤50
Nominal discharge current	kA	10	10
Steep current impulse residual voltage (peak value)	kA	≤98	≤146.5
Lightning impulse residual voltage (peak value)	kV	≤85	≤127.5
Switching impulse residual voltage (peak value)	kV	≤64.9	≤108.5
Long-duration current impulse, 2ms	A	400	400
4/10 µs 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 20-630-1	RaySTC-E 20-630-1	16.5-23	35-70	Cu or Al conductor
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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