

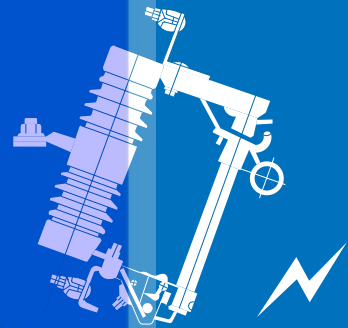
## DROP-OUT FUSE

### Application & Key Feature

- Outdoor used high voltage protective device connected with incoming feeder of distribution transformer or distribution lines
- Product are mainly protecting transformer or lines from short circuit, overload and On/Off loading current
- Main components include insulator base, statics & live contact and fuse tube.
- Product are in comply with IEC282-2 & NEMA standard

### Classification

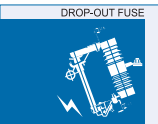
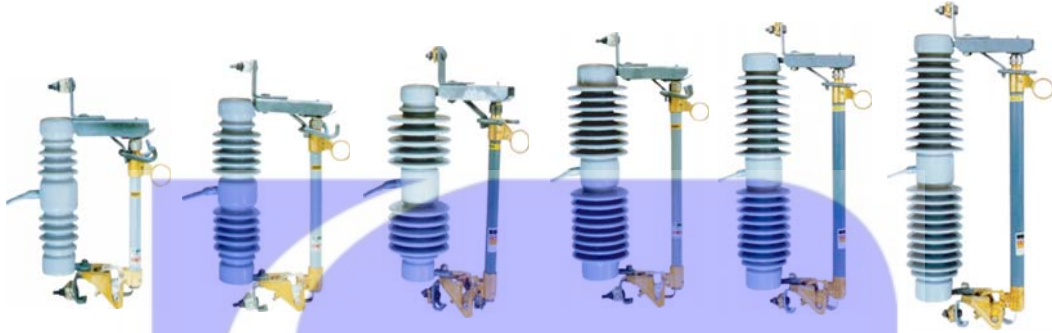
- Porcelain housed drop-out fuse
- Polymer housed drop-out fuse
- Drop-out fuse accessoriess



# Colmate

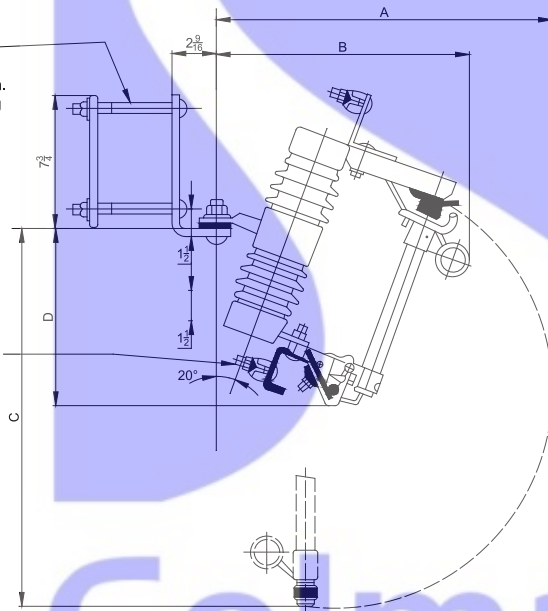
*Electric*

**Drop-out Fuse CFA Series**



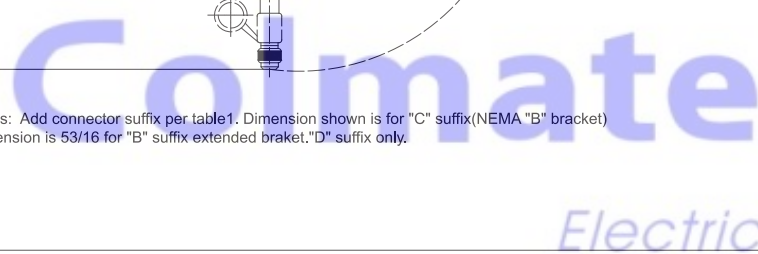
Mounting bracket, Adjustable  
For 3" x 4" to 4" x 5" crossarm.  
Furnished only when catalog  
Number suffix "B" or "C" is  
specified

Optional parallel  
Groove connector shown  
Furnished only when  
Catalog number  
Suffix d is specified



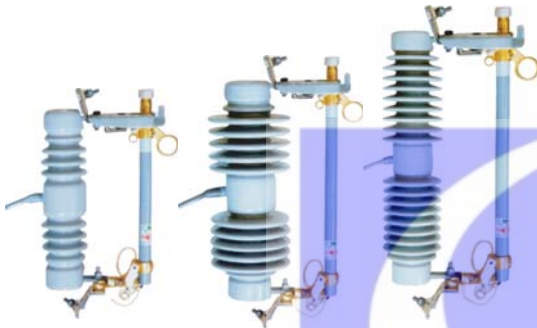
Voltage/kV	Dimensions/mm			
	A	B	C	D
15	455	340	515	240
18	515	355	650	295
24	515	355	650	295
30	600	375	780	330
33	640	395	890	370
36	660	420	915	395

Notes: Add connector suffix per table1. Dimension shown is for "C" suffix (NEMA "B" bracket)  
Dimension is 53/16 for "B" suffix extended bracket. "D" suffix only.



Cat. No.	Rated Current/A	Breaking Current /A	Impulse Voltage /kV	Power-frequency Withstand Voltage /kV	Leakage Distance/mm	Weight/kg	Dimensions/cm
CFA 10KV-15KV	100/200	10000/12000	110	40	250	7.3	38.5X34.5X10.5
CFA 15KV-27KV	100/200	10000/12000	125	45	350	8.5	48X34.5X10.5
CFA 24KV-27KV	100/200	8000/10000	150	65	530	12	48X34.5X14
CFA 27KV-33KV	100/200	6000/8000	170	70	700	15	56X38X14.5
CFA 33KV-36KV	100/200	6000/8000	170	70	720	15.5	57X38X14.5
CFA 36KV-38KV	100/200	6000/8000	180	75	850	17	61X38X14.5

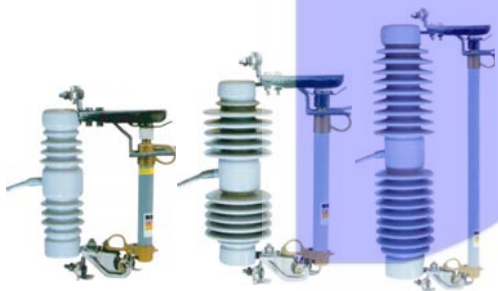
**Drop-out Fuse CFB Series**



Cat. No.	Rated Current/A	Breaking Current /A	Impulse Voltage /kV	Power-frequency Withstand Voltage/kV	Leakage Distance /mm	Weight /kg	Dimensions/cm
CFB 10kV-15kV	100/200	10000/12000	110	40	250	7.3	39.5×36.5×10.5
CFB 15kV-27kV	100/200	10000/12000	125	45	350	8.5	49×36.5×10.5
CFB 24kV-27kV	100/200	8000/10000	150	65	530	12	49×36.5×14
CFB 27kV-33kV	100/200	6000/8000	170	70	700	15	57×40×14.5
CFB 33kV-36kV	100/200	6000/8000	170	70	720	15.5	58×40×14.5
CFB 36kV-38kV	100/200	6000/8000	180	75	850	17	62×40×14.5

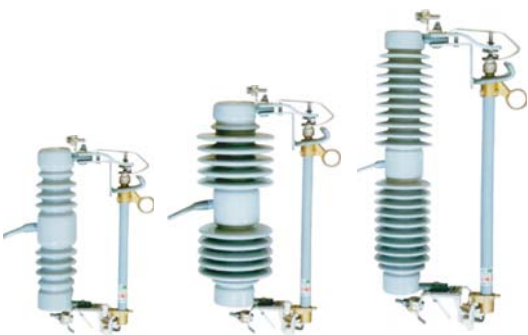


**Drop-out Fuse CFC Series**



Cat.No.	Rated Current/A	Breaking Current /A	Impulse Voltage /kV	Power-frequency Withstand Voltage/kV	Leakage Distance /mm	Weight /kg	Dimensions/cm
CFC 10kV-15kV	100/200	10000/12000	110	40	250	7.3	38.5×34.5×10.5
CFC 15kV-27kV	100/200	10000/12000	125	45	350	8.5	48×34.5×10.5
CFC 24kV-27kV	100/200	8000/10000	150	65	530	12	48×34.5×14
CFC 27kV-33kV	100/200	6000/8000	170	70	700	15	56×38×14.5
CFC 33kV-36kV	100/200	6000/8000	170	70	720	15.5	57×38×14.5
CFC 36kV-38kV	100/200	6000/8000	180	75	850	17	61×38×14.5

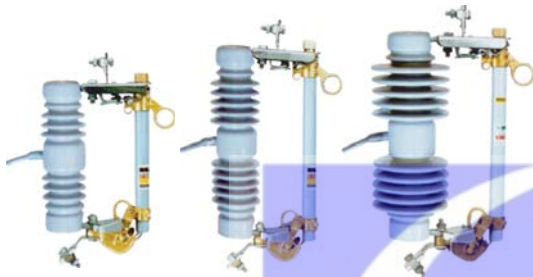
**Drop-out Fuse CFD Series**



Cat.No.	Rated Current/A	Breaking Current /A	Impulse Voltage /kV	Power-frequency Withstand Voltage/kV	Leakage Distance /mm	Weight /kg	Dimensions/cm
CFD 10kV-15kV	100/200	10000/12000	110	40	250	7.3	38.5×35×10.5
CFD 15kV-27kV	100/200	10000/12000	125	45	350	8.5	48×35×10.5
CFD 24kV-27kV	100/200	8000/10000	150	65	530	12	48×34.5×14
CFD 27kV-33kV	100/200	6000/8000	170	70	700	15	56×38×14.5
CFD 33kV-36kV	100/200	6000/8000	170	70	720	15.5	57×38.5×14.5
CFD 36kV-38kV	100/200	6000/8000	180	75	850	17	61×38.5×14.5

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**Drop-out Fuse CFE Series**

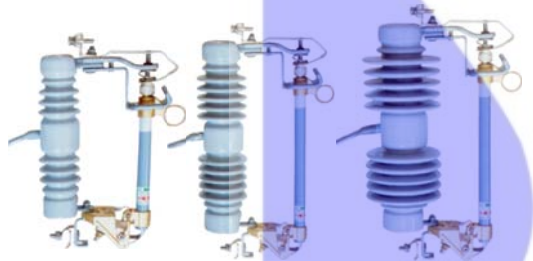


Cat. No.	Rated Current/A	Breaking Current/A	Impulse Voltage /kV	Power-frequency Withstand Voltage	Leakage Distance /mm	Weight /kg	Dimensions /cm
CFE 10KV-15kV	100/200	10000/12000	110	40	250	7.3	38.5X34.5X10.5
CFE 15KV-27kV	100/200	10000/12000	125	45	350	8.5	48X34.5X10.5
CFE 24KV-27kV	100/200	8000/10000	150	65	530	12	48X34.5X14

DROP-OUT FUSE

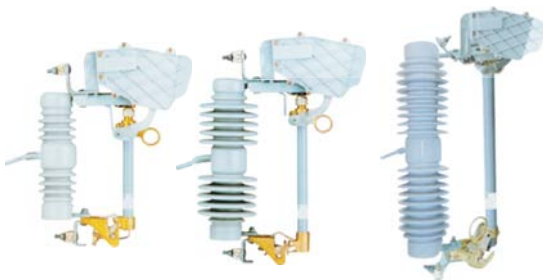


**Drop-out Fuse CFF Series**



Cat. No.	Rated Current/A	Breaking Current/A	Impulse Voltage /kV	Power-frequency Withstand Voltage	Leakage Distance /mm	Weight /kg	Dimensions /cm
CFF 15KV-27kV	100/200	10000/12000	125	45	350	8.5	48X34.5X10.5
CFF 24KV-27kV	100/200	8000/10000	150	65	530	12	48X34.5X14
CFF 24KV-27kV	100/200	8000/10000	150	65	530	12	48X34.5X14

**Drop-out Fuse CFG Series**



Cat.No.	Rated Current/A	Breaking Current /A	Impulse Voltage /kV	Power-frequency Withstand Voltage /kV	Leakage Distance /mm	Weight /kg
CFG 10kV-15kV A	100/200	10000/12000	110	40	230	7.5
CFG 10kV-15kV B	100/200	10000/12000	110	40	230	7.5
CFG 10kV-15kV C	100/200	10000/12000	110	40	230	7.5
CFG 15kV-27kV	100/200	8000/10000	125	45	350	9.4
CFG 24kV-27kV	100/200	6000/8000	150	65	530	12
CFG 36kV-38kV	100/200	6000/8000	180	75	850	17.5

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### Drop-out Fuse CFH Series

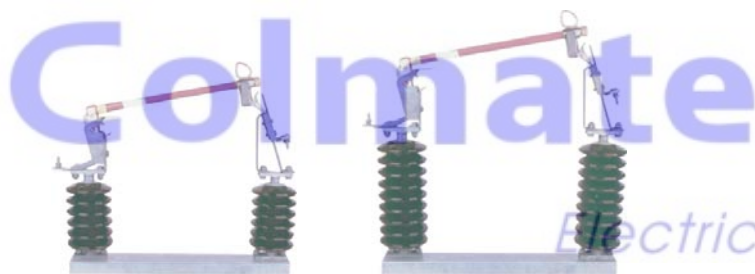


Cat. No.	Rated Current/A	Breaking Current/A	Impulse Voltage/kV	Power-frequency Withstand Voltage /kV	Leakage Distance/mm	Weight/kg	Dimensions/cm
CFH 10-15KV A	100/200	8000/10000	110	40	340	7.5	42X33X11.5
CFH 10-15KV B	100/200	8000/10000	110	40	340	7.5	49X27X11.5
CFH 10-15KV C	100/200	8000/10000	110	40	260	8.5	48.5X44X13.5
CFH 10-15KV D	100/200	8000/10000	110	40	250	9	38.5X34.5X10.5
CFH 10-15KV E	100/200	8000/10000	110	40	250	7.3	38.5X34.5X10.5
CFH 10-15KV F	100/200	8000/10000	110	40	530	12	51.5X51.5X13

DROP-OUT FUSE

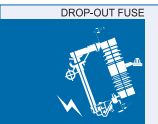


### Drop-out Fuse CFI Series



Cat. No.	Rated Current/A	Breaking Current/A	Impulse Voltage/kV	Power-frequency Withstand Voltage /kV	Leakage Distance/mm	Weight/kg	Dimensions/cm
CFI 27-33kV	100/200	6000/8000	170	70	480	23	56×38×14.5
CFI 33-36kV	100/200	6000/8000	170	70	530	23	57×38×14.5
CFI 36-38kV	100/200	6000/8000	180	75	820	27.5	61×38×14.5

**Drop-out Fuse With Polymer Insulator**



Cat. No.	Rated Voltage(kV)	Rated Current(A)	Breaking Current(A)	Impulse Voltage(kV)	Power Frequency Withstand Voltage(kV)	Creepage Distance (mm)	Weight (kgs)	Dimension (cm)
CFS-1A-12-380	12	100/200	8000/10000	110	40	380	3.7	41.5X37.5X10.5
CFS-1R-15-450	15	100/200	8000/10000	125	45	450	3.7	45X37.5X10
CFS-1A-24-540	24	100/200	8000/10000	150	65	540	4.0	50.5X38X10
CFS-1A-24-540	24	100/200	8000/10000	150	65	540	4.2	51.5X38X11.5

**Drop-out Fuse With Polymer Insulator**



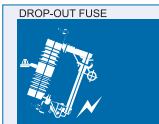
Cat. No.	Rated Voltage(kV)	Rated Current(A)	Breaking Current(A)	Impulse Voltage(kV)	Power Frequency Withstand Voltage(kV)	Creepage Distance (mm)	Weight (kgs)	Dimension (cm)
CFS-1R-27-600	27	100/200	8000/10000	150	65	600	4.0	53.5X37.5X10
CFS-1R-30-670	30	100/200	8000/10000	170	70	670	4.3	55.5X37.5X12.5
CFS-1A-33-740	33	100/200	8000/10000	170	70	740	4.4	61.5X38X11.5
CFS-1R-33-880	33	100/200	8000/10000	180	75	880	4.8	67.5X38X12.5



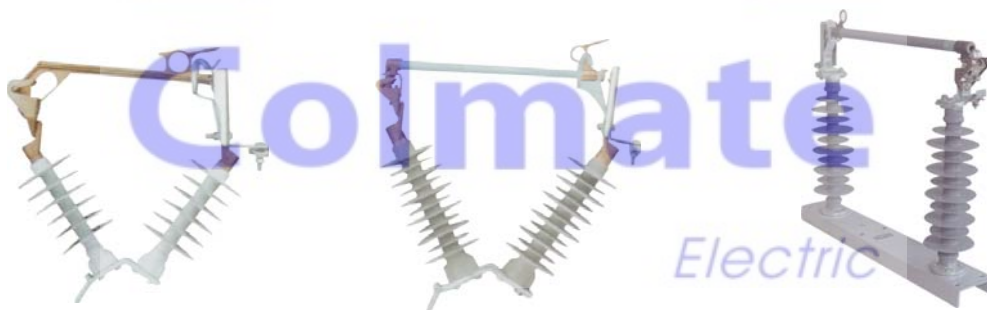
**Drop-out Fuse With Polymer Insulator**



Cat. No.	Rated Voltage(kV)	Rated Current(A)	Breaking Current(A)	Impulse Voltage(kV)	Power Frequency Withstand Voltage(kV)	Creepage Distance (mm)	Weight (kgs)	Dimension (cm)
CFS-2A-11-245	11	100/200	10000/12000	110	45	245	3.8	45X34X11.5
CFS-2A-11-350	11	100/200	10000/12000	110	45	350	4.3	41X38X13
CFS-2A-12-375	12	100/200	10000/12000	110	45	375	4.4	41X35X16
CFS-2A-24-540	24	100/200	10000/12000	150	65	540	4.5	51X34X11.5
CFS-2A-33-720	33	100/200	10000/12000	170	70	720	5	61X34X11.5
CFS-2A-33-900	33	100/200	10000/12000	170	70	900	6	61.5X35.5X17.5



**Drop-out Fuse With Polymer Insulator**



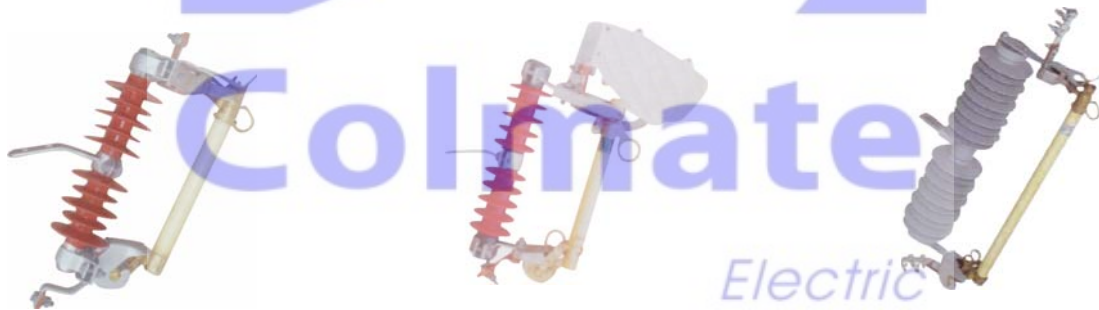
Cat. No.	Rated Voltage(kV)	Creepage Distance (mm)	Rated Current(A)	Breaking Current(A)	Impulse Voltage(kV)	Power Frequency Withstand Voltage(kV)
CFS-3R-24-540	24	540	100/200	6000/8000	170	70
CFS-3A-36-1130	36	1130	100/200	6000/8000	180	70
CFS-3A-36-1110	36	1110	100/200	6000/8000	180	70

### Drop-out Fuse With Polymer Insulator



Cat. No.	Rated Voltage(kV)	Rated Current(A)	Breaking Current(A)	Impulse Voltage(kV)	Power Frequency Withstand Voltage(kV)	Creepage Distance (mm)	Weight (kgs)	Dimension (cm)
CFS-4R-15-350	15	100/200	10000/12000	125	45	350	8.5	38.5x34.5x10.5
CFS-5A-24-450	24	100/200	10000/12000	150	65	450~540	12	49x35x14
CFS-6A-24-450	24	100/200	10000/12000	150	65	450~540	12	45x34.5x10

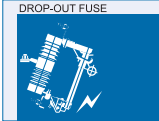
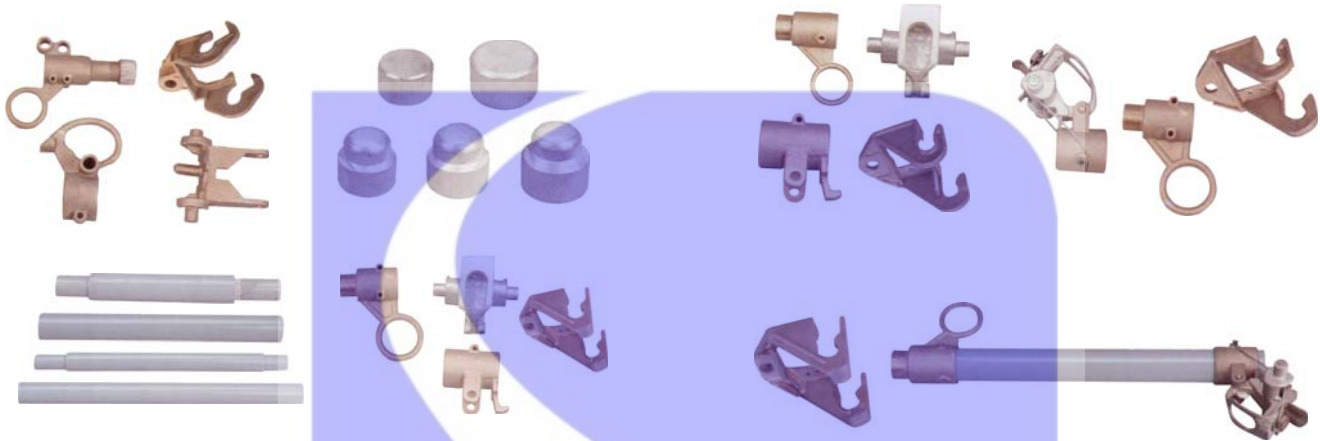
### Drop-out Fuse With Polymer Insulator



Cat. No.	Rated Voltage(kV)	Rated Current(A)	Breaking Current(A)	Impulse Voltage(kV)	Power Frequency Withstand Voltage(kV)	Creepage Distance (mm)	Weight (kgs)	Dimension (cm)
CFS-7A-12-350	12	100/200	6300/8000	100/110	42	350	3.8	48x15x31
CFS-8R-12-350	12	100/200	6300/8000	110	42	350	3.8	42x35x11
CFS-9A-33-870	35	100/200	6300/8000	170	70	870	16	90x40x13



**Metal Fittings For Drop-Out Fuse**



Attachment hooks, Lower contacts, Sturdy ferrules, Upper contacts

**Portable Loadbreak Tool with Loadbuster(Hook stick)**



Application: *Electric*

Loadbreak tool is one kind of circuit breaking tool used for cutout fuse, Isolating switch in the power system & equipment with rated voltage ≤ 34.5kV and with Max. rated Amperpage of 900A

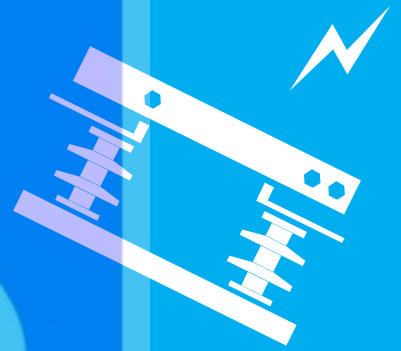
Key Feature:

- Flexible tool with easy operation;
- Economical investment by act as an cutout device;
- Minimize the maintenance & circuit cutout time

## ISOLATE SWITCH

### Application & Key Feature

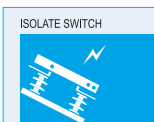
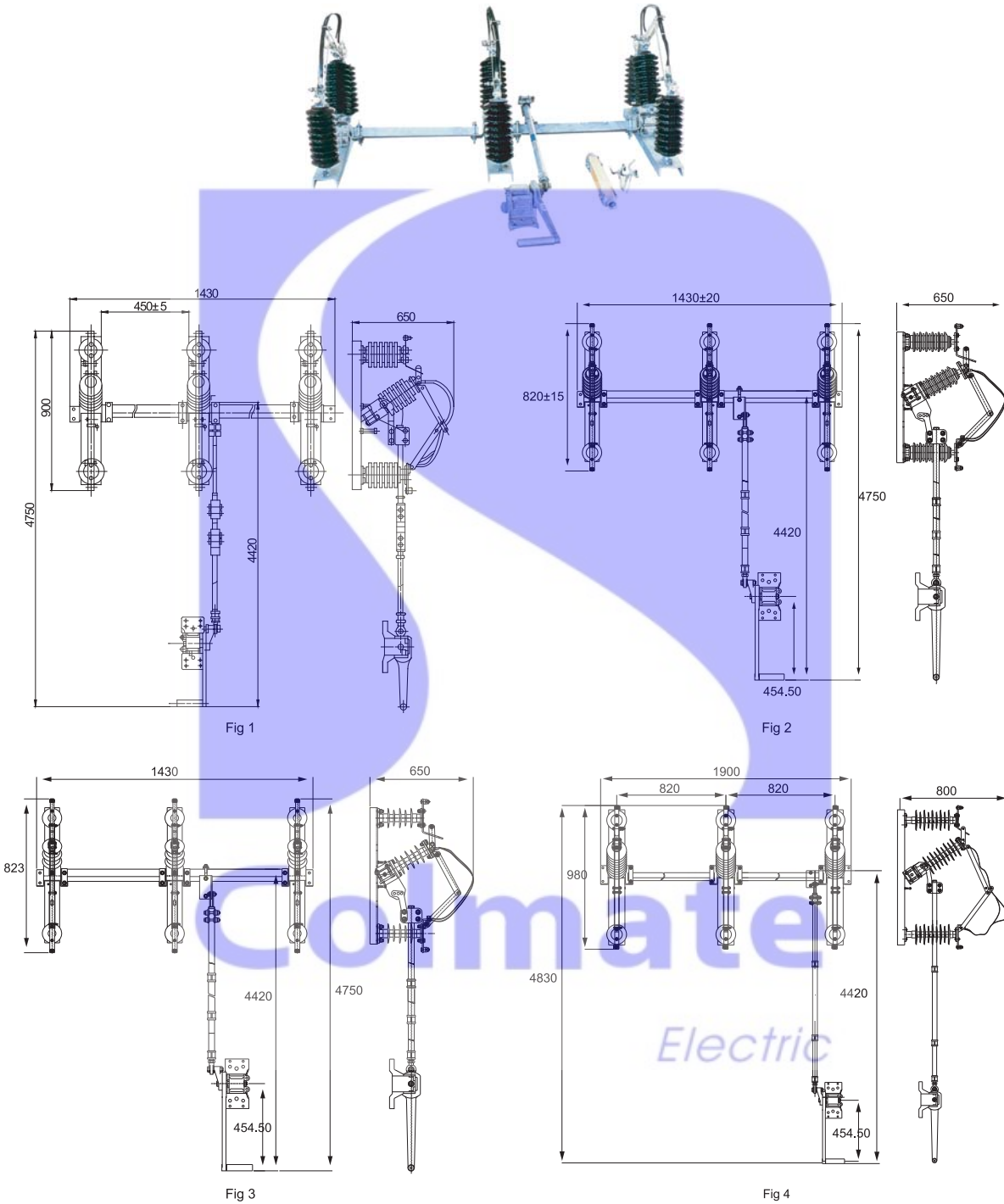
- High voltage switch equipment of single phase AC50Hz suitable for power system to make or break power supply under circumstances of with volotage but without loading
- Isolated hook rod is required for operating



# Colmate

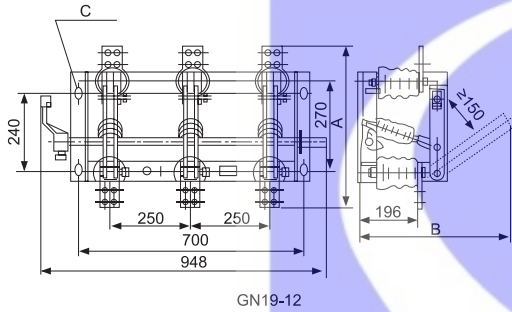
*Electric*

**Isolating Switch ( Gang Insulator) RH Series**

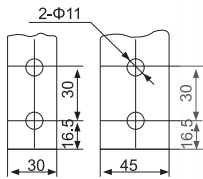


Cat. No.	Fig.No.	Rated Voltage (kV)	Rated Current(A)	Min Creepage Distance(mm)	4S Heat Steady E.C (A)	Shock Voltage (A)	Impulse Withstand Voltage (kV)	Power Frequency Withstand Voltage (kV)	Material (Housing)
RH-11/P	1	11	400	430	12500	31500	95	42	Porcelain
RH-33/P	2	33	600	990	12500	31500	195	80	Porcelain
RH-11/S	3	11	400	430	12500	31500	95	42	Silicon Rubber
RH-33/S	4	33	600	1120	12500	31500	195	80	Silicon Rubber

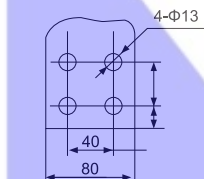
**H.V Disconnecting Switch GN19-12C(D)**



GN19-12



GN19-12(C)/400



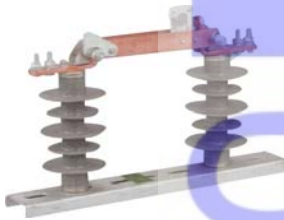
GN19-12(C) 1000  
1250

Cat. No.	Rated Voltage (kV)	Rated Current(A)	Rated Short Time Withstand Current(kA)	Rated Peak Withstand Current(kA)
GN19-12/400-125	12	400	12.5	31.5
GN19-12/630-20	12	630	20	50
GN19-12/1000-31.5	12	1000	31.5	80
GN19-12/1250-31.5	12	1250	31.5	80
GN19-12C/400-12.5	12	400	12.5	31.5
GN19-12C/630-20	12	630	20	50
GN19-12C/1000-31.5	12	1000	31.5	80
GN19-12C/1250-31.5	12	1250	31.5	80

ISOLATE SWITCH

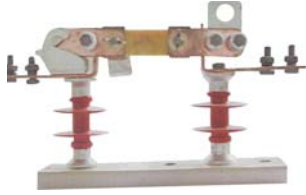


**12kV Disconnecting Switch**



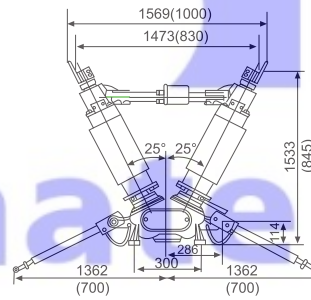
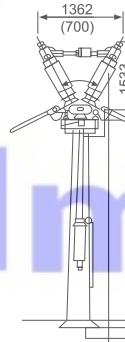
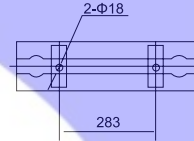
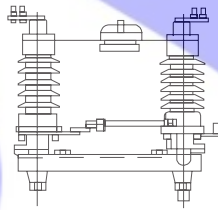
Cat. No.	Rated Voltage (kV)	Rated Current(A)	Withstand Current(kA)		10S Heat Steady Current(kA)
			Peak	Relative	
HGW9-12W/200	12	200	5	9	5
HGW9-12W/400	12	400	21	15	10
HGW9-12W/630	12	630	35	25	14
GW9-12W/200	12	200	5	9	5
GW9-12W/400	12	400	21	15	10
GW9-12W/630	12	630	35	25	14
GW9-12w/200	12	200	5	9	5
GW9-12w/400	12	400	21	15	10
GW9-12w/630	12	630	35	25	14

**0.5kV/15kV Disconnecting Switch**



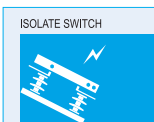
Cat. No.	Rated Voltage (kV)	Rated Current(A)	Impulse Withstand Voltage		Power-frequency Withstand Voltage	
			To earth	Across the isolating distance (kV)	To earth(kV)	Across the isolating distance(kV)
GW9-15G/400	15	400	75	85	38	42
GW9-15G/630	15	630	75	85	38	42
JW2-0.5/200	0.5	200	5	9	5	-
JW2-0.5/400	0.5	400	21	15	10	-
JW2-0.5/630	0.5	630	35	25	14	-

**Disconnecting Switch GW Series**



**Remark:**

- The voltage grades for dimensions in the brackets is 40.5kV
- The installation dimensions are detailed in the installation and application manual of the product



Type	Cat. No.	Rated Voltage(kV)	Rated Current(A)	Disconnecting Switch		Earthing Switch		Earthing Switch
				Rated peak withstand current(kA)	Rated short time withstand current(kA)	Rated peak withstand current(kA)	Rated short time withstand current(kA)	
General Type (Pollution Resistance Type)	GW4	12	400-1000	50	20(4s)	50 80	20 (4s) 31.5(4s)	Without earthing, single earthing, dual earthing
		17.5	400-630	80	31.5(4s)			
		40.5	400-1250	80	31.5(4s)			
General Type (Pollution Resistance Type)	GW5-69D(W)	40.5	630	50	20(4s)	50 80	20 (4s) 31.5(4s)	Without earthing, single earthing, dual earthing
		69	1000	80	31.5(4s)			
		126	1250	80	31.5(4s)			
		1600/2000						

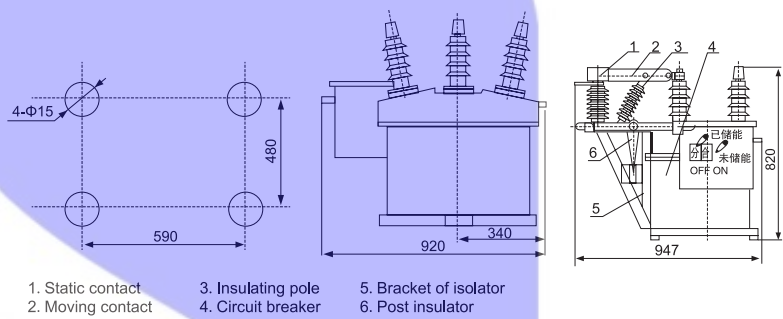
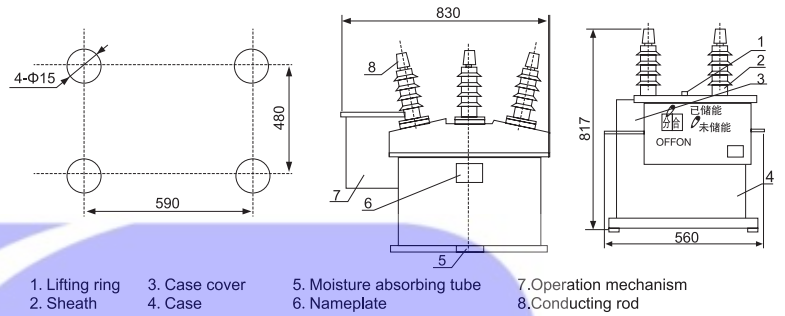
**Outdoor H.V Vacuum Circuit Breaker**



ZW8-12



ZW8-12G



**Application:**

- Three phase outdoor high voltage AC Switch device;
- Used to connect or break the load current, overload current and short circuit current in 12KV,50Hz power system like substation,industry,mining,urban and rural electricity power networks;
- In comply with IEC6227-100,IEC60694,GB1984,GB/T11022
- Composed of ZW8-12 breaker and isolator used as section switch;
- May be operated automatically or manually.

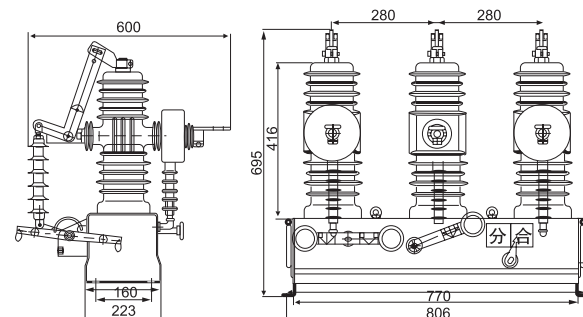
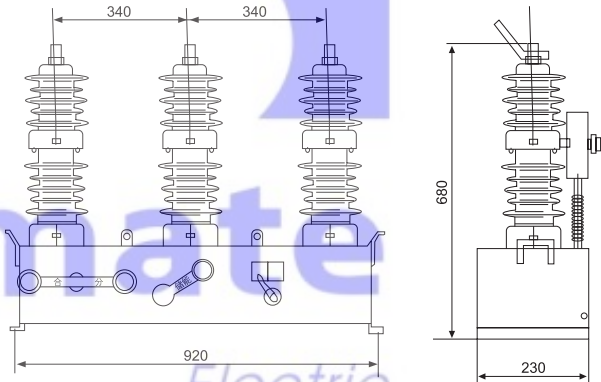
**Outdoor H.V Vacuum Circuit Breaker**



ZW32-12



ZW32-12B



**Application:**

- Three phase outdoor high voltage AC Switch device;
- used to connect or break the overload current and short circuit current in 10-12 KV AC system like substation,distribution system in industrial mining establishment, or rural grid which needs frequent operation;
- Could be remotely controlled In comply with IEC62271-100,IEC60694.