

XIKAI

Ring main unit product catalogue

Protect and control power distribution systems



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World Bridge of Power System,
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XIYA

Key Of Power Electric Professional

- Ring Main Unit
- Load switch
- Vacuum circuit breaker
- Grounding switch
- Gas-Filled Cabinet
- Insulating components
- Auxiliary equipment
- Switch cabinet accessories

XIKAI

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Indoor AC high voltage sulfur hexafluoride load switch

FLN36-12D Indoor AC high voltage sulfur hexafluoride load switch

Product Overview

The FL(R)N36-12D indoor high-voltage SF₆ load switch is an indoor switchgear with a rated voltage of 12KV. It uses SF₆ gas as the arc-extinguishing and insulating medium and includes three positions: closing, opening and grounding. It features a compact size, convenient installation and use, and strong adaptability to the environment.

The FL(R)N36-12D indoor high-voltage SF₆ load switch can be combined with other electrical components to achieve control and protection functions. It can be used for the control and protection of electrical equipment in industrial and mining enterprises, civil power supply and secondary substations. Among them, the load switch-fuse combination electrical appliance is matched with the protection characteristics of the transformer and is especially suitable for ring network power supply units.

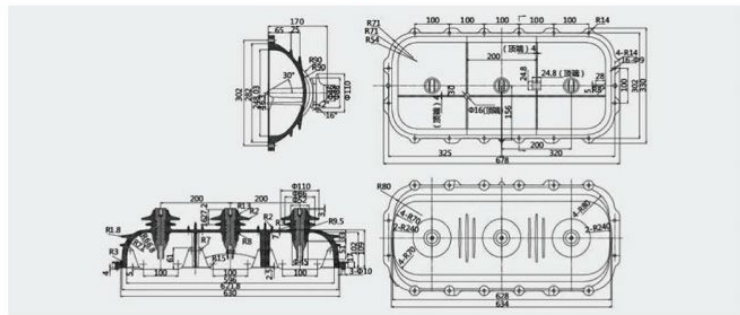
FLN36-12D/630-20 type indoor high-voltage SF₆ load break switch (hereinafter referred to as load switch) and FL(R)N36-12D/100-50 type combined apparatus (hereinafter referred to as combined apparatus) comply with the Chinese National Standards GB3804 《3-63KV AC High-Voltage Load Switches》(EQVIEC 60265-1) and GB16926 《AC High-Voltage Load Switch-Fuse Combined Apparatus》(EQVIEC 420).



Operating environment

- Altitude: The maximum altitude at which the equipment can be installed is 1000 meters.
- Ambient air temperature: upper limit +40°C, lower limit -15°C;
- Environmental humidity: The daily average relative humidity should not exceed 95%, and the monthly average relative humidity should not exceed 90%.
- Earthquake: The intensity of the earthquake does not exceed 8 degrees.
- The surrounding air should not be significantly contaminated by corrosive or flammable gases, water vapor, etc., and there should be no frequent severe vibrations.

Outline dimensional drawing



Indoor AC high voltage sulfur hexafluoride load switch

FLN36-12D Indoor AC high voltage sulfur hexafluoride load switch

Model numbers and their meanings

F	L	(R)	N	36	12	D /	T	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
① Load switch	② Sulfur hexafluoride	③ With fuse	④ Inside the house	⑤ Design Number	⑥ Rated voltage	⑦ With grounding switch	⑧ Spring-operated mechanism	⑨ Rated current	⑩ Rated short-circuit withstand current

Technical Specifications

Project		Unit		Parameters	
				FLN36-12D/T630-20	FLN36-12D/100-50
Rated voltage		kA		12	
Rated frequency		Hz		50	
Rated current		A		630	100
Rated insulation level	1-minute power frequency withstand voltage			Contact,interlaced 42 fracture 48	
	Electrical impulse withstand voltage (peak value)	kA		Contact,interlaced 75 fracture,85 section	
	Zero gauge pressure rated withstand voltage			12	
Rated thermal stability voltage (35)		kA		20	
Rated steady-state current		kA		50	
Rated short-circuit closing voltage		A		125	
Rated closed-loop starting current		A		630	
Rated active load breaking current		A		630	
Rated cable charging breaking current		A		10	
Rated short-circuit breaking current		KA		50	
Rated transfer current		A		1700	
Fuse type				SKLDJ-12KV/100A*	
Impact energy output		J		140.5	
Rated thermal stability current of the grounding switch (3 seconds)		kA		20	
Rated breaking capacity of the grounding switch (peak value)for 2 seconds		kA		50	
Rated breaking capacity of the grounding switch		kA		50	
Mechanical lifespan	Load switch	time	3000		
	Grounding switch	time	2000		
The air insulation distance between charged bodies and to the ground		mm	>125		
SF ₆ gas pressure(at 20℃ absolute pressure)		Mpa	0.05		
Annual leakage rate			<1%		
Interval between opening and closing operations		ms	<3		
Loop resistance		μQ	<65		
Manual operation maximum moment		N.m	85		
Rated operating voltage		V	AC110 DC48 AC220		

Indoor AC high voltage sulfur hexafluoride load switch

FLN36-24D Indoor AC high voltage sulfur hexafluoride load switch



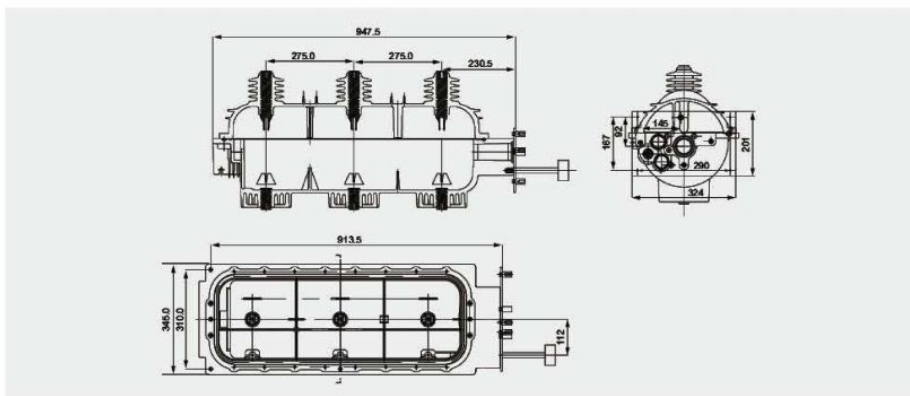
Product Overview

The FLN36-24D indoor AC high-voltage sulfur hexafluoride load switch is suitable for three-phase AC 50Hz, rated voltage 12kV ring network power supply or double radiation power supply systems. It is used for closing and opening load current and overload current, and can also be used to close and open no-load long lines, no-load transformers and capacitor banks, etc. The series combination of the load switch and the current-limiting fuse can replace the circuit breaker. That is, the load switch is responsible for closing and opening various load currents, while the current-limiting fuse is responsible for opening large overload currents and short-circuit currents.

Operating environment

- The altitude does not exceed 1000 meters.
- Ambient air temperature: Upper limit +40°C, lower limit -25°C;
- Relative humidity: Daily average does not exceed 95%, monthly average does not exceed 90%.
- The surrounding air is not significantly contaminated by corrosive gases, flammable gases, or water vapor.
- There is no frequent severe vibration.

Outline dimensional drawing



Indoor AC high voltage sulfur hexafluoride load switch

FLN36-24D Indoor AC high voltage sulfur hexafluoride load switch

Model numbers and their meanings

FL	N	36	24	D	T	630	20
①	②	③	④	⑤	⑥	⑦	⑧

- | | |
|-----------------------------------|---|
| ① Sulfur hexafluoride load switch | ⑤ With grounding switch |
| ② Inside the house | ⑥ Spring operating mechanism |
| ③ Design Number | ⑦ Rated current |
| ④ Rated voltage | ⑧ Rated short-time withstand current (kA) |

Technical Specifications

Serial Number	Project Name	Unit	Parameters	
1	Rated voltage	kV	24	
2	Main circuit lightning impulse withstand voltage (same, earth-relative / between contacts) (peak value)	kV	125	145
	Main circuit 1-minute power frequency withstand voltage (Identical, relative to / Between fracture surfaces) (Peak value)	kV	65	79
	Auxiliary circuit 1-minute power frequency withstand voltage	kV		
3	Rated current	A	630	
4	Transfer current	A	870	
5	Rated short-circuit closing current (peak value)	kA	50	
6	Rated short-circuit withstand current	kA	20	
7	Rated short-circuit duration	S	3	
8	Rated peak withstand current (peak)	kA	50	50
9	Grounding switch closing current (peak value)	kA	20	
10	Peak withstand current (peak) of grounding switch	kA	50	
11	Mechanical life of the load switch	This OPS	3000	
12	Mechanical life of the grounding switch	This OPS	2000	
13	Arc-extinguishing chamber rated pressure (at 20°C)	bar	1.45	

Indoor AC high voltage sulfur hexafluoride load switch

FLN36-40.5D Indoor AC high voltage sulfur hexafluoride load switch



Product Overview

FLN36-40.5D, FLRN36-40.5D type indoor AC high voltage sulfur hexafluoride load switch, load switch-fuse combination apparatus, and load switch capable of mounting cable heads are developed by our company through digesting and absorbing foreign advanced technology, combined with China's operational requirements, and independently designed and developed. The product has undergone comprehensive type tests, and its performance meets the requirements of GB3804 "AC High Voltage Load Switches for 3-63kV", GB16926 "High Voltage Load Switch-Fuse Combination Apparatus", IEC60265, and IEC60420 standards.

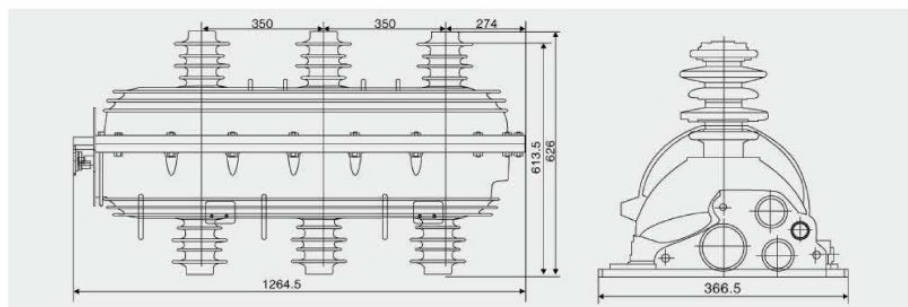
The product features a "make-break-earth" three-position arc-extinguishing chamber, reliable interlocking, high insulation strength at the break, large creepage distance design, and the outlet end protected by an equalizing protective cover. The load switch capable of mounting cable heads has its outlet end equipped with a touchable cable front connector, incoming and outgoing lines installed with high-voltage cables, and is used in cable branch (junction) boxes. The switch has a special dynamic sealing and fixed sealing design, reliable sealing, and is equipped with a pressure gauge in a conspicuous position for monitoring during operation, ensuring operational safety. It is a new generation of high-voltage switchgear equipment for urban power grids.

This product is applicable to three-phase AC power systems with a voltage of 10kV and a frequency of 50Hz. It is used in industrial and mining enterprises, high-rise buildings, urban residential areas, distribution substations, large shopping malls, airports, subways, hospitals and other places to open and close the load current and fault current, and to control and protect the lines and distribution transformers.

Operating environment

- Ambient temperature range: -25°C to +40°C.
- Altitude: No more than 2000 meters
- Humidity conditions: The average relative humidity does not exceed 95%, the average monthly relative humidity does not exceed 90%, and the average daily water vapor pressure does not exceed 2.2 kPa, and the average monthly water vapor pressure does not exceed 1.8 kPa.
- The surrounding air was not significantly contaminated by dust, smoke, corrosive and/or flammable gases, vapors or salt fog.
- Vibrations from outside the switchgear and control equipment, as well as ground motions, can be disregarded. The amplitude of electromagnetic interference sensed in the secondary system does not exceed 1.6 kV.

Outline dimensional drawing



Indoor AC high voltage sulfur hexafluoride load switch

FLN36-40.5D Indoor AC high voltage sulfur hexafluoride load switch

Model numbers and their meanings

FL	N	36	-	40.5	D	/	T	-	630	-	20
①	②	③		④	⑤		⑥		⑦		⑧

- | | |
|-----------------------------------|---|
| ① Sulfur hexafluoride load switch | ⑤ With grounding switch |
| ② Inside the house | ⑥ Spring operating mechanism |
| ③ Design Number | ⑦ Rated current |
| ④ Rated voltage | ⑧ Rated short-time withstand current (kA) |

Technical Specifications

Serial Number	Project Name	Unit	Data	
			FLN36-40.5D	FLRN36-40.5D
1	Rated voltage	kV	35	35
2	Rated frequency	Hz	50	50
3	Rated current	A	630	125
4	Rated short-time withstand current / Rated short-circuit duration of the load switch	kA/s	20-3	
	Rated short-time withstand current / Rated short-circuit duration of the grounding switch	kA/s	20-2	
5	Rated peak withstand current and rated short-circuit breaking current	kA	50	125(Expected)
6	Conductive load breaking current	A	630	
	Closed-loop breaking current	A	630	-
	5% rated active load breaking current	A	31.5	
	Cut off the charging current of the cable	A	10	
	Disconnecting the no-load transformer capacity	kVA	125	1250
	Breakdown transfer current	A		1700
7	Expected short-circuit breaking current	kA		50
	1min power frequency withstand voltage between phases, to ground / at break point	kV	42/48	42/48
7	Voltage withstand capability against lightning strikes between phases, with respect to ground / at the break point	kV	75/85	75/85
8	Main circuit, grounding circuit mechanical life		3000/2000	200/2000
9	SF ₆ rated pressure (gauge pressure at 20°C)	MPa	0.04~0.05	0.04~0.05

Indoor AC high voltage sulfur hexafluoride load switch

Spring-operated mechanism



Product Overview

The LGCT type spring operating mechanism is suitable for FLRN36-12D/T100-31.5 and FLN36-12D/630-20 types of indoor high-voltage SF₆ load switches and indoor 12kV switches. This series of mechanisms is made based on the principle of compression spring release. Its working positions include closing, opening and grounding. It has the characteristics of moderate size, convenient installation and use, and strong applicability. It has the function of breaking the fuse and tripping, and can be equipped with a deenergizing relay coil.

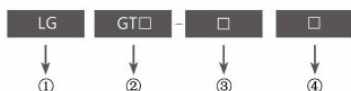
This institution complies with the relevant technical requirements of GB3804-1990 "3-63kV AC High-Voltage Load Switch" and GB16926-1997 "AC High-Voltage Load Switch - Fuse Combination Electrical Apparatus".

Main purpose

The FLN3611-12D-T630-25 indoor high-voltage AC sulfur hexafluoride load switch and the FLRN3611-12D/T100-31.5 indoor high-voltage AC sulfur hexafluoride load switch fuse combination electrical apparatus are applicable in power stations and industrial electrical equipment for 50Hz AC ring network or terminal power supply, and are used as protection for load control lines in 10kV power systems. The load switch can open and close load current, loop current, no-load transformer and cable charging current; the combination electrical apparatus can open any current up to the rated short-circuit breaking current, and is suitable for ring network units, box-type substations and other electrical complete sets of equipment.

It is particularly suitable for power distribution in urban residential areas, small secondary substations, switch stations, industrial and mining enterprises, large shopping malls, airports, subways, hospitals, stadiums, etc.

Model numbers and their meanings



- ① product code
- ② Spring operating mechanism
- ③ Operation mode: S - Manual D - Electric
- ④ Usage method: J connection switch (FIN36-12D) - C output switch (FIRN36-12D)

Indoor AC high voltage sulfur hexafluoride load switch

Spring-operated mechanism

CT-□J(K-type) spring-operated mechanism

1.Manual incoming spring operating mechanism
Model: LGCT-SJ (Type K)



2.Electric incoming line spring operating mechanism
Model: LGCT-DJ (Type K)



Note: If the user wishes to order the in-line electric part of this institution separately, please proceed accordingly.

Operating Procedures

Closing operation of the load switch

Insert the operating handle into the closing operation shaft hole (lower right corner) and turn it clockwise by 180°. The mechanism will drive the contacts to perform the closing operation of the load switch quickly.

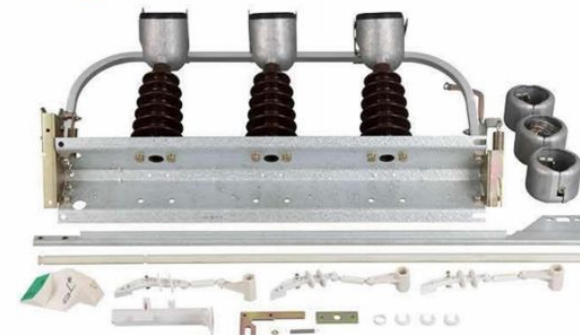
The opening operation of the load switch

Turn the control handle counterclockwise by 180 degrees, and the operation will be completed.

Grounding operation of load switch

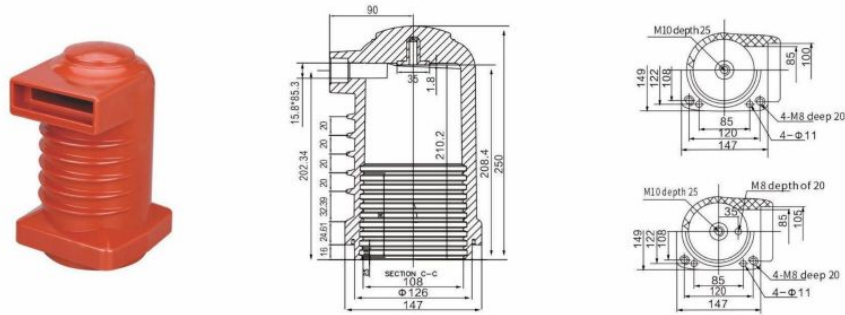
Insert the grounding operation shaft hole (in the upper right corner) of the operation item into the device and rotate it clockwise by 180°. The mechanism will drive the contactor to perform the rapid grounding closing operation. The opening operation of the grounding switch only requires inserting the operation handle into the grounding operation shaft and rotating it counterclockwise by 180° to complete the operation.

SF₆ switch grounding device

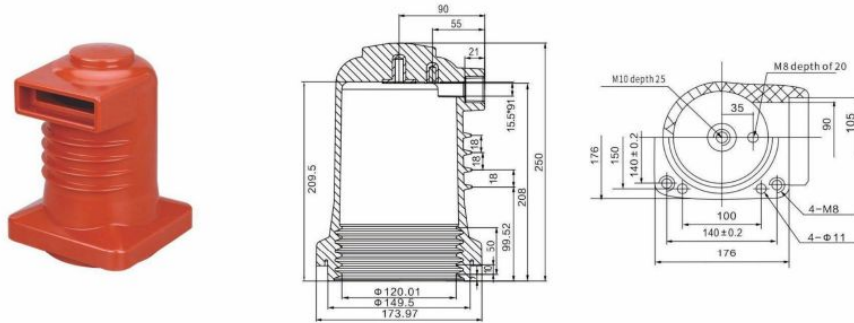


H.V-Switchgear insulation

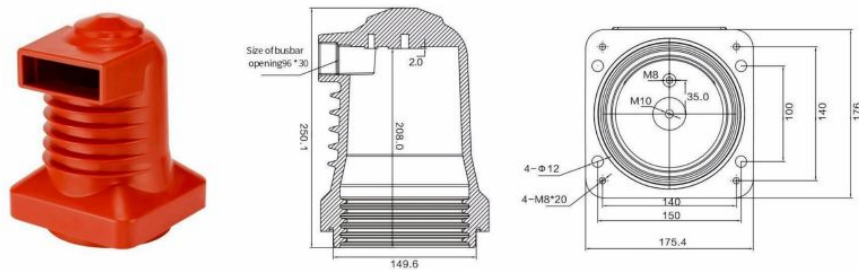
Contact box series



CH3-12kV/150 contact box 630~1250A



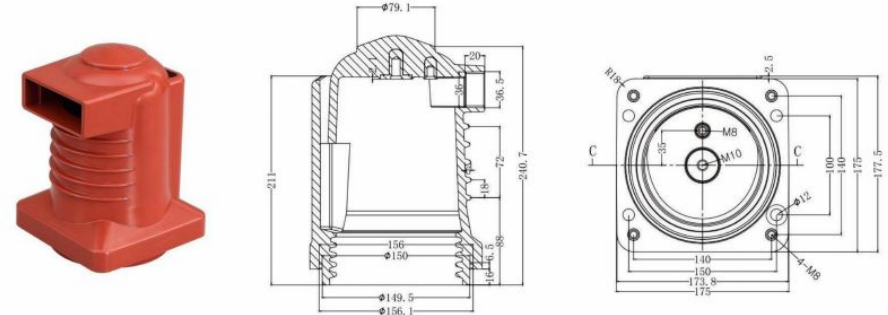
CH3-12kV/180 contact box 1250A



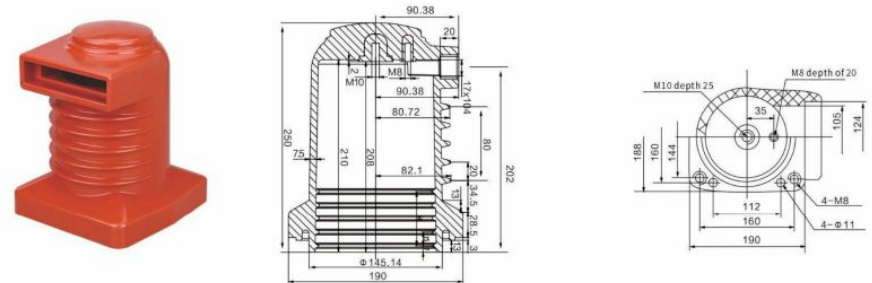
CH3-12kV/180 contact box 1250A (large mouth)

H.V-Switchgear insulation

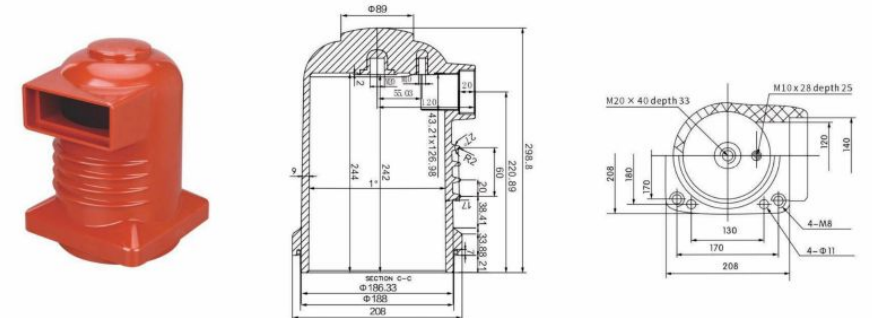
Contact box series



CH3-12kV/180 vent contact box

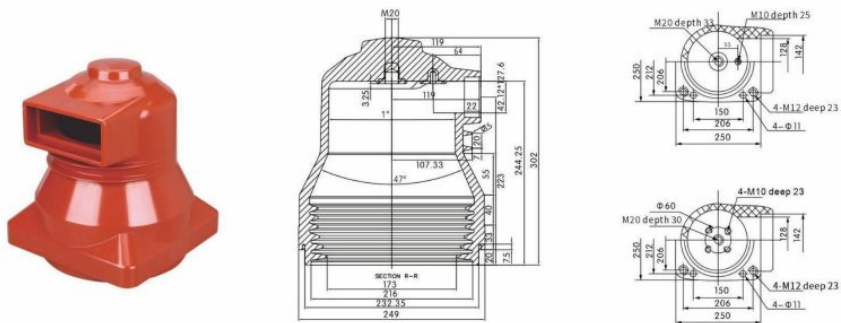


CH3-12kV/190 contact box 1600A

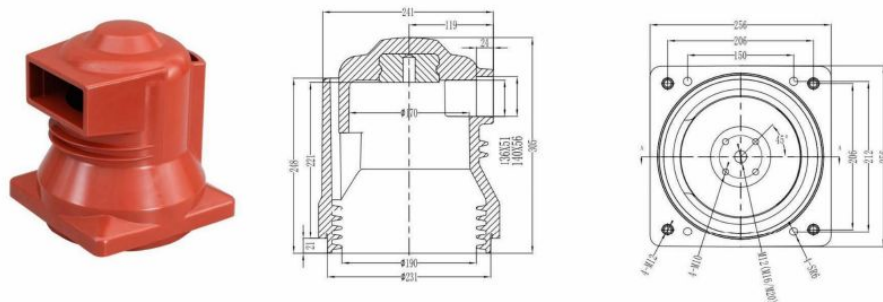


CH3-12kV/208 contact box 1600-2000A

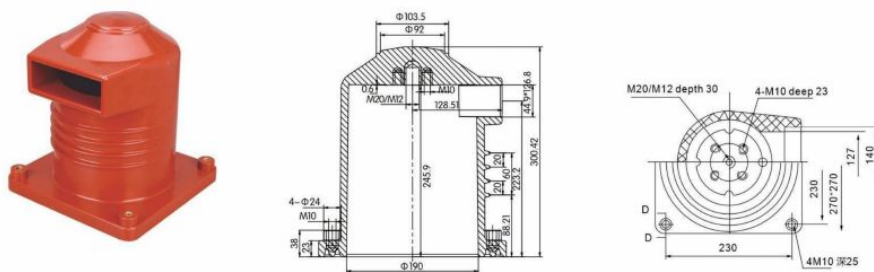
H.V-Switchgear insulation



CH3-12kV/250 contact box 2500-3150A



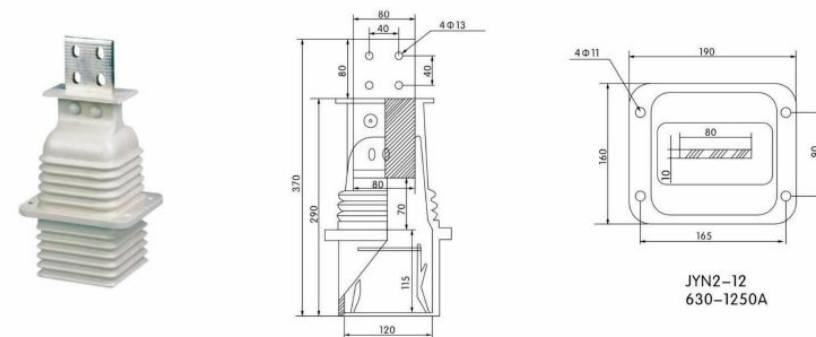
CH3-12kV/250 vent contact box



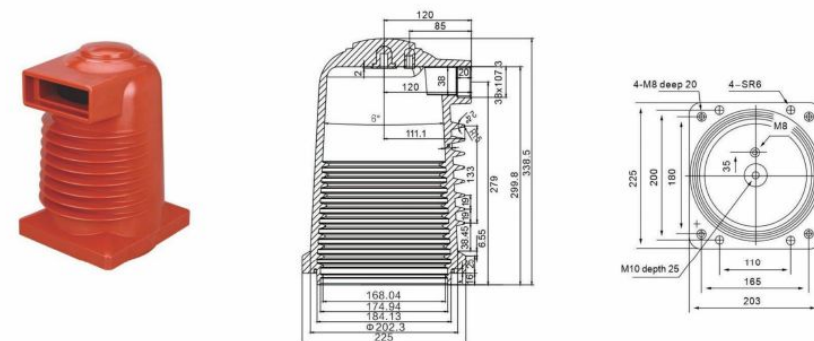
CH3-12kV/270 contact box 4000A

H.V-Switchgear insulation

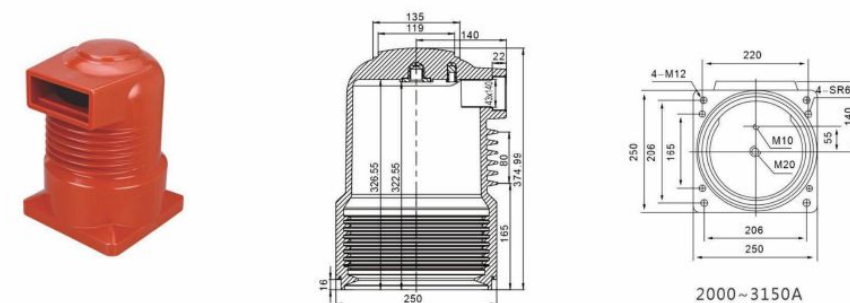
Contact box series



JYN2-12kV/Contact box 630-1250A



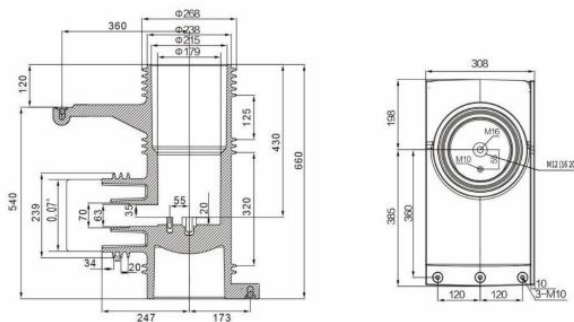
CH3-24kV/225 contact box 630-1600A



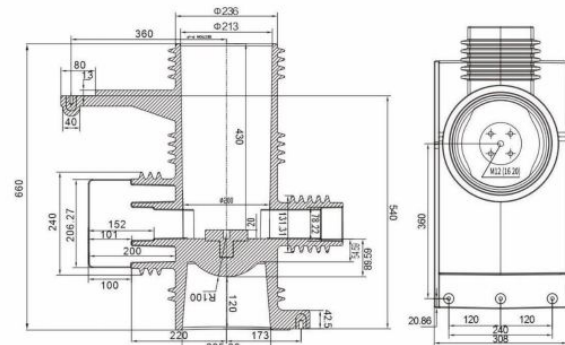
CH3-24kV/250 contact box 2000-4000A

H.V-Switchgear insulation

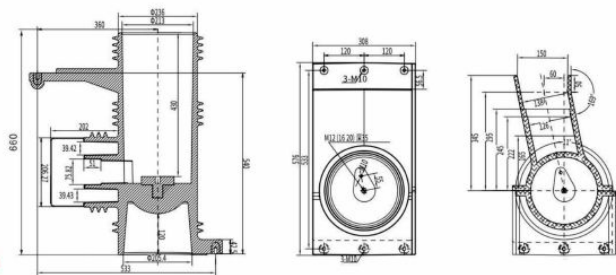
Contact box series



CH3-40.5kV/660 (improved) contact box (two-way)



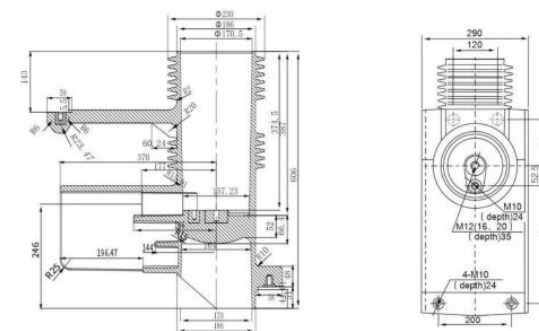
CH3-40.5kV/660 (improved) contact box (tee)



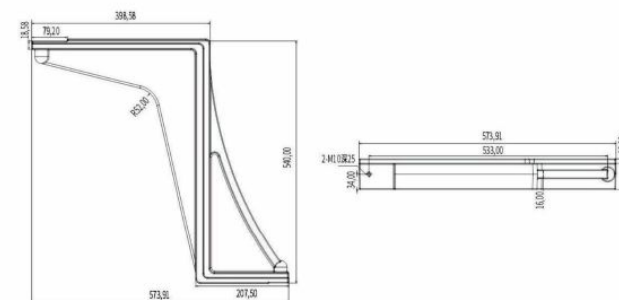
Contact box skewed left to right

H.V-Switchgear insulation

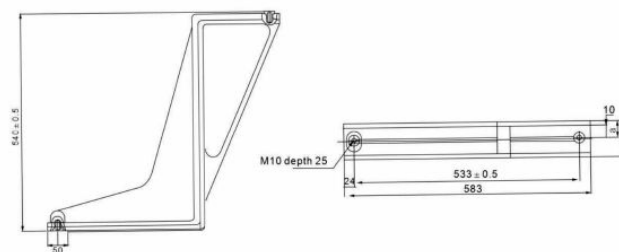
Baffle plate series



CH3-40.5kV ABB contact box



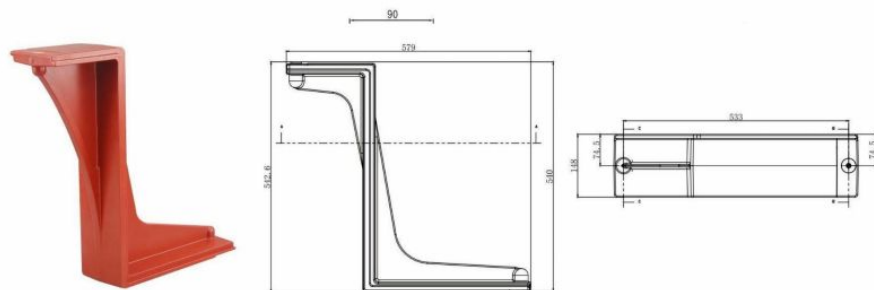
WB1-40.5kV/68 Baffle plate



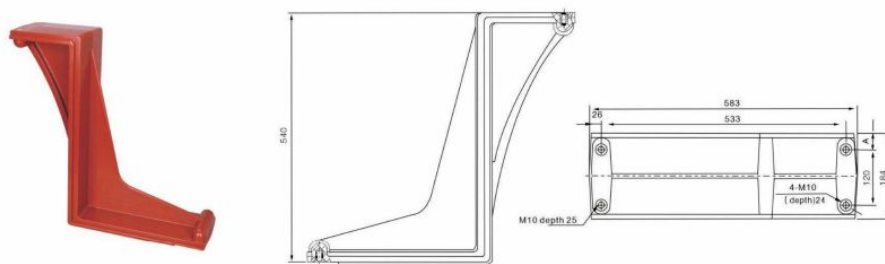
WB1-40.5kV/85Baffle plate

H.V-Switchgear insulation

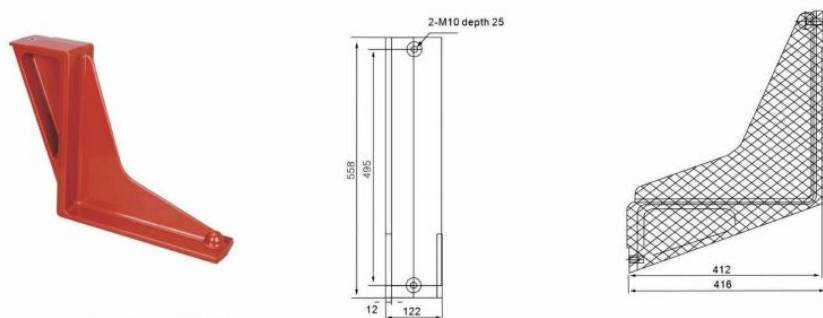
Baffle plate series



Baffle plate 150



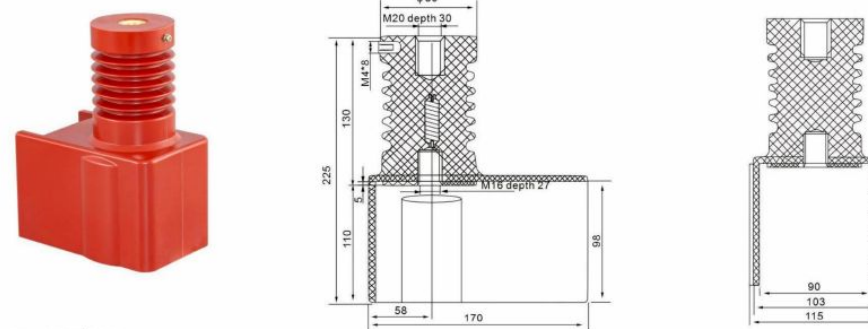
WB2-40.5kV/184 Baffle plate



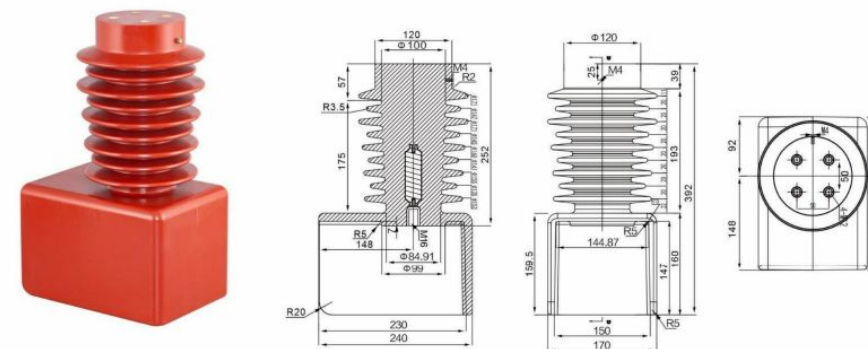
WB-40.5kV ABB Baffle plate

H.V-Switchgear insulation

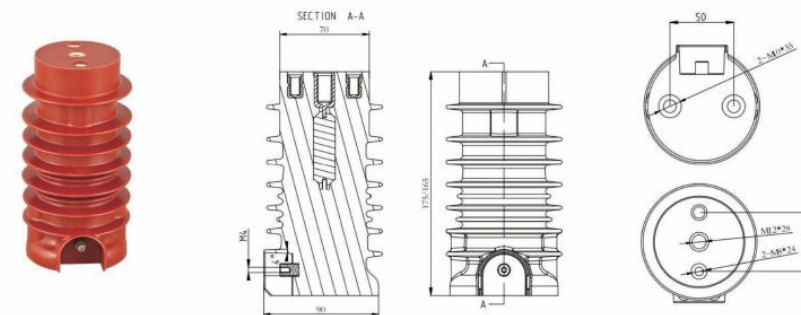
Sensor Series



CG5-12kV Sensor



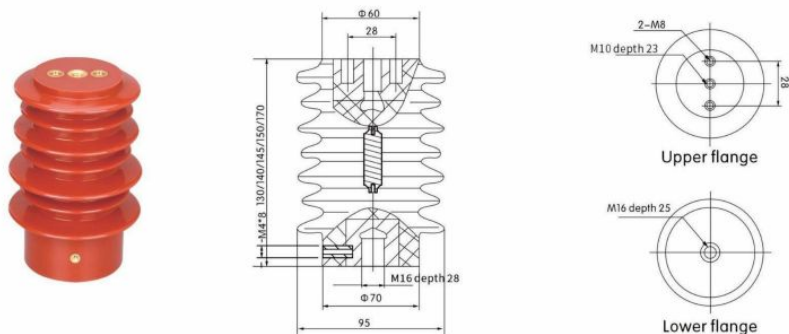
CG5-35kV Sensor



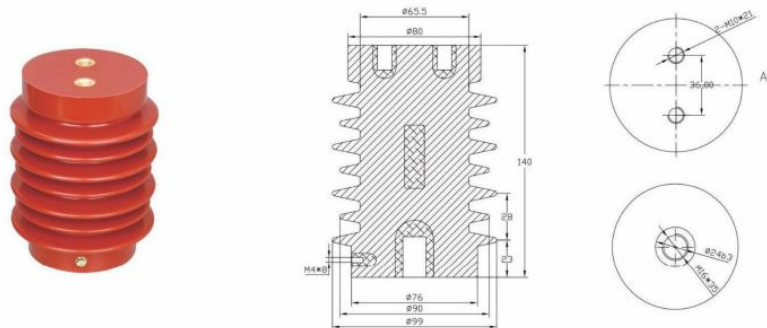
CG5-17.5 kV/90x165~175 Sensor

H.V-Switchgear insulation

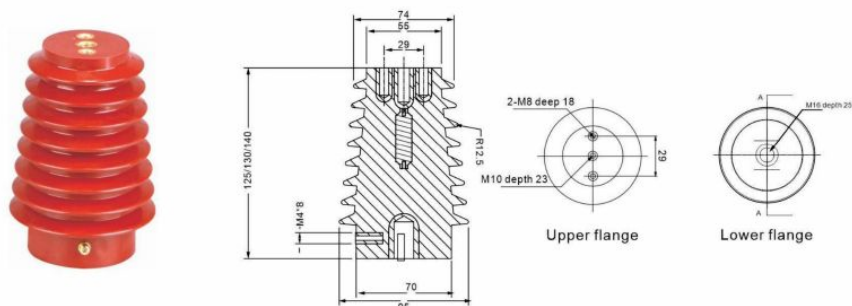
Sensor Series



CG5-12kV/95 × 130~140~145~150~170 Sensor

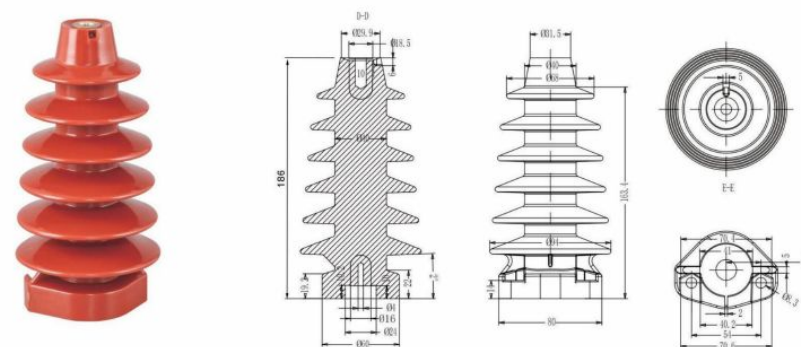


CG5-12kV/100 × 140-150 Sensor

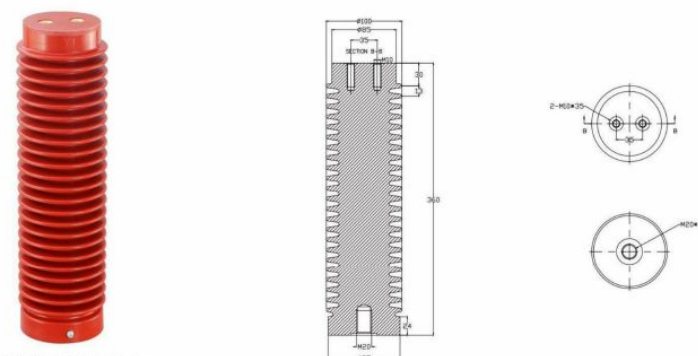


CG5-12kV/100 × 125~130~140 Sensor

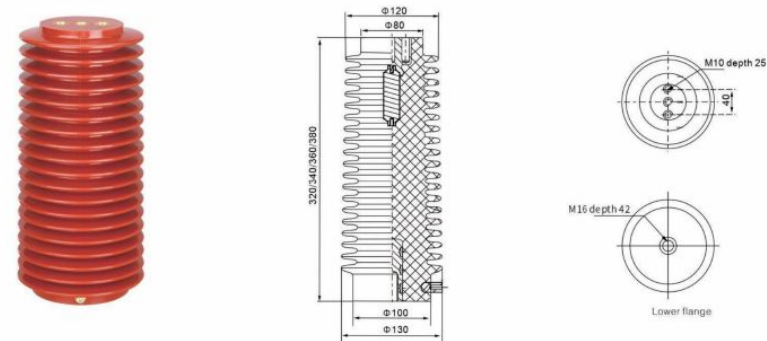
H.V-Switchgear insulation



CG5-24kV/94x186 Sensor



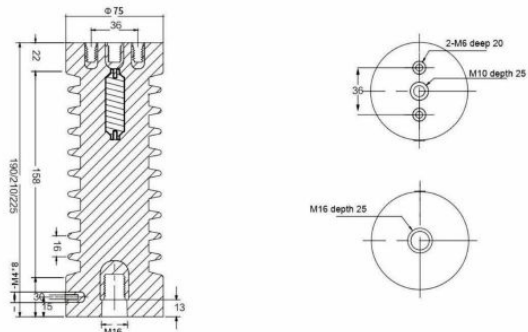
CG5-40.5kV/100 * 360 Sensor



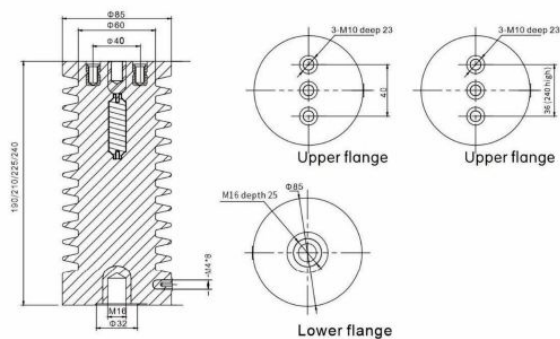
CG5-40.5kV/130x320-340-360-380 Sensor

H.V-Switchgear insulation

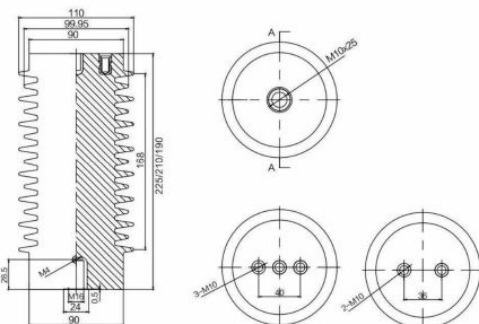
Sensor Series



CG5-24kV/75 × 190~210~225 Sensor

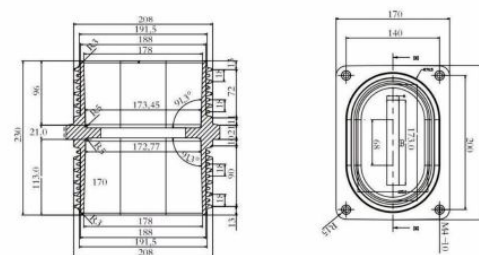


CG5-24kV/85 × 190~210~225 Sensor



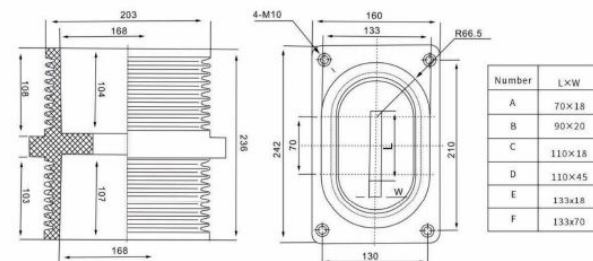
CG5-24kV/110x190-210-225 Sensor

H.V-Switchgear insulation

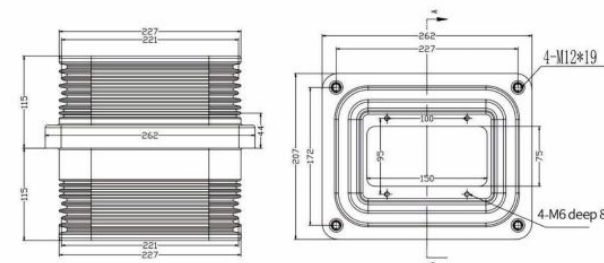


Number of copper bars that can be threaded	Single row	Single row/ double row	Single row/ double row	Single row/ double row	Single row	Single row
A	18	18	20	18	60	80
B	68	88	110	133	130	135

TG3-12kV/140 × 200 Wall bushing



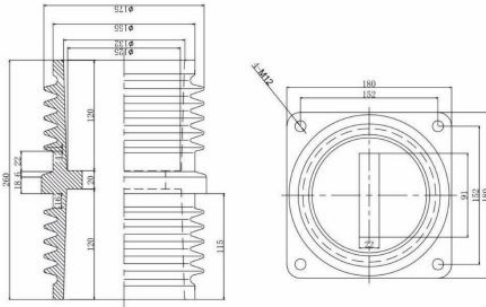
TG3-12kV/130x210 Wall bushing



TG3-12kV/172 x 227 Wall bushing (with shielding)

H.V-Switchgear insulation

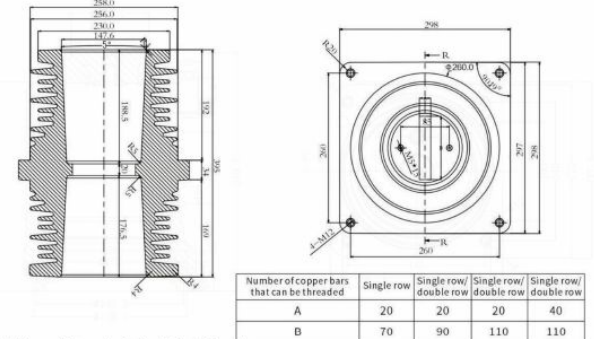
Wall bushing Series



TG2-12kV/182 (152 × 152) Wall bushing

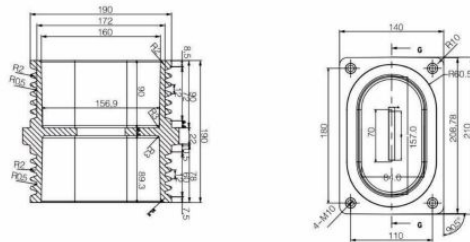
H.V-Switchgear insulation

Wall bushing Series



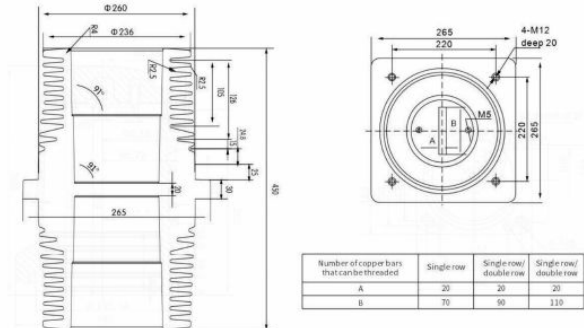
TG3-40.5kV/260 × 260 × 395 Wall bushing(with shielding)

Number of copper bars that can be threaded	Single row	Single row/double row	Single row/double row	Single row/double row
A	20	20	20	40
B	70	90	110	110



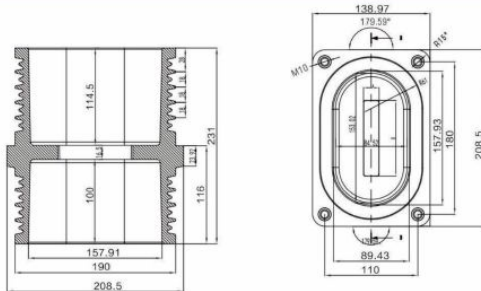
TG3-12kV/110 × 180 Wall bushing

Number of copper bars that can be threaded	Single row	Single row	Single row/double row	Single row/double row	Single row/double row
A	18	13	18	18	18
B	68	85	88	108	133



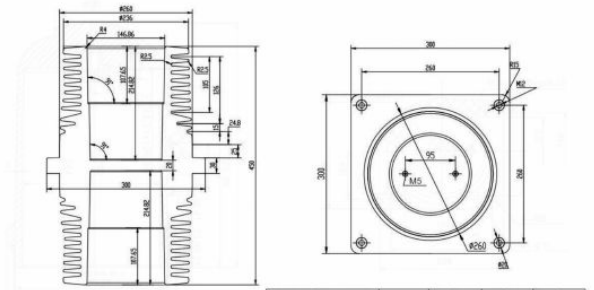
TG3-40.5kV/220x220x450 Wall bushing (with shielding)

Number of copper bars that can be threaded	Single row	Single row/double row	Single row/double row
A	20	20	20
B	70	90	110



TG3-12kV/110x180x230 Wall bushing

Number of copper bars that can be threaded	Single row	Single row	Single row/double row	Single row/double row	Single row/double row
A	15	18	18	45	18
B	60	70	90	90	108

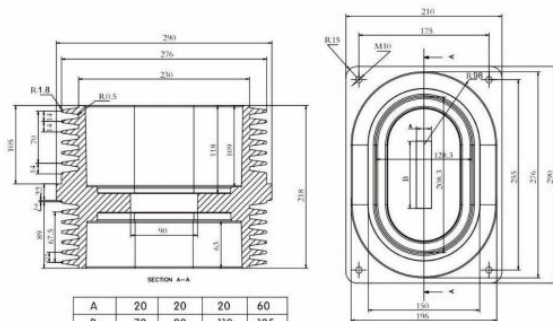


TG3-40.5kV/260 × 260 × 450 Wall bushing (with shielding)

Number of copper bars that can be threaded	Single row	Single row/double row	Single row/double row	Single row/double row
A	20	20	20	40
B	70	90	110	110

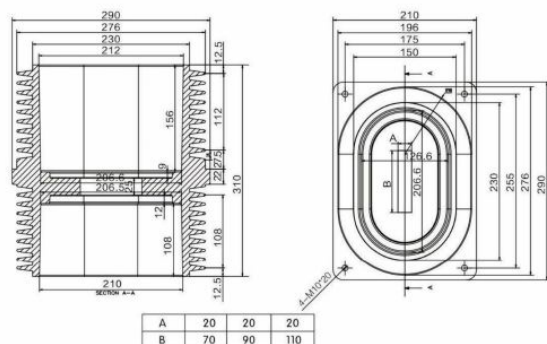
H.V-Switchgear insulation

Wall bushing Series



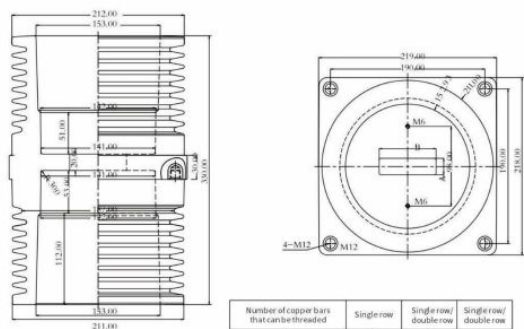
A	20	20	20	60
B	70	90	110	125

TG3-24kV/175 × 255 × 218 Wall bushing



A	20	20	20
B	70	90	110

TG3-24kV/175 × 255 × 310 Wall bushing

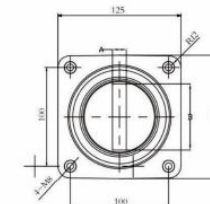
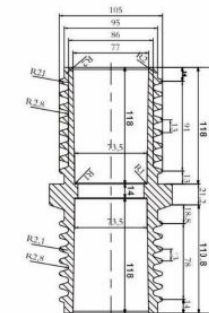


Number of copper bars that can be threaded	Single row	Single row/ double row	Single row/ double row
A	20	20	20
B	70	90	110

TG3-24kV/190x190x330 Wall bushing (with shielding)

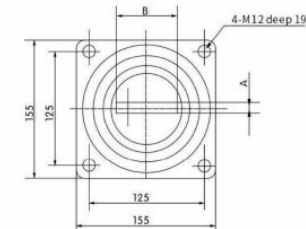
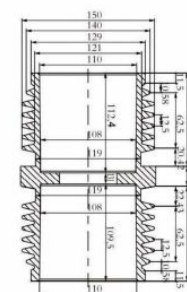
H.V-Switchgear insulation

Wall bushing Series



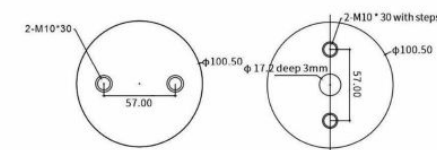
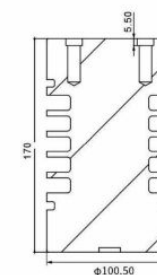
A	9	9	14	18
B	46	56	67	88

TG4-12kV/128 (100 × 100) Wall bushing



A	14	18	18	15
B	68	68	88	105

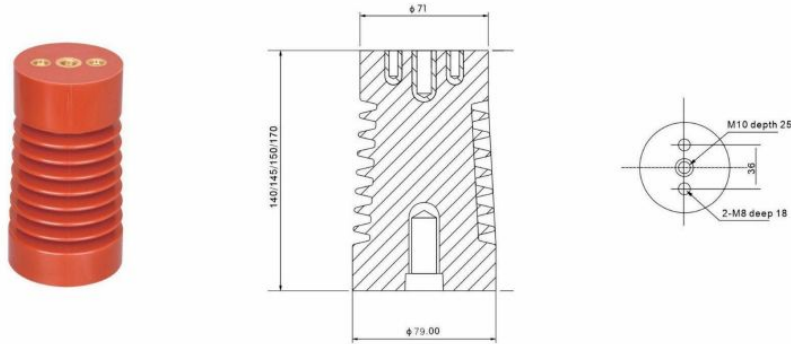
TG1-12kV/155 (125 × 125) Wall bushing



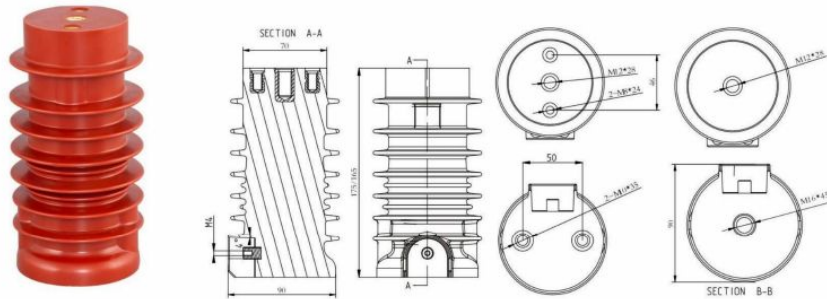
Grey 101X171 outdoor insulator

H.V-Switchgear insulation

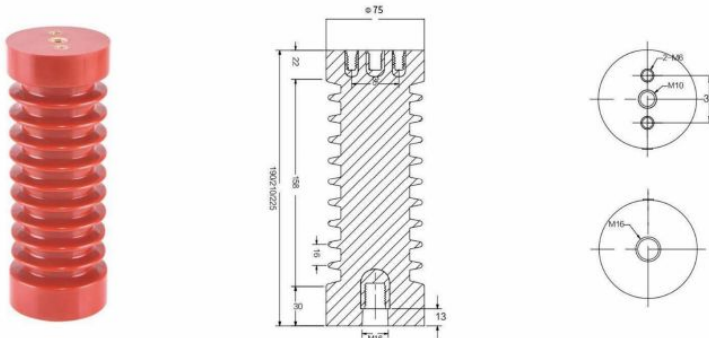
Insulator Series



ZJ-12kV/ $\Phi 80 \times 140 \sim 145 \sim 150$ Support insulator



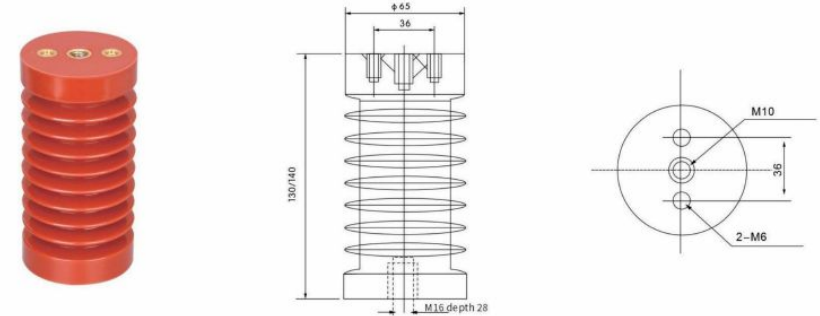
ZJ-17.5kV 90x165-175 Support insulator



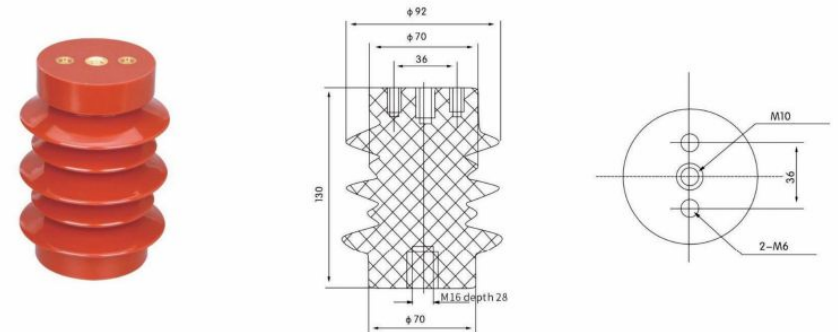
ZJ-24kV/75x190-210-225 Support insulator

H.V-Switchgear insulation

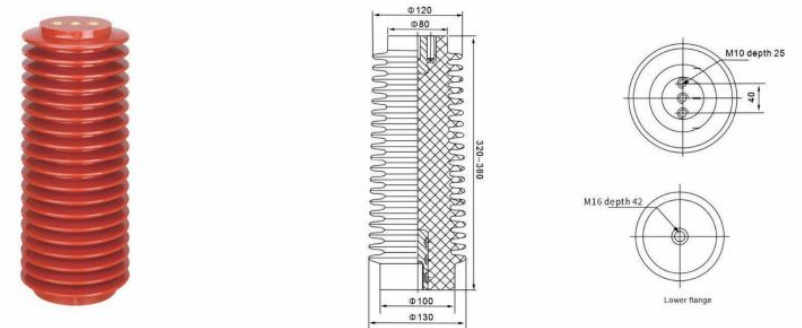
Insulator Series



ZJ-12kV/ $\Phi 65 \times 130 \sim 140$ Support insulator (FN7)



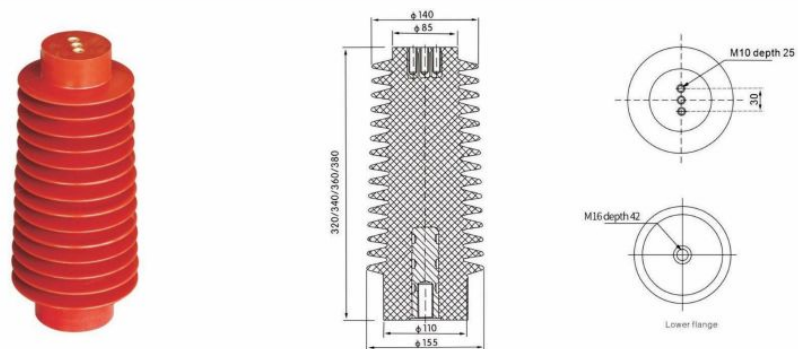
ZJ-12kV/ $\Phi 70 \times 130$ Support insulator (Fn5)



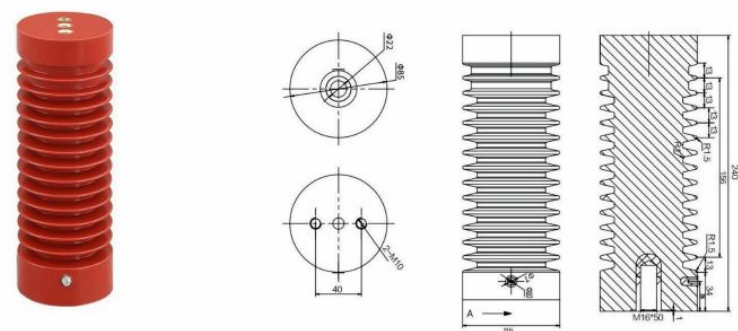
ZJ-40.5kV/130x320-340-360-380 Support insulator

H.V-Switchgear insulation

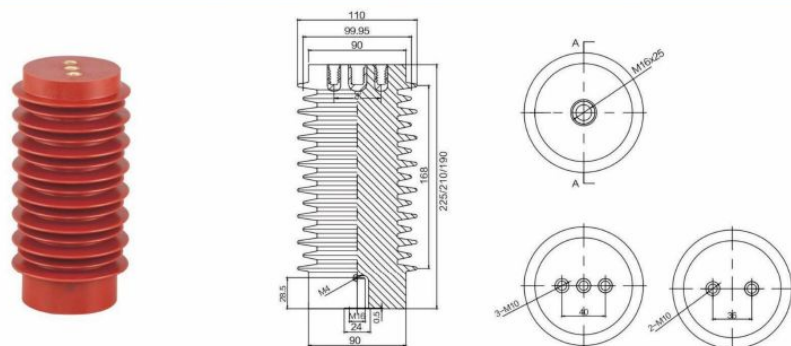
Insulator Series



ZJ-40.5kV/155x320-340-360-380 Support insulator

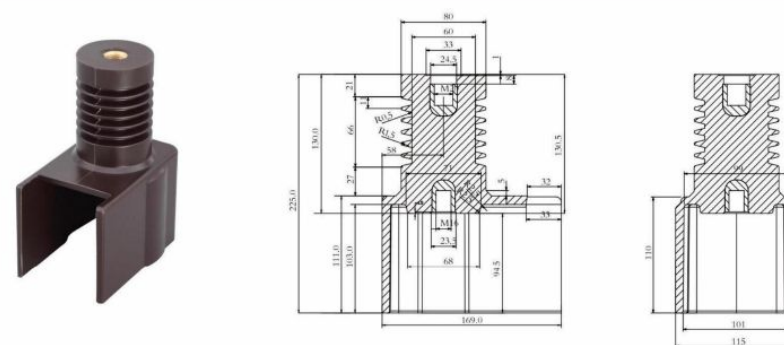


ZJ-24kV/85x190-210-225 Support insulator

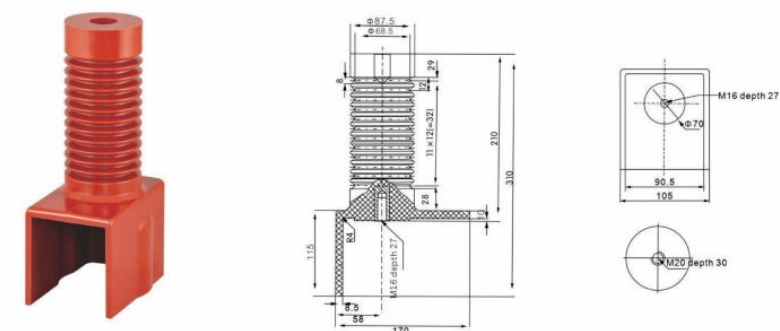


ZJ-24kV/110x190-210-225 Support insulator

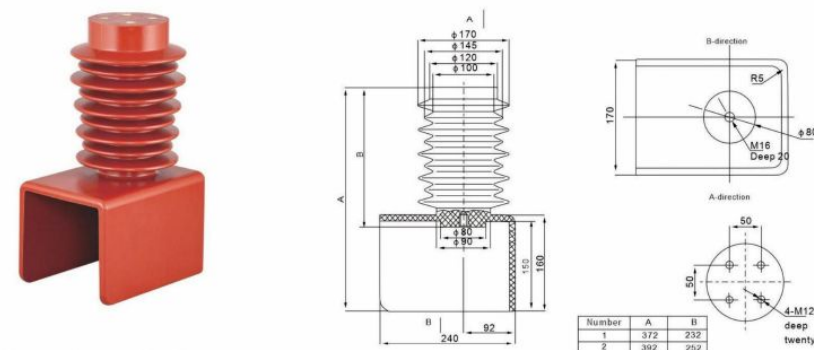
Indoor vacuum circuit breaker PT handcar insulators



12kV continuous insulator 630-1250A



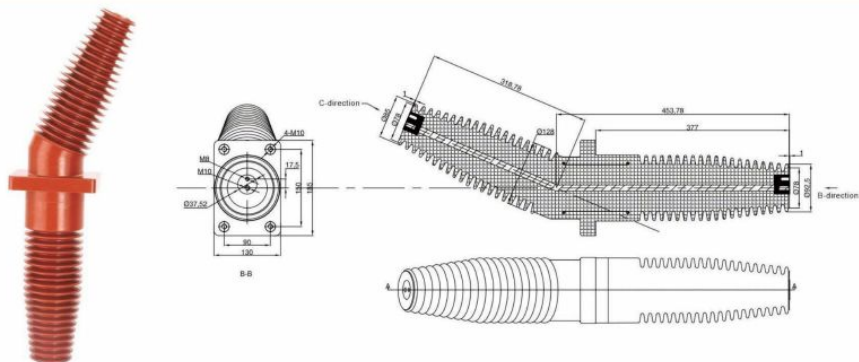
24kV continuous insulator



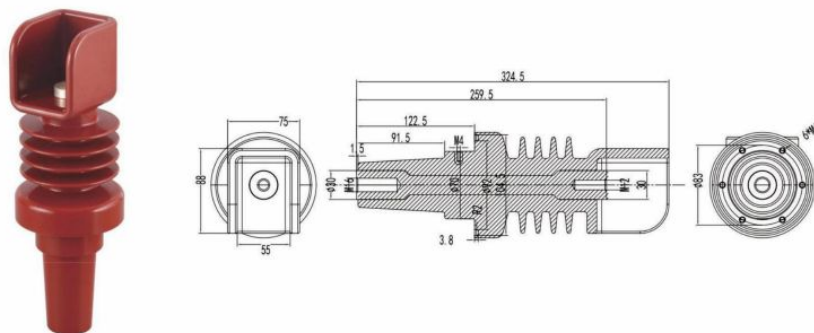
35kV continuous insulator

Indoor vacuum circuit breaker PT handcar insulators

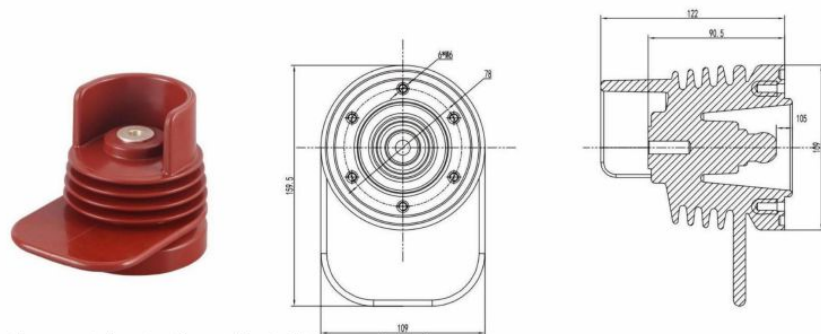
Connected insulator series



35kV continuous insulator (Chint type)

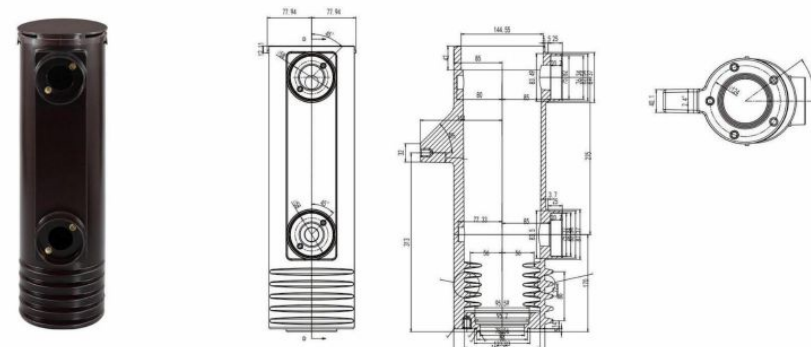


Environmental protection cabinet outlet conduit

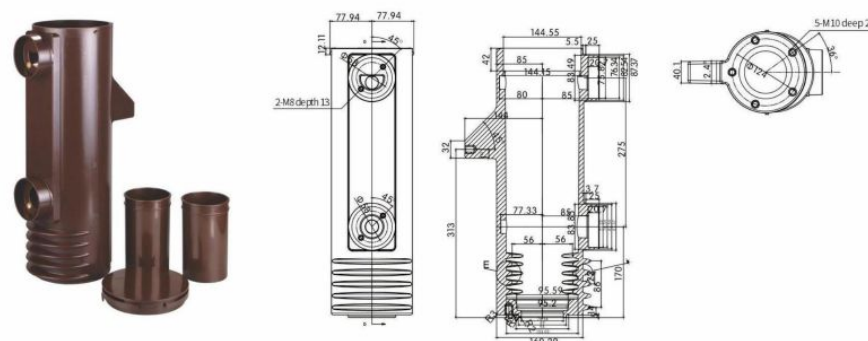


Environmental protection cabinet side expansion sleeve

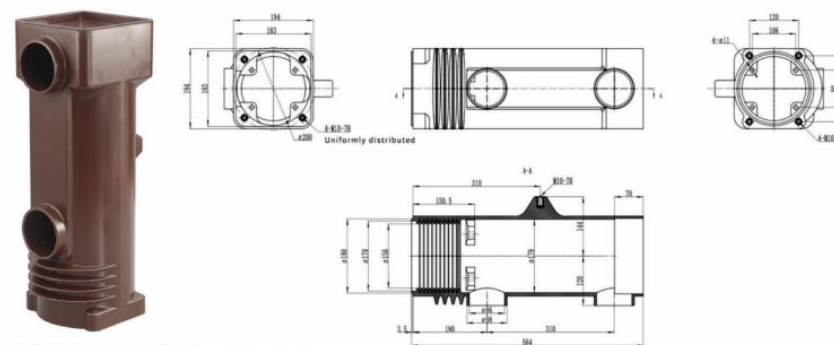
Indoor vacuum circuit breaker PT handcar insulators



Vs1 isolation Insulated tube (upper and lower circular holes)

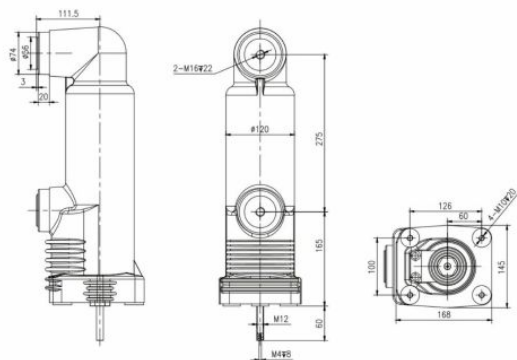


VS1-12kV/630-1250A VS1 Insulated tube (five holes)

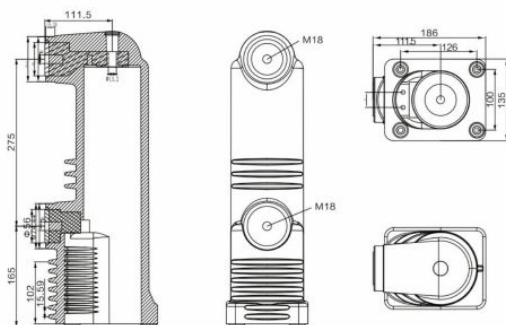


VS1-12kV/1600A~3150A Insulated tube

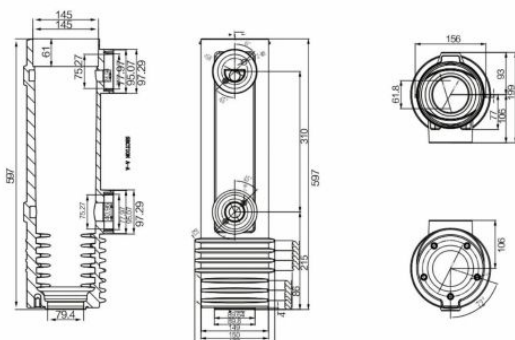
Indoor vacuum circuit breaker PT handcar insulators



12kV fixed sealed pole 630~1250A

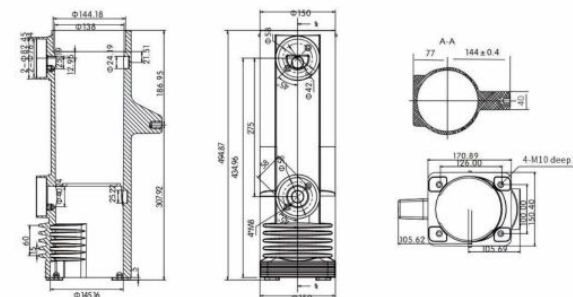


12kV Insulated tube cylinder



24kV Insulated tube

Indoor vacuum circuit breaker PT handcar insulators



VS1-12kV/630-1250A Vs1Insulated tube (four holes)

- **Technical parameters of main items**

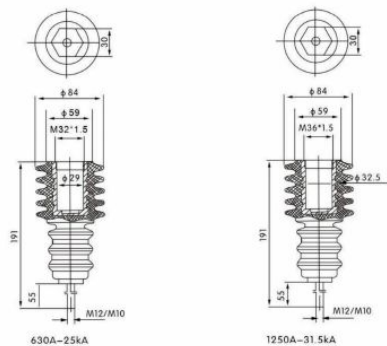
parameter name	parameter
Rated voltage	12kV
Rated current	630A
Rated frequency	50Hz
Rated short-duration power frequency withstand voltage (1min)	48kV
Rated lightning impulse withstand voltage	85kV
Rated short-circuit breaking current	25kA
Rated peak withstand current	63KA
Rated short-circuit making current (peak value)	63KA
Rated short-circuit breaking current breaking times	30 times
Rated back-to-back capacitor bank breaking current*	400A
Rated single capacitor bank breaking current*	630A
Rated short-time withstand current	25kA
Mechanical life	30000 times
Contact self-closing force	100±30N
Contact reaction force at rated opening distance	200±30N
Loop resistance at lower limit of rated working pressure	≤25μΩ
Storage period	20 years
Contact allowable wear thickness	3mm
Moving part weight	≤2.5kg

● Mechanical parameters of the matched vacuum switch

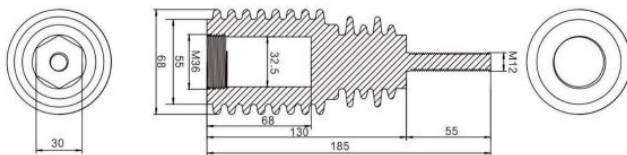
parameter name	parameter
Contact distance	9±1mm
Rated contact travel	4±1mm
Average opening speed	1.1±0.2m/s
Average closing speed	0.6±0.2m/s
Rated contact pressure	3000±200N
Contact closing bounce time	≤2ms
Contact opening rebound amplitude	≤2mm
Three-phases out of phase	≤2ms

Note: * is the rated value provided upon request

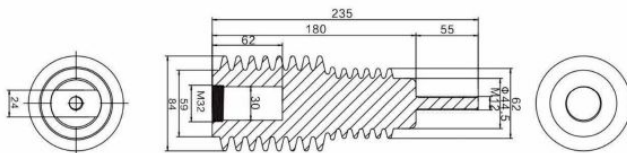
Indoor vacuum circuit breaker PT handcar insulators



VS1 insulated pull rod



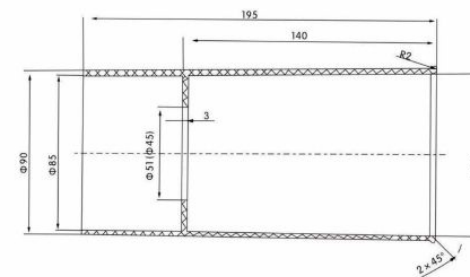
Sealing rod



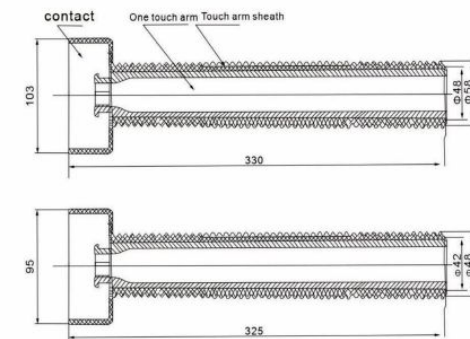
24kV pull rod

Indoor vacuum circuit breaker PT handcar insulators

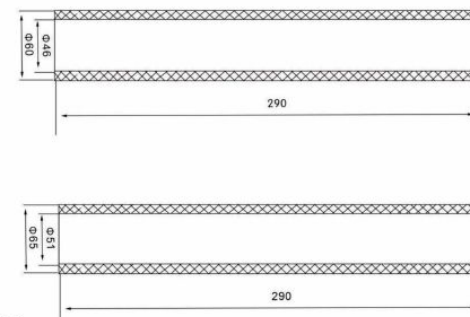
Tactile arm sleeve



JR021 Guide arm bushing ϕ 45 (51)

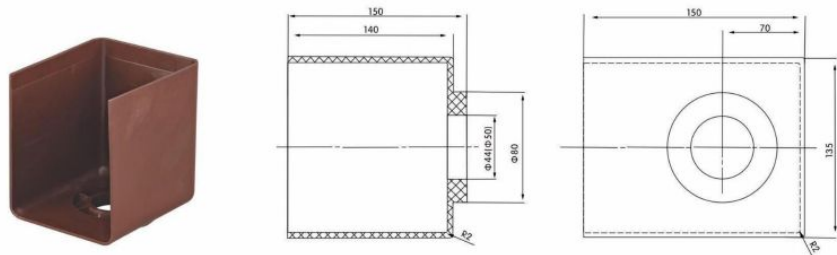


Silicone contact arm sleeve $\phi 42 \times 321$ $\phi 48 \times 321$

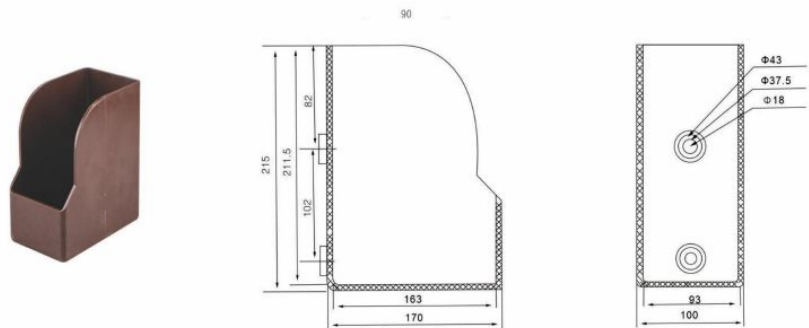


Tactile arm sleeve ϕ 46x290 ϕ 51x290

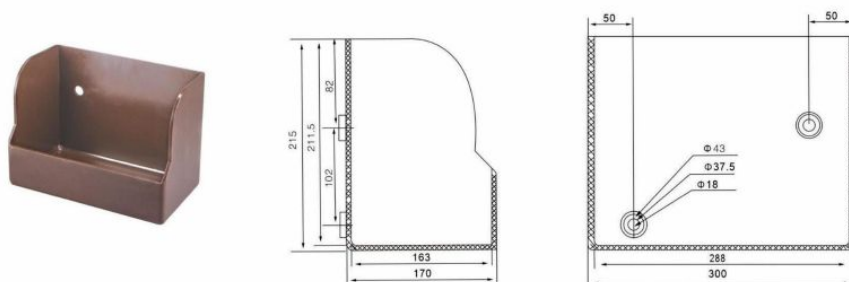
Indoor vacuum circuit breaker PT handcar insulators



Jr022 insulation cover ϕ 45 (51)

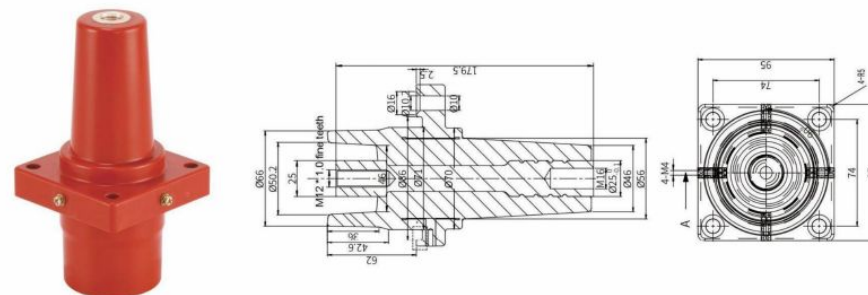


JV1 Upper Insulation Cover

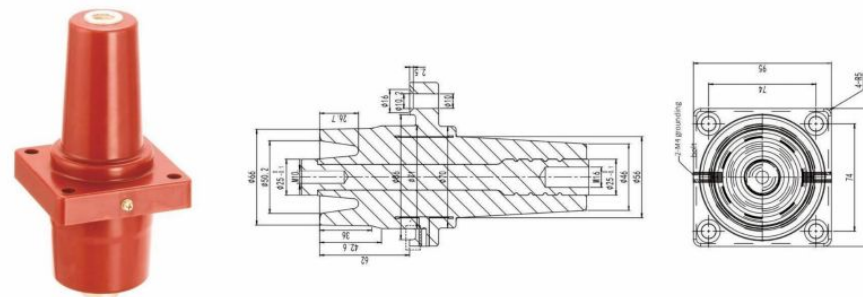


JV2 Gas cabinet sleeve

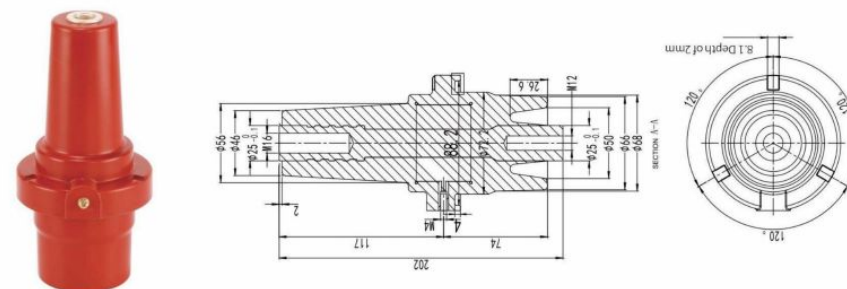
Gas Insulated Switchgear



Gas cabinet sleeve 180



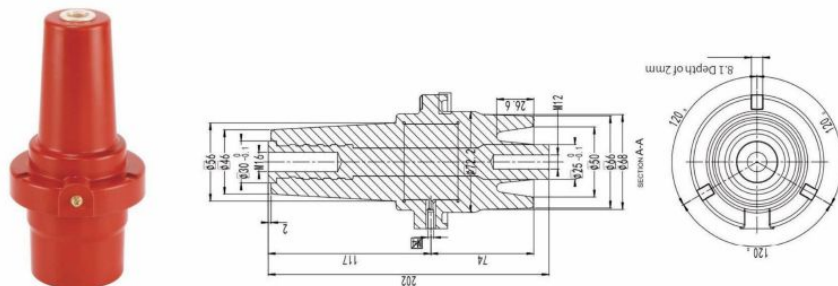
Gas cabinet sleeve 198



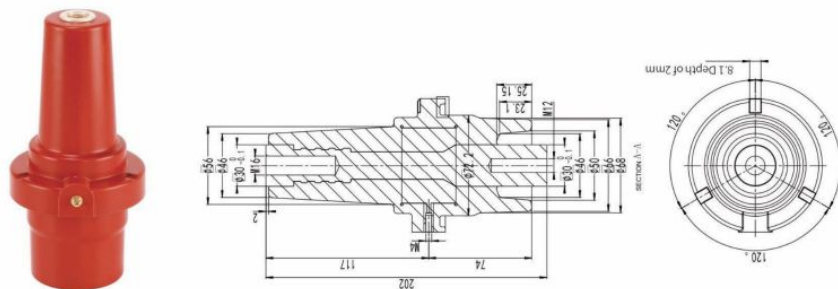
Gas cabinet sleeve202 630A

Gas Insulated Switchgear

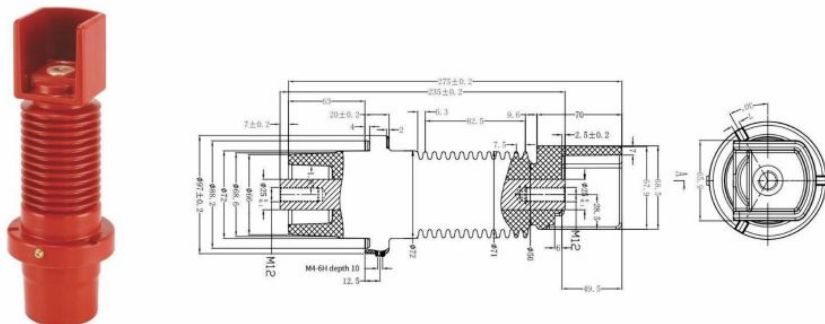
Ring main cabinet and inflatable cabinet series



Gas cabinet sleeve 202 630A South grid type



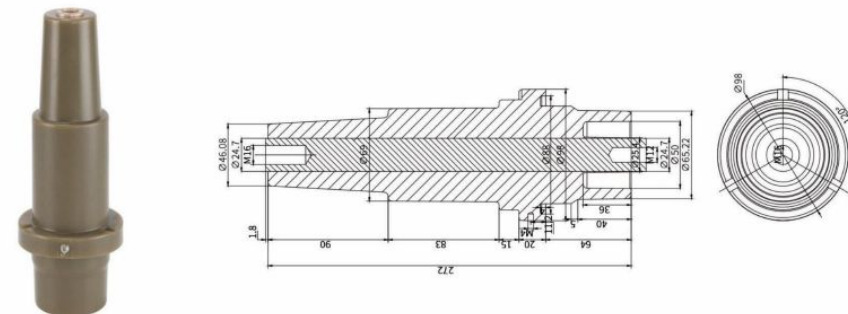
Gas cabinet sleeve 202 1250A



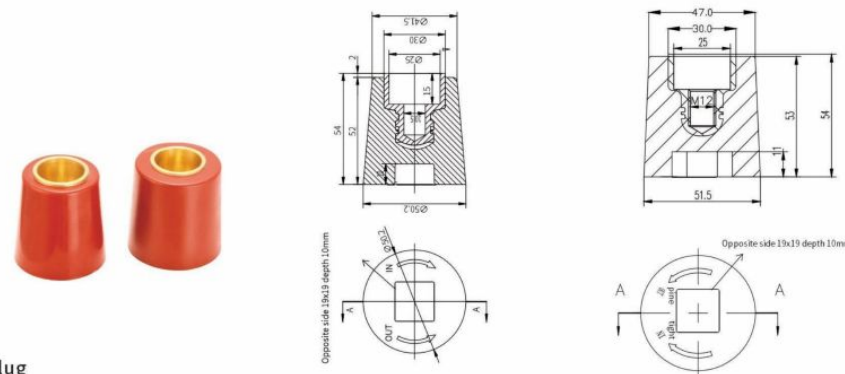
Gas cabinet sleeve 235

Gas Insulated Switchgear

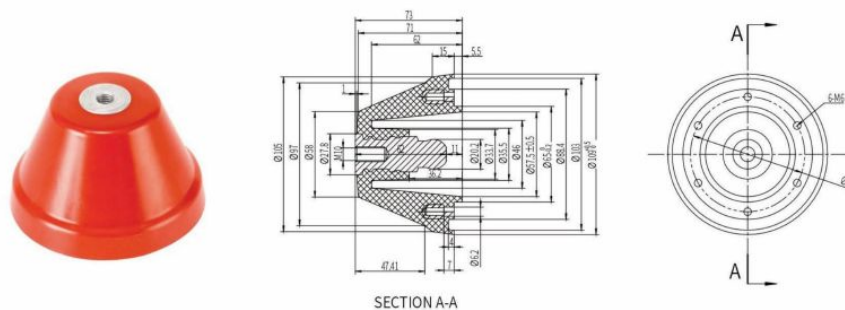
Ring main cabinet and inflatable cabinet series



Gas cabinet sleeve 285 double way sleeve

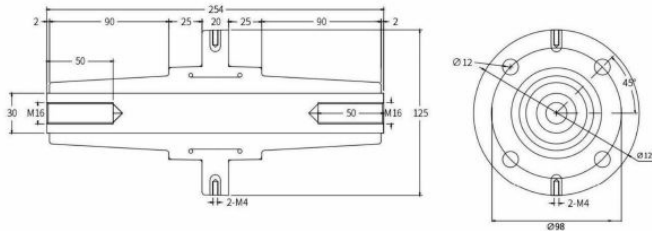


Plug

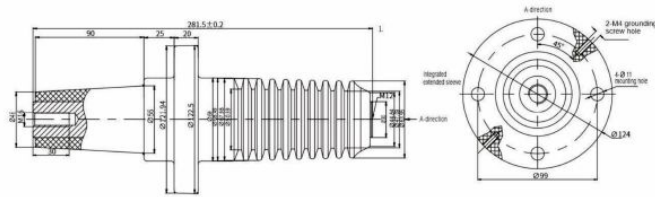


Inflatable cabinet female connector sleeve (630A)

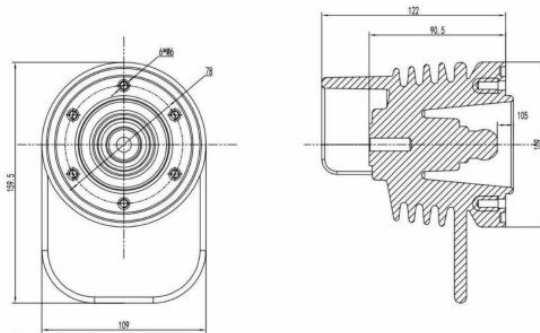
Gas Insulated Switchgear



Docking sleeve 254 sleeve (cable branch box)



Double way sleeve 281 sleeve (integrated with umbrella skirt)

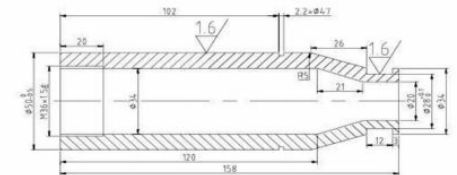


Environmental protection cabinet side expansion sleeve

Component Of MV Switchgear

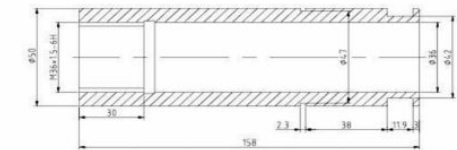
VS1 Contact arm series

Name: Contact arm
Material: Copper/Aluminum



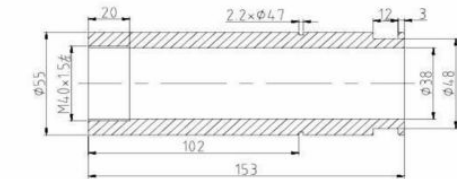
XY.12.121.1/121.2 VS1-12/630A

Name: Contact arm
Material: Copper/Aluminum



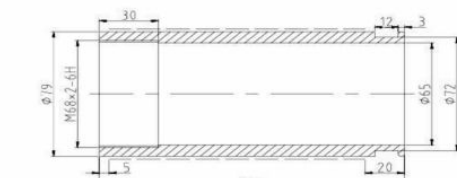
XY.12.122.1/122.2 VS1-12/1250A

Name: Contact arm
Material: Copper



XY.12.123 VS1-12/1600A

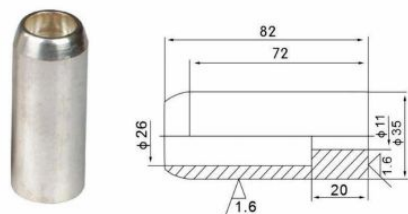
Name: Contact arm
Material: Copper



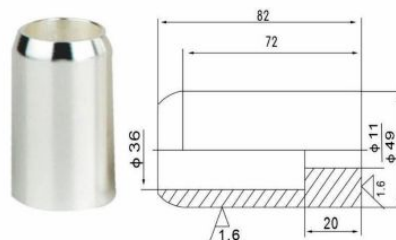
XY.12.124 VS1-12/2000A

Other accessories of high-voltage cabinet

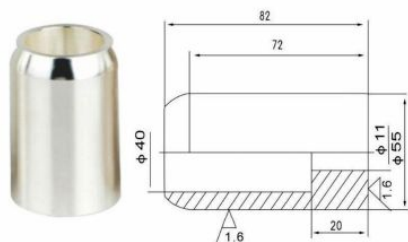
Fixed contact series



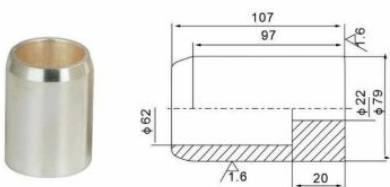
630A Fixed contact
Material: T2 purple copper



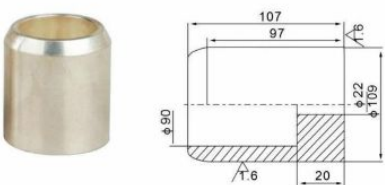
1250A Fixed contact
Material: T2 purple copper



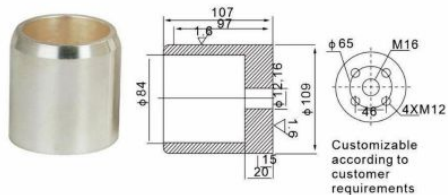
1600A Fixed contact
Material: T2 purple copper



2000A Fixed contact
Material: T2 purple copper

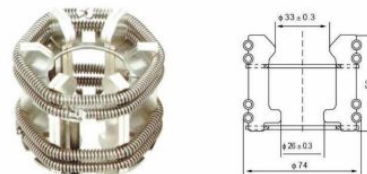


2500A-3150A Fixed contact
Material: T2 purple copper



4000A Fixed contact
Material: T2 purple copper

Other accessories of high-voltage cabinet



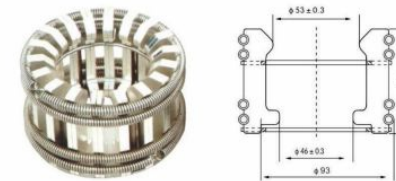
GC5-630A (12 pieces) Tulip Contact



GC5-630/1250A (24 pieces) Tulip Contact



GC5-1250A (30 pieces) Tulip Contact series



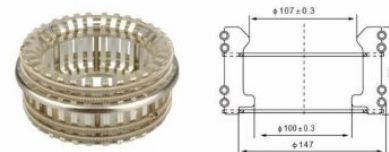
GC5-1600A (36 pieces) Tulip Contact series



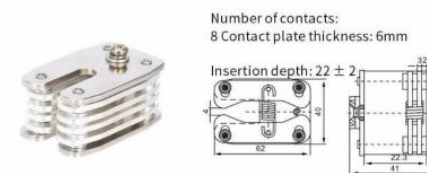
GC5-2000A (48 pieces) Tulip Contact



GC5-3150A (64 pieces) Tulip Contact (old type)



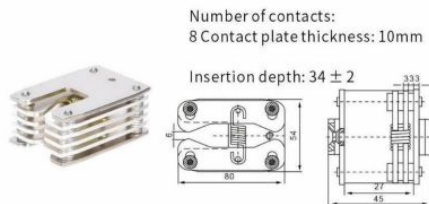
GC5-4000A (84 pieces) Tulip Contact



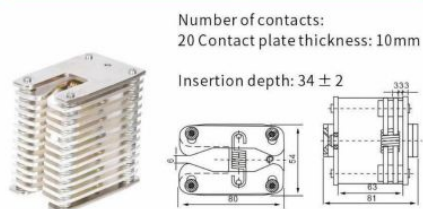
GC6-400A Spring type Flat Contact

Other accessories of high-voltage cabinet

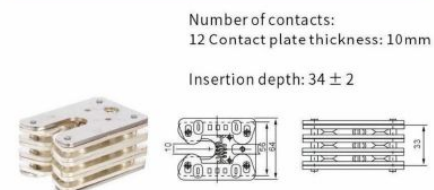
Spring type flat contact series



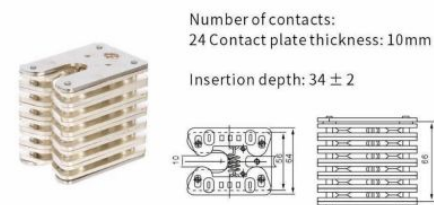
GC6-400A Flat contact



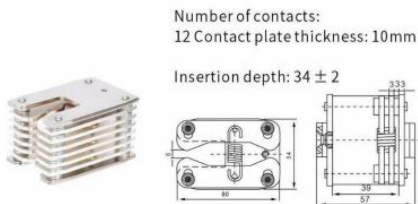
GC6-1000A Flat contact



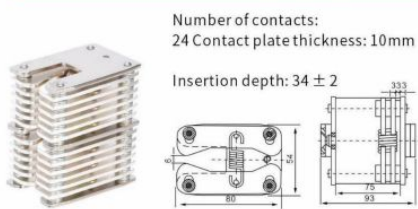
GC8-630A Flat contact



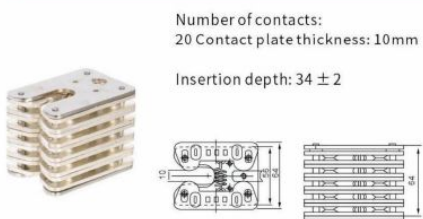
GC8-1250A Flat contact



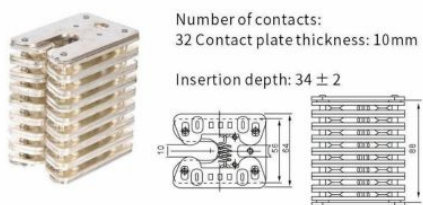
GC6-630A Flat contact



GC6-1250A Flat contact



GC8-1000A Flat contact



GC8-1600A Flat contact

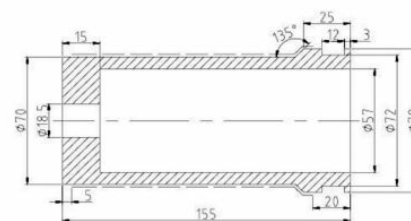
Other accessories of high-voltage cabinet

ZN85 Contact arm series

Name: Contact arm
Material: Copper



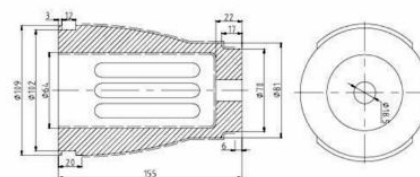
XY.12.125 VS1-12/200A



Name: Contact arm
Material: Copper



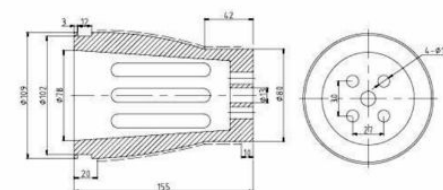
XY.12.126 VS1-12/2500A-3150A



Name: Contact arm
Material: Copper



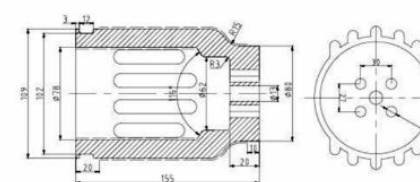
XY.12.127 VS1-12/3150A



Name: Contact arm
Material: Copper



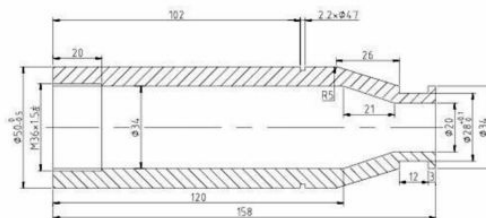
XY.12.128 VS1-12/4000A



Component Of MV Switchgear

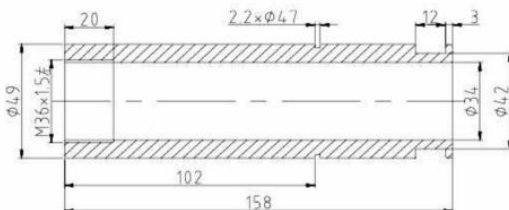
VS1 Contact arm series

Name: Contact arm
Material: Copper/Aluminum



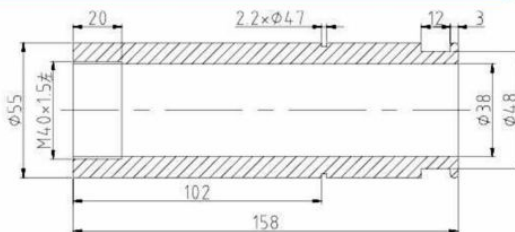
XY.12.108.1/108.2 VS1-12/630A

Name: Contact arm
Material: Copper/Aluminum



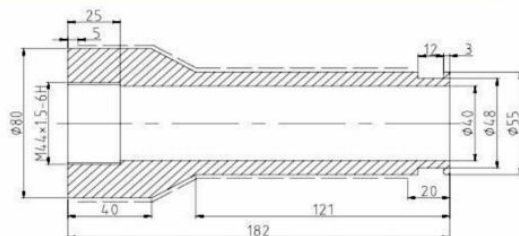
XY.12.109.1/109.2 VS1-12/1250A

Name: Contact arm
Material: Copper



XY.12.110 VS1-12/1600A

Name: Contact arm
Material: Copper

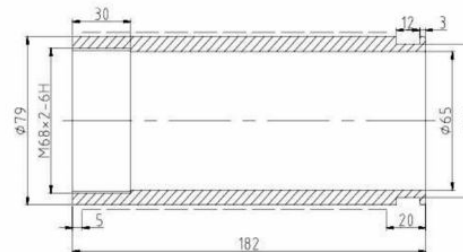


XY.12.111 VS1-12/1600A

Component Of MV Switchgear

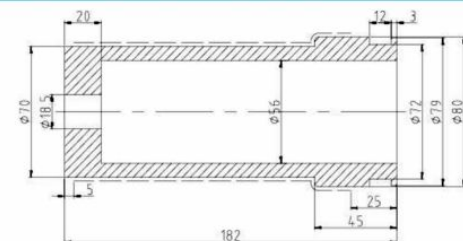
VS1 Contact arm series

Name: Contact arm
Material: Copper



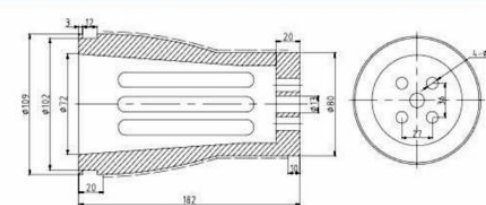
XY.12.112 VS1-12/2000A

Name: Contact arm
Material: Copper



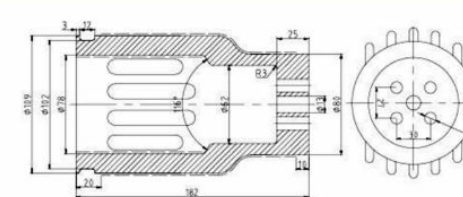
XY.12.113 VS1-12/2000A

Name: Contact arm
Material: Copper



XY.12.114 VS1-12/2500A-3150A

Name: Contact arm
Material: Copper

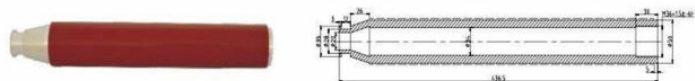


XY.12.115 VS1-12/4000A

Component Of MV Switchgear

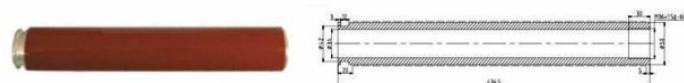
ZN85 Contact arm series

Name: Contact arm
Material: Copper/Aluminum



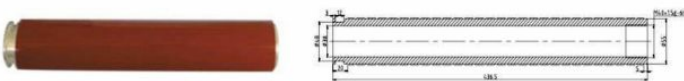
XY.12.116.1/116.2 VS1-12/630A

Name: Contact arm
Material: Copper/Aluminum



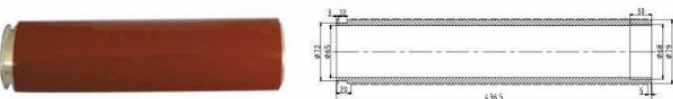
XY.12.117.1/117.2 VS1-12/1250A

Name: Contact arm
Material: Copper



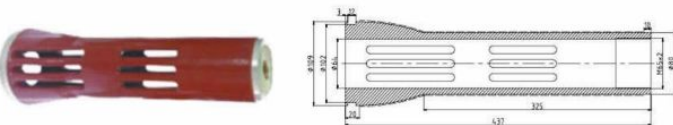
XY.12.118 VS1-12/1600A

Name: Contact arm
Material: Copper



XY.12.119 VS1-12/2000A

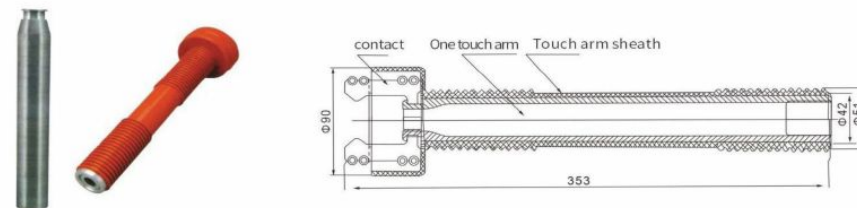
Name: Contact arm
Material: Copper



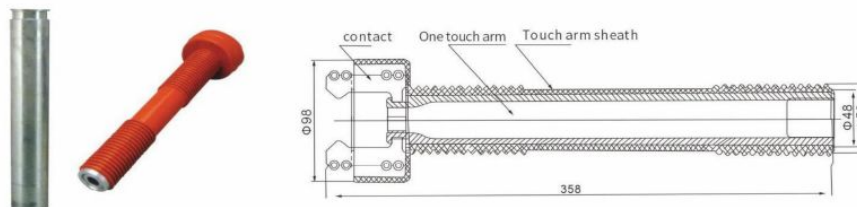
XY.12.120 VS1-12/2500A-3150A

Component Of MV Switchgear

VS1 Contact arm series



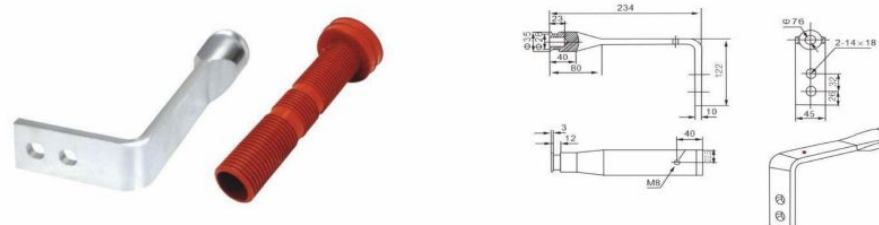
630A silicone Guide arm material: T2 purple copper/aluminum



1250A silicone Guide arm material: T2 purple copper/aluminum



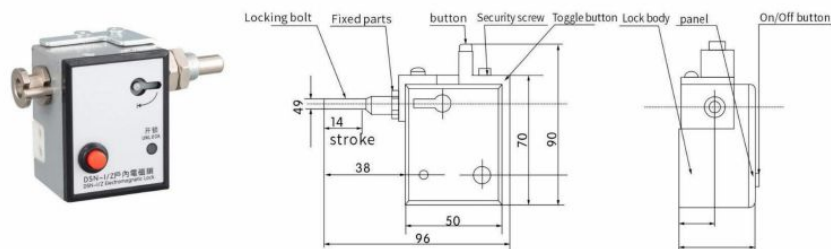
630A measuring Guide arm material: T2 purple copper



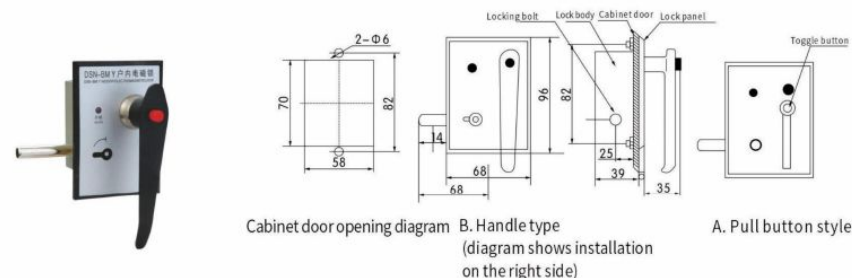
1250A measuring Guide arm material: T2 purple copper

Other accessories of high-voltage cabinet

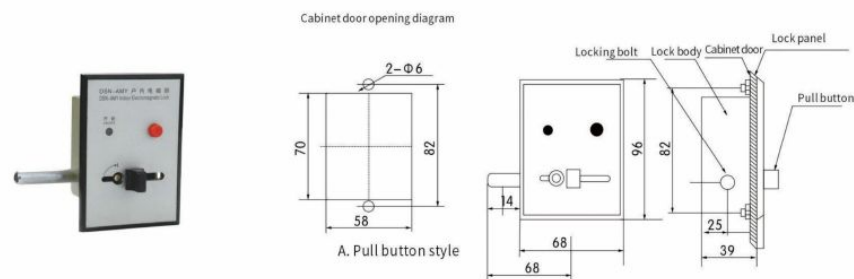
DSN type electronic lock series



DSN-I/Y(Z) Indoor Electromagnetic Lock



DSN-BMY(Z) Handle Electromagnetic Lock



DSN-AMY (Z) pull-out torsion electromagnetic lock

Other accessories of high-voltage cabinet

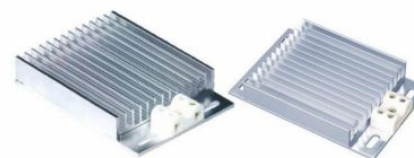
Middle cabinet accessories



Copper bar type small busbar



Flexible wire small busbar



Interlock Electromagnetic



Cable clamp



Secondary plug socket

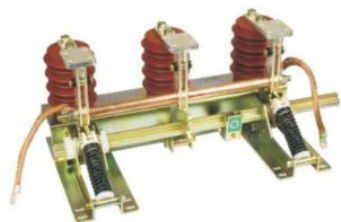


Program sequence lock

Other accessories of high-voltage cabinet

Grounding switch series

JN15-12/31.5 Combination earthing switch (ES1-10/31.5)

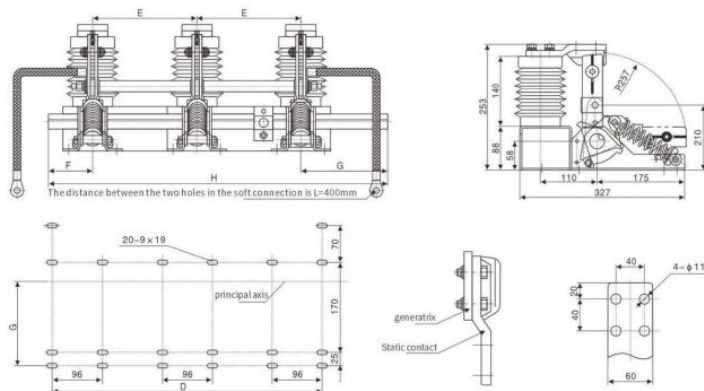


Main technical parameters			
Project	unit	data	
Rated voltage	KV	12	
Rated short-term withstand current	KA	31.5	
Rated short-circuit duration	S	4	
Rated short-circuit making current	KA	80	
Rated peak withstand current	KA	80	
Rated insulation level	Rated short-term powerfrequency withstand voltage	KV	6.5
	Rated lightning impulse withstand voltage	KV	125
Mechanical lifespan		次	2000

Main uses

JN15-12/31.5 indoor high-voltage grounding switch is the latest developed grounding switch by our company. This product has the characteristics of advanced design, simple and compact structure, and reliable technical performance. It complies with the requirements of GB1985-2004 AC High Voltage Isolation and Grounding Switches and IEC62271-102:2002, and is suitable for indoor 12KV three-phase AC 50 (60) Hz power systems; It has the ability to make short circuits to protect other electrical equipment inside the switchgear from damage. It can be used in conjunction with various high-voltage switchgear cabinets as a grounding protection for high-voltage electrical equipment maintenance

Outline and installation dimensions of JN15-12/31.5 earthing switch



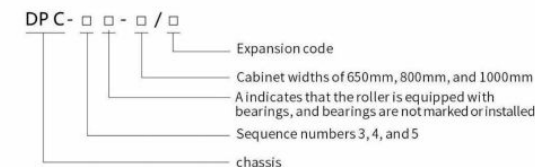
Product model	E	F	G	H	D	C
JN15-12/31.5-165	165	75	160	565	426	
JN15-12/31.5-180	180	75	160	595	456	
JN15-12/31.5-200	200	75	160	635	495	
JN15-12/31.5-210	210	75	160	655	516	
JN15-12/31.5-220	220	75	160	675	536	
JN15-12/31.5-230	230	75	160	695	556	
JN15-12/31.5-250	250	75	160	735	596	
JN15-12/31.5-275	275	75	185	810	646	96

Unit(mm)

Other accessories of high-voltage cabinet

Chassis car series

DPC chassis vehicle



The chassis car is mainly used for installing circuit breakers, transformers and other components in withdrawables switchgear, pushing them in and out, and serving as an auxiliary operation for connecting the components to the busbar. When the chassis car cooperates with the internal mechanism of the circuit breaker and other interlocking mechanisms of the central cabinet, it can meet the "five prevention" interlocking requirements in GB3906. The specific functions are as follows:

1. The circuit breaker can only be closed when the handcart is in the testing/isolation or working position, and after the circuit breaker is closed, the handcart cannot move, thus preventing the occurrence of load connected and mistakenly closed isolation contacts.
2. When the handcart is in the working position or about 10mm away from the testing/isolation position, the grounding switch cannot be closed to prevent accidental closing of the grounding switch when energized.
3. When the grounding switch is closed, the handcart cannot move from the test/isolation position to the working position to prevent the circuit breaker from being closed when the grounding switch is in the closed position.
4. After the chassis vehicle enters the cabinet, once it leaves the testing/isolation position, the handcart cannot be withdrawn from the cabinet.

DPC chassis vehicle



Lock plate 8JH.141.012

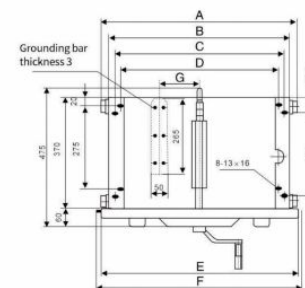
Lock plate 8JH.141.012.1

Lock plate 8JH.141.012.2

Lock plate 8JH.141.050 (with VSm)

Lock plate 8JH.141.012S (equipped with VS1+)

Note: There are five types of lock plates available for DPC chassis cars to choose from, with the standard configuration being 8JH.141.012.2. If an additional four types of lock plates are required, please specify them when placing an order.



Model	A	B	C	D	E	F	G
DPC-4-650	500	450	410	385 Installation 13X30	502	535	100
DPC-4A-650							
DPC-4-800	650	600	560	520	652	685	160
DPC-4A-800							
DPC-4-1000	850	800	760	720	852	885	200
DPC-4A-1000							

Component Of MV Switchgear

EK6-12/31.5 Series Indoor Earthing Switch



Product Overview

EK6-12/31.5 Series indoor earthing switch is a new design which is improved on the ES1 type. It is suitable for electric power system with IEC129 standard 3-12KV, three-phase and AC50(60)Hz. As an earthing protection, it can be used in various kinds of HV switchgears. It meets GB1985-2004 and IEC129 standard.

Product definition

E K 6 - 12/31.5 - □

- Central distance between poles
- Rated short-time withstand current(KA)
- Rated voltage(KV)
- Design No.
- Indoor
- Earthing switch

Operating environment

- Ambient temperature:-10°C~+40°C;
- Altitude: <1000m;
- Relative humidity: Daily average ≤ 95%, Monthly average < 90%
- Earthquake intensity: < 8 degree;
- Dirtiness degree: II.

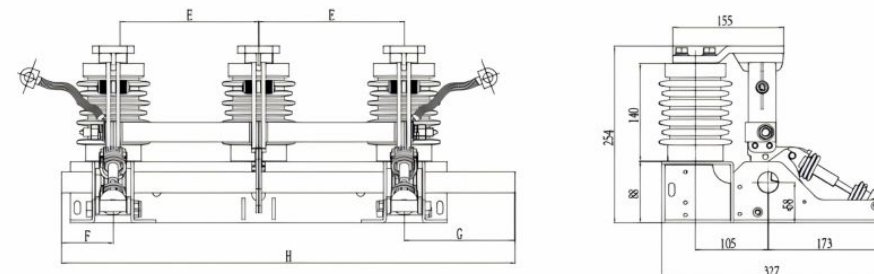
Mainly technical specification

No.	Item	Unit	Data
1	Rated voltage	KV	12
2	Rated short time withstand current	KA	31.5
3	Rated short circuit withstand time	S	4
4	Rated short circuitmaking current	KA	80
5	Rated peak withstand current	KA	80
6	Rated insulation level	KV	Imin power frequency withstand voltage
			Lightning Impulse withstand voltage
7	Mechanical life	TIMES	2000

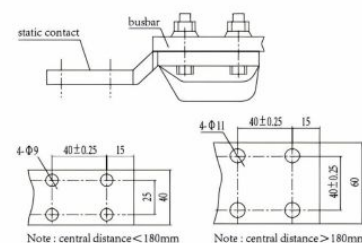
Component Of MV Switchgear

JN15-12/31.5(ES1-10/31.5) Earthing Switch

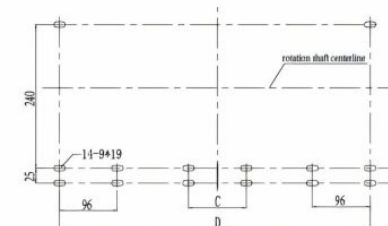
JN15-12/31.5 earthing switch(ES-10/31.5) Outline and installation dimension



Copper terminal block



Hole location diagram



(Unit:mm)

Specification	E	F	G	H	D	C
JN15-12/31.5-165	165	75	160	565	426	
JN15-12/31.5-180	180	75	160	595	456	
JN15-12/31.5-200	200	75	160	635	496	
JN15-12/31.5-210	210	75	160	655	516	
JN15-12/31.5-220	220	75	160	675	536	
JN1512/31.5230	230	75	160	695	556	96
JN15-12/31.5-250	250	75	160	735	596	96
JN15-12/31.5-275	275	75	185	810	646	96

Order notes:indicate product specification, central distance between poles, if the electric live display model number of display needed or not.
Please note the soft link length when ordering (normal L-250mm).
Please consult us if you have any special request.

Component Of MV Switchgear

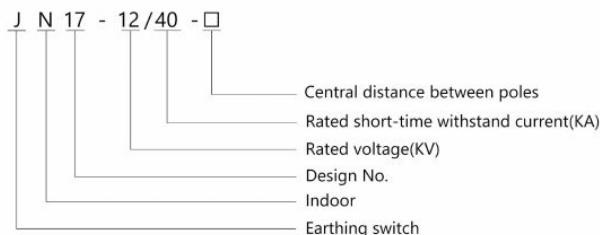
JN17-12/40 Earthing Switch



Product Overview

JN17-12/40 (Old type is JN15-12/40) Series indoor high voltage earthing switch is a new design and improved product based on the ESI type. The structure is assembled and suitable for electric power system with 3-10KV, three-phase and AC 50(60)Hz. As an earthing protection, it can be used in various kinds of HV switchgears. It meets GB1985-2004 and IEC129 standard.

Product definition



Operating environment

- Ambient temperature:-10°C-+40°C;
- Altitude: ≤1000m;
- Relative humidity: Daily average ≤ 95%, Monthly average < 90%
- Earthquake intensity: < 8 degree;
- Dirtiness degree: II.

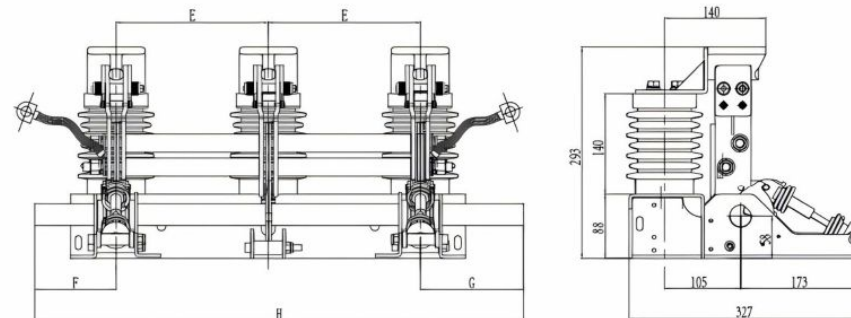
Mainly technical specification

No.	Item		Unit	Data
1	Rated voltage		KV	12
2	Rated short time withstand current		KA	40
3	Rated short circuit withstand time		S	4
4	Rated short circuit making current		KA	80
5	Rated peak withstand current		KA	80
6	Rated insulation level	Imin power frequency withstand voltage	KV	42
		Lightning Impulse withstand voltage		75
7	Mechanical life		TIMES	2000

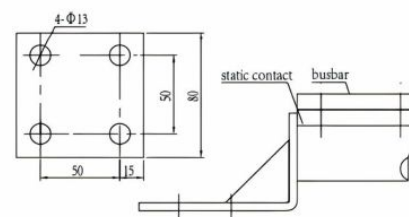
Component Of MV Switchgear

JN17-12/40 Earthing Switch

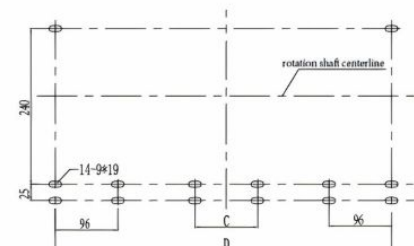
JN17-12/40 earthing switch(ES-10/31.5) Outline and installation dimension



Copper terminal block



Hole location diagram



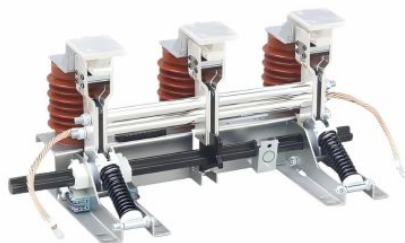
(Unit:mm)

Specification	E	F	G	H	D
JN17-12/40-210	210	50	185	655	516
JN17-12/40-220	220	50	185	675	536
JN17-12/40-230	230	50	185	695	556
JN17-12/40-250	250	50	185	735	596
JN17-12/40-275	275	50	210	810	646

Order notes: indicate product specification, central distance between poles, if the electric live display model number of display needed or not.
Please note the soft link length when ordering (normal L-250mm).
Please consult us if you have any special request.

Component Of MV Switchgear

JN17-12/50 Earthing Switch



Product Overview

JN17-12/50 (Old type is JN15-12/50) Series indoor high voltage earthing switch is a new design and improved product based on the ESI type. The structure is assembled and suitable for electric power system with 3-10KV, three-phase and AC 50(60)Hz. As an earthing protection, it can be used in various kinds of HV switchgears. It meets GB1985-2004 and IEC129 standard.

Product definition

J N 17 - 12 / 50 - □

- Central distance between poles
- Rated short-time withstand current(KA)
- Rated voltage(KV)
- Design No.
- Indoor
- Earthing switch

Operating environment

- Ambient temperature:-10°C~+40°C;
- Altitude: ≤1000m;
- Relative humidity: Daily average ≤ 95%, Monthly average < 90%
- Earthquake intensity: < 8 degree;
- Dirtiness degree: II.

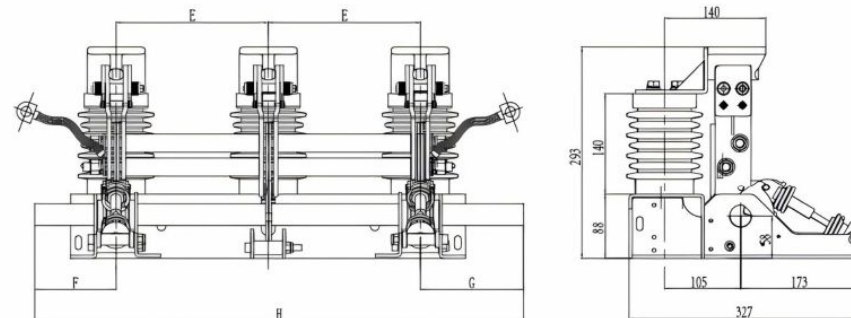
Mainly technical specification

No.	Item		Unit	Data
1	Rated voltage		KV	12
2	Rated short time withstand current		KA	50
3	Rated short circuit withstand time		S	4
4	Rated short circuit making current		KA	100
5	Rated peak withstand current		KA	100
6	Rated insulation level	Imin power frequency withstand voltage	KV	42
		Lightning Impulse withstand voltage		75
7	Mechanical life		TIMES	2000

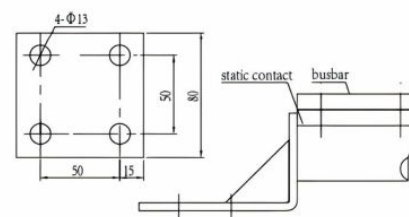
Component Of MV Switchgear

JN17-12/50 Earthing Switch

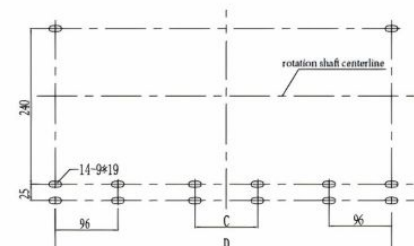
JN17-12/40earthing switch(ES-10/31.5) Outline and installation dimension



Copper terminal block



Hole location diagram



(Unit:mm)

Specification	E	F	G	H	D
JN17-12/50-210	210	50	185	655	516
JN17-12/50-220	220	50	185	675	536
JN17-12/50-230	230	50	185	695	556
JN17-12/50-250	250	50	185	735	596
JN17-12/50-275	275	50	210	810	646

Order notes:indicate product specification, central distance between poles, if the electric live display model number of display needed or not.
Please note the soft link length when ordering (normal L-250mm).
Please consult us if you have any special request.

Component Of MV Switchgear

JN15-24/31.5 Series Earthing Switch



Product Overview

JN15-24/31.5 Series indoor earthing switch is a new design and improved on the JN15 type (the installation size does not change). It is 50(60)Hz. As an earthing protection, it can be used in various kinds of HV switchgears. It meets GB1985-2004 and IEC129 standard. suitable for electric power system with 20-24KV, three-phase and AC

Product definition

J N 15 - 24/31.5-□

Central distance between poles
Rated short-time withstand current(KA)
Rated voltage(KV)
Design No.
Indoor
Earthing switch

Operating environment

- Ambient temperature:-10°C-+40°C;
- Altitude: ≤1000m;
- Relative humidity: Daily average ≤ 95%, Monthly average < 90%
- Earthquake intensity: < 8 degree;
- Dirtiness degree: II.

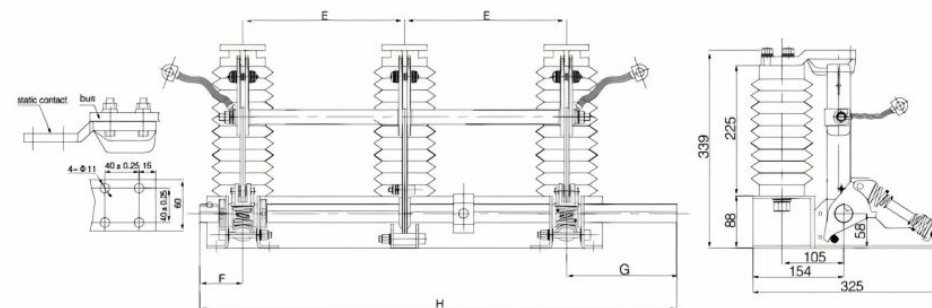
Mainly technical specification

No.	Item		Unit	Data
1	Rated voltage		KV	24
2	Rated short time withstand current		KA	31.5
3	Rated short circuit withstand time		S	4
4	Rated short circuit making current		KA	80
5	Rated peak withstand current		KA	80
6	Rated insulation level	1 min power frequency withstand voltage	KV	65
7		Lightning Impulse withstand voltage		95
8	Mechanical life		TIMES	2000

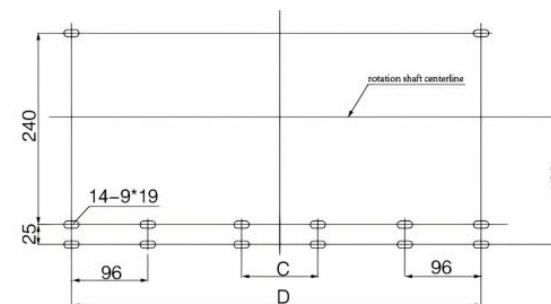
Component Of MV Switchgear

JN15-24/31.5 Series Earthing Switch

Installation drawing and hole location diagram



Hole location diagram



Specification	E	F	G	H	D	C
JN15-24/31.5-210	210	75	160	655	516	
JN15-24/31.5-220	220	75	160	735	536	
JN15-24/31.5-230	230	75	160	810	556	96
JN15-24/31.5-250	250	75	160	810	596	96
JN15-24/31.5-275	275	75	185	810	646	96

Order notes: indicate product specification, central distance between poles, if the electric live display model number of display needed or not.
Please note the soft link length when ordering (normal L-250mm).
Please consult us if you have any special request.

Component Of MV Switchgear

JN22B-40.5/31.5 Series High Voltage Earthing Switch



Product Overview

JN22B-40.5/31.5 series indoor HV earthing switch is researched and developed by XI'AN HV Electric research organization, with advanced design and steady performance, simple structures, simple mounting end adjustment, suitable for electric power system with 40.5KV, Threephase, AC 50Hz.As an earthing protection, it can be used in KYN 40.5 or other kinds of switchgears. It is complied with GB 1985-2004 and IEC129 standard.

Product definition

JN22B-40.5/31.5-□

Central distance between poles (mm)
4S thermal stability current(KA)
maximum voltage(KV)
Design No.
Indoor earthing switch

Operating environment

- Altitude: ≤1000m;
- Ambient temperature: -10°C ~+40°C;
- Earthquake intensity: <8 degree;
- Applicable in the place without corrosive, flammable gas and water place.

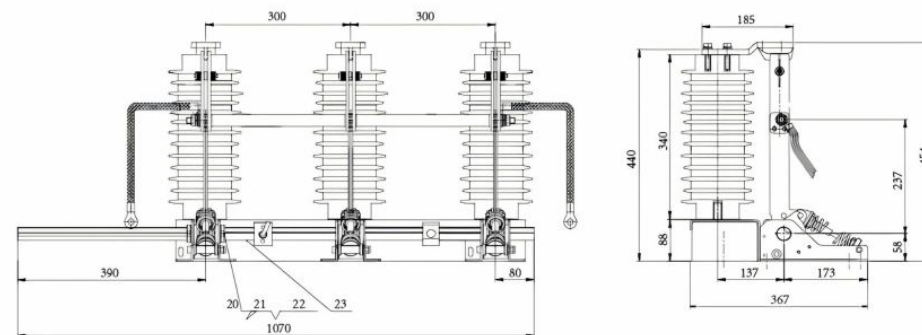
Mainly technical specification

No.	Item	Unit	Data
1	Rated voltage	KV	35
2	Maximum voltage	KV	40.5
3	Rated short time withstand current	KA	31.5
4	Rated short circuit withstand time	S	4
5	Rated short circuit making current	KA	80
6	Rated peak withstand current	KA	80
7	Rated insulation level	KV	1 main power frequency withstand voltage
			Lightning Impulse withstand voltage
8	Central distance between poles	MM	300;350;400

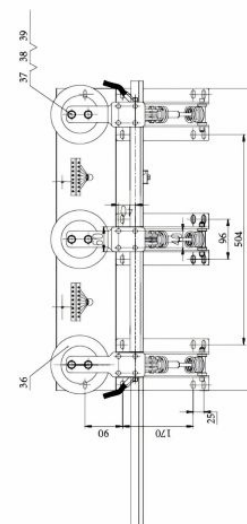
Component Of MV Switchgear

JN22B-40.5/31.5 Series High Voltage Earthing Switch

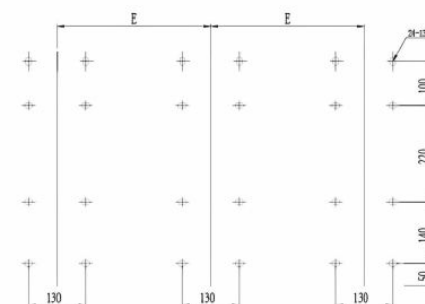
Outline and installation dimension



Cabinet backwards



Installation hole size



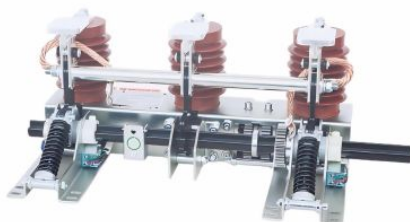
B	H
280	750
300	790
350	890
400	990

Order notes:

- 1.Indicate product specification, rated voltage stability current, central distance between poles.
- 2.If bevel gear mechanism needed,please indicate right or left operation mechanism according to the operation position shows in the drawing above.
- 3.If sensors with electric display device needed, please indicate type NO.
- 4.Please consult us if any special request.

Component Of MV Switchgear

DJN15-31.5 Electric Earthing Switch

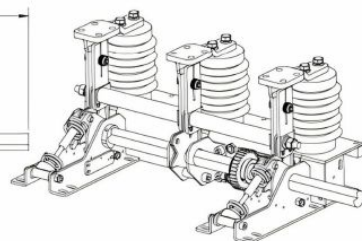
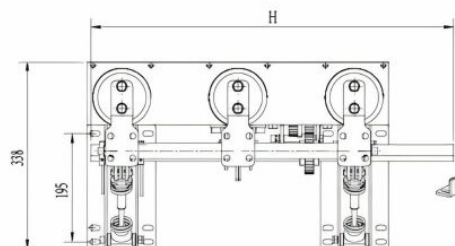
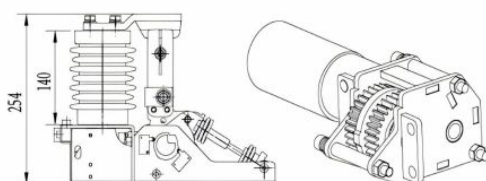
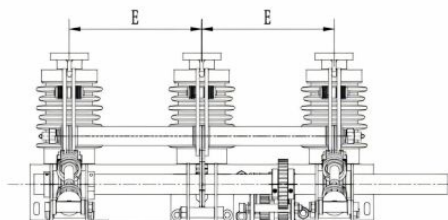


Product Overview

The controller of DJN15-31.5 earthing switch can realize the control and protection of motor operating mechanism. If the electric mechanism has difficulty in driving the motor, for example the installation is not in place or the mechanism is stuck, which reaches the protection condition, the controller can break the motor immediately and drive motor reversely to release the stuck state of the chassis.

In order to adapt to the development of power switchgear, we developed the electric earthing switch which achieves national invention patent. To maintain the style and the relevant interlock of the original switchgear, the electric earthing switch adds motor operating mechanism on the basis of original earthing switch JN15, JN17, JN22B and JN22 series. It could maintain the characteristics of the original earthing switch and realize the electric operation of the earthing switch at the same time. And the electric and manual operation do not need to switch, which satisfies the requirement of programmed operation in the power system.

Electric Earthing Switch Assembly



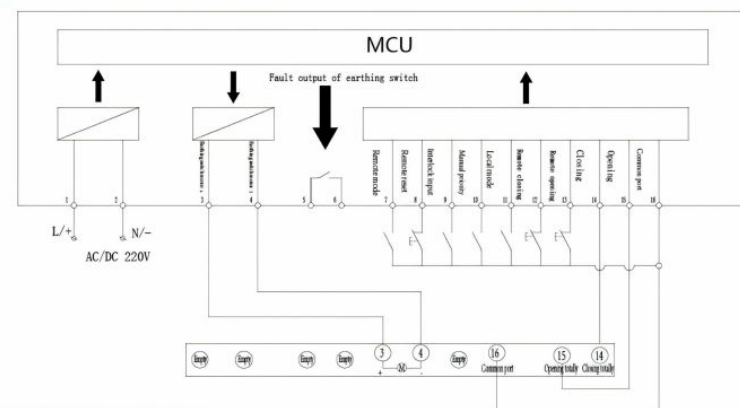
Component Of MV Switchgear

Electric Earthing Switch

Control logic

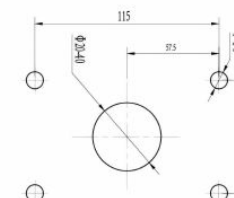
- Electric open and close operation are allowed when the interlock signal is satisfied.
- Entering into switch opening and closing instruction during switch opening and closing operation,, the controller will still execute the original operation.
- If the open / close buttons on the panel are pressed simultaneously or the interlock signal is invalid during switch opening and closing operation, the controller will stop the operation.
- When the blocking rotation protection condition is satisfied, the blocking rotation protection protection current setting is set to 1A.
- The time limit of electric opening and closing operation is 12s. When time is out and the trolley is not at the position, it needs to stop and alarm.

Copper terminal block



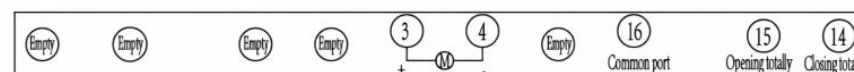
Technical Parameters

- Supply voltage: AC/DC 220V, AC/DC110V
- Motor rated voltage: DC220V, DC110V
- Rated power of motor: Max 300W
- Power consumption: < 2W
- Power frequency withstand voltage: AC2.5KV 1min
- Output contact: 1NO.3A, AC 250V
- Protection: IP20
- Working temperature: -20°C to +50°C
- Dimensions: L*W*H=125*78*69
- Installation: door panel installation



Statement:
The four Φ5 openings in above picture are the fix installation openings of controller on the panel. Φ20-40 opening is used to go through the connection cable inside the controller. The opening is used for the cable of the controller. Ans it has no strict requirement of processing dimension tolerances.

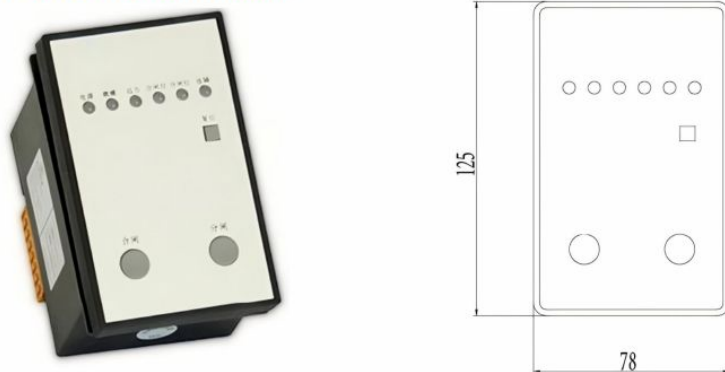
Indication of terminals for earthing switch



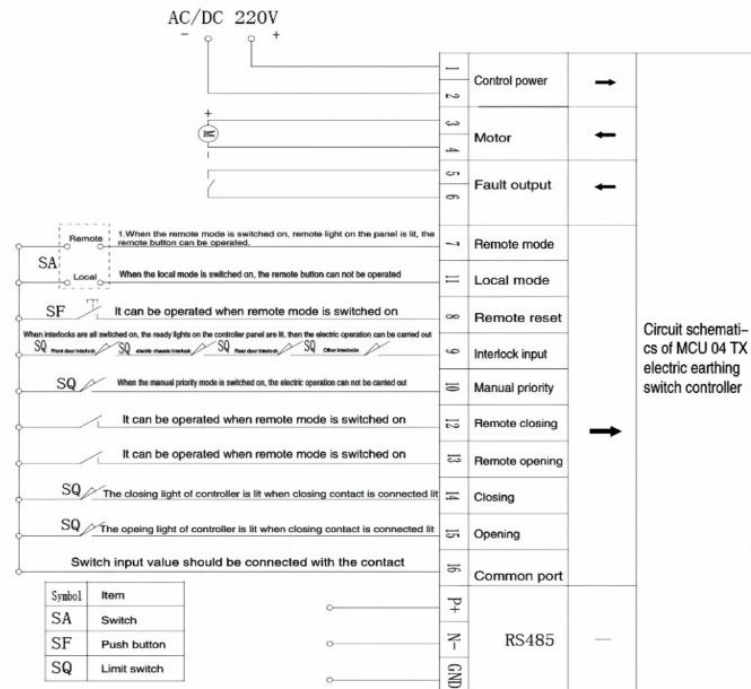
Component Of MV Switchgear

Electric controller

Electric controller dimensions



Circuit schematics of MCU 04 TX electric earthing switch controller



Component Of MV Switchgear

Electric controller

Instructions of indicators, buttons and contacts of the controller

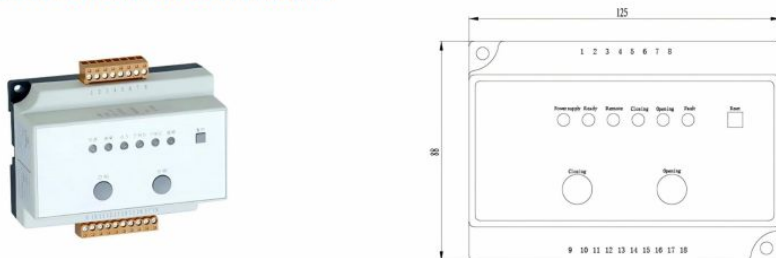
Button	Closing	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the working position; 2.When the system is in the working position,the command will not be responded.
	Opening	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the test position; 2.When the system is in the test position,the command will not be responded.
	Emergency stop/reset	When the controller is in the lock state for protection,red protection indicator on the panel lights up,pressing the button will let the system return to standby state.If the button is pressed while the system is in the working position or the test position,the motor will immediately be braked and return to standby state.
Indicator lamp	Power supply	Power indicator that will go on and is green at power on,and go off at power off.
	Ready	Ready indicator that will go on and is green at ready,and go off if not.
	Remote	Remote operation indicator that will go on and is white in remote mode,and go off in local mode.
	Closing	Normally on and is red when the electric mechanism is in work position.
	Opening	Normally on and is red when the electric mechanism is in test position.
	Fault	Normally on and is red when the system protection lock starts,and go off when it is reset.

1	Power L/+	Positive or L controller power supply
2	Power N/-	Negative or N controller power supply
3	Motor+	Driving signal output of controller,connect to driving motor"+"
4	Motor-	Driving signal output of controller,connect to driving motor"- "
5.6	Fault alarm	NO contact.Open when there is no locked rotor fault,and close when there is locked rotor fault.
7	Remote	It is remote operation mode when it is short-circuit connected with the common port of digital input.
8	Remote reset	Effective when it is short-circuit connected with the common port of digital input.
9	Interlock input	Effective when i is short-circuit connected with the common port of digital input.
10	Manual prior	It is manual operation mode when it is short-circuit connected with the common port of digital input,and is electric operation mode when it is disconnected with the common port of digital input;
11	Local	t is local operation mode when it is connected with the common port of digital input;
12	Remote closing	Effective when it is short-circuit connected with the common port of digital input
13	Closing opening	Effective when i is short-circuit connected with the common port of digital input
14	Closing	Effective when it is short-circuit connected with the common port of digital input
15	Opening	Effective when it is short-circuit connected with the common port of digital input
16	Common port	Common port of digital input signal
P+		485 Communication port
N-		
GDN		

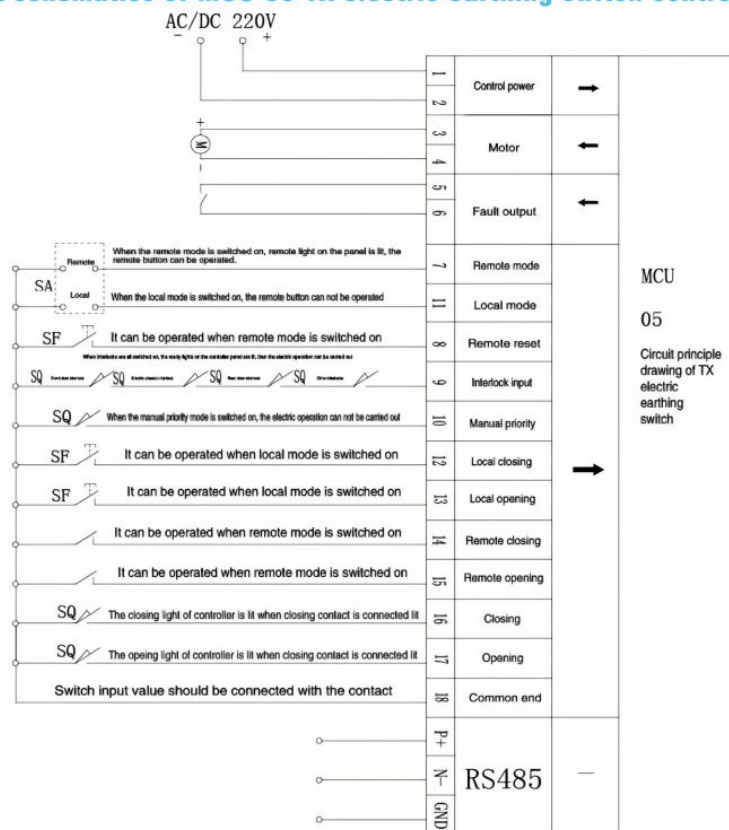
Component Of MV Switchgear

Electric controller

Electric controller dimensions



Circuit schematics of MCU 05 TX electric earthing switch controller



Component Of MV Switchgear

Electric controller

Instructions of indicators, buttons and contacts of the controller

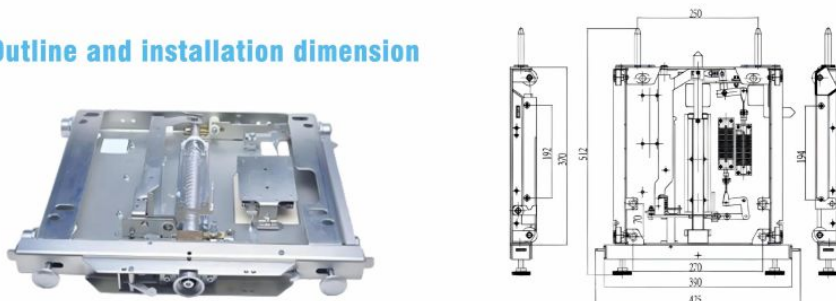
Button	Closing	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the working position; 2.When the system is in the working position,the command will not be responded.
	Opening	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the test position; 2.When the system is in the test position,the command will not be responded.
	Emergency stop/reset	When the controller is in the lock state for protection,red protection indicator on the panel lights up,pressing the button will let the system return to standby state.If the button is pressed while the system is in the working position or the test position,the motor will immediately be braked and return to standby state.
Indicator lamp	Power supply	Power indicator that will go on and is green at power on,and go off at power off.
	Ready	Ready indicator that will go on and is green at ready,and go off if not.
	Remote	Remote operation indicator that will go on and is white in remote mode,and go off in local mode.
	Fault	Normally on and is red when the system protection lock starts,and go off when it is reset.
	Closing	Normally on and is red when the electric mechanism is in work position.
	Opening	Normally on and is red when the electric mechanism is in test position.

1	Power L/+	Positive or L controller power supply
2	Power N/-	Negative or N controller power supply
3	Motor +	Driving signal output of controller,connect to driving motor "+"
4	Motor -	Driving signal output of controller,connect to driving motor "-"
5,6	Fault alarm	NO contact.Open when there is no locked rotor fault,and close when there is locked rotor fault.
7	Remote	It is remote operation mode when it is short-circuit connected with the common port of digital input
8	Remote reset	Effective when it is short-circuit connected with the common port of digital input
9	Interlock input	Effective when it is short-circuit connected with the common port of digital input
10	Manual prior	It is manual operation mode when it is short-circuit connected with the common port of digital input,and is electric operation mode when it is disconnected with the common port of digital input;
11	Local	It is local operation mode when it is connected with the common port of digital input
12	Local closing	Effective when it is short-circuit connected with the common port of digital input
13	Local opening	Effective when it is short-circuit connected with the common port of digital input
14	Remote closing	Effective when it is short-circuit connected with the common port of digital input
15	Closing opening	Effective when it is short-circuit connected with the common port of digital input
16	Closing	Effective when it is short-circuit connected with the common port of digital input
17	Opening	Effective when it is short-circuit connected with the common port of digital input
18	Common port	Common port of digital input signal
P+		485 Communication port
N-		
GND		

Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (chassis truck)

Outline and installation dimension



Product Overview

Chassis truck is mainly used to hold circuit breaker, transformer and other components in the withdrawable switchgear, chassis push and exit them. And chassis as an auxiliary operation for connecting components and busbars. When operation with internal mechanism of circuit breaker and other interlock mechanism of mid-placed cabinet it can satisfy the interlock requirement of "5 preventions" stipulated in GB3906. Specific functions areas follows:

- Only when the handcart is under testing/isolating or working position, the circuit breaker can be closed. After that, the handcart is underlocked state, which prevents misconnection and mismatched isolation contacts with load.
- When the handcart is under working position or away from testing/isolating position for 10mm, the earthing switch fails to close, avoid powered falsemaking of the switch.
- When the earthing switch close, the handcart shall not shift from testing/isolating to working position, avoid the switch closing the circuit breaker in making.
- When the chassis enters into cabinet, once away from testing/isolating position, the handcart fails to draw out from the cabinet.

Product definition

DPC - □ - □ - □

Wide: 650mm, 800mm, 1000mm
A: wheel with bearing, noA: wheel without bearing
Design No. 3, 4, 5
Chassis truck

DPC Chassis truck order notes

- Indicate the specification of chassis truck, code of lock plate, specification of auxiliary switch (for example: 5 NO, 3 NO & 2 NC etc);
 - Indicate the earthing method;
 - Please consult us if you have any special request.
- Note: The specification of auxiliary switch is not the auxiliary state when chassis truck in testing position.

Lock plate of the chassis truck



8YF.141.012.1



8YF.141.012.2



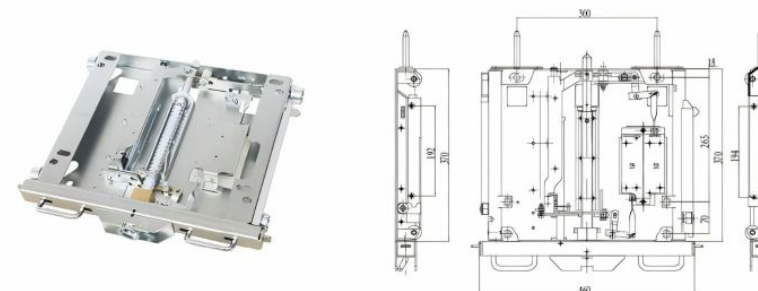
8YF.141.012

Note: There are five kinds of lock plates for choice, the regular specification is 8YF. 141 .012, if you need other four lock plates please indicate when you place the order.

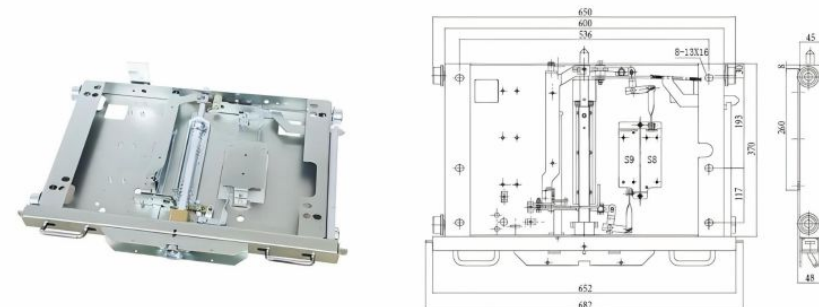
Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (chassis truck)

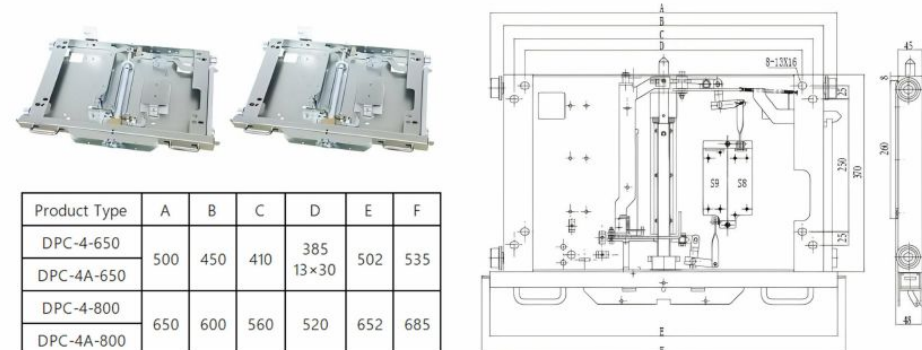
DPC-4A-550 Chassis truck outline and installation dimension (match VD4)



DPC-3A-800 Chassis truck outline and installation dimension (match VD4)



DPC-4/4A-□ Chassis truck specification and installation dimension

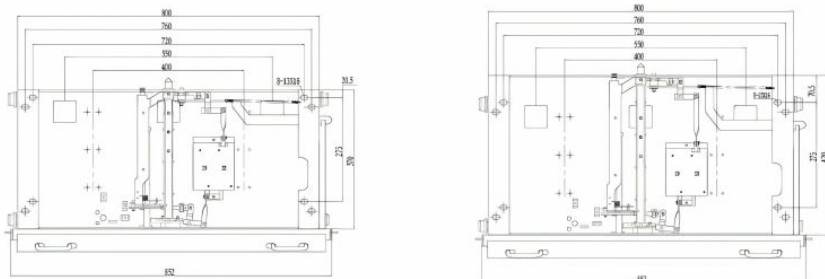


Product Type	A	B	C	D	E	F
DPC-4-650	500	450	410	385 13×30	502	535
DPC-4A-650						
DPC-4-800	650	600	560	520	652	685
DPC-4A-800						

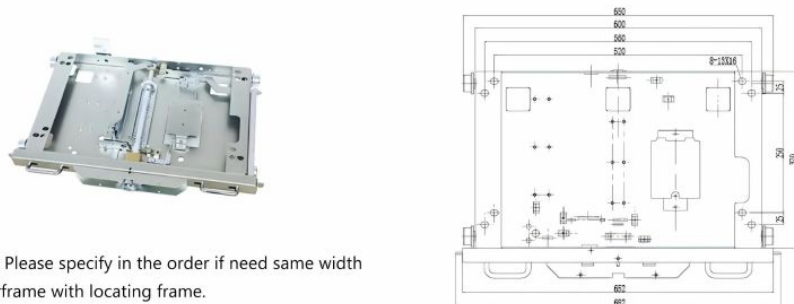
Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (chassis truck)

DPC-4/4A-1000/24KV Chassis truck specification and installation dimension

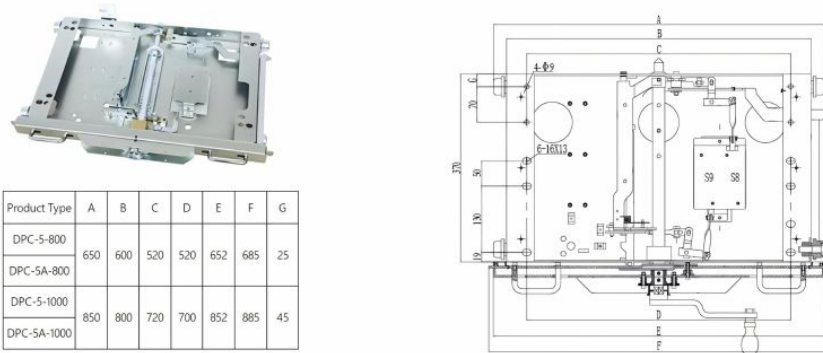


DPC-4-800/XC2 Chassis truck (For low layer) outline and installation dimension



Note: Please specify in the order if need same width of carframe with locating frame.

DPC-5/5A-□ Chassis truck specification and installation dimension (match VBI)



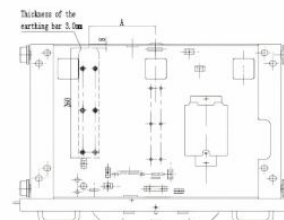
Product Type	A	B	C	D	E	F	G
DPC-5-800	650	600	520	520	652	685	25
DPC-5A-800	850	800	720	700	852	885	45

Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (chassis truck)

Earthing method of chassis truck

(1) Installation of earthing bar(650/800)



(2) Earthing bar installation (type 1000)



(3) Installation size of earthing contact

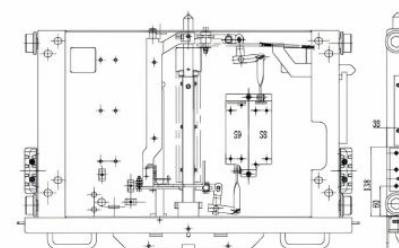
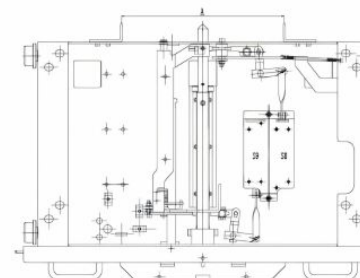
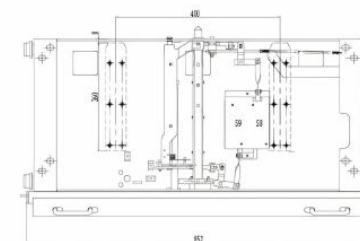
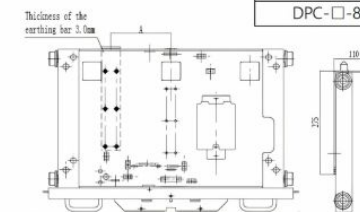


Type	A
DPC-□-650	180
DPC-□-800	296
DPC-□-1000	496

(4) Guide rail earthing(both side)



Type	A
DPC-□-650	100
DPC-□-800	160



Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (chassis truck)

DPC-□-□/G/S Chassis truck



DPC chassis truck mid-door interlock function:

A. DPC-D-EI/G chassis truck

This type only add door closing operation, the handle of chassis could be shook only when the cabinet door closed. Don't need to modify the cabinet door.

B. DPC-EJ-EI/S chassis truck

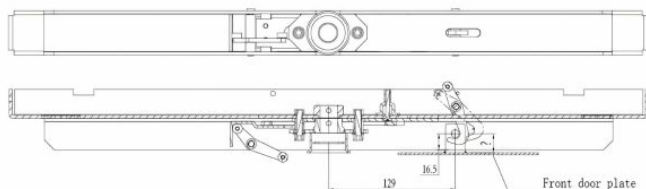
This type add locking on internal, when the handcart moves away from testing position, the door will be locked, which can be opened again only when the handcart back to the testing position. The cabinet door need to be changed.

DPC-□-□/H Chassis truck

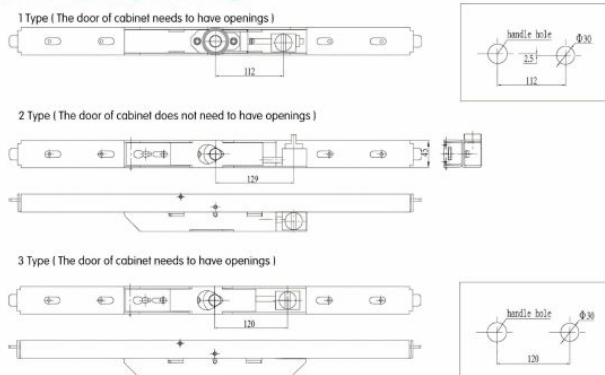


This type can interlock between two or more chassis. Once one chassis is in working, the others will fail to work. It is suitable for interlock of dual-power supply cabinet. The user only needs to open two holes on the cabinet door, recommended size: $\Phi 30$.

Mid-door interlock assembly drawing



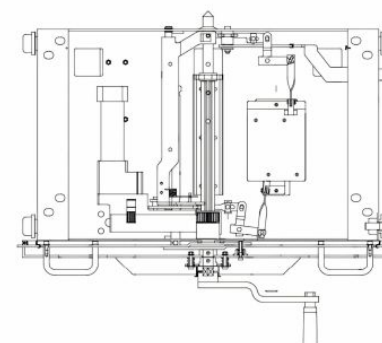
Mid-door interlock assembly drawing



Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

DDPC-4-800 Outline and installation dimension of electric chassis



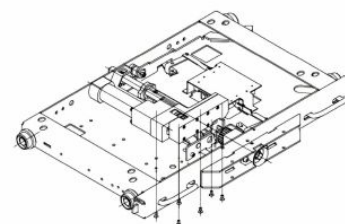
Note: Opening size and mode of installation are common type. When the input power is AC/DC 110V, please specify in advance.

Overview of DDPC-4-800 electric chassis

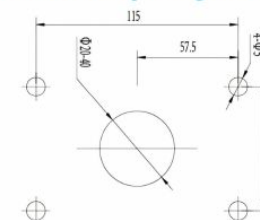
To meet the development of the power switching devices and the new demand of power divisions, we have developed the electric chassis which fills the domestic blank and achieves national patent for invention. To maintain the style of the original chassis used in the center console, the electric chassis is improved with an electric mechanism from the original chassis 650#, 800#, 1000# and 24KV# series, which maintains the character of the original chassis and achieves the electric operation of the chassis's working position and test position. Therefore, the electric operation and manual operation do not need to be switched, which satisfies the requirements of programmed operation in the power system.

The controller of chassis can achieve the control and protection for the electric mechanism, the controller can brake the motor immediately when the motor-driven drive motor is blocked (for example, installation is not in place or mechanism is stuck) and reach the protection condition and reversely drive motor to release the stuck state of the chassis.

Electric chassis assembling



Installation opening size of panel controller



The four $\Phi 5$ openings in the left figure are the fixed mounting holes of the controller on the panel. $\Phi 20-40$ holes are used to connect the cable inside the controller, which is used to pass through the controller data line without strict machining dimensional tolerance requirements.

Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

Operating Instructions of the electric chassis

- Only when the grounding switch and circuit breaker are at opening states, the chassis is allowed to be swung in and out.
- When the chassis is equipped with manual priority function, under manual operation status, the electric button for swing in and out is pressed without any action.
- When the chassis is not at working position and test position under natural state, if it is needed to be swung in the working position by electric operation, the chassis must be swung in the test position by manual or electric operation first, then it is moved to the working position by electric operation.
- When it needs manual operation after electric operation, the handle must be inserted into it and rotate it about 80° then reversely rotate it about 30°.
- In case that the handle of chassis can not be pulled, to observe whether the angle of the screw rod is in the correct position.
- If the operation needs an emergency stop during electric operation process, or there is fault which is solved, just press the reset button.

Technical parameters

- Power voltage: AC/DC 220V, AC/DC 110V
- Rated motor voltage: DC220V, DC110V
- Allow motor rated power: Max. 300W
- Power: < 2W
- Power frequency withstand voltage: AC2.5KV 1min
- Output contact: 1NO.3A, AC 250V
- Protection class: IP20
- Operating ambient temperature: -20°C to +50°C
- Dimensions: L*W*H=125*78*69
- Installation: door panel installation

Motor parameters

- Power voltage: AC/DC220V, AC/DC110V
- Rated motor voltage: DC220V, DC110V
- Rated motor power: 200W
- Rated motor torque: 260N/m
- Motor rotation speed: 50r/min

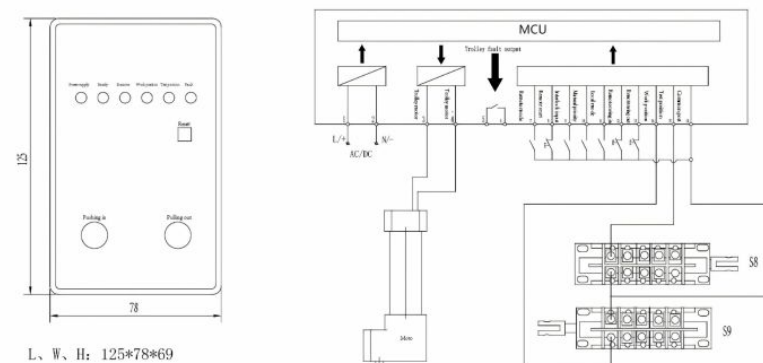
Control Instructions of the chassis

- The control logic
 - The electric pushing operation is allowed when the interlock signal is satisfied.
 - During the electric operation, when input the pushing in/out command and the controller still performs original operation.
 - During the electric operation, if press pushing in/out button on the panel at the same time or the interlock signal is invalid, the controller will stop operation.
 - When the locked-rotor protection condition is satisfied, the controller let the mechanism rotate reversely for 200ms after stopping the mechanism; 15s before swinging in, the locked-rotor protection current setting value is set to 1.2A and 4A after 15s, 7s before swinging out, it is set to 4A, and 1.2A after 7s.
 - The electric pushing in/out operation is limited within 80s. When the time is up and the chassis is not in the position, it will stop and alarm.
- Precautions
 - The limit switch at contacts 16 and 17 is the S9 and S8 auxiliary switches of the handcart. It only needs to connect the controller contacts to the corresponding contacts of S9 and S8.
 - During the electric operation of the controller, press the reset button if the alarm light is always on.
 - Pay attention to the positive and negative positions of the motor when wiring the motor.
 - It can also be used with the microcomputer protection device together when it is pushing in and out.
 - There are two modes, local and remote. Only one mode can work at one time.
 - When the handcart is not in the test position during electric operation, it must be pushed out to the test position so that the electric operation can be pushed into the working position.

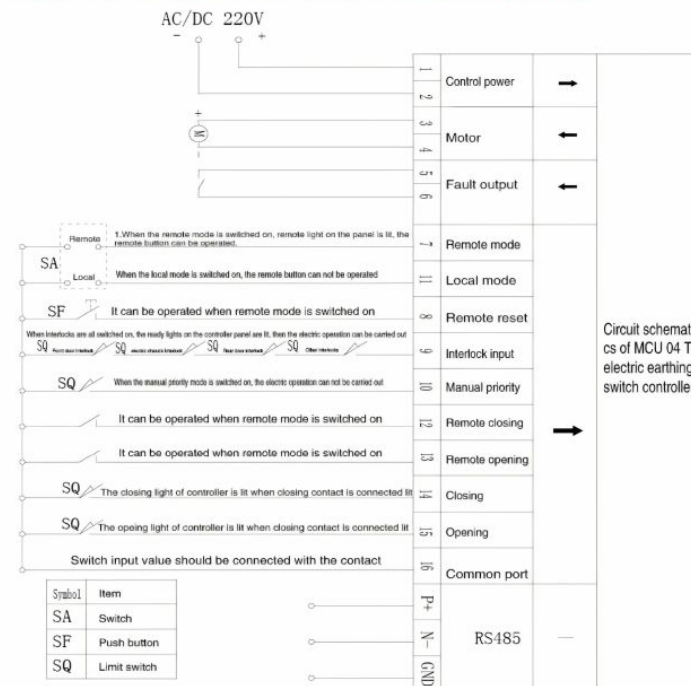
Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

Dimensions and wiring diagram of panel controller of the electric chassis



Circuit schematics of MCU 04 TX electric chassis controller



Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

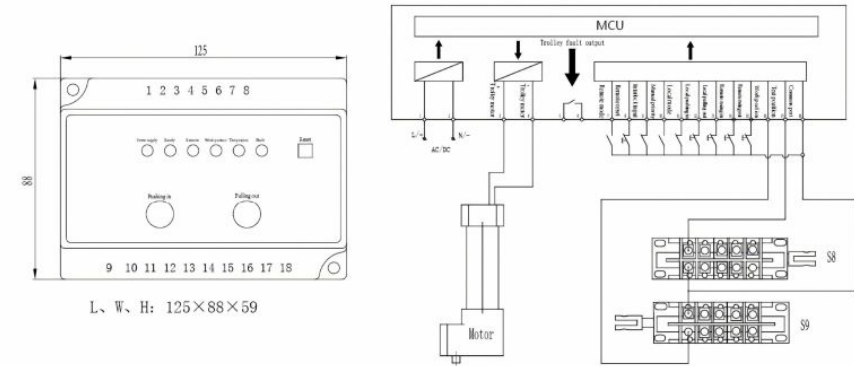
Instructions of indicators, buttons and contacts of the controller

Button	Pushing in	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the working position; 2.When the system is in the working position,the command will not be responded.
	Pushing out	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the test position; 2.When the system is in the test position,the command will not be responded.
	Emergency stop/reset	When the controller is in the lock state for protection,red protection indicator on the panel lights up,pressing the button will let the system return to standby state.If the button is pressed while the system is in the working position or the test position,the motor will immediately be braked and return to standby state.
Indicator lamp	Power supply	Power indicator that will go on and is green at power on,and go off at power off.
	Ready	Ready indicator that will go on and is green at ready,and go off not.
	Remote	Remote operation indicator that will go on and is white in remote mode,and go off in local mode.
	Work position	Normally on and is red when the electric mechanism is in work position.
	Test position	Normally on and is red when the electric mechanism is in test position.
	Fault	Normally on and is red when the system protection lock starts,and go off when it is reset.
1	Power L/+	Positive or L controller power supply
2	Power N/-	Negative or N controller power supply
3	Motor+	Driving signal output of controller,connect to driving motor"+"
4	Motor-	Driving signal output of controller,connect to driving motor"- "
5,6	Fault alarm	NO contact.Open when there is no locked rotor fault,and close when there is locked rotor fault.
7	Remote	is remote operation mode when it is short-circuit connected with the common port of digital input
8	Remote reset	Effective when it is short-circuit connected with the common port of digital input
9	Interlock input	Effective when it is short-circuit connected with the common port of digital input
10	Manual priority	It is manual operation mode when it is short-circuit connected with the common port of digital input,and is electric operation mode when it is disconnected with the common port of digital input;
11	Local	It is local operation mode when it is connected with the common port of digital input;
12	Remote pushing in	Effective when it is short-circuit connected with the common port of digital input
13	Remote pushing out	Effective when it is short-circuit connected with the common port of digital input
14	Work position	Effective when it is short-circuit connected with the common port of digital input
15	Test position	Effective when it is short-circuit connected with the common port of digital input
16	Common port	Common port of digital input signal
P+		
N-		485 communication port
GND		

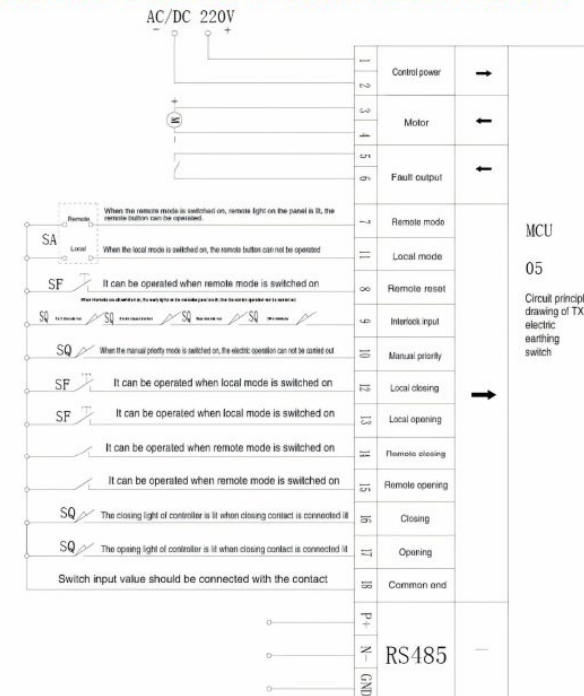
Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

Dimensions of electric chassis controller



Circuit schematics of MCU 05 TX electric chassis controller



Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

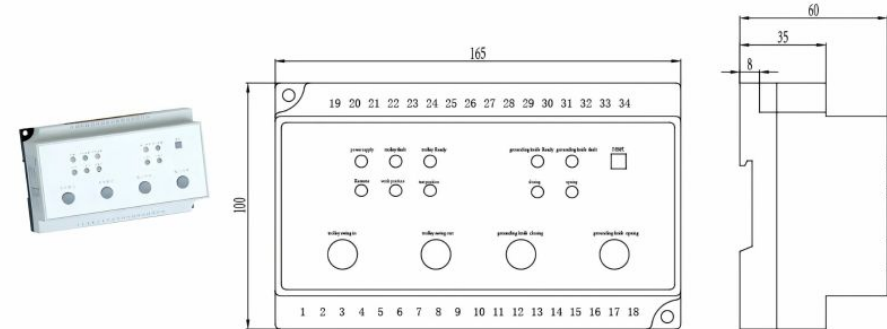
Instructions of indicators, buttons and contacts of the controller

Button	Pushing in	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the working position; 2.When the system is in the working position,the command will not be responded.
	Pushing out	The controller allows operation.After pressing the button: 1.When the system is in the standby state,the motor will start to move to the test position 2.When the system is in the test position,the command will not be responded.
	Emergency stop/reset	When the controller is in the lock state for protection,red protection indicator on the panel lights up,pressing the button will let the system return to standby state.If the button is pressed while the system is in the working position or the test position,the motor will immediately be braked and return to standby state.
Indicator lamp	Power supply	Power indicator that will go on and is green at power on,and go off at power off.
	Ready	Ready indicator that will go on and is green at ready,and go off at not.
	Remote	Remote operation indicator that will go on and is white in remote mode,and go off in local mode.
	Work position	Normally on and is red when the electric mechanism is in work position.
	Test position	Normally on and is red when the electric mechanism is in test position.
	Fault	Normal on and is red when the system protection block starts,and go off when it is reset
1	Power L/+	Positive or L controller power supply
2	Power N/-	Negative or N controller power supply
3	Motor+	Driving signal output of controller,connect to driving motor"+ "
4	Motor-	Driving signal output of controller,connect to driving motor"- "
5,6	Fault alarm	NO contact.Open when there is no locked rotor fault,and close when there is locked rotor fault.
7	Remote	It is remote operation mode when it is short-circuit connected with the common port of digital input
8	Remote reset	Effective when it is short-circuit connected with the common port of digital input
9	Interlock input	Effective when it is short-circuit connected with the common port of digital input
10	Manual prior	It is manual operation mode when it is short-circuit connected with the common port of digital input,and is electric operation mode when it is disconnected with the common port of digital input;
11	Local	It is local operation mode when it is connected with the common port of digital input;
12	Local pushing in	Effective when it is short-circuit connected with the common port of digital input
13	Local pushing out	Effective when it is short-circuit connected with the common port of digital input
14	Remote pushing in	Effective when it is short-circuit connected with the common port of digital input
15	Remote pushing out	Effective when it is short-circuit connected with the common port of digital input
16	Work position	Effective when it is short-circuit connected with the common port of digital input
17	Test position	Effective when it is short-circuit connected with the common port of digital input
18	Common port	Common port of digital input signal
P+		485 communication port
N-		
GDN		

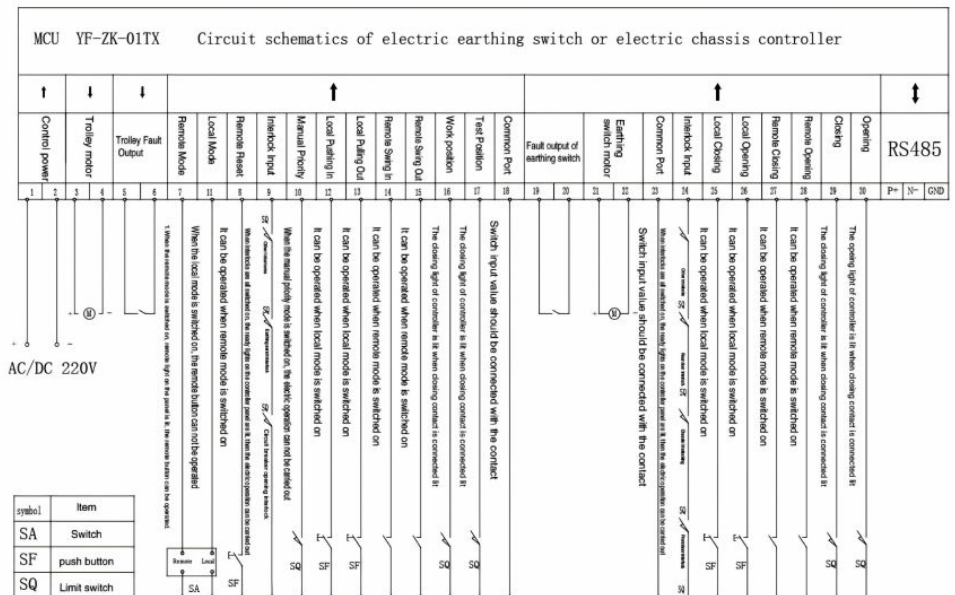
Component Of MV Switchgear

KYN28A-12(GZS) High Voltage Switchgear Fittings (Electric chassis truck)

Integrated controller wiring diagram



Controller circuit schematics of MCU YF-ZK-01TX electric chassis



Component Of MV Switchgear

KYN28-12(GZS) High voltage Switchgear Fittings-----Guide rail

Left and right guide rail series:standard type, lengthen type,suitable for various kinds of circuit breaker handcarts



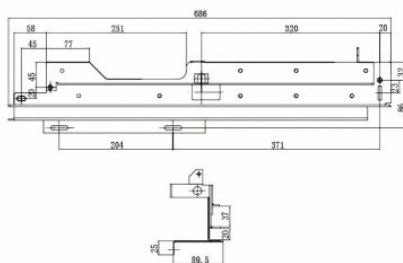
Standard guide rail 5YF.260.011



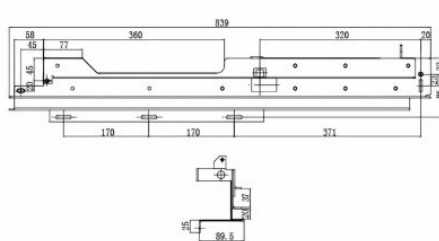
Aluminum guide rail 5YF.260.010



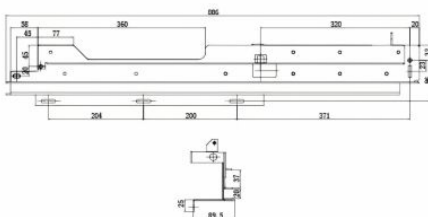
Guide rail interlocking device 5YF.363.011



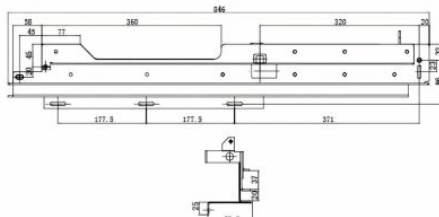
Guide rail 5YF.260.010 (Standard type) outline and installation dimension



010 Guide rail 5YF.260.1 (Lengthen type, lengthen 153mm, suitable for vb2 etc.)



Guide rail 5YF.260.010.3 (Lengthen type, lengthen 200mm, suitable for 3ah, zn2, zn65 etc, modified handcart type circuit breakers) •011



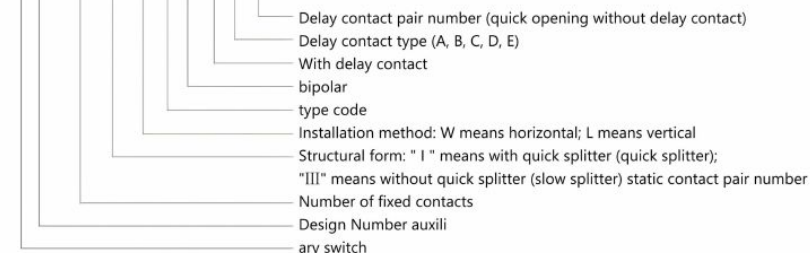
Guide rail 5YF.260.1.4 (Lengthen type, lengthen 160mm, suitable for small current vb2, 24KV circuitbreaker handcart)

Component Of MV Switchgear

KYN28-12(GZS) High Voltage Switchgear Fittings-----Cabinet lock & padlock

Integrated controller wiring diagram

F 10 - □ □ / □ □ 2 - Y □ □



Note: There are two sets of normal contacts, and the section with delay can only have one set of contacts.

Applicable working conditions

- The altitude does not exceed 3000 meters;
- Ambient temperature: -40°C ~ +40°C;
- Relative humidity: the daily average value is not greater than 95%, the monthly average value is not greater than 90%;
- The vibration acceleration is not greater than 15 m/s²;
- The surrounding medium has no explosion hazard, no conductive dust, no damaged insulation and no gas place that corrodes metal.

Technical parameter

term	DC		AC
Rated voltage (V)	110	220	220, 380
Rated current (A)	6	5	10
Rated maximum breaking current (A)	6	5	10
Life times	Time constant t=20ms 20000		220V, cosφ=0.4 20000

F10 series auxiliary switch contact numbers

Number	1	2	3	4	5	6	7	8	9	10
Contact number (normally)	1-3	5-7	9-11	13-15	17-19	21-23	25-27	29-31	33-35	37-39
Contact number (normally)	2-4	6-8	10-12	14-16	18-20	22-24	26-28	30-32	34-36	38-40

- ◆ Classification of aluminum color (silver gray, white), electroplating process (silver plating, gold plating) customer needs.
- ◆ Can be customized according to customer needs.

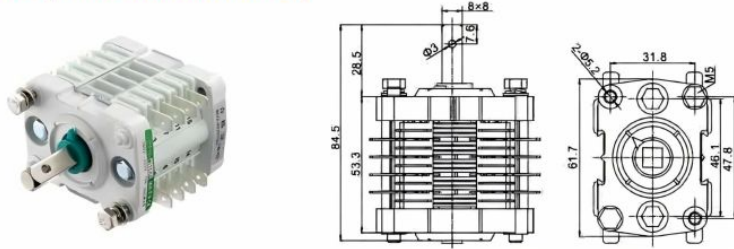
Order information

1. Product name, model, quantity
2. Indicate the number of contact pairs and switch joints, type and installation method
3. Whether to choose connection accessories
4. If the user has other special requirements, please explain

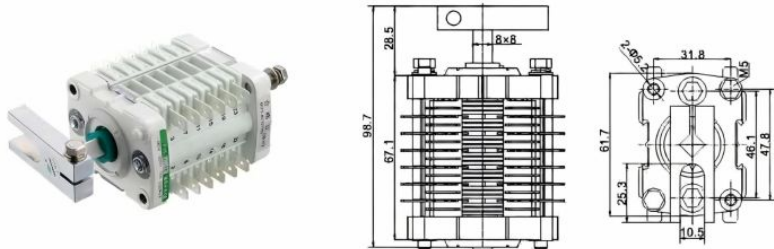
Component Of MV Switchgear

F10 auxiliary switch

F10-8 III/LD(white aluminum silver)



F10-12 III/LBJ(white aluminum silver)



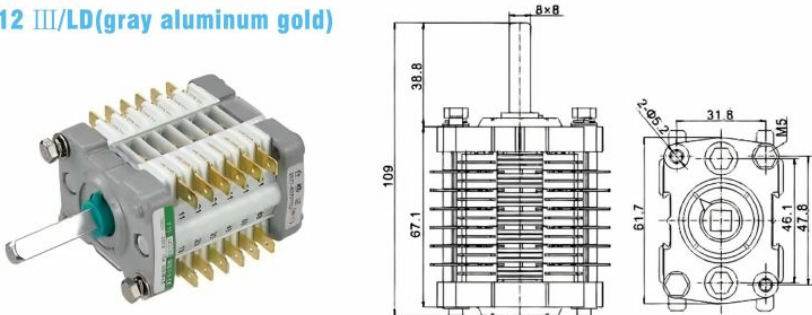
F10-12 III/LD(white aluminum silver)



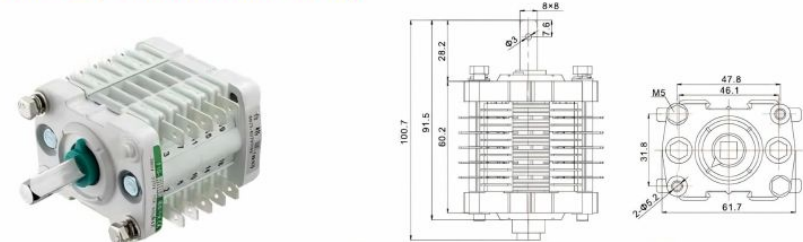
F10-12 III/LD(gray aluminum silver)



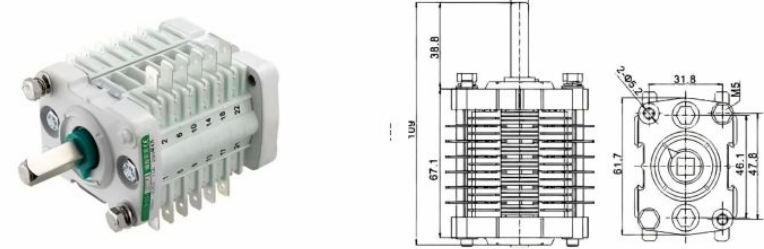
F10-12 III/LD(gray aluminum gold)



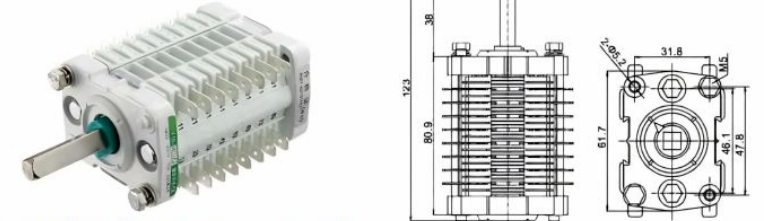
F10-10 III/LD(white aluminum silver)



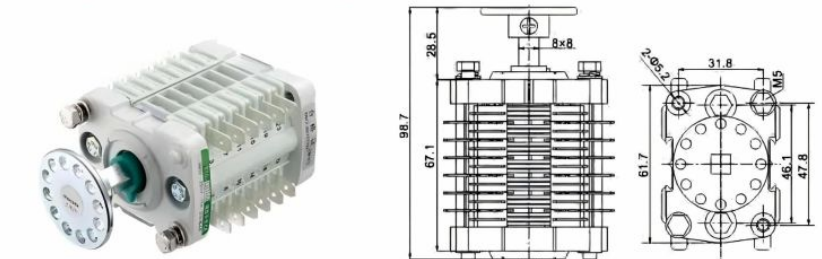
F10-12 III/LB(white aluminum silver)



F10-16 III/LD(white aluminum silver)



F10-12 III/LD(white aluminum silver)



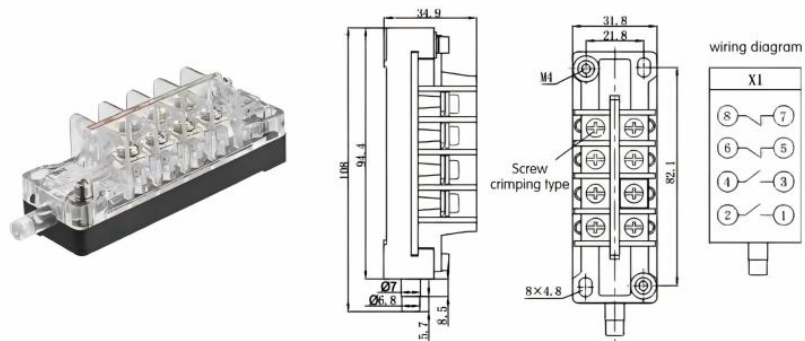
Component Of MV Switchgear

F10 auxiliary switch

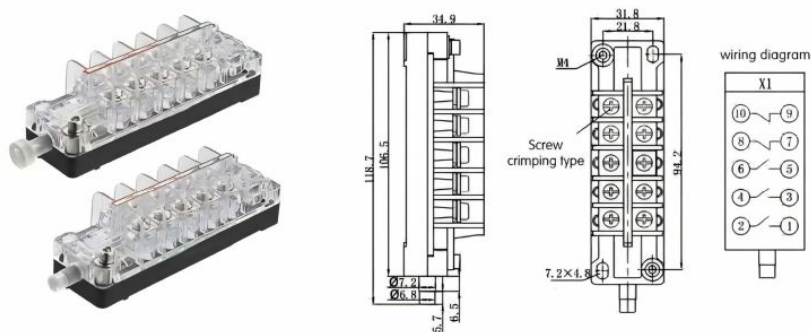
Component Of MV Switchgear

F10 auxiliary switch

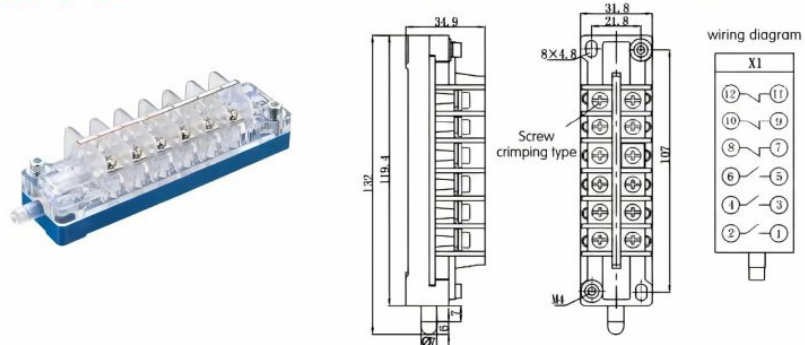
FK10- II -22



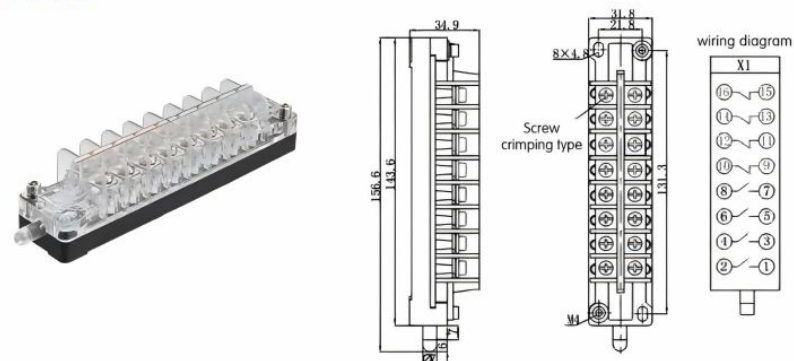
FK10- II -32



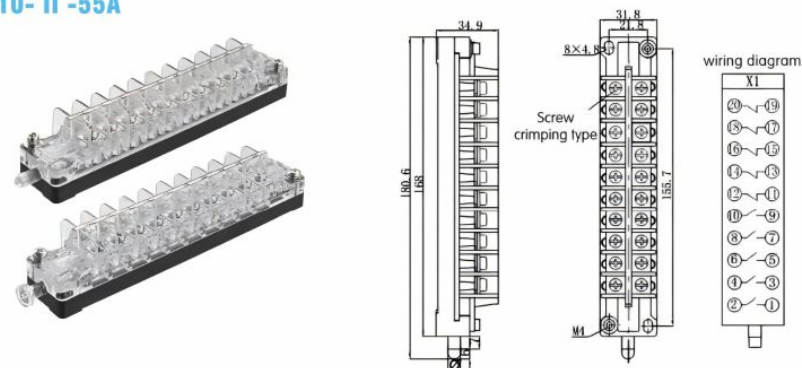
FK10- II -33



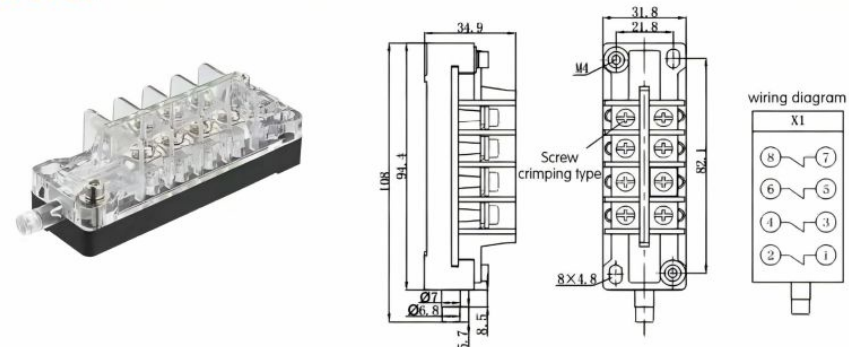
FK10- II -44



FK10- II -55A



FK10- II -04



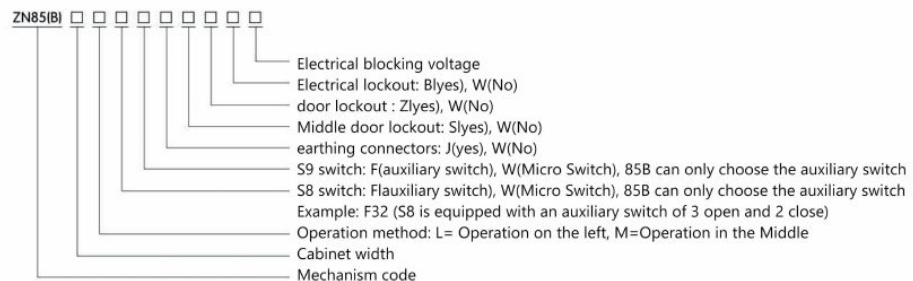
Component Of MV Switchgear

F10 auxiliary switch

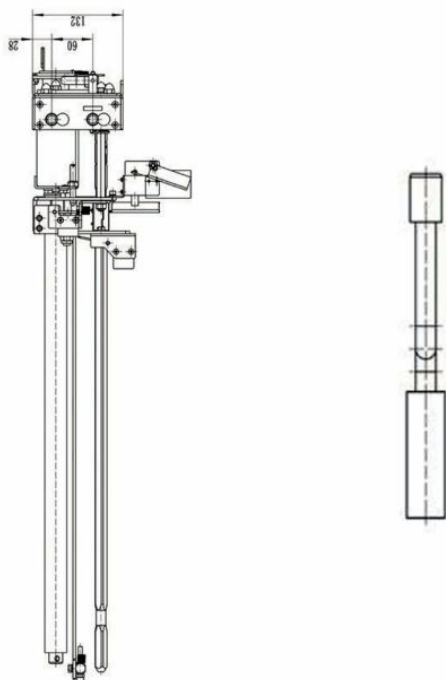
Component Of MV Switchgear

ZN85 circuit breaker

Product model and its meaning



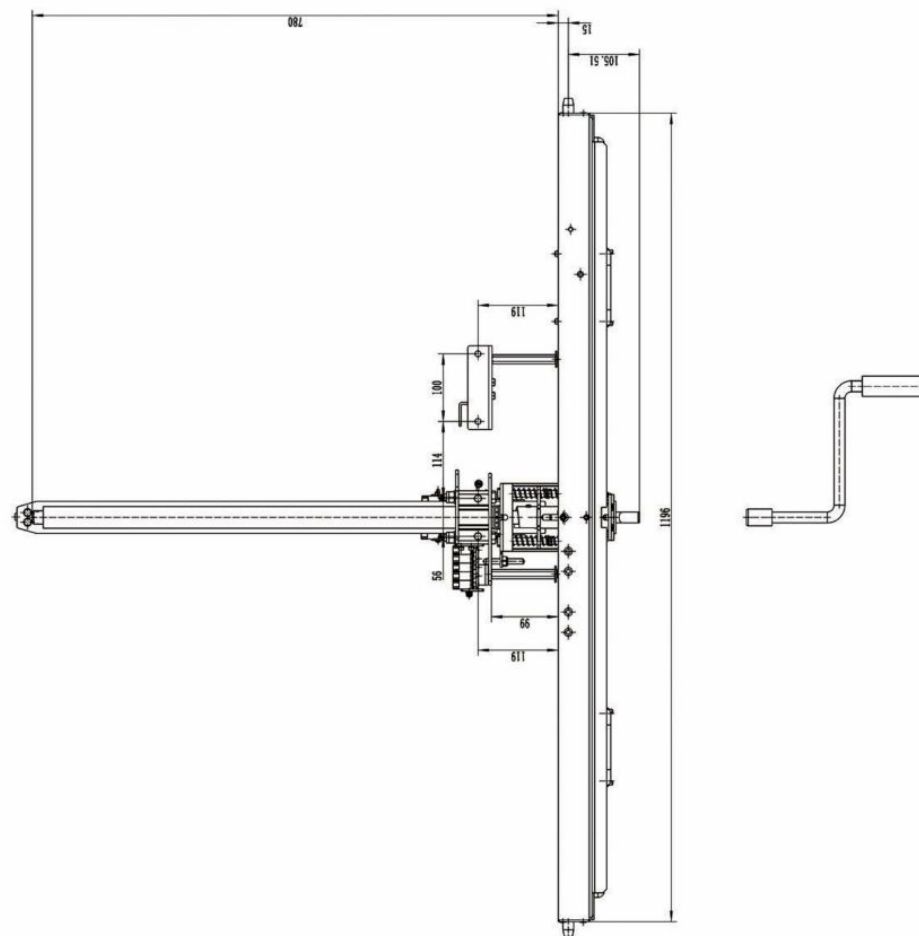
ZN85 Propulsion mechanism installation dimension drawing



Component Of MV Switchgear

ZN85 circuit breaker

ZN85B Propulsion mechanism installation dimension drawing



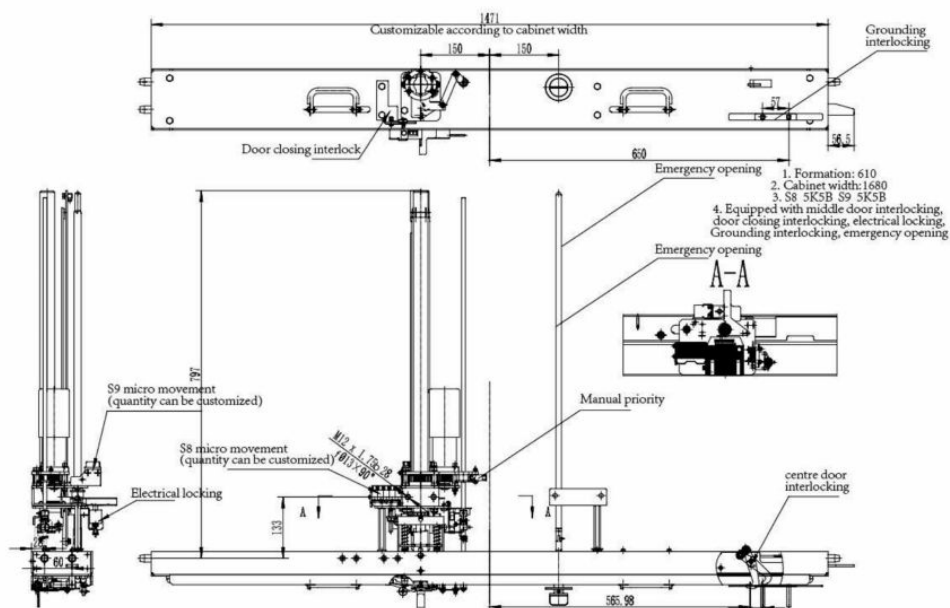
Component Of MV Switchgear

ZN85 circuit breaker

product photograph



Outline overall and installing dimensions



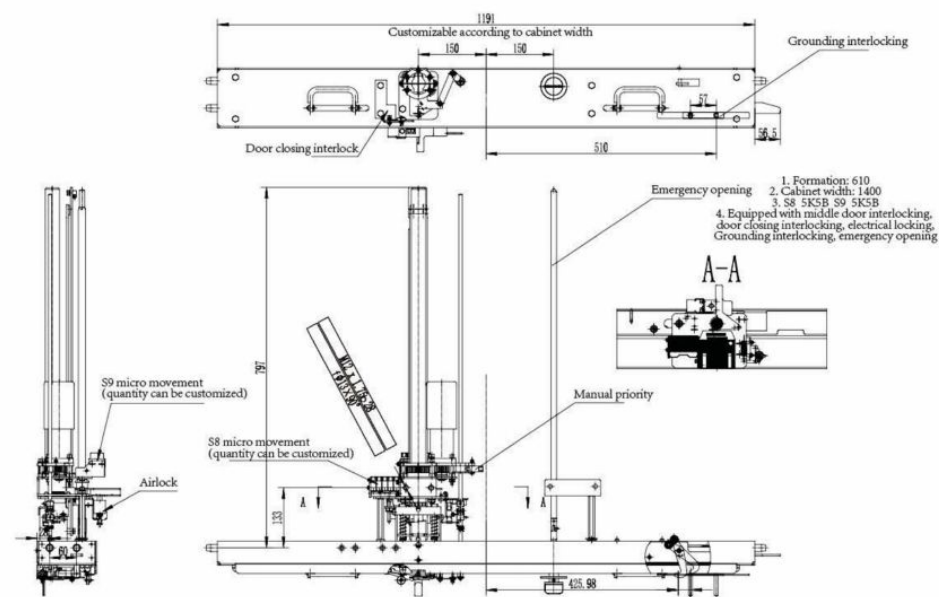
Component Of MV Switchgear

ZN85 circuit breaker

product photograph

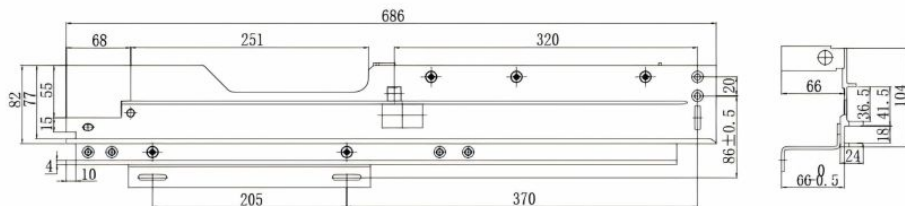


Outline overall and installing dimensions

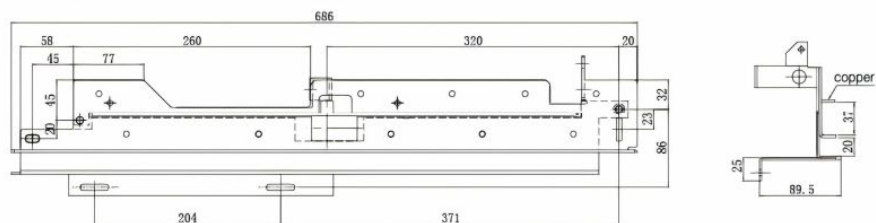


Component Of MV Switchgear

Aluminum guide rail 5YF.260. ⁰¹⁰₀₁₁.A

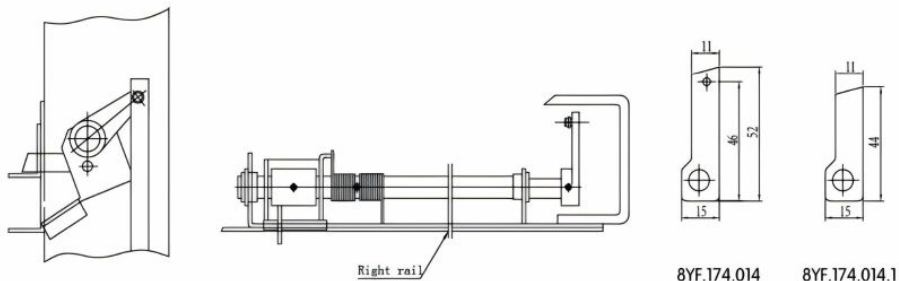


Aluminum guide rail 5YF.260.⁰¹⁰₀₁₁.B (with VD4 circuit breaker)



Note: If there are other non-standard rail ordering please specify.

Guide rail interlocking device(5YF.363.011) assembly drawing



Component Of MV Switchgear

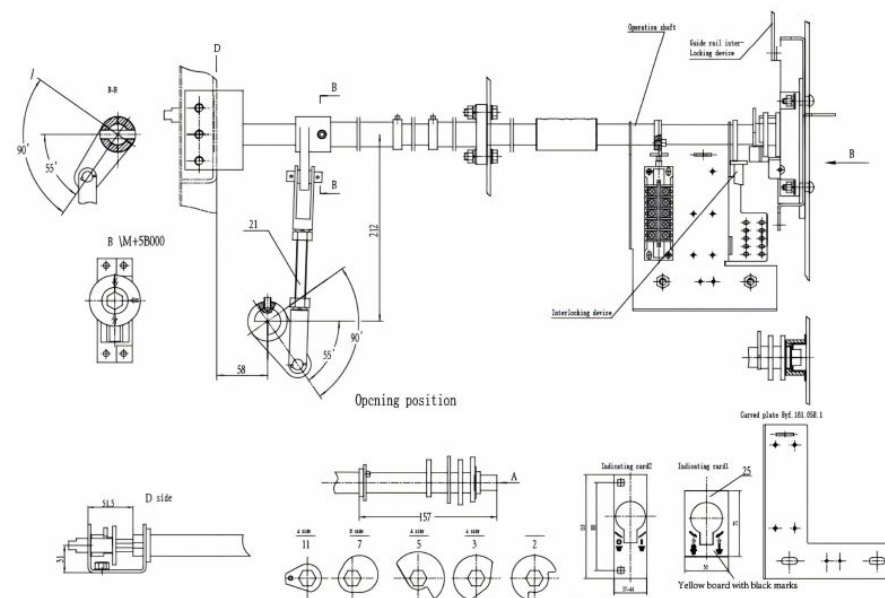
Introduction

The interlock device has improved the reverse blocking of the back door on the basis of 5YF.363.010. When the rear door (sealed plate) is open, earthing switch could still be operated in the original mechanism. Butd in this mechanism, the rear door (sealed plate) must be closed or the earthing switch could not be operated.

The working principal is that the back support has been turned into reverse blocking based on 5YF.363.010. When the rear door (sealed plate) is open, the pushing plunger of 8YF.1407.0402 will move out of the cabinet under the force of door (sealed plate). The interlock shaft will retract to the rear of the cabinet for lockout and the earthing switch could not be operated.



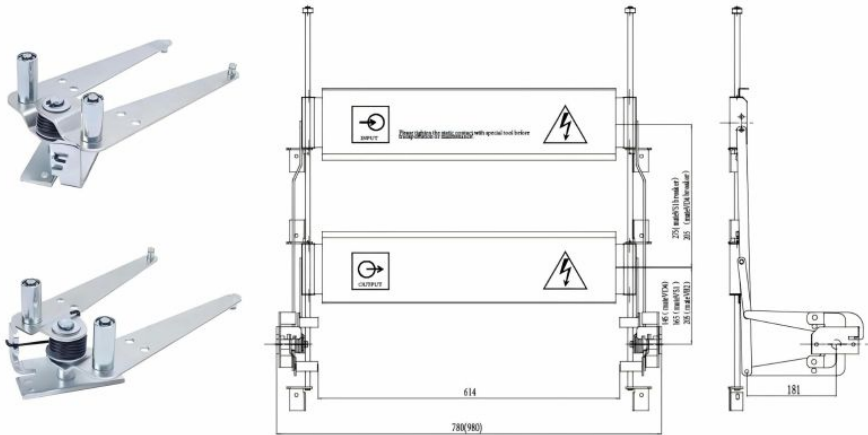
Earthing switch operation mechanism interlocking device (Transmission operation of connecting rod)5YF.363.010.5 assembly drawing



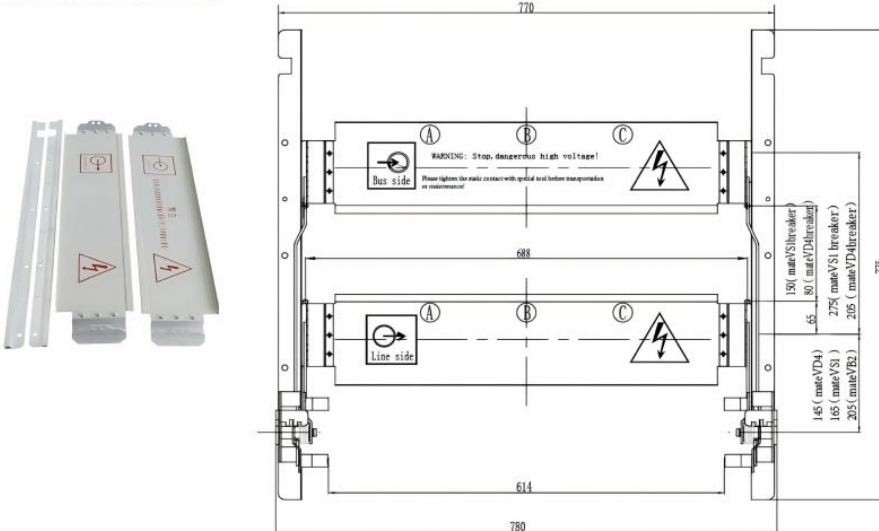
Component Of MV Switchgear

KYN28-12(GZS)High Voltage Switchgear Fittings-----12KV Shutter Mechanism

(800mm Mid-placed switchgear cabinet) Shutter mechanism 5YF.320.010 installation drawing



(800mm Mid-placed switchgear cabinet) Shutter mechanism 5YF.320.010.2 installation drawing



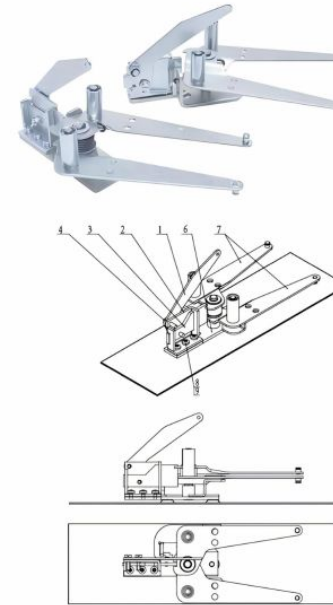
Component Of MV Switchgear

KYN28-12(GZS)High Voltage Switchgear Fittings-----12KV Shutter Mechanism

Introduction

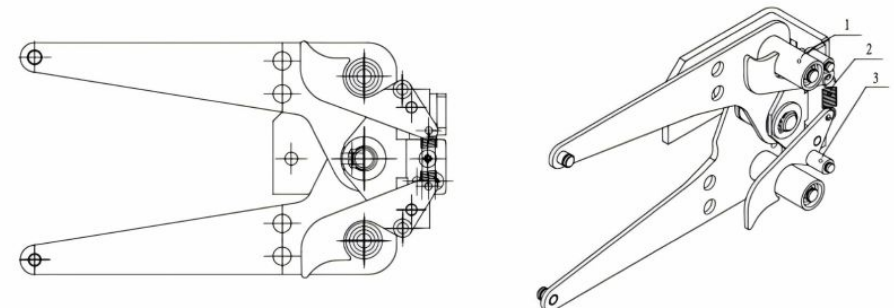
To better protect maintenance personnel, the company's original center cabinet KYN28 shutter mechanism has been optimized to increase the self-locking function. When the handcart is pulled out of the cabinet, maintenance personnel in the maintenance, you can leave the door locked, blocking the contact box and the stationary contact, avoid electrical shock caused by misuse.

Based on KYN28 switchgear, this mechanism increases self-locking function. Here is the work process. When the handcart is out of the cabinet, No.1 rotates counterclockwise around No.4 under the action of a tension spring, which makes No.3 slide to the right. And No.7 is blocked because of No.3. When the handcart is pushed into the cabinet, No.1 rotates clockwise around No.4 under the action of the handcart, which makes No.3 slide to the left. And No.7 will be unlocked and work properly.



Drawing of valve mechanism device 5YF.320.010/12S installation drawing

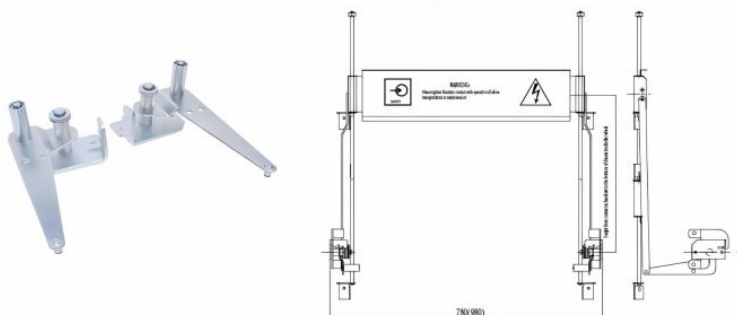
- No.3 arc plate locks the No.1 rollers on the left and right plate to realize self-interlock.
- When VCB is moving from testing position to working position, the two side pusher of the VCB will press the upper down No.3 arc plate to rotate to the middle. So the self-locking mechanism will be unlocked and the shutter mechanism will open normally.
- When VCB is out, No.3 arc plate will be pressed by No.2 tension spring to lock No.1 roller and the shutter mechanism will be locked.



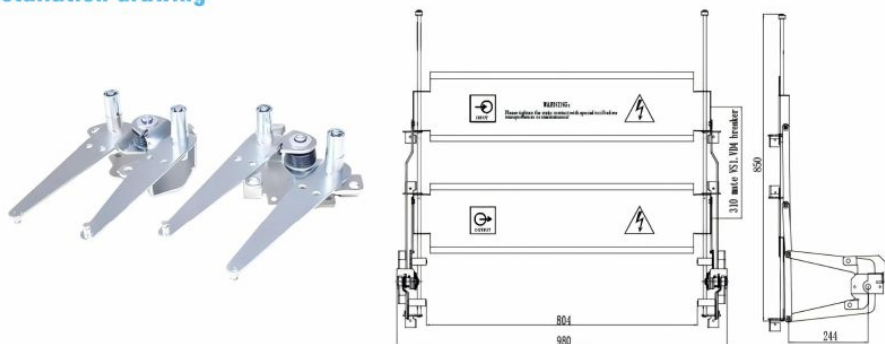
Component Of MV Switchgear

KYN28-12(GZS)High Voltage Switchgear Fittings-----12KV Shutter Mechanism

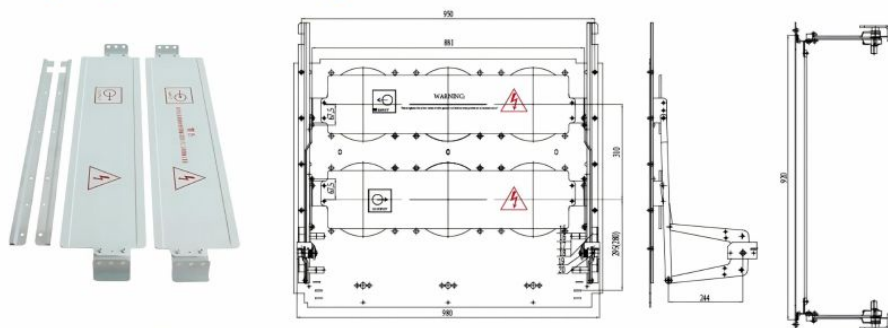
(800mm/1000mm Wide mid-placed switchgear cabinet) Upside shutter mechanism 5YF.320.012/5YF.320.012.1 installation drawing



(1000mm Wide mid-placed switchgear cabinet) Shutter mechanism 5YF.320.011 installation drawing



(1000mm Mid-placed switchgear) shutter mechanism 5YF.320.011.2(Secondary switchgear) installation drawing



Component Of MV Switchgear

KYN261-40.5 High Voltage Switchgear Fittings----35KV Shutter Mechanism

Installation diagram of 35KV shutter mechanism device (Connecting-rod type) 11 YF.03.240



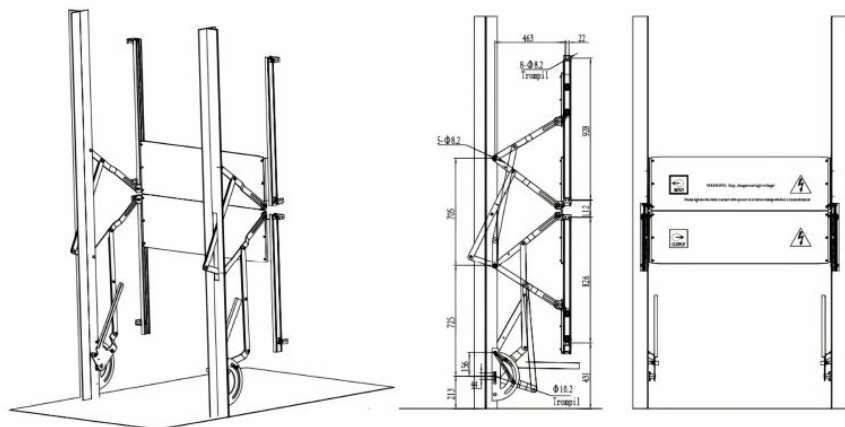
Note: with ZN85 and other similar breakers.

Installation diagram of 35KV shutter mechanism device(Guide groove type) 11 YF.03.250

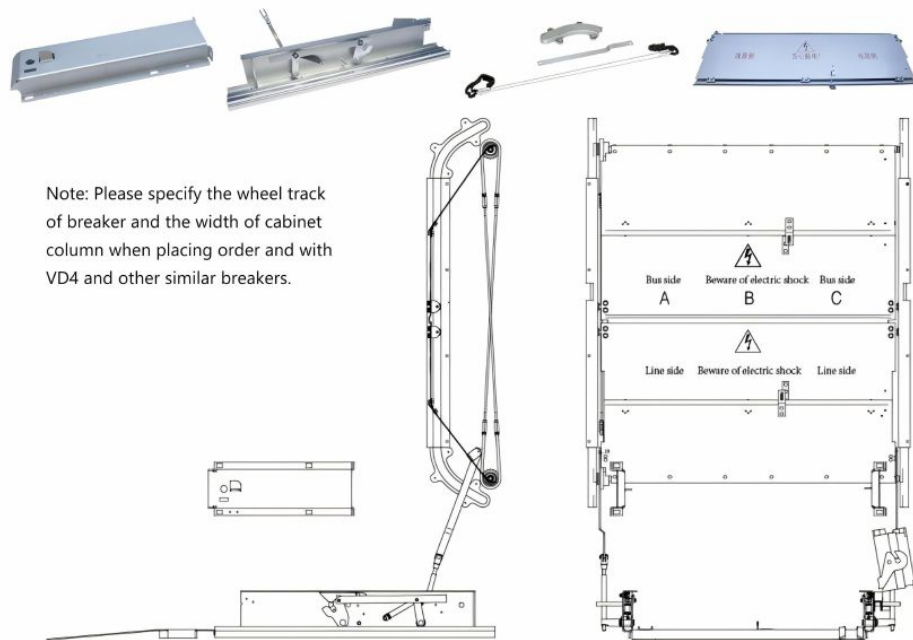


Component Of MV Switchgear

KYN261-40.5 High Voltage Switchgear Fittings----35KV Shutter Mechanism



KYN61C Shutter mechanism earthing interlocking device



Note: Please specify the wheel track of breaker and the width of cabinet column when placing order and with VD4 and other similar breakers.

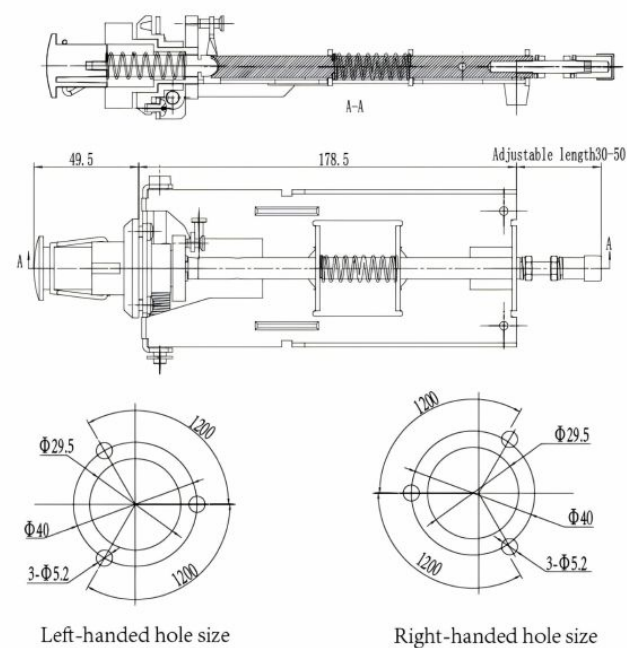
Component Of MV Switchgear

SYF.1505.2000 New Emergency opening device



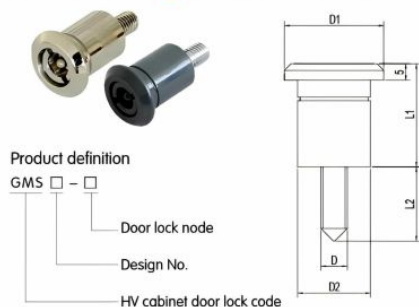
SYF.1505.2000 New emergency opening device

The products are mainly used in switchgears to simplify the operation of the circuit breaker tripped procedures and improve processing speed of circuit sudden failure in emergency. The product uses rotary folded structure to realize a manual trip in test position and work position without opening the door. The device can be operated by one hand. Let it go and then it will reset automatically. So it can be operated easily and quickly.

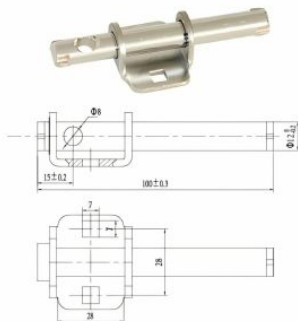


Component Of MV Switchgear

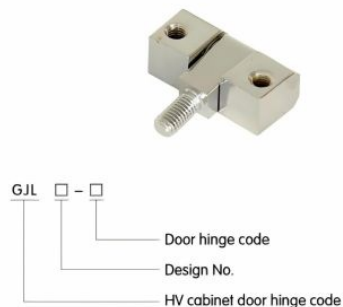
GMS1 HV Switchgear cabinet door lock



Padlock and hole location diagram



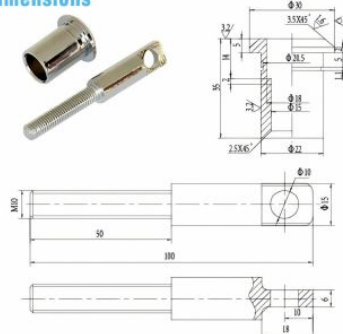
HV cabinet door hinge definition



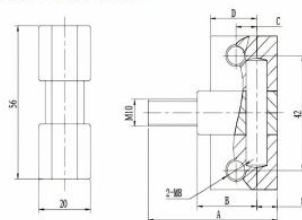
GMS1 HV Cabinet door lock dimension (mm)

Item	D1	D2	D	L1	L2
GMSI-1	φ24	φ20	M8	31	22.5
GMSI-2	φ30	φ22	M10	35	20.5
GMSI-3	φ24	φ20	M8	31	34.5
GMSI-4	φ30	φ22	M8	35	20.5
GMSI-5	φ30	φ22	M10	35	29
GMSI-6	φ30	φ22	M10	40	20.5
GMSI-7	①30	φ22	M8	27	23
GMSI-8	φ30	φ22	M10	45	20.5
GMSI-9	φ30	φ22	M8	35	25
GMSI-10	φ30	φ22	M10	31	24.5

Padlock bolt schematic and installation dimensions



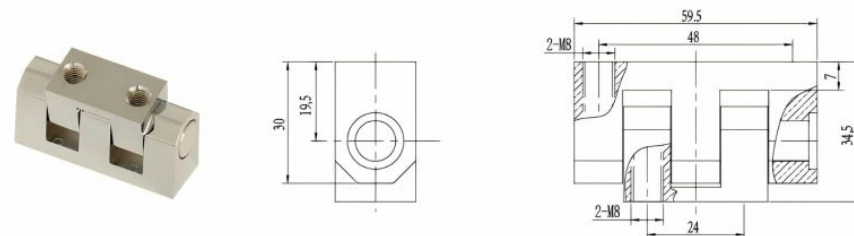
GJL1-□ Cabinet door hinge specification and installation dimension



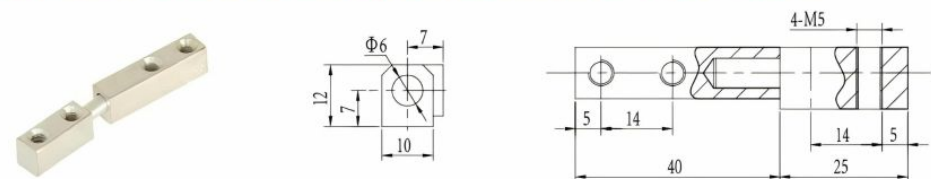
Item	Code	A	B	C	D	2-M8
GJL1-1	5YF.872.011	50	23	8	18	Thoroughly hole
GJL1-2	5YF.872.011.1	56	26	12	22	
GJL1-3	5YF.872.012	50	23	8	18	Blind hole
GJL1-4	5YF.872.012.1	56	26	12	22	

Component Of MV Switchgear

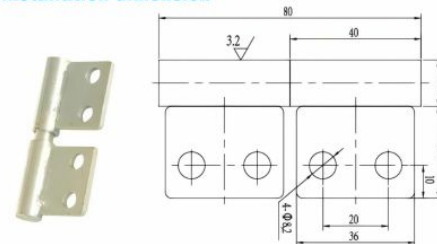
GJL2-□ HV cabinet door hinge specification and installation dimension



GJL4-□ HV cabinet door hinge specification and installation dimension



GJL5-□HV cabinet door hinge specification and installation dimension

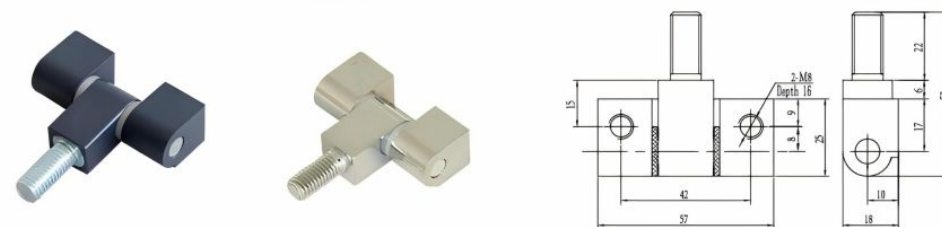


GJL7 HV cabinet door hinge specification and installation dimension



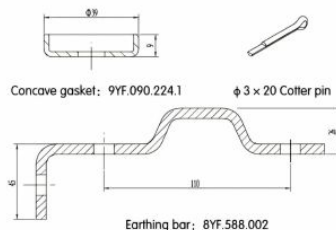
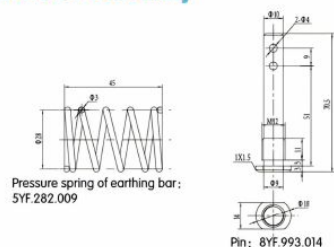
Item	H	L	L1	L2	D
GJL7-1	28	41	13	18	M8
GJL7-2	20	28	9	11	M6

GJL9-1 HV cabinet door hinge specification and installation dimension

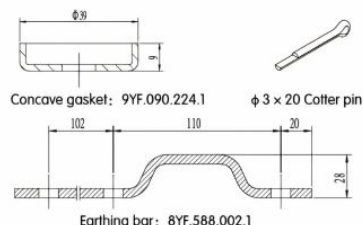
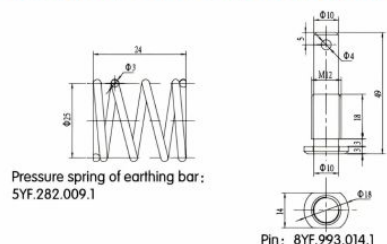


Component Of MV Switchgear

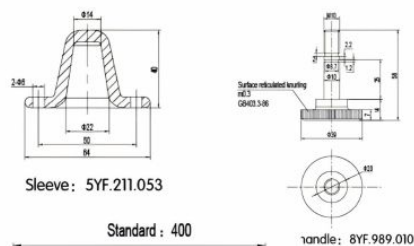
Mid partition assembly



Earthing bars and components(under-placed use)

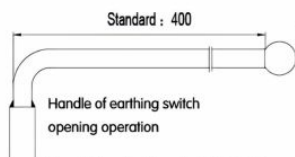


Others



Sleeve: 5YF.211.053

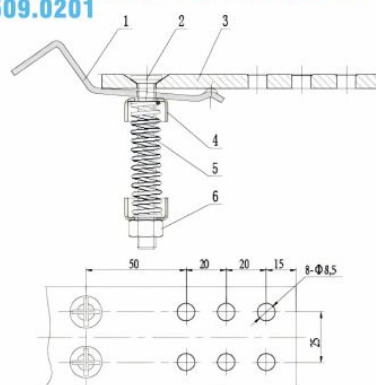
Handle: 8YF.989.010



Handle(standard type): 5YF.253.011

Note: Plastic mold forming, pay attention to the installation hole size.

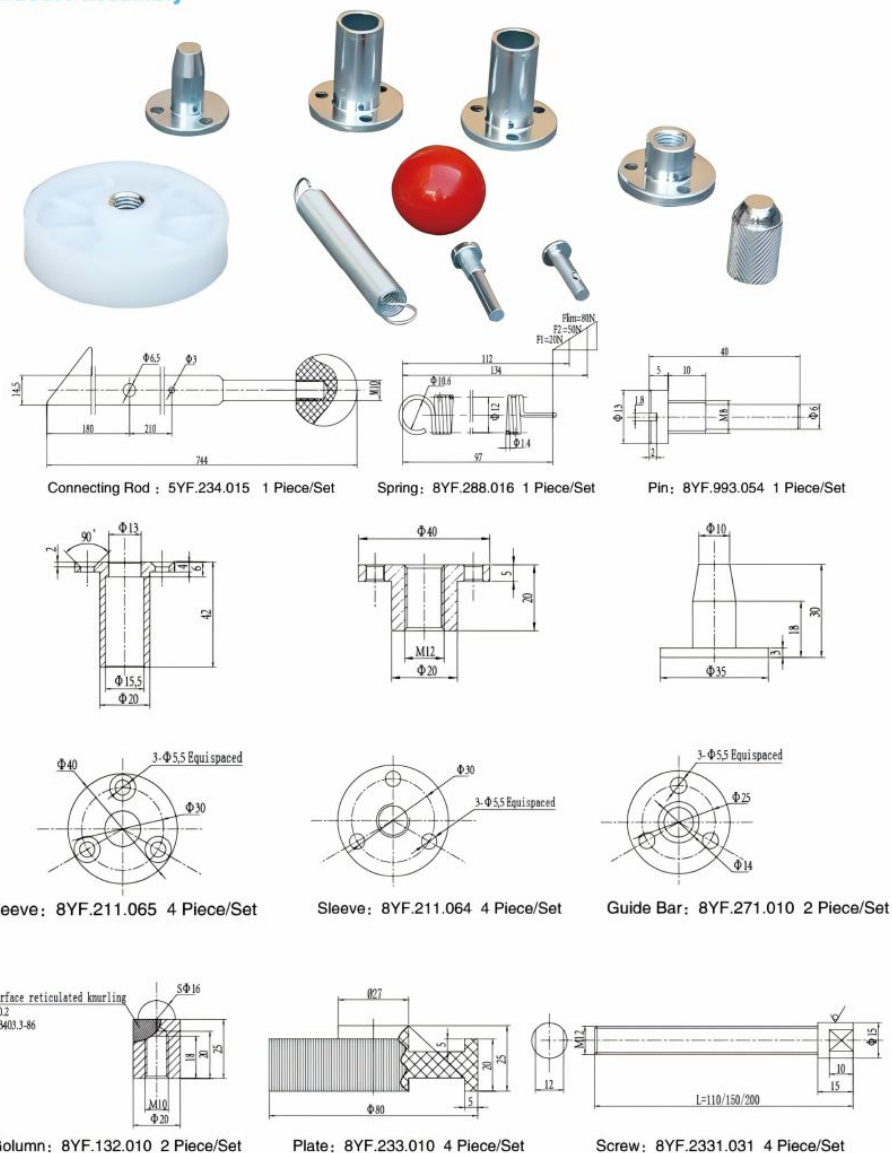
Grounding bracket assembling 5YF. 1509.0201



No.	Item	Code	Qty pcs/set
1	Grounding bar(curved)	8YF.1509.0202	1
2	Cross screw	M8X70	2
3	Grounding bar (straight)	8YF.1509.0201	1
4	Spring seat	8YF.1509.0203	4
5	Compressed spring	8YF.1509.0204	2
6	Locknut	M8	2

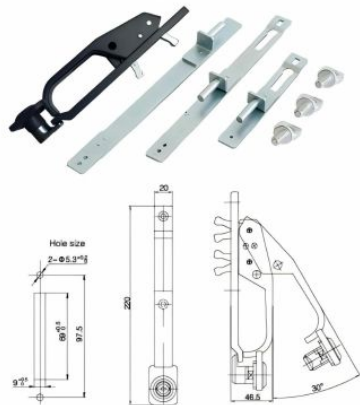
Component Of MV Switchgear

Handcart assembly



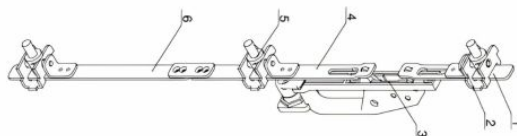
Component Of MV Switchgear

Fast unlocking device (5YF.1606.8010) installation drawing

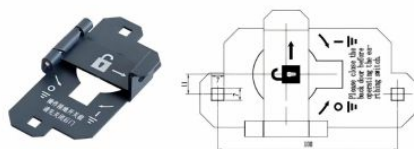


Fast unlocking device (5YF.1606.8010)complete table

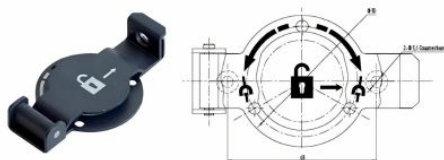
NO.	Item	Code	Qty pcs/ set
1	Upper locking riveting	5YF.1606.8001	1
2	Support	customized welding door plate	3
3	Lack handle	8YF.1606.8009	1
4	Medium locking riveting	5YF.1606.8004	1
5	Latch	8YF.1606.8008	3
6	Under locking riveting	5YF.1606.8006	2



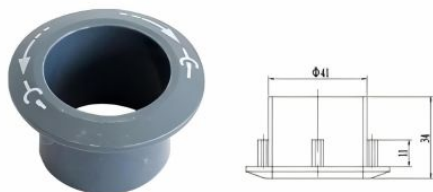
Earthing interlocking Padlock



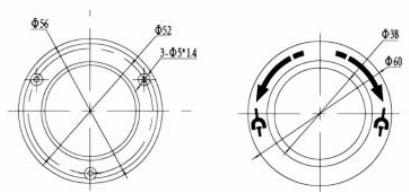
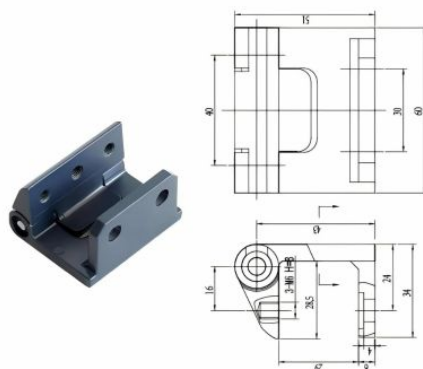
Mid-door padlock



IN-OUT indicator



Second generation cabinet door hinge



Component Of MV Switchgear

Hydraulic transport vehicle

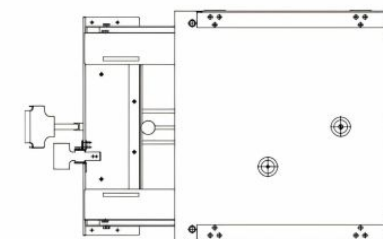
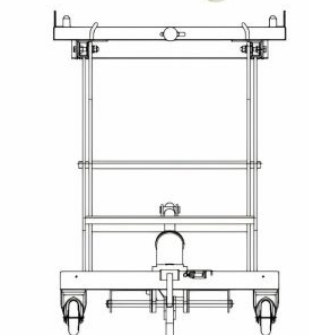
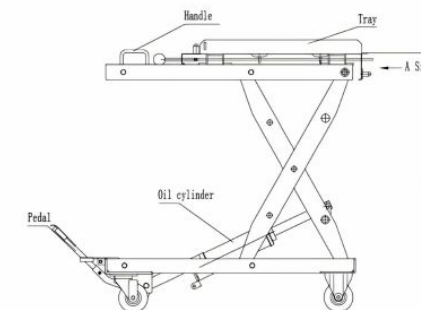
The hydraulic transport vehicle

In order to meet customers' demand, we developed the trolley based on the mechanical principle. It is easy to operate and saves time and effort with simple structure. So it is widely used.

- Operating instructions

Minium height of the trolley 320mm, maximum height 900mm, weight capacity < 300KG.

- Put the VCB on the trolley pallet, step the pedal to rise the suitable height,
- Push the trolley by directional and undirectional wheels to the switchgear, and adjust the height of trolley by step and oil-return step to make the trolley lever and switchgear mid-partition in the same horizontal position (Note: When the oil-return step more harder, the handcart will go down more quickly);
- Push the trolley from the switchgear direction to make the trolley lever insert in mid-partition guide hole, and the lever of the trolley will lock the trolley and switchgear automatically to make it fixed, and push the VCB through guide rail into switchgear;
- Fluctuate trolley lever to withdraw out the trolley.

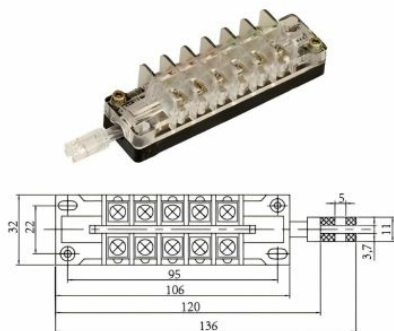


Item	L1	L2
2YF.1612.0650	515	350
2YF.1612.0800	665	500
2YF.1612.1000	865	700
2YF.1612.1200	1075	700

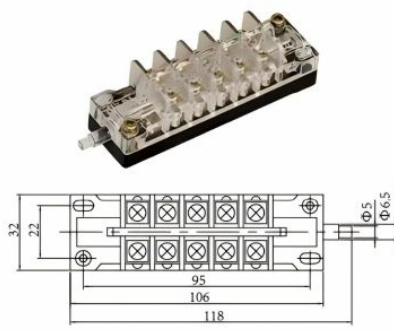
Component Of MV Switchgear

Auxiliary switch & Explosion -proof frame

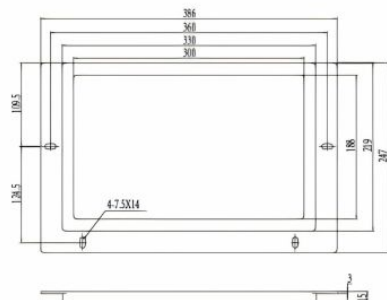
FK10- I -□□ auxiliary switch and installation dimension



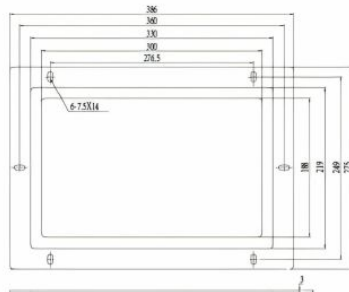
FK10- II -□□ auxiliary switch and installation dimension



Explosion-proof frame



Explosion-proof window(3 sides)

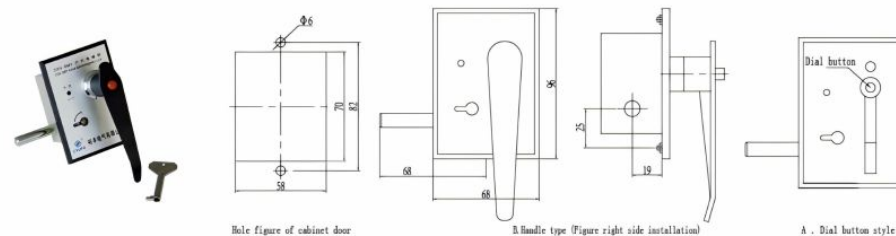


Explosion-proof window(4 sides)

Component Of MV Switchgear

Indoor electromagnetic lock

DSN-BM(Z/Y) type indoor electromagnetic lock



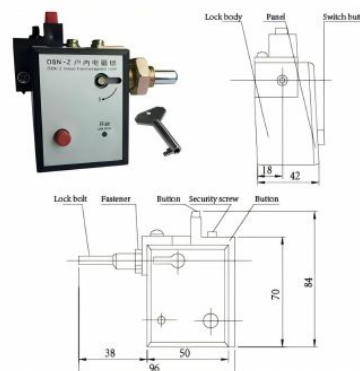
Model & Spec.	Rated voltage	Rated current	Rated power	Hole size of cabinet door	Installation size of cabinet door	Lock travel	Remark
DSN-AMZ	AC 220V DC 220V DC 110V	00mA 196mA 98mA	<3VA <50w <12w	56mm×70mm	Φ6×82mm	14mm	Adopt new type electromagnetic structure that let three voltage classes in common use.
DSN-AMY							
DSN-BMZ							
DSN-BMY							
DSN-AMZ6	DC 6V	400mA	<2.5W	56mm×70mm	Φ6×82mm	14mm	Especially match our uninterruptible DC power supply to improve the capability to prevent the misoperation.
DSN-AMY6							
DSN-BMZ6							
DSN-BMY6							

DSN type indoor electromagnetic lock

DSN Indoor electromagnetic lock is a kind of electric control interlocking device which can prevent misoperation, mainly used for switchgear doors and some other parts need to be safety interlocked to realize positive interlocking. It is very necessary locking devices for electricity generation and supply to prevent erranting chared gap or misoperation.

Model No.:DSN-Z DSN-Y; Voltage:AC220V DC220V DC110; Installing support bolts size:M14、M16; Bolts travel:14mm;

Assembled ways: DSN-Z left assembled, DSN-Y right assembled.

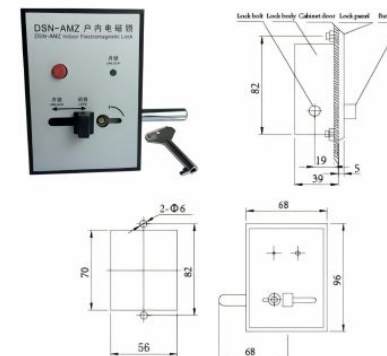


DSN-AM indoor electromagnetic lock

DSN-AM Indoor electromagnetic lock is a kind of electric control interlocking device which can prevent misoperation, mainly used for switchgear doors and some other parts need to be safety interlocked to realize positive interlocking. It is very necessary locking devices for electricity generation and supply to prevent erranting chared gap or misoperation.

Model No.:DSN-AMY DSN-AMZ; Hole size:56MMx70MM; voltage: AC220V DC220V DC110

Assembled size: Φ6X82mm, Bolts travel:15mm; DSN-AMZ left assembled, DSN-AMY right assembled.



Component Of MV Switchgear

Secondary socket with 58 cores& cabinet light& Latching electromagnet

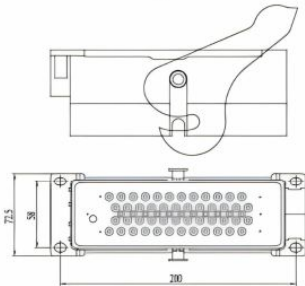
Secondary socket with 58 cores



Purpose: GZD-58 secondary socket is used for secondary circuit connection of GZS1 (with VSI.VD4) high voltage intermediate switchgear.

Basic parameters: Rated voltage: AC 380V, DC 220V;
Rated current: AC 16A, DC 10A; Mechanical life: 2000 times.
Note: The socket is equipped with pin.Only wires below 1.5mm² can be used through the wiring hole.Please specify if you need 2.5 or 4 mm² wires.

GZD-58 Secondary socket



(DC220V/110V) Latching electromagnet



Please specify the following information in the order:
AC110V,220V; AC110V,220V

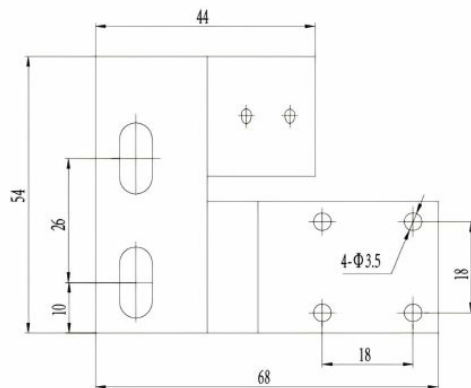
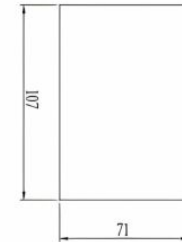
Cabinet light



Hole opening in the cabinet



LED Light in cabinet



CM1 Busbar-15(4-6mm Wire type)



MJI Busbar(Φ8 Copper bar type)



MJI	Section number	8	9	10	11	12	13	14	15	16	17
	H	182	203	240	263	288	317	344	364	393	425

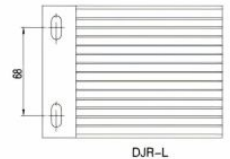
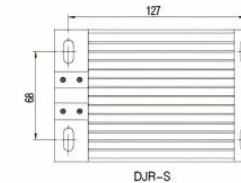
MJ2 Busbar(Φ6 Copper bar type)



MJ2	Section number	10	11	12	13	14	15	16	17	18	19	20
	H	163	182	203	222	240	263	288	302	317	344	365

Note: Please specify the number of sections and mounting hole size when ordering.

Heater

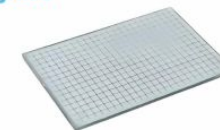


General

DJR-type aluminum-alloy comb-shaped heater is a new type of electric heater designed specially for moisture resistance and dehumidification for power equipments, and it adopts dedicated aluminum alloy heat dissipation section bars and high-class alloy heating wires. With the features of small size, fine looking, uniform heat dissipation, quick heat conduction and large heat dissipation area, the service life of the heating wires is guaranteed to be longer than that of normal heaters, and long and reliable operation are guaranteed as well.

Operating voltage:AC220V Rated power:50~500W+5%

Explosion-proof (tempered) glass



Note: Please specify if users need a shielded network and other specifications.

Component Of MV Switchgear

Cable clamp & rubber retainer & protective core

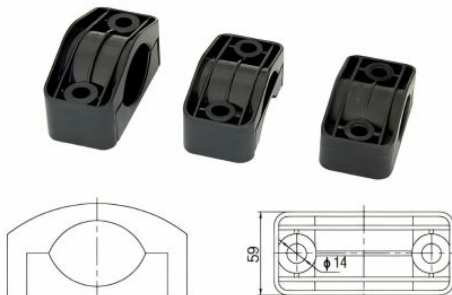
Rubber retainer



8LS 766003P3	Flat rubber retainer(53×13)
8LS 766022	Rubber retainer(φ62)
8LS 766055.1	Rubber retainer(φ80,tower type)
8LS 766004	Rubber retainer(φ90)
8LS766005	Rubber retainer(φ110,tower type)

It is used in the top or bottom of cabinet for the cables to pass in and out and can also protect cables well.

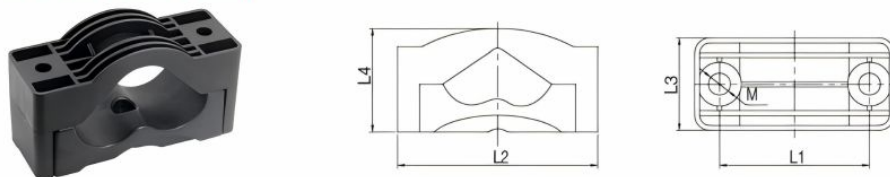
Cable clamp



Type	Applicable cable	Hole distance	Screw size
XL90-150)	65×100	120	M14
Large(75-95)	47×75	97	M14
Medium (55-75)	36×60	82	M13
Small (36-52)	35×52	74	M13
XS (20-36)	23×41	60	M12
XXS13-25)	13×25	60	M12

Note: Material ABS or PAS please specify when ordering.

Three-core cable clamp



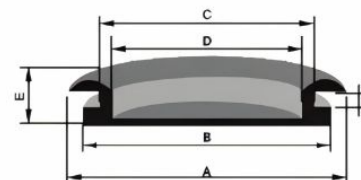
Type	Applicable cable outer diameter	L1	L2	L3	L4	M
SY27-38	3*27-38	125	180	75	75	15.5
SY38-51	3*38-51	145	195	80	100	15.5
SY51-69	3*51-69	170	220	85	130	15.5
SY69-90	3*69-90	215	252	90	163	15.5

Note: Material ABS or PAS please specify when ordering.

Component Of MV Switchgear

Cable clamp & rubber retainer & protective core

single-sided protective coil



Product name: single-sided protective coil

Product material: natural rubber, polyvinyl chloride, environmental protection rubber, etc.

Product use: Mainly used for the protection and fixing of power supply, control box or general cable and power line outlets, making rough iron holes into smooth outlet holes, with the function of insulating and protecting cables and power lines, beautiful and not easy to fall off.

Product color: black, milky white

Installation dimension							
Model	A	B	C	D	E	F	Packing
DM-01	23	20	15	13	4.6	2	2000
DM-02	29	25	20	17	5.2	2	1000
DM-03	29	27	22	18	6.5	2	1000
DM-04	34	29	25	19	6.2	2	1000
DM-05	40	35	30	25	6.4	2	1000
DM-06	40	37	32	26	6.3	2	1000
DM-07	41	39	35	28	6.5	2	1000
DM-08	46	43	40	29	7.6	2.5	500
DM-09	52	50	45	38	7	2.5	500
DM-10	57	54	50	39	8.8	2.5	500
DM-11	70	65	60	48	9	2.5	300
DM-12	75	72	65	54	10.2	2.5	300
DM-13	77	73	70	56	10	2.5	300
DM-14	80	78	75	58	10.8	2.5	200
DM-15	90	85	80	65	11	2.5	200
DM-16	100	95	90	75	12.5	3	100
DM-17	10	106	100	87	10.5	3	100
DM-18	118	114	110	92	10.8	3	100
DM-19	130	125	120	105	11	3	100
DM-20	150	140	130	120	15.6	4	100
DM-21	170	163	150	130	14.5	4	100

Component Of MV Switchgear

Cable clamp & rubber retainer & protective core

pagoda type guard coil



Product name: pagoda type guard coil

Product material: EPDM, natural rubber, silicone rubber, etc.

Product use: mainly used for the protection of incoming and outgoing wires of high and low voltage complete sets of electrical cabinets, box transformers, cable distribution boxes, etc., according to the thickness of the wires, free cutting caliber, play, dustproof, rainproof insulation and protection of wires and cables Function.

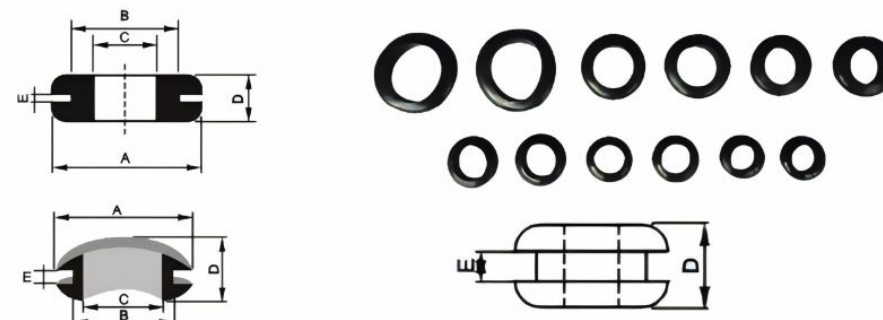
Product color: black

Installation dimension						
Model	A	B	C	D	E	Packing
BT-01	30	25	20	22	2.5	2000
BT-02	40	30	27	40	2.5	2000
BT-03	50	40	35	45	3	1000
BT-04	50	45	35	45	3	1000
BT-05	60	50	42	52	3	1000
BT-06	68	60	54	60	3	500
BT-07	75	65	55	52	4.5	500
BT-08	78	70	59	60	5	500
BT-09	93	80	70	50	5	500
BT-10	98	90	78	55	4	500
BT-11	108	100	85	58	4	500
BT-12	125	105	98	60	4	300
BT-13	120	110	98	62	5	300
BT-14	125	115	100	55	4	300
BT-15	130	120	100	65	4	300
BT-16	170	130	110	65	4	100
BT-17	170	150	135	75	5	100
BT-18	200	180	170	115	5	100
BT-19	280	250	110	125	7	100

Component Of MV Switchgear

Cable clamp & rubber retainer & protective core

double-sided protective coil



Product name: double-sided protective coil (PVC/rubber)

Product use: Mainly used for the protection and fixing of power supply, control box or general cables and power cord outlets, making rough iron holes into smooth outlet holes, with the function of insulating and protecting electric paper and power cords, beautiful and not easy fall off.

Product color: black, white, red, green, blue and other options

Installation dimension						
Model	A	B	C	D	E	Packing
SM-01	10	6	4.5	5.5	1.7	1000
SM-02	14.8	8	7.7	6.6	1.7	1000
SM-03	14	10	7.3	6.4	1.7	1000
SM-04	17	12	10	6.3	1.7	1000
SM-05	23.3	14	13.3	9.4	2.4	1000
SM-06	22.4	16	13.5	7.4	1.7	1000
SM-07	23.7	18	15.5	6.1	1.7	1000
SM-08	26.3	20	17.5	10.5	2.2	1000
SM-09	35.5	25	24.2	9.5	2.4	1000
SM-10	39.2	30	25	11	2.4	1000
SM-11	40	35	31	13	2	500
SM-12	49.5	40	33.8	12.5	2.2	500
SM-13	61	50	45	10.2	3	500
SM-14	90	80	66	8.8	1.7	500

Component Of MV Switchgear

Cable clamp & rubber retainer & protective core

Elliptical Protective Coil



Product Name: Elliptical Protective Coil

Product material: EPDM, natural rubber, silicone rubber, etc.

Product use: mainly used for the protection of incoming and outgoing wires of high and low voltage complete sets of electrical cabinets, box transformers, cable distribution boxes, etc., according to the thickness of the wires, free cutting caliber, play, dustproof, rainproof insulation and protection of wires and cables Function.

Product color: black

Installation dimension		
16x55	30x100	60x140
18x55	30x120	60x160
18x70	30x140	80x120
18x120	30x160	80x160
18x100	32x62	
18x140	35x116	
18x160	35x100	
19x102	37x110	
20x46	40x85	
20x65	40x90	
20x135	40x132	
22x45	40x150	
25x56	45x155	
25x120	45x175	
26x84	50x100	
27x135	50x120	
30x70	50x145	
30x85	50x150	
	50x200	

Component Of MV Switchgear

Cable clamp & rubber retainer & protective core

rubber mat



Product name: rubber mat

Product material: Nitrile rubber, EPDM rubber, natural rubber, silicone rubber, PCC, etc.

Product use: The seat cushion of the chassis shell is fixed with screws, which is safe and does not fall off, is resistant to repeated pressure, and is non-slip.

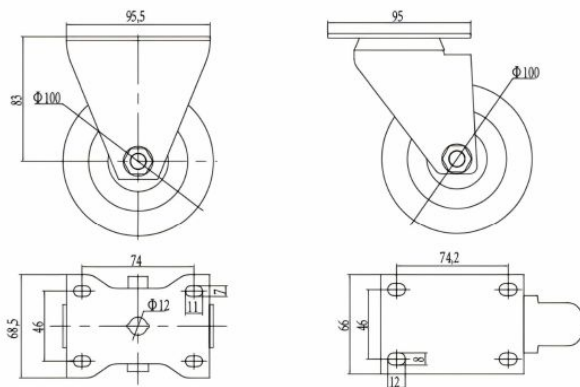
Product color: black, milky white.

Installation dimension	
Model	Packing
012mm	1000
015 mm	2000
018mm	2000
d>20mm	1000
022mm	1000
026mm	1000
032mm	500
<D47mm	500
050mm	500

Component Of MV Switchgear

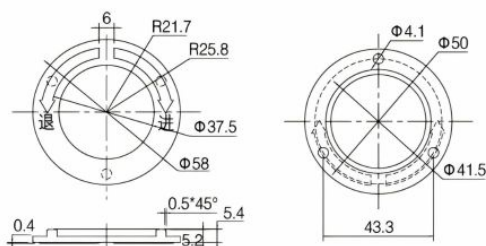
Display

Elliptical Protective Coil

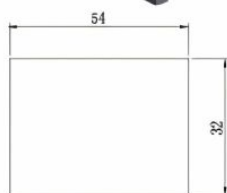


Note: If you need brake function, please specify when ordering.

Advance and retreat signs



DXN display with side outgoing line (Opening hole: 54×32mm)

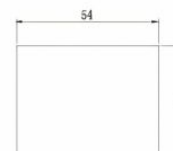


No.	Model number	High Voltage Indication Luminous Parts			Voltage between phases when the phases match between test point (M)	Voltage between phases when the phases do not match between test point (V)
		Type	Working voltage (M)	Service life (H)		
1	DXN8-7.2-40.5/T8	Ultra-high brightness luminous tube	<DC2.5	>50000	<AC30	>AC60
2	DXN8-12/T8S					

Component Of MV Switchgear

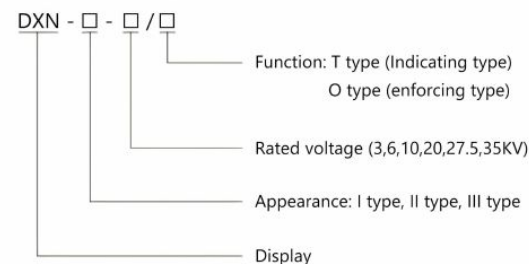
Display

DXN display with interlock (Opening hole 54×32mm)



No.	Model number	High Voltage Indication Luminous Parts			Working voltage of interlock (V)	Voltage between phases when the phases match between test point (V)	Voltage between phases when the phases do not match between test point (V)
		Type	Working voltage (M)	Service life (H)			
1	DXN8-7.2-40.5/QT4	Ultra-high brightness luminous tube	<DC2.5	>50000	AC 220 DC 220 DC 110	<AC30	>AC60
2	DXN8-7.2-40.5/QT4C						
3	DXN8-12/QT4S						
4	DXN8-12/QT4SC						

DXN display's specification

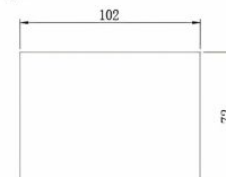


Type I and Type II has two styles for choice, indicating type T and forced close type Q, while Type III has only indicating type.

DXN front panel size



I Type



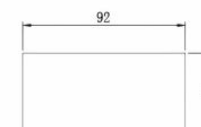
I Type、II Type



II Type



III Type

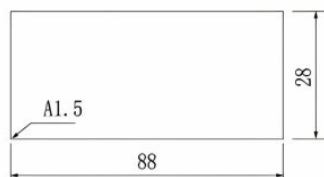


III Type

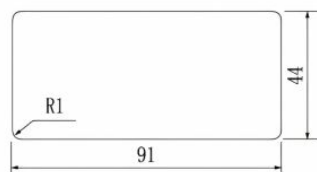
Component Of MV Switchgear

Display

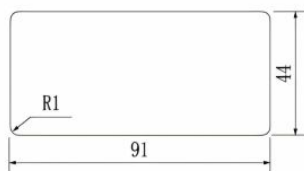
DXN-T-II Live display Outline and installation dimension



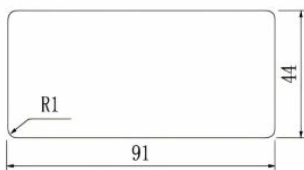
DXN-Q-II Live display Outline and installation dimension



DXN8D-Q Live display Outline and installation dimension



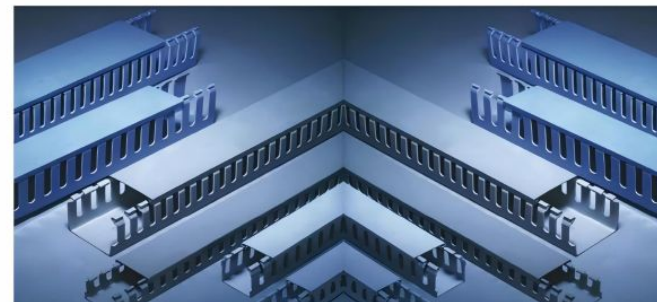
DXN8D-Q Live display (pluggable) Outline and installation dimension



Component Of MV Switchgear

wiring duct

Wiring duct



Product name: Wiring duct

Product material: Nanya rigid PVC, good insulation, non-spontaneous combustion, temperature resistance to 8° C.

Product structure: It is composed of the bottom of the tank and the cover of the tank, and there are outlet holes on both sides of the bottom tank. Working temperature: The bottom of-25 can be continuously high temperature to 75 degrees, and it can withstand heat up to 85 degrees in an instant. How to use: First fix the bottom groove, put the wires to be distributed into the groove, and cover the groove cover.

Product features:

1. The square buckle slot cover and the slot body design will never fall off after being combined, and the joint surface is smooth, which will not cut hands or scratch nearby wiring.
2. It is not easy to break, deform and change color within 70 degrees of the wiring groove, save time and facilitate assembly, and has good fire resistance and insulation performance.
3. Low outlet holes, easy assembly, simple disassembly, and easy wiring. Scope of application: stage, electrical, air-conditioning engineering, high and low voltage control peanut cabinet cabinets, large mechanical equipment and other indoor overhead cable layout, general industrial plants have acid and alkali corrosion and power line layout and protection in the waterproof area.

Product structure diagram

Specification (height x width)	Package (piece/meter)
20x15	100
20x20	100
20x25	100
25x25	100
30x15	100
30x20	100
30x25	100
30x30	100
30x35	100
30x50	100
35x25	100
35x35	100
40x25	100
40x30	100
40x35	100
40x40	100
40x50	100
40x60	100
45x45	100
45x50	100

Specification (height x width)	Package (piece/meter)
50x15	100
50x25	100
50x30	100
50x35	100
50x40	100
50x45	100
50x50	100
50x55	100
50x60	100
50x80	60
50x100	60
60x35	100
60x40	100
60x60	8
80x35	60
80x45	60
80x50	60
80x55	60
80x80	36
80x100	36
100x100	36