

**FUSE CUTOUPS, SURGE ARRESTERS
AND DISCONNECTING SWITCH**

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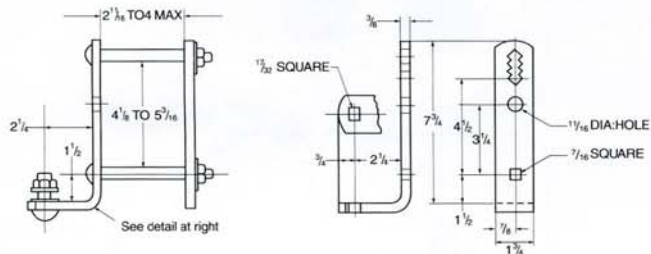


Drop out fuse cutouts and load switching fuse cutouts are for outdoor used high voltage protective device. To be connected with in coming feeder of distributing transformer or distribution lines it mainly protect transformer or lines form short circuit and overload, and on/off loading current.

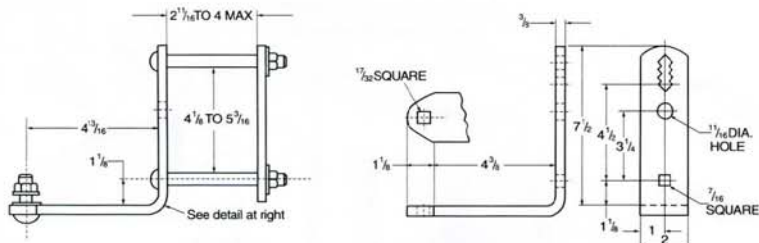
Drop out fuse cutout is composed of insulator supports and fuse tube, static contacts is fixed on two sides of insulator support and moving contact is installed on two ends of fuse tube. Fuse tube is composed of inside arc-extinguishing tube, outer phenolic compound paper tube or epoxy glass tube.

Load switch fuse cutout provides enforced elastic auxiliary contacts and arc-extinguishing enclosure for switching on/off loading current.

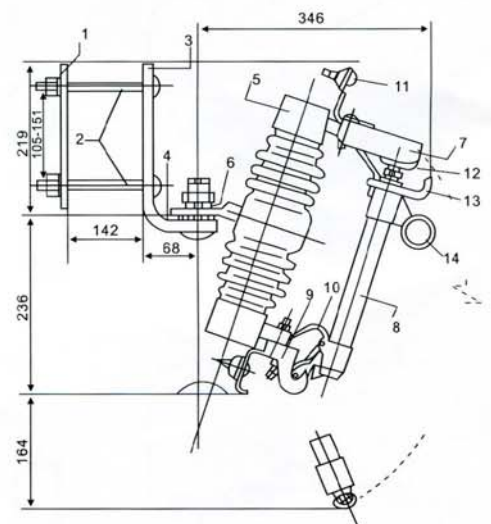
At normally working via fuse link tightened the fuse tube is fixed to form up of close position. In case system current faults, fault current result in fuse melt immediately and take place electric arc, which let arc-extinguishing tube being heated and explode a lot of gas. This will produce high pressure and blow off the arc along the tube. After fuse link melt, moving contact has no lightened strength again, mechanism is locked and fuse tube drop out. Cutout now is in open position. When it needs to switch off during cutout loading, operator shall via insulating operating bar pull the moving contact, at its beginning main contact and auxiliary static contact is contacted still. Whiling pulling the auxiliary contact is separated between auxiliary contacts there occur electric arc and the arc will be lengthened in arc-extinguishing enclosure gap and meanwhile arc-extinguishing explode gas to blow off the arc during current passing zero.



NEMA Type B Mounting Bracket-Adjustable for 3"X 4" to 4"X5" Crossarm



Extended Mounting Bracket-Adjustable for 4"X4" to 4"X5" Crossarm



Parallel-groove connector

Tinplated cast red brass, for ease of conductor connecting, accommodates two conductors of unlike size in a single connector. Other styles of connectors are also available.

Insulator

Higher insulation characteristics than ANSI distribution-cutout standards.

One-piece channel (hood)

Heavy galvanized steel (which is also used for inserts, hangers, and structural bolts and nuts)

Upper contacts

Silver-to-silver; stainless steel spring provides high contact pressure.

Rugged attachment hooks

For load buster guide tube during closing.

Trunnion

High-strength cast bronze, silver plated. Surfaces around trunnion bear on broad hinge surfaces to keep tube in alignment during closing.

Fuse tube

Fiber-lined epoxy fiber glass

Lower contacts

Silver-to-silver; provide dual current path, independent of hinge pivot. Stainless-steel backup springs prevent arcing when tube rises in hinge during recoil.

Toggle joint

Assure reliable drop out after operation.

Sturdy ferrules

Pinned to top and bottom of tube for permanent alignment, large, accessible lifting ring.

Trunnion

Secures tube in hinge during closing.

Flipper

Gives high-speed terminal separation quick cable flip-out, and (in conjunction with the toggle joint) reduces transmission of forces to fuse link during closing.

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-1	15	100	10000	110	40	250	7.3	38.5×34.5 × 10.5
FSC-1	15	200	12000	110	40	250	7.3	

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-2	15	100	10000	110	40	250	7.5	40×34.5 × 10.5
FSC-2	15	200	12000	110	40	250	7.5	

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-3	15	100	10000	110	40	250	7.3	38.5×34.5 × 10.5
FSC-3	15	200	12000	110	40	250	7.3	



10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-4	15	100	8000	110	40	340	7.5	42×33 ×11.5
FSC-4	15	200	10000	110	40	340	7.5	



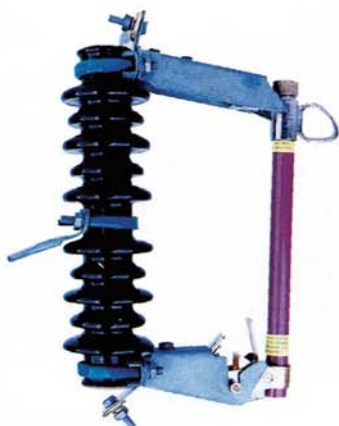
10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-5	15	100	8000	110	40	350	3.5	42×35 ×10
FSC-5	15	200	10000	110	40	350	3.5	



10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-6	15	100	8000	110	40	350	3.8	45×35 ×12
FSC-6	15	200	10000	110	40	350	3.8	

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-7	11	100	6000	110	42	340	8	49×27 ×11.5
FSC-7	11	200	8000	110	42	340	8	

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-8	11	100	6000	110	45	530	16.2	62×56 ×13.5
FSC-8	11	200	8000	110	45	530	16.2	

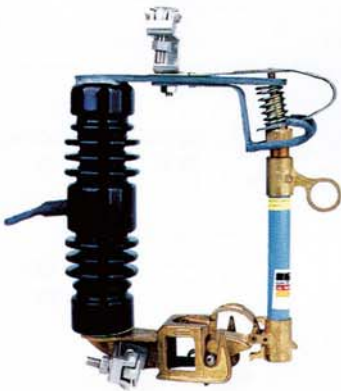
**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-9	15	100	10000	110	40	300	7.5	39×34.5 ×10.5
FSC-9	15	200	12000	110	40	300	7.5	



10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-10	15	100	10000	110	45	380	3.5	48.5×35 ×10.5
FSC-10	15	200	12000	110	45	380	3.5	



10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-11	15	100	10000	110	40	260	8.5	48.5×44 ×13.5
FSC-11	15	200	12000	110	40	260	8.5	



15KV-27KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-12	15	100	10000	125	45	350	8.5	48.5×35 ×10.5
FSC-12	15	200	12000	125	45	350	8.5	

**15KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-13	15	100	10000	125	45	350	8.8	51.5×34 ×12
FSC-13	15	200	12000	125	45	350	8.8	

**15KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-14	15	100	10000	125	45	350	8.5	47×33.5 ×10
FSC-14	15	200	12000	125	45	350	8.5	

**15KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-15	15	100	10000	125	45	350	8.5	48×35 ×10.5
FSC-15	15	200	12000	125	45	350	8.5	



15KV-27KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-16	15	100	10000	125	45	350	12	50×36 ×13
FSC-16	15	200	12000	125	45	350	12	



15KV-27KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-17	15	100	10000	125	45	350	8.5	48×35 ×10.5
FSC-17	15	200	12000	125	45	350	8.5	



24KV-27KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-18	24	100	8000	150	65	530	12	50.5×36 ×17
FSC-18	24	200	10000	150	65	530	12	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-19	24	100	8000	150	65	530	12	49×37 ×17
FSC-19	24	200	10000	150	65	530	12	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-20	27	100	8000	150	65	470	13	56×38 ×10.5
FSC-20	27	200	10000	150	65	470	13	

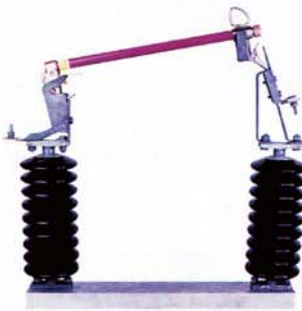
**27KV-33KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-21	33	100	6000	170	70	700	15	59×37 ×17
FSC-21	33	200	8000	170	70	700	15	



33KV-36KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-22	36	100	6000	170	70	720	15.5	66×37 ×17
FSC-22	36	200	8000	170	70	720	15.5	



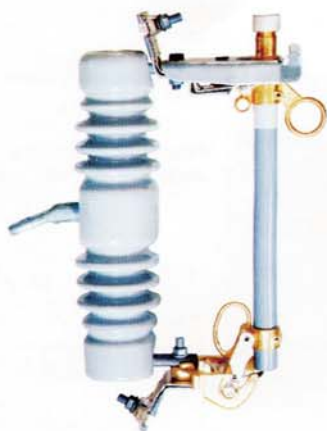
33KV-36KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-23	33	100	6000	170	70	820	28.5	70×43 ×17
FSC-23	33	200	8000	170	70	820	28.5	



33KV-36KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-24	38	100	6000	170	70	870	16	98×44 ×18
FSC-24	38	200	8000	170	70	870	16	

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-25	10	100	10000	110	40	250	7	39.5×36.5 ×10.5
FSC-25	10	200	12000	110	40	250	7	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-26	24	100	8000	150	65	530	12	49×37 ×17
FSC-26	24	200	10000	150	65	530	12	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-27	24	100	8000	150	65	530	12	48×37 ×17
FSC-27	24	200	10000	150	65	530	12	



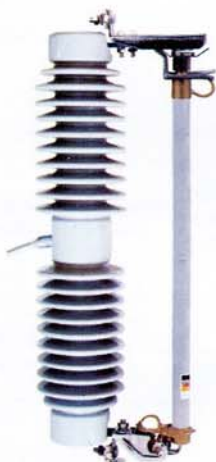
15KV-27KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-28	15	100	10000	125	45	350	8.5	48×34.5 ×10.5
FSC-28	15	200	12000	125	45	350	8.5	



27KV-33KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-29	33	100	6000	170	70	700	15	59×36 ×17
FSC-29	33	200	8000	170	70	700	15	



36KV-38KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-30	36	100	6000	180	75	850	17	65×37 ×17
FSC-30	36	200	8000	180	75	850	17	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-31	24	100	8000	150	65	530	12	50.5×37 ×17
FSC-31	24	200	10000	150	65	530	12	

**27KV-33KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-32	33	100	6000	170	70	700	15	59×36 ×17
FSC-32	33	200	8000	170	70	700	15	

**36KV-38KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-33	36	100	6000	180	75	850	17	66×36 ×17
FSC-33	36	200	8000	180	75	850	17	



10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-34	15	100	10000	110	40	230	7.5	49×35 ×11.5
FSC-34	15	200	12000	110	40	230	7.5	



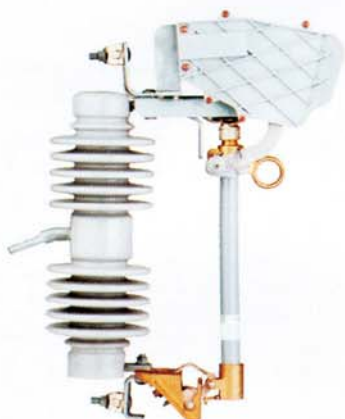
10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-35	15	100	10000	110	40	230	7.5	49×35 ×11.5
FSC-35	15	200	12000	110	40	230	7.5	



15KV-27KV

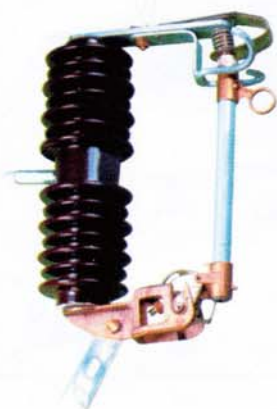
Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-36	15	100	10000	125	45	350	9.4	55×42 ×11.5
FSC-36	15	200	12000	125	45	350	9.4	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-37	24	100	10000	150	65	530	12	55×44.5 ×20
FSC-37	24	200	12000	150	65	530	12	

**15KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-38	15	100	10000	125	45	350	8.5	49×36.5 ×10.5
FSC-38	15	100	12000	125	45	350	8.5	

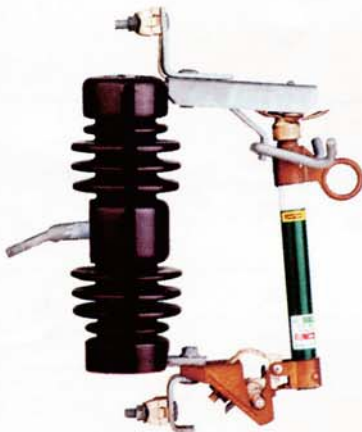
**15KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-39	15	100	8000	125	45	350	9.4	56×44 ×13
FSC-39	15	200	10000	125	45	350	9.4	



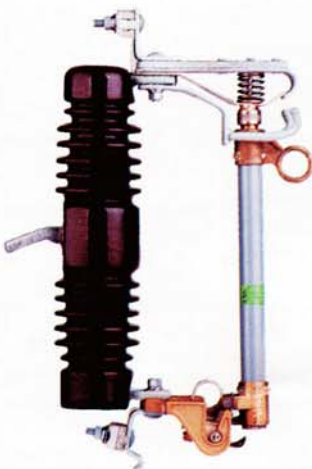
36KV-38KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-40	36	100	6000	170	70	850	17.5	72.5×44.5 ×18
FSC-40	36	200	8000	170	70	850	17.5	



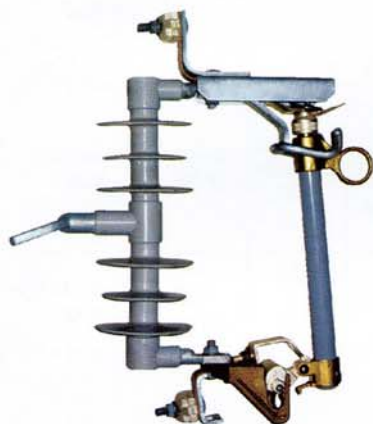
10KV-15KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-41	10	100	8000	110	40	250	7.3	38.5×34.5 ×10.5
FSC-41	10	200	10000	110	40	250	7.3	

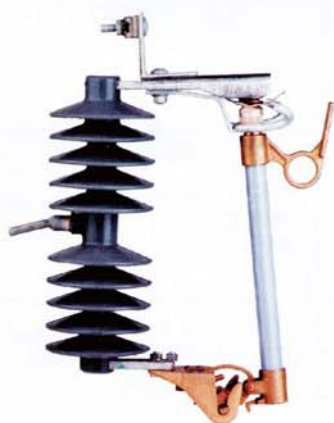


15KV-27KV

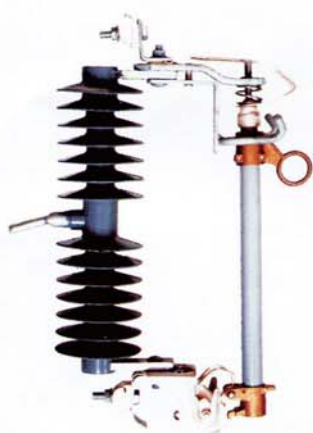
Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-42	15	100	8000	125	50	480	9.2	56×38 ×14.5
FSC-42	15	200	10000	125	50	480	9.5	

**10KV-15KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-43	10	100	10000	110	40	380	3.5	39×36 ×10.5
FSC-43	10	200	12000	110	40	380	3.5	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-44	24	100	6000	150	65	560	3.8	40×36 ×12
FSC-44	24	200	8000	150	65	560	3.8	

**27KV-33KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-45	27	100	6000	170	70	620	7.3	48×35 ×12
FSC-45	27	200	8000	170	70	620	7.3	



30KV-33KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-46	33	100	6000	170	70	680	5.3	60×35.5 ×12
FSC-46	33	200	8000	170	70	680	5.3	



36KV-38KV

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-47	36	100	6000	180	75	820	6	66×35.5 ×12
FSC-47	36	200	8000	180	75	820	6	



24KV-27KV

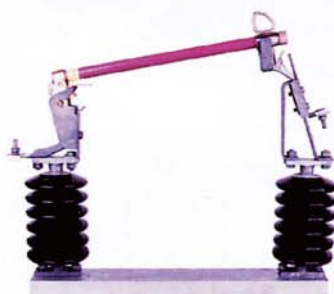
Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-48	24	100	6000	150	65	650	5.8	39×35 ×11
FSC-48	24	200	8000	150	65	650	5.8	

**24KV-27KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-49	24	100	6000	150	65	800	5.5	47×45 ×13.5
FSC-49	24	200	8000	150	65	800	5.5	

**27KV-33KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-50	33	100	6000	180	75	1070	7.6	61×60 ×12
FSC-50	33	200	8000	180	75	1070	7.6	

**11KV**

Type	Rated voltage (KV)	Rated current (A)	Breaking current (A)	Impulse voltage (BIL)	Power-frequency withstand voltage	Leakage distance (MM)	Weight (KG)	Dimensions (CM)
FSC-51	11	100	6000	125	45	450	22	59×40 ×16
FSC-51	11	200	8000	125	45	450	22	

Hook Stick Tools



Hookstick,FUERTE' s Portable Loadbreak Tool

Hook Stick is first attached to a universal pole at least six feet long. It is then positioned across the front of the Type FSC Cutout, with the Hook Stick anchor hung on the attachment hook on the far side of the cutout. The pull ring of the fuse tube or disconnect blade is engaged with Hook Stick's pull-ring hook and held fast with Hook Stick's pull-ring of the fuse tube or disconnect blade is engaged with Hook Stick's pull-ring hook and held fast Hook Stick's pull-ring latch. As the universal pole is pulled downward with a firm, steady stroke, and as Hook Stick is extended to its maximum length, the cutout is opened and the current is diverted through Hook Stick at the same time Hook Stick's opening stroke, its internal trigger trips, the charged operating spring is released, the internal contact are separated, and the circuit is positively interrupted. The only sound is that of Hook Stick tripping.

Circuit interruption is independent of the speed at which the Hook Stick tool is operated. All that is required is a smooth operating stroke. without hesitation, without jerking ,until the tool is extended to its maximum length. The resetting latch retains the tool in the open position for removal from the cutout-and until released to reset Hook Stick for tis next operation.

And resetting Hook Stick is easy too. merely release the resetting latch and firmly close the extended tool to its fully telescoped position. it's that simple. For detailed information on Hook Stick, FRT'S portable load break tool ,see FRT Descriptive Bulletin 811-30.

1. Attach

Reach across the front of the cutout and attach Hook Stick's anchor to the attachment hook on the far side of the cutout, and then engage its pull ring with Hook Stick's pull-ring hook.

Hook Stick's pull-ring latch prevents disengagement of the cutout pull ring and Hook Stick's pulling hook.

2. Pull

A firm, steady downward pull on Hook Stick to its maximum extended length-opens the cutout in the normal manner as the current is diverted through Hook Stick. At a predetermined point in the opening stroke, Hook Stick trips, breaking the circuit positively.

3. Remove

Hook Stick is disengaged by first removing its anchor from the cutout attachment hook. Then, with the blade in the open position, Hook Stick is removed from the pulling with a simple "roll-off" motion.

High-voltage Fuse Link Series

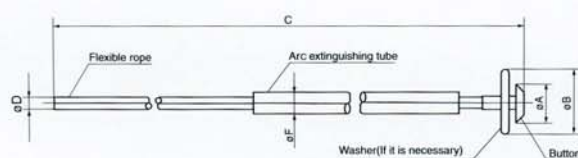
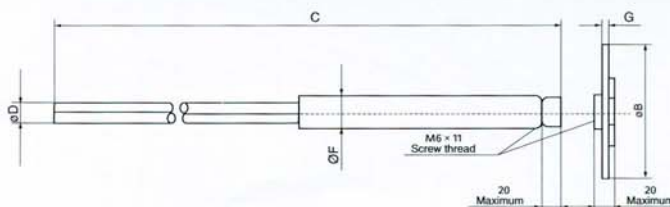
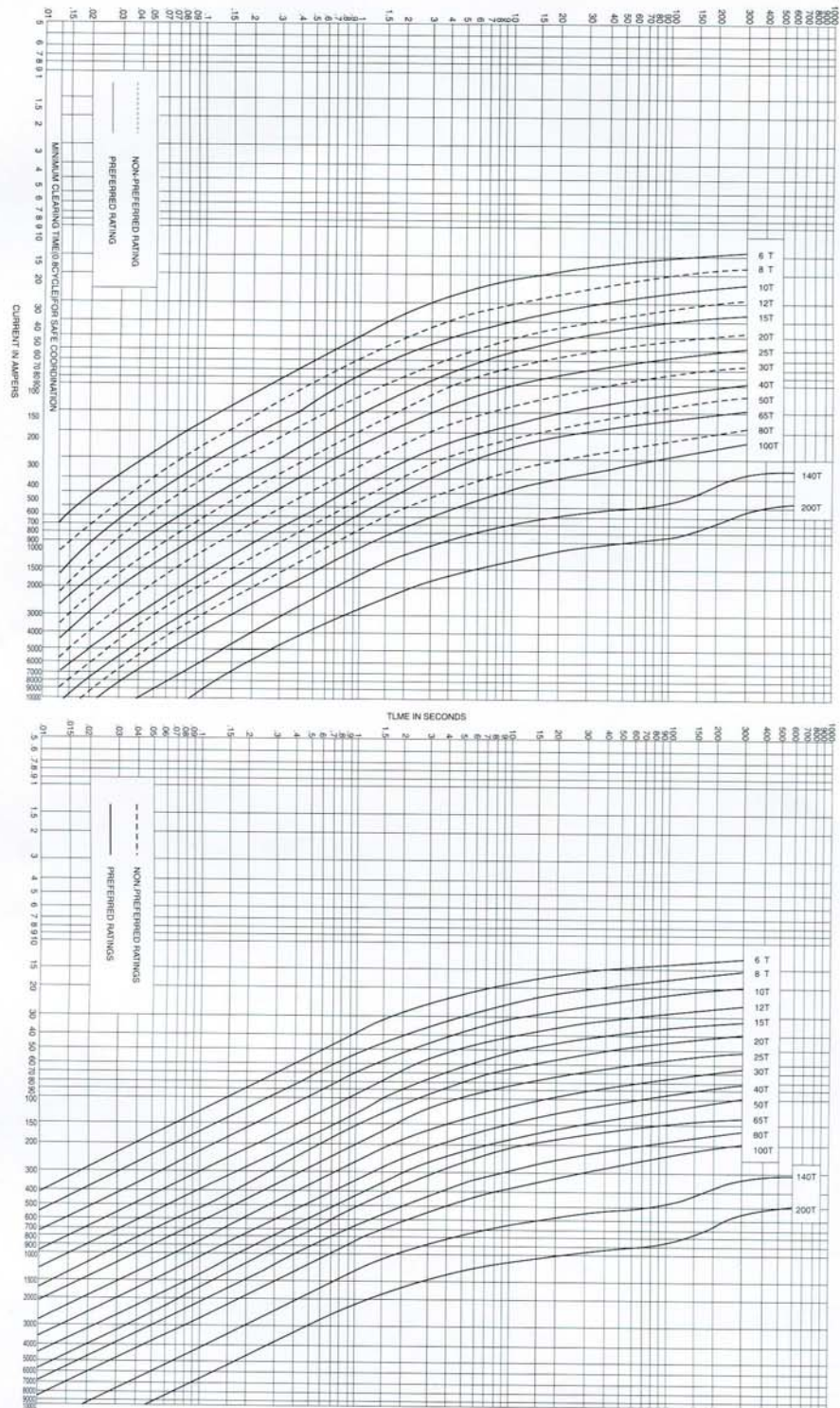


Fig.B.1a button type



Rated current(A)	Dimension(mm)					Quantity/carton
	A	B	C	D	F	
1(to)25	12.5±0.2	19.0±0.2	(Note)1	2.0	6.5	125
30(to)40	12.5±0.2	19.0±0.2	(Note)1	3.0	8.0	250
50(to)100	19.0±0.3	(Not applicable)	(Note)1	5.0	9.0	250
140(to)200	19.0±0.3	(Not applicable)	(Note)1	7.0	13.0	150

Fuse Link Curve Diagram



LIGHTNING ARRESTER

Application

The ZnO arrester is mainly used to protect distribution transformer, cable connector and electric equipment from being damaged by lightning impulse voltage and operated over-voltage.

Keystone

The zinc oxide arrester is the most advanced over-voltage protector in the world. Due to make the resistor disc of core component mainly adopt zinc oxide arrester. Compared with the conventional silicon carbide arrester, this prescription of the product improves greatly the volt-Ampere characteristics of the resistor disc and increased through-current capability at over-voltage so as to bring a radical change for the characteristics of the arresters.

Normal service conditions

The ambient air temperature is no higher than +40°C, no lower than -40°C.

The altitude above sea level does not exceed 1000-2000m (the altitude area should be indicated when order).

AC system frequency 50Hz or 60Hz.

Industrial frequency voltage brought to bear on arrester for a long time does not exceed arrester's sustained operation voltage.

Maximum wind speed does not exceed 35m/s.

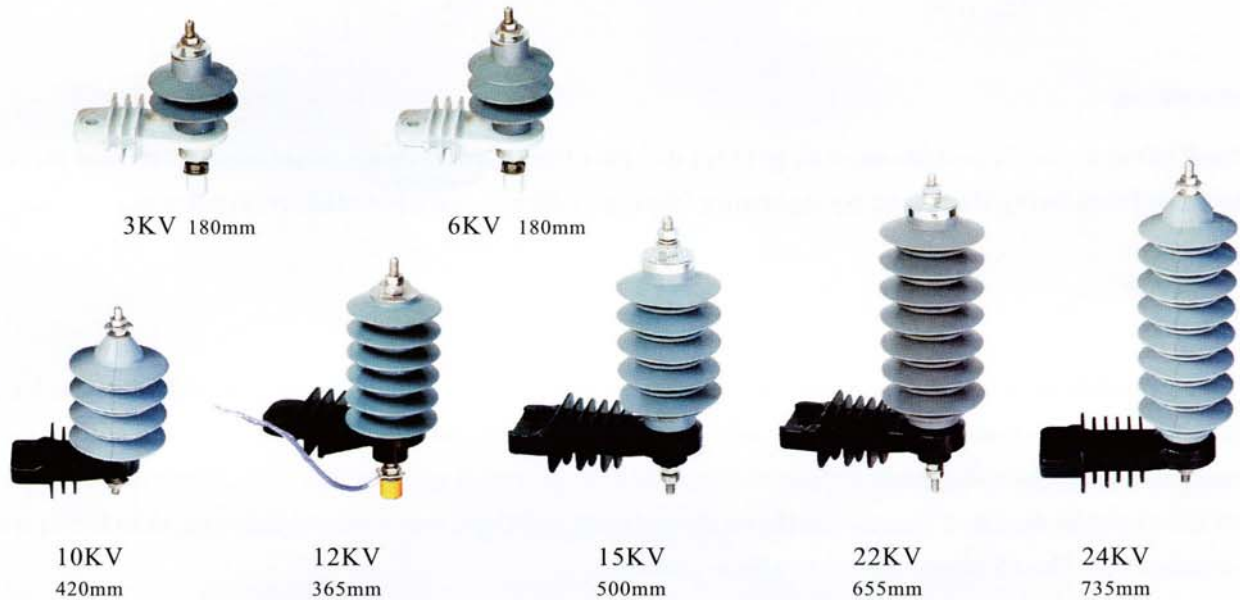
The earthquake intensity does not exceed 7 degrees.

The filthy area should be given clear indication.

Technical Standard

The technical performance of the product is in conformity with GB 11032-2000, IEC 60099-4, IEC 37-199/CDV, standard technical requirements.

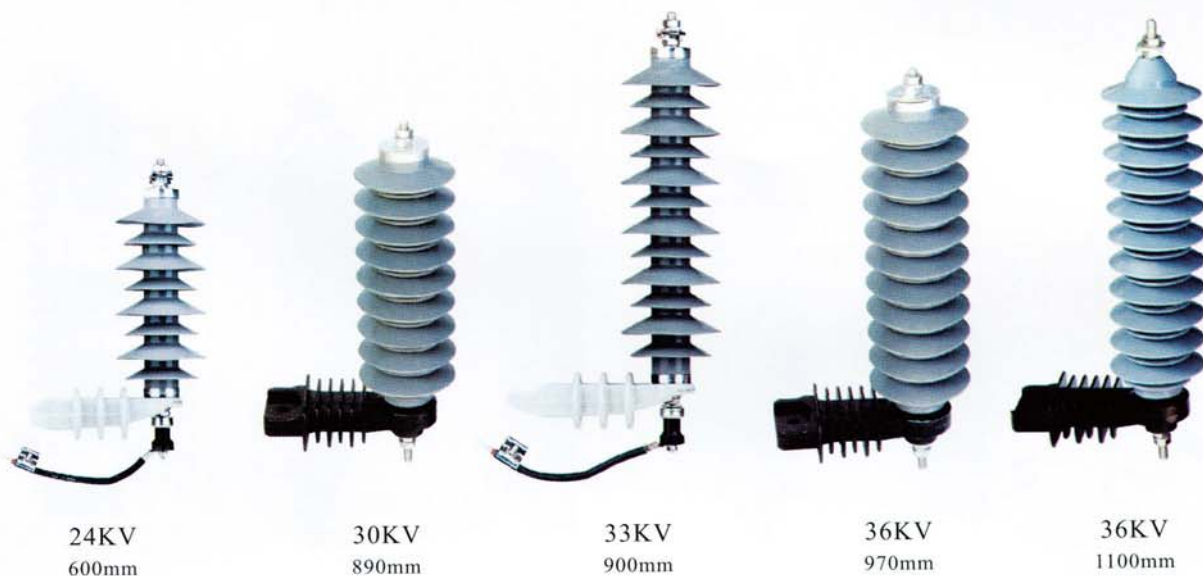
Lightning Arrester



Polymeric Housed Metal-oxide Surge Arrester Without Gaps Nominal Discharge Current 5KA (EXPORT)

Type	MOA Rated Voltage	MCOV	Current Impulse Residual Voltage			2ms Rectangular current impulse withstand	4/10 μ s High current impulse withstand
			1/4 μ s Lightning current impulse	8/20 μ s Lightning current impulse	30/60 μ s Switching current impulse		
	KV(rms)	KV(rms)	KV(crest)	KV(crest)	KV(crest)	A	KA(crest)
YH5W-3	3	2.55	11.3	9	8.9	150	65
YH5W-6	6	5.1	22.6	18	16.8	150	65
YH5W-9	9	7.65	33.7	27	23.8	150	65
YH5W-10	10	8.4	36	30	23	150	65
YH5W-11	11	9.4	40	33	30	150	65
YH5W-12	12	10.2	42.2	36	27	150	65
YH5W-15	15	12.7	51	45	38.5	150	65
YH5W-18	18	15.3	61.5	54	46.2	150	65
YH5W-21	21	17.0	71.8	63	54.2	150	65
YH5W-24	24	19.5	82	72	62	150	65
YH5W-27	27	22.0	92	81	69.8	150	65
YH5W-30	30	24.4	102	90	79	150	65
YH5W-33	33	27.5	112	99	86.7	150	65
YH5W-36	36	29.0	123	108	92.4	150	65

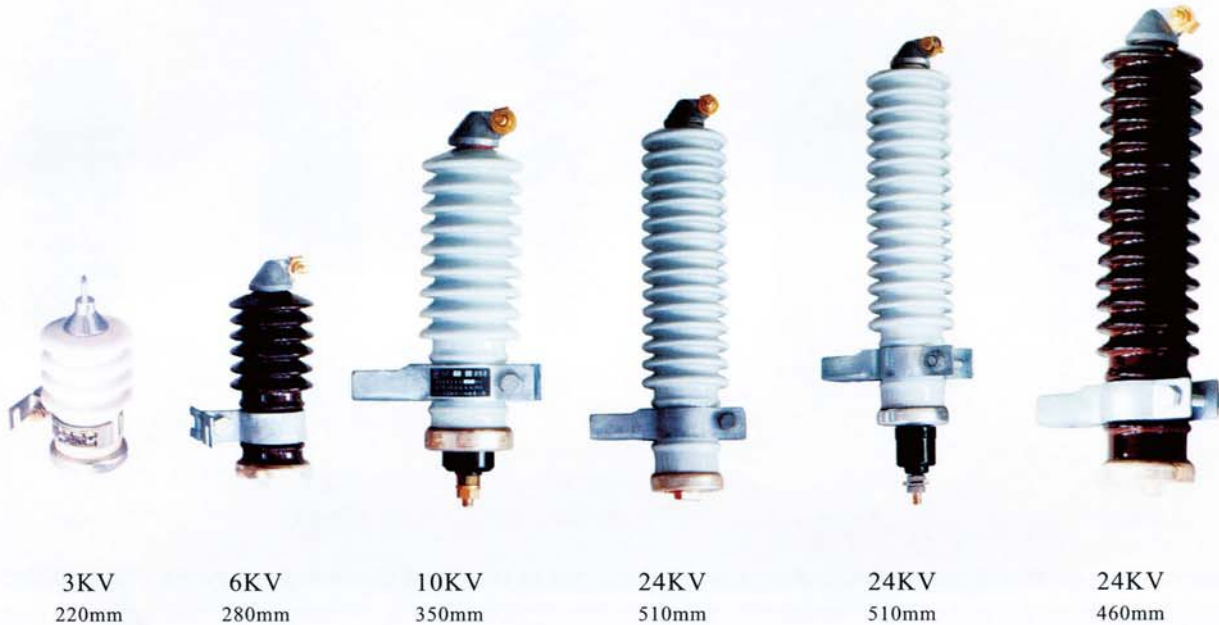
Lightning Arrester



Polymeric Housed Metal-oxide Surge Arrester Without Gaps Nominal Discharge Current 10KA (EXPORT)

Type	MOA Rated Voltage	MCOV	Current Impulse Residual Voltage			2ms Rectangular current impulse withstand	4/10 μ s High current impulse withstand
			1/4 μ s Lightning current impulse	8/20 μ s Lightning current impulse	30/60 μ s Switching current impulse		
			KV(crest)	KV(crest)	KV(crest)		
YH10W-3	3	2.55	11.3	9	8.9	250	100
YH10W-6	6	5.1	22.6	18	16.8	250	100
YH10W-9	9	7.65	33.7	27	23.8	250	100
YH10W-10	10	8.4	36	30	23	250	100
YH10W-11	11	9.4	40	33	30	250	100
YH10W-12	12	10.2	42.2	36	27	250	100
YH10W-15	15	12.7	51	45	38.5	250	100
YH10W-18	18	15.3	61.5	54	46.2	250	100
YH10W-21	21	17.0	71.8	63	54.2	250	100
YH10W-24	24	19.5	82	72	62	250	100
YH10W-27	27	22.0	92	81	69.8	250	100
YH10W-30	30	24.4	102	90	79	250	100
YH10W-33	33	27.5	112	99	86.7	250	100
YH10W-36	36	29.0	123	108	92.4	250	100

Lightning Arrester



Porcelain Housed Metal-oxide Surge Arrester Without Gaps Nominal Discharge Current 5KA (EXPORT)

Type	MOA Rated Voltage	MCOV	Power frequency discharge voltage	1.2/50 μ s Impulse discharge voltage $\leq$	8/20 μ s Lightning impulse residual voltage $\leq$	2ms Rectangular current impulse withstand	4/10 μ s High current impulse withstand
	KV(rms)	KV(rms)	KV(rms)	KV(crest)	KV(crest)	A	KA(crest)
Y5C-3	3	2.55	5.5	9	9	150	65
Y5C-6	6	5.1	11	18	18	150	65
Y5C-9	9	7.65	16	27	27	150	65
Y5C-10	10	8.4	18	30	30	150	65
Y5C-12	12	10.2	22	36	36	150	65
Y5C-15	15	12.7	26	45	45	150	65
Y5C-18	18	15.3	33	54	54	150	65
Y5C-21	21	17.0	36	63	63	150	65
Y5C-24	24	19.5	40	72	72	150	65

Lightning Arrester



10KV
350mm



18KV
510mm



10KV
340mm



10KV
340mm



12KV
490mm



18KV
655mm

Porcelain Housed Metal-oxide Surge Arrester Without Gaps Nominal Discharge Current 10KA (EXPORT)

Type	MOA Rated Voltage	MCOV	Power frequency discharge voltage	1.2/50 μ s Impulse discharge voltage $\leq$	8/20 μ s Lightning impulse residual voltage $\leq$	2ms Rectangular current impulse withstand	4/10 μ s High current impulse withstand
	KV(rms)	KV(rms)	KV(rms)	KV(crest)	KV(crest)	A	KA(crest)
Y10C-3	3	2.55	5.5	9	9	200	65
Y10C-6	6	5.1	11	18	18	200	65
Y10C-9	9	7.65	16	27	27	200	65
Y10C-10	10	8.4	18	30	30	200	65
Y10C-12	12	10.2	22	36	36	200	65
Y10C-15	15	12.7	26	45	45	200	65
Y10C-18	18	15.3	33	54	54	200	65
Y10C-21	21	17.0	36	63	63	200	65
Y10C-24	24	19.5	40	72	72	200	65

Lightning Arrester



Porcelain Housed Metal-oxide Surge Arrester Without Gaps (EXPORT)

Type	MOA Rated Voltage	MCOV	Power frequency discharge voltage $\geq$	1.2/50 μ s Impulse discharge voltage $\leq$	8/20 μ s Lightning impulse residual voltage $\leq$	2ms Rectangular current impulse withstand	4/10 μ s High current impulse withstand
	KV(rms)	KV(rms)	KV(rms)	KV(crest)	KV(crest)	A	KA(crest)
Y5C-10	10	8.4	18	30	30	100	65
Y5C-12	12	10.2	22	36	36	100	65
Y5C-15	15	12.7	26	45	45	100	65
Y5C-24	24	19.5	40	72	72	100	65
Y5C-33	33	27.5	54	99	99	100	65
Y5C-36	36	29.0	61	108	108	100	65
Y10C-10	10	8.4	18	30	30	100	65
Y10C-12	12	10.2	22	36	36	100	65
Y10C-15	15	12.7	26	45	45	100	65
Y10C-24	24	19.5	40	72	72	100	65
Y10C-33	33	27.5	56	99	99	100	65
Y10C-36	36	29	61	108	108	100	65

Lightning Arrester



(220、380V)



12KV



24KV



66KV

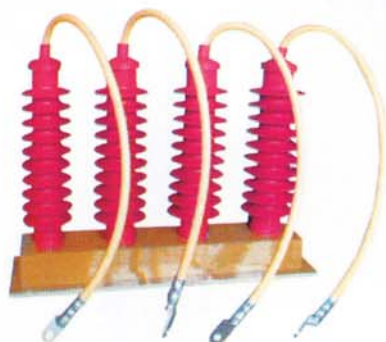


110KV

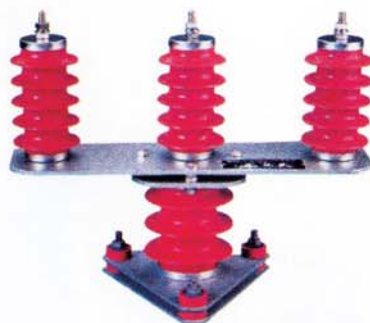
Porcelain Housed Metal Oxide Surge Arrester With Series Gaps

Service condition	Type	Rated voltage	Nominal voltage (virtual value) KV	MCOV (Virtual value) KV	Direct (U1mA) reference voltage $\geq$ KA	Max current impulse Residual voltage			2ms Rectangular current impulse withstand A	4/10 μ s High current impulse with stand KA	0.75 Direct reference current μ A
						1/4 μ s steep current impulse	8/20 μ s Lightning impulse Residual Voltage	30/60 μ s Lightning impulse Residual Voltage			
Substation (Z)	Y5WZ-42/134	42	35	23	73	154	134	114	150	65	50
	Y5WZ-51/134	51	35	40.8	73	154	134	114			
	Y5WZ-52.7/134	52.7	35	40.8	73	154	134	114			
	Y5W-54/134	54	35	41	73	154	134	114			
Substation	Y5W-75/215	75	66	60	123	248	215	183	400	65	50
	Y5W-90/224	90	66	72.5	130	258	224	190			
	Y5W-100/260	100	110	78	145	291	260	221			
	Y5W-102/260	102	110	79.6	148	297	266	226			
Substation	Y5W-108/281	108	110	84	157	315	281	239	600	100	50
	Y10W-75/250	75	66	60	127	288	250	213			
	Y10W-75/223	75	66	60	127	256	223	190			
	Y10W-75/230	75	66	60	127	265	230	196			
	Y10W-90/224	90	66	72.5	130	258	224	190			
	Y10W-90/232	90	66	72.5	130	266	232	198			
Substation	Y10W-90/235	90	66	72.5	130	270	235	201	600	100	50
	Y10W-10/260	100	110	78	145	291	260	221			
	Y10W-102/226	102	110	79.6	148	297	266	226			
	Y10W-108/281	108	110	84	157	315	281	239			

Lightning Arrester



35KV



6, 10KV



XHY5W 17/150

Application

Three-phase Integrated Lightning arrester of FBP is a kind of traditional lightning arrester. It is able to prevent electrical equipment from the damage of lightning. It mainly fit for protective transformer, switch, electric model, parallel connection balance capacitor which the voltage is below 350V, and different kinds vacuum open circuit apparatus. It can set up in many kinds of high voltage switch in the cabinet. Like KYN, GBC, JYN, GCSI, XGNect.

Work Principle

The key technique of Three-phase integrated lightning arrester consists in offering a good wiring method, using four units lightning rod instead of six, however, it has the same function.

Way Of Wiring

Three-phase Integrated lightning arrester of FBP adopts compound outside connection, silicon glue material, and it can be made once at a time from a model. The high voltage cable also adopts silicon glue material. It needn't pay any attention to the distance between the phases when you set up it. Just connect with the joins with sign. The vest connect with A, B, C. Generally the length of cable is about 600mm. Offer the length of cable according to the customers need when you order it.

Three-phase Integrated Metal-Oxide Surge Arrester Without Gaps

Destination	Type	System Voltage	MOA Rated Voltage	MCOV	1mA Reference Voltage at 1mA DC $\geq$	8/20 μ s Residual Voltage on nominal current $\leq$	2ms Rectangular current impulse withstand
		KV(rms)	KV(rms)	KV(rms)	KV(-)	KV(crest)	A
Distribution	YH5WS-10/30 $\times$ 2	6	10	8.0	16.0/15.0※	30.0	100
	YH5WS-17/50 $\times$ 2	10	17	13.6	26.5/25.0※	50.0	100
Substation	YH5WS-10/27 $\times$ 2	6	10	8.0	15.0/14.4※	27.0	150
	17/45 $\times$ 2	10	17	13.6	25.0/24.0※	45.0	150
	51/160 $\times$ 51/134	35	51	40.8	88.0/73.0※	160.0/134.0	150
Capacitor	10/27 $\times$ 2	6	10	8.0	15.0/14.4※	27.0	400
	17/46 $\times$ 2	10	17	13.6	25.0/24.0※	46.0	400
	51/150 $\times$ 51/134	35	51	40.8	88.0/73.0※	150.0/134.0	400
Motor	8/25 $\times$ 8/18.7	6.3	8	6.3	15.0/11.2※	25.0/18.7	200
	13.5/41.5 $\times$ 13.5/31	10.5	13.5	10.5	25.0/18.6※	41.5/31.0	200
Generator	8/25 $\times$ 8/18.7	6.3	8	6.3	15.0/11.2※	25.0/18.7	400
	13.5/41.5 $\times$ 13.5/31	10.5	13.5	10.5	25.0/18.6※	41.5/31.0	400

Note: ※(Phase-phase-earth if it is porcelain housed without "H")

Surge Arrester Monitor & Discharge Counter



Product Features

Discharge Counter is used for recording the discharge times of surge arrester in operation. Monitor is connected in series with surge arrester and operates in power system. It measures on-line real-time leakage current of surge arresters and records the monitor discharging times.

Application scope

It is used for all kinds of metal oxide surge arrester in the voltage of 220kV and below, the service conditions is the same with the surge arrester connected.

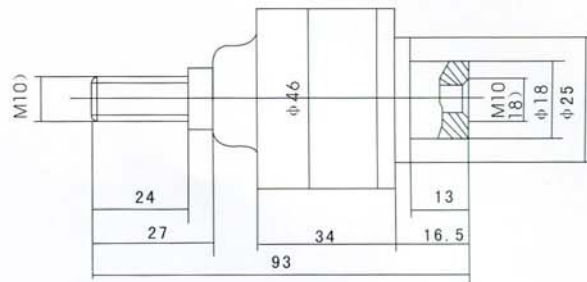
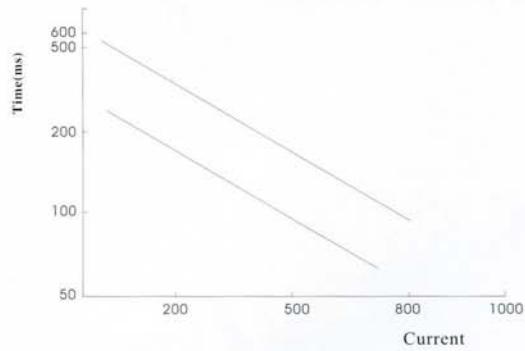


Arrester disconnect

Arrester disconnect is a device for disconnecting an arrester from the system in the event of arrester failure, to prevent a persistent fault on the system and to give visible indication of the failed arrester, TL-1 is a thermal explode disconnect, our products as per IEC60099-4 Standard.

Arrester disconnect A-S character

Current Level	Power frequency (A)			2000 μ s Squre wave Impulse curent(A)	4/10 μ s High current(KA)
	20	200	800	600	100
operation time(ms)	< 0.5	< 0.04	< 0.02	∞	∞

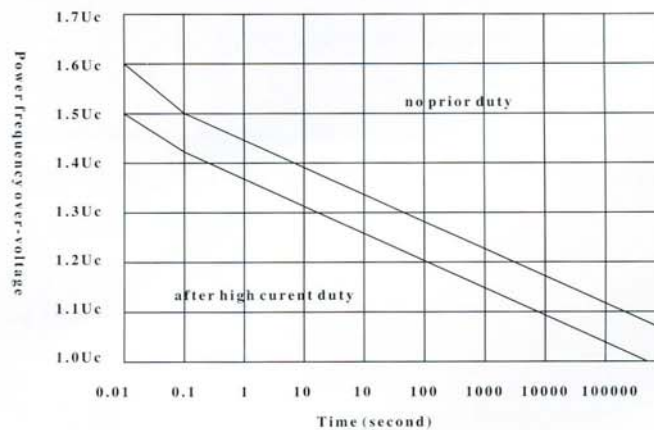


Zinc-oxide varistor

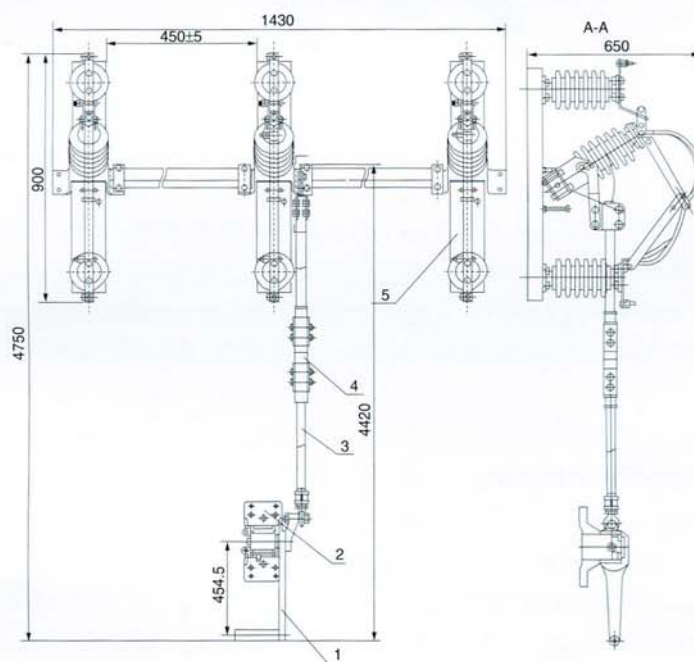
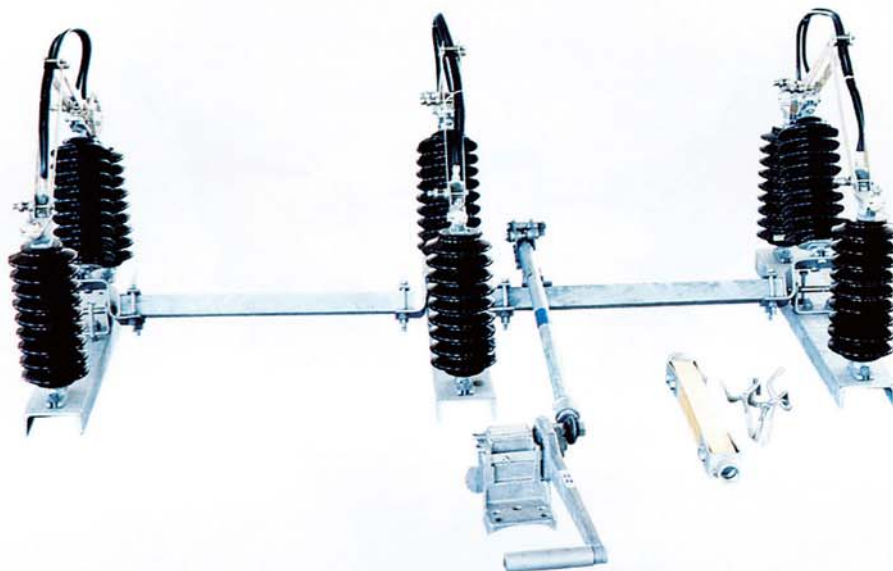


Type	Dimension(mm)		Nominal standard discharge current (KA)	Rated voltage(KV)	MCOV(KV)	8/20 μ s Lightning impulse residual volage(KV)	2000/ μ s Square wave impulse current withstand(A)	4/10 μ s High current impulse (KA)	Line class
	Diameter	Height							
D35	$\phi 35 \pm 0.2$	24 ± 0.5	5	3-3.4	2.55	9.1	100	65	
D38	$\phi 38 \pm 0.2$	24 ± 0.5	10	3-3.4	2.55	9.3	200	65	
D42	$\phi 42 \pm 0.2$	24 ± 0.5	10	3-3.4	2.55	9.2	250	100	
D53	$\phi 53 \pm 0.2$	24 ± 0.5	10	3-3.4	2.55	8.9	400	100	I

Temporary over-voltage capability



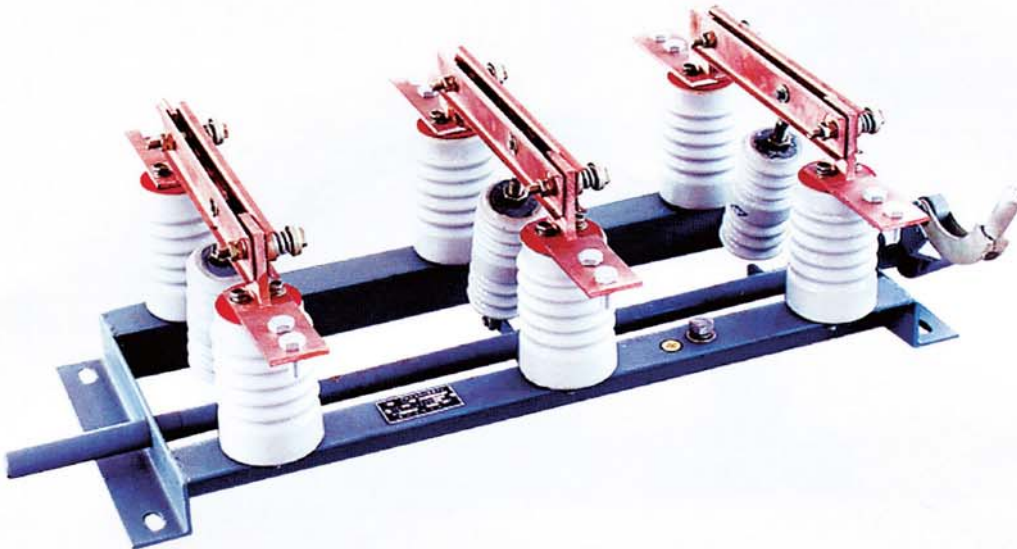
Disconnecting Switch



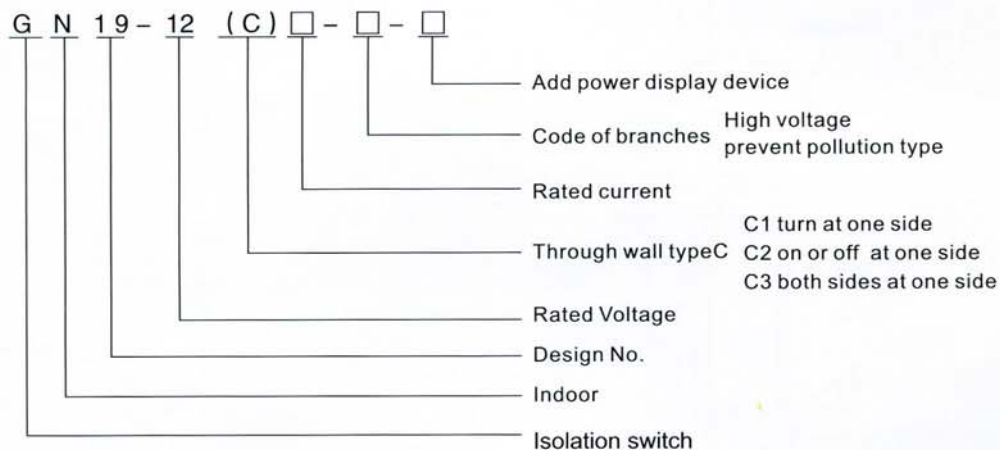
RH-B 11KV-38KV

Type	Rated voltage KV	Rated current A	4s heat steady e.c.A	Shock voltage A	Impulse withstand voltage (KV)	Power-frequency withstand voltage (KV)
RH-B	11	400	12500	31500	95	42
RH-B	33	600	12500	31500	195	80

GN19-12(C) Series Isolating Switch



Type Instruction



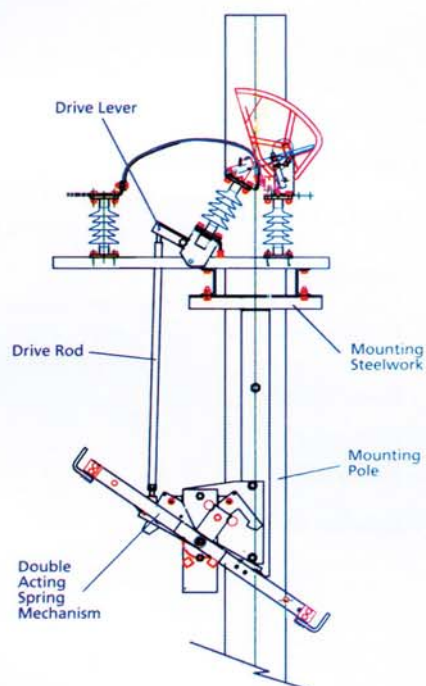
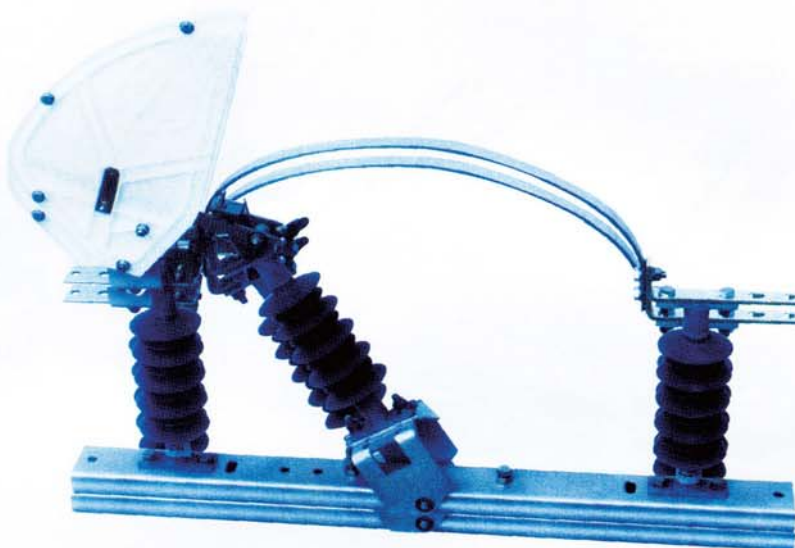
service conditions

The altitude 1000 m -3000 m.
 The ambient temperature: -30℃~+40℃
 The relative humidity of air monthly ≤90% ,daily ≤95%
 The wind pressure ≤700pa (wind speed 34m/s)
 Amplitude earthquake degree 8
 Environment degree degree III
 Cannot be use on the condition of the danger of fire and blast
 heavy pollution chemical etching, strong shake etc.

Used condition

GN19-12(C) series isolating switch (indoor) ,used for in the three-phase AC 50Hz rated voltage 10-12KV power system, comply with CS6-1 type manual operation mechanism which can be used for opening and closing loading current overloading current and short-circuit. Some type can also be used at heavy pollution or high altitude area

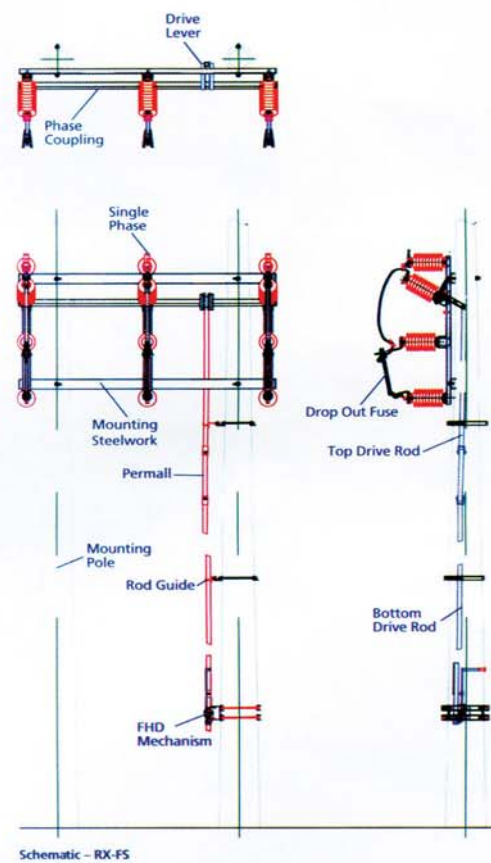
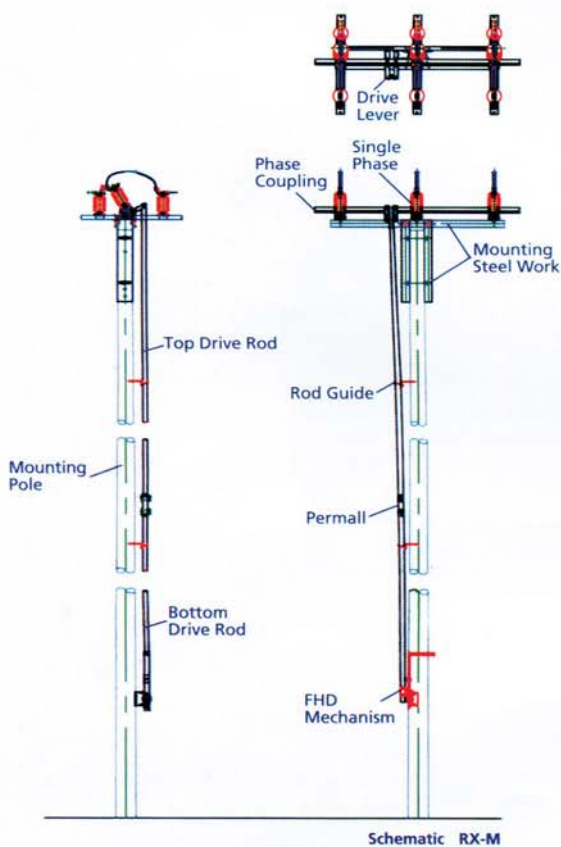
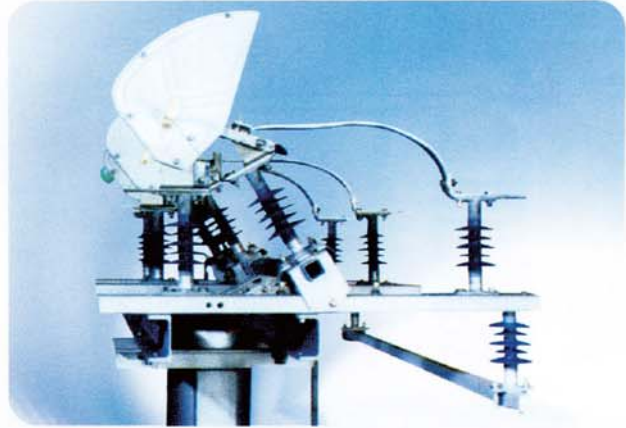
Disconnecting Switch



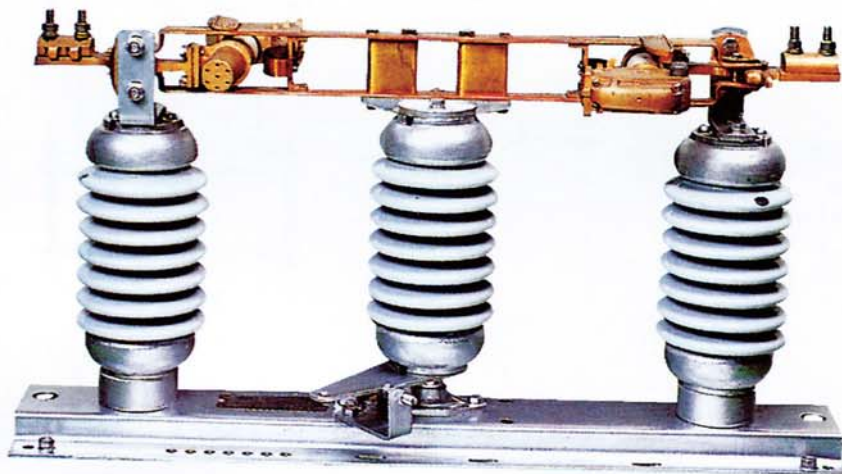
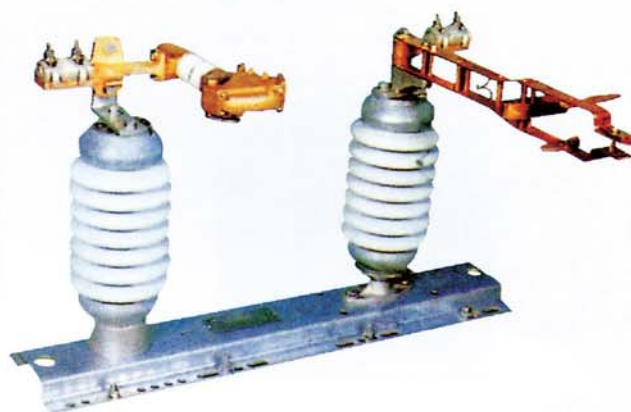
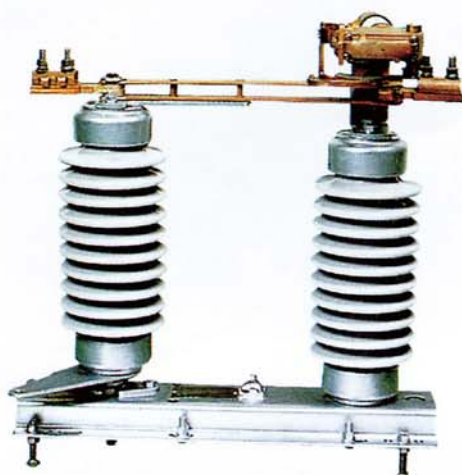
RH-A 12KV-36KV

Type	Rated voltage KV	Rated current A	4s heat steady e.c.A	Shock voltage A	Impulse withstand voltage (KV)	Creepage distance mm
RH-A	12	up to 630	12500	31500	85	To 560
RH-A	15.5	up to 630	12500	25000	110	To 560
RH-A	24	up to 630	12500	25000	145	To 1000
RH-A	36	up to 630	12500	25000	195	To 1320

Disconnecting Switch



Load Break Switch Series

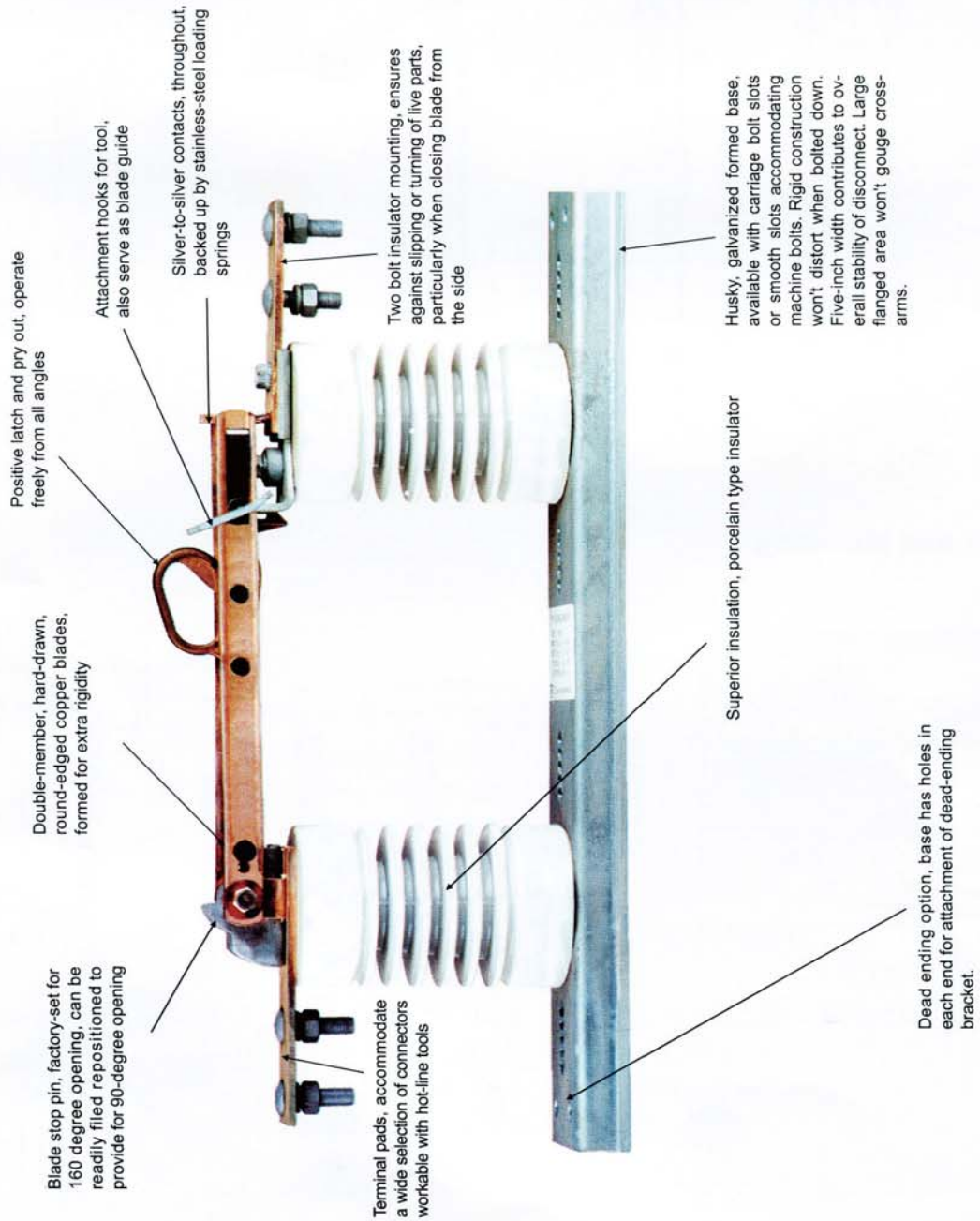


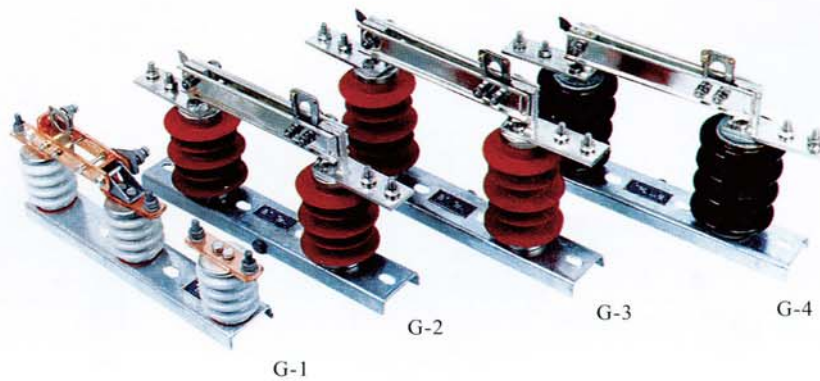
Rated voltage KV	Rated current A	4s heat steady e.c.A	Shock voltage A	Impulse withstand voltage (KV)	Power-frequency withstand voltage (KV)
14.4	400	12500	31500	85	42
	600	12500	31500	85	42
25.5	400	12500	31500	125	45
	600	12500	31500	125	45

SECTION "A-

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Branch Feeder Style Disconnects



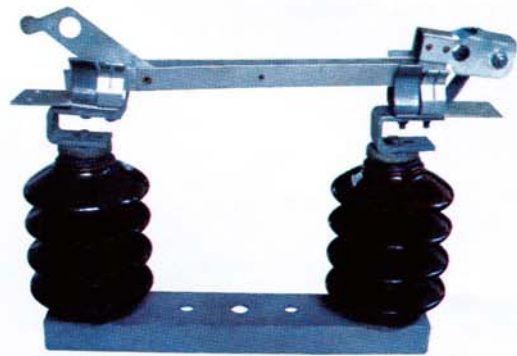
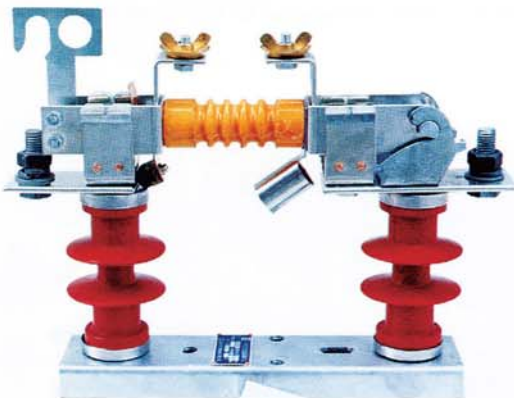


10KV

Type		HGW9-10W/400	HGW9-10W/630
Rated voltage KV		12	12
Rated current A		400	630
4S heat steady e.c.A		12500	12500
Shock voltage A		31500	31500
Impulse withs-land voltage	To earth	75	75
	Across the isolating distance KV	85	85
Power-frequency withstand voltage	To earth	38	38
	Across the isolating distance KV	42	42

15KV

Type		HGW9-15GW/400	HGW9-15GW/630
Rated voltage KV		15	15
Rated current A		400	630
4S heat steady e.c.A		12500	12500
Shock voltage A		31500	31500
Impulse withs-land voltage	To earth	75	75
	Across the isolating distance KV	85	85
Power-frequency withstand voltage	To earth	38	38
	Across the isolating distance KV	42	42



Type		HGWK-0.5W/800	HGWK-0.5W/100
Rated voltage KV		0.5	0.5
Rated current A		800	1000
4S heat steady e.c.A		1250	1250
Shock voltage A		3150	3150
Impulse withs-land voltage	To earth	4	4
	Across the isolating distance KV	5	5
Power-frequency withstand voltage	To earth	2	2
	Across the isolating distance KV	3	3

Style	Mounting Position ①	Rating				
		kV			Amperes,RMS	
		Nom.	Max	BIL ②	Cont.	Mom. ③
Branch Feeder (with bases having carriage-bolt slots)	Vertical or Inverted	14.4	15.5	110	600	40000
					900	40000
		25	27	125A	600	40000
					900	40000