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PRODUCT CATALOGUE www.zmscable.com



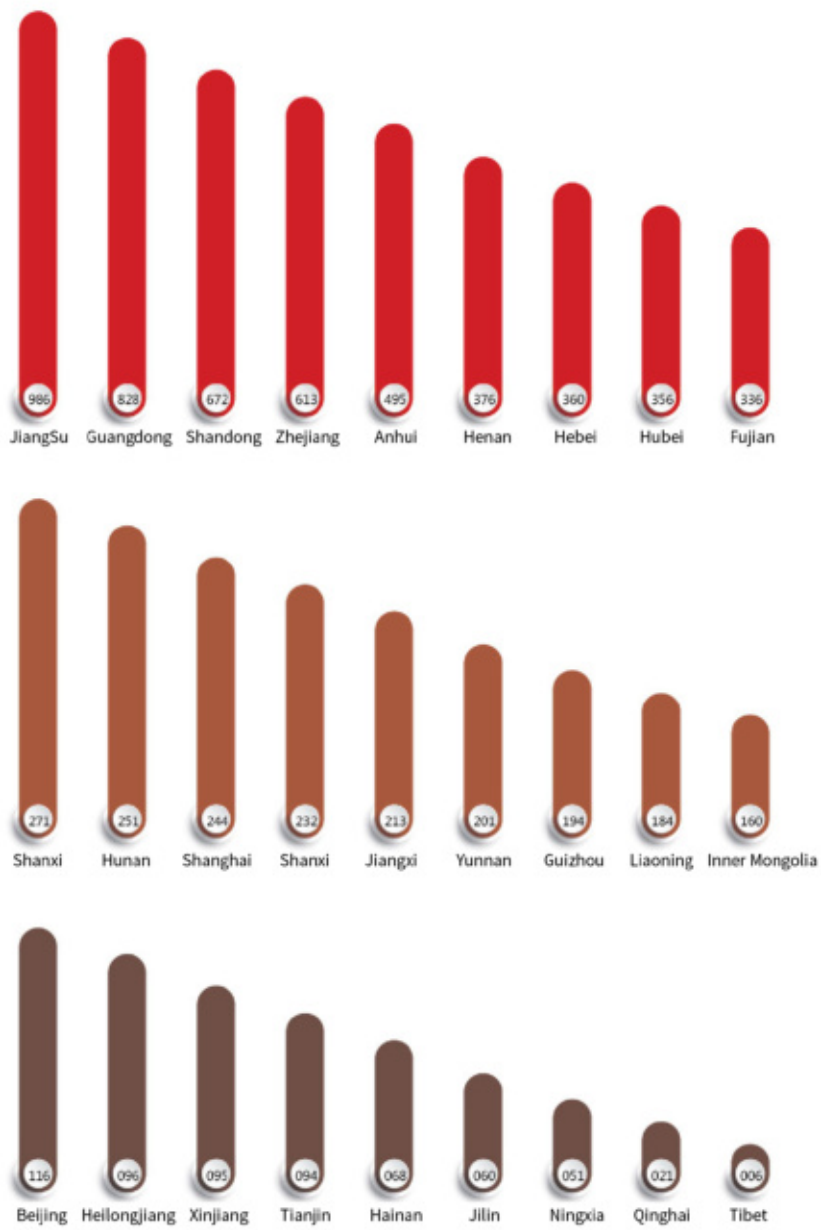
产品选型手册

ZMS ELECTRIC
PRODUCTS CATALOGUE



ZMS' s Partners

Provincial partner ranking



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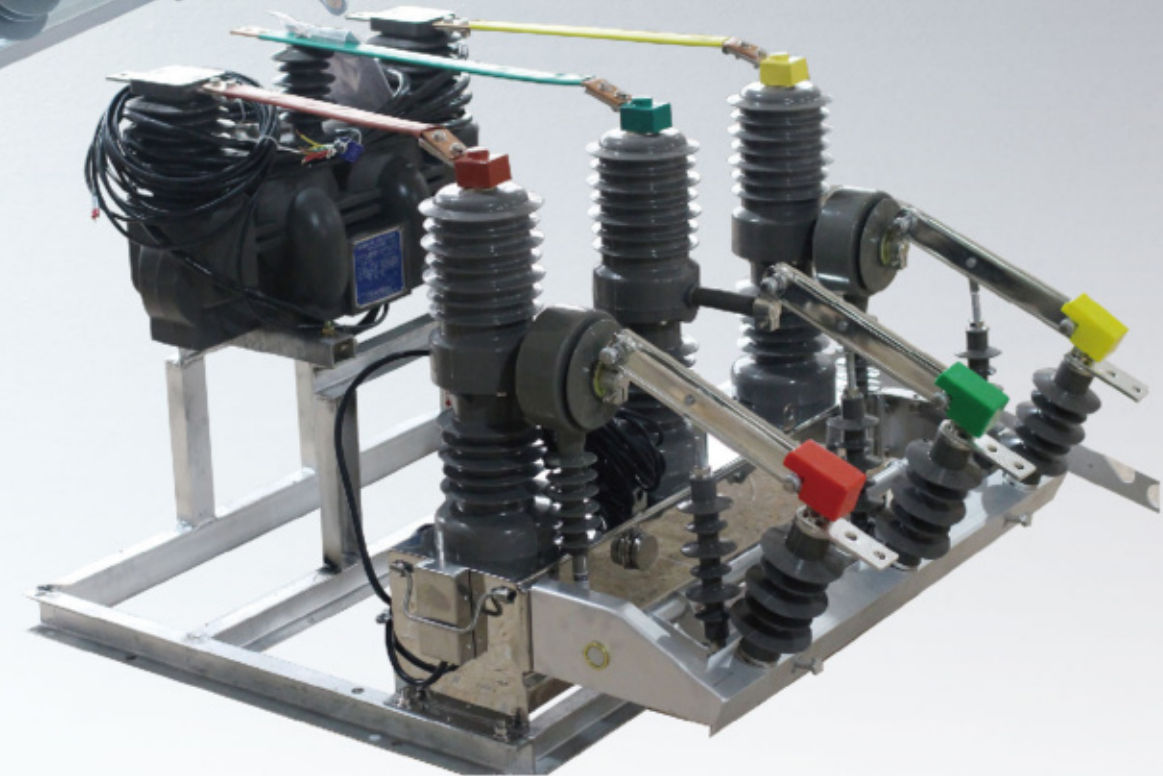
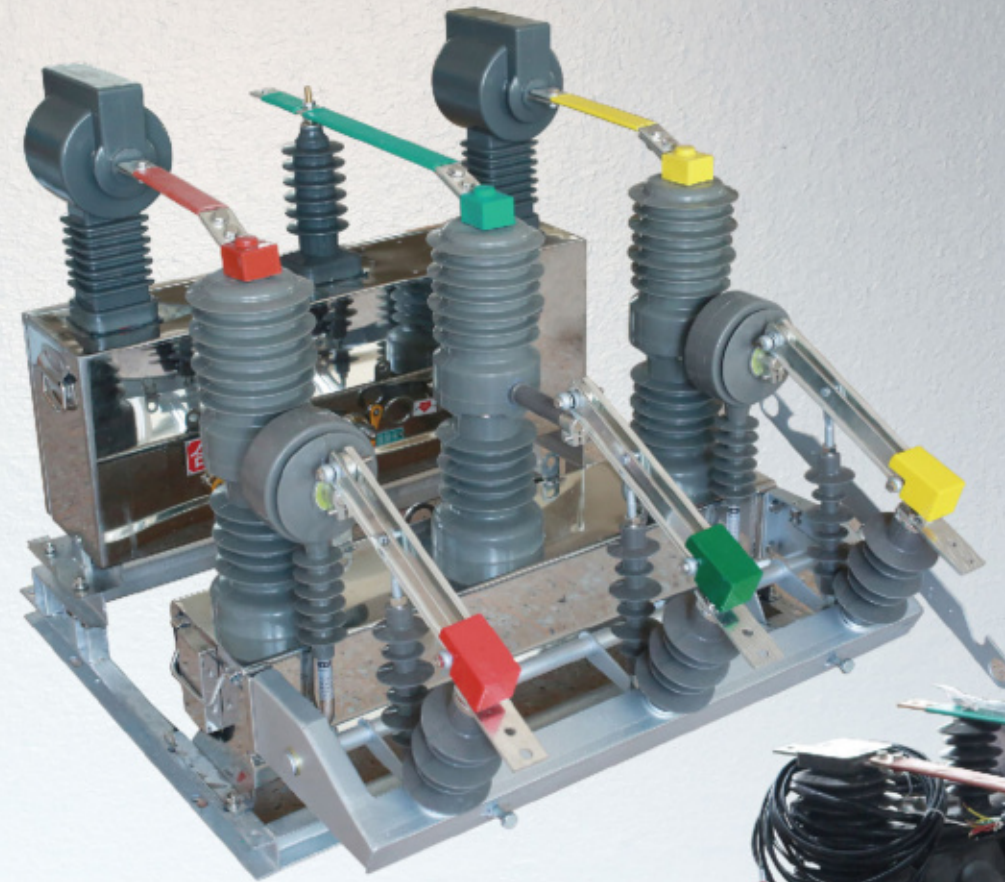
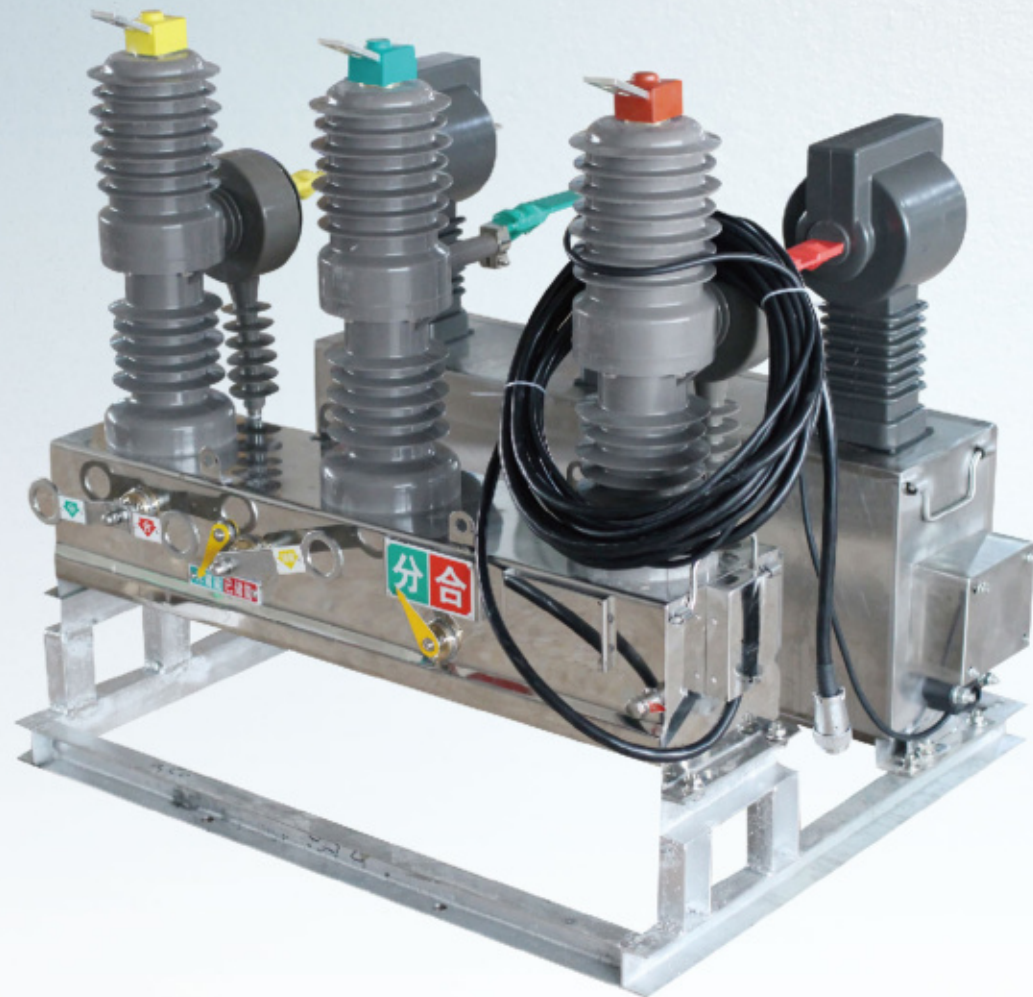
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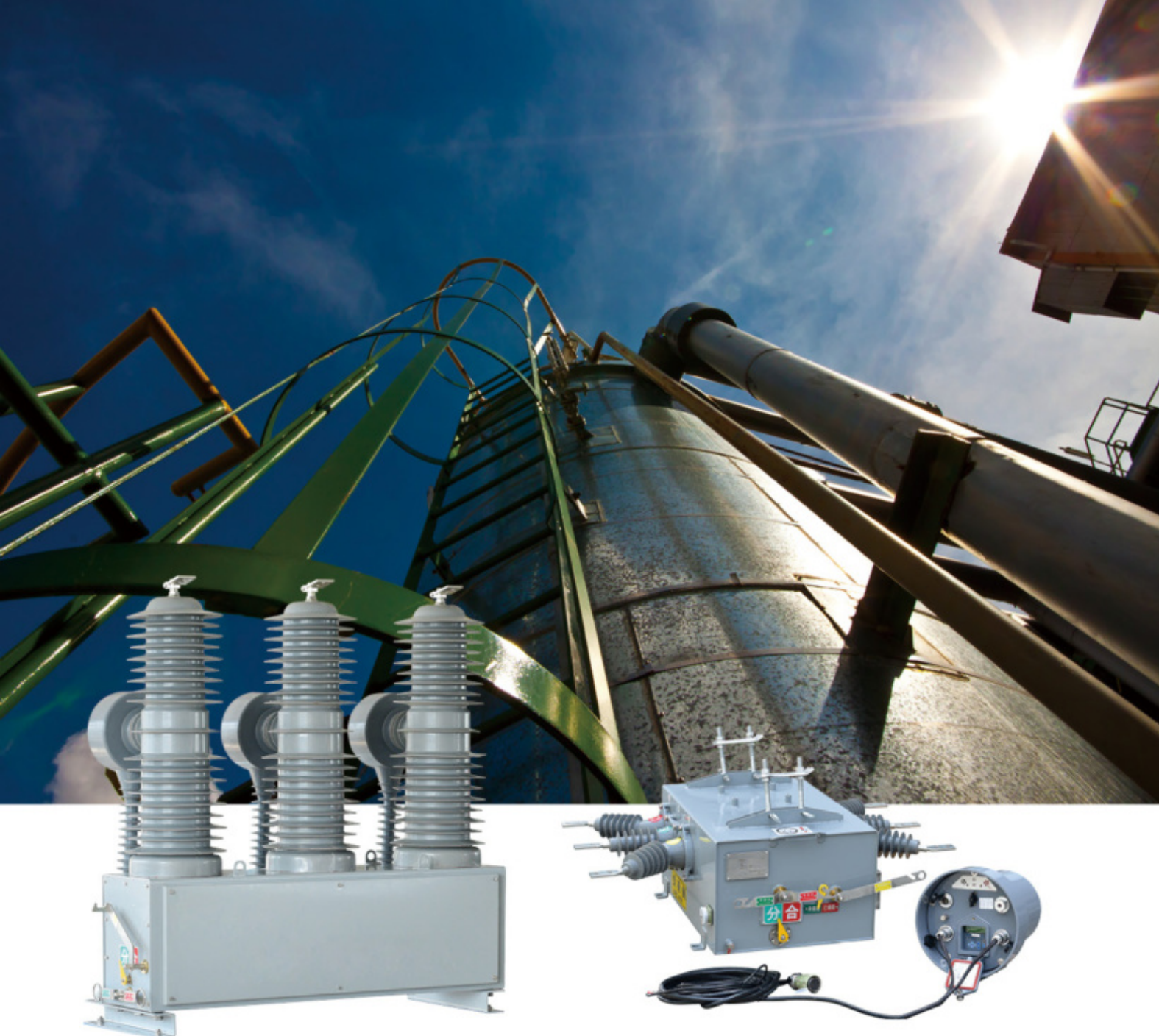
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ZMS

Introduction of new products

Introduction of new products





Outdoor High Voltage Vacuum Circuit Breaker Series

ZW20-12F(M)

Outdoor High Voltage Intelligent (permanent magnet) Vacuum Circuit Breaker

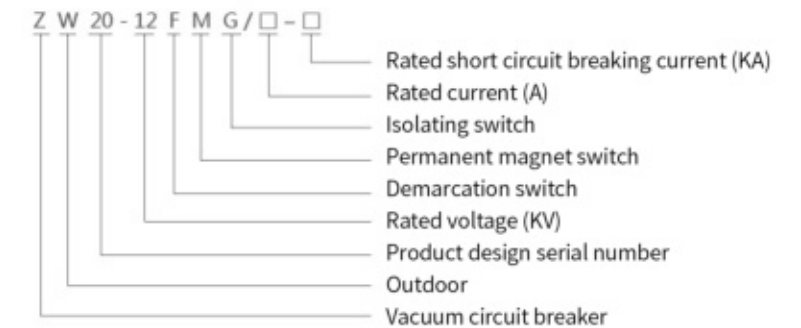


Overview

W20-12F (M) Outdoor High Voltage Intelligent (permanent magnet) Vacuum Circuit Breaker is an outdoor high voltage switch-gear with rated voltage 12KV and three-phase AC 50/60Hz. It is mainly used to turn off the load current, overload current and short circuit current of the power system.

It is suitable for protection and control of substations, industrial and mining enterprises and urban and rural distribution networks, especially for places with frequent operation and automatic distribution networks of urban power networks. This product is matched with the controller, can meet the requirements of the distribution automation system, and can reliably and effectively complete the traditional re-closer function. It adopts mature box sealing structure and has good sealing performance, so that it is not affected by the external environment, so it is a maintenance-free product. Its spring operating mechanism or permanent magnet operating mechanism has high reliability and is a good product for on-column circuit breakers.

Model meaning



Product Feature

- ◆Miniaturized design.
- ◆The box body has inverted buckle structure, full sealing, simple sealing effect and high anti-fouling grade.
- ◆Novel transmission mode, simple and reliable.
- ◆The main components are sealed in the box to achieve real maintenance-free.
- ◆Voltage transformers and isolation switches can be installed externally.

Use Condition

- ◆Working Temperature: not more than 40 °C; daily average temperature not more than 35 °C; minimum ambient air temperature is -25 °C.
- ◆Air Humidity: the daily average is not more than 95% and the monthly average is not more than 90%; the daily average of water vapor pressure is not more than 2.2KPa and the monthly average is not more than 1.8KPa.
- ◆Altitude: no more than 2000m.
- ◆The surroundings are not obviously contaminated by dust, smoke, corrosive and / or combustible gases, vapors or salt spray.
- ◆Vibration or ground motion from outside the switch-gear and control equipment can be ignored.
- ◆The amplitude of induced electromagnetic interference in the secondary system does not exceed 1.6KV.

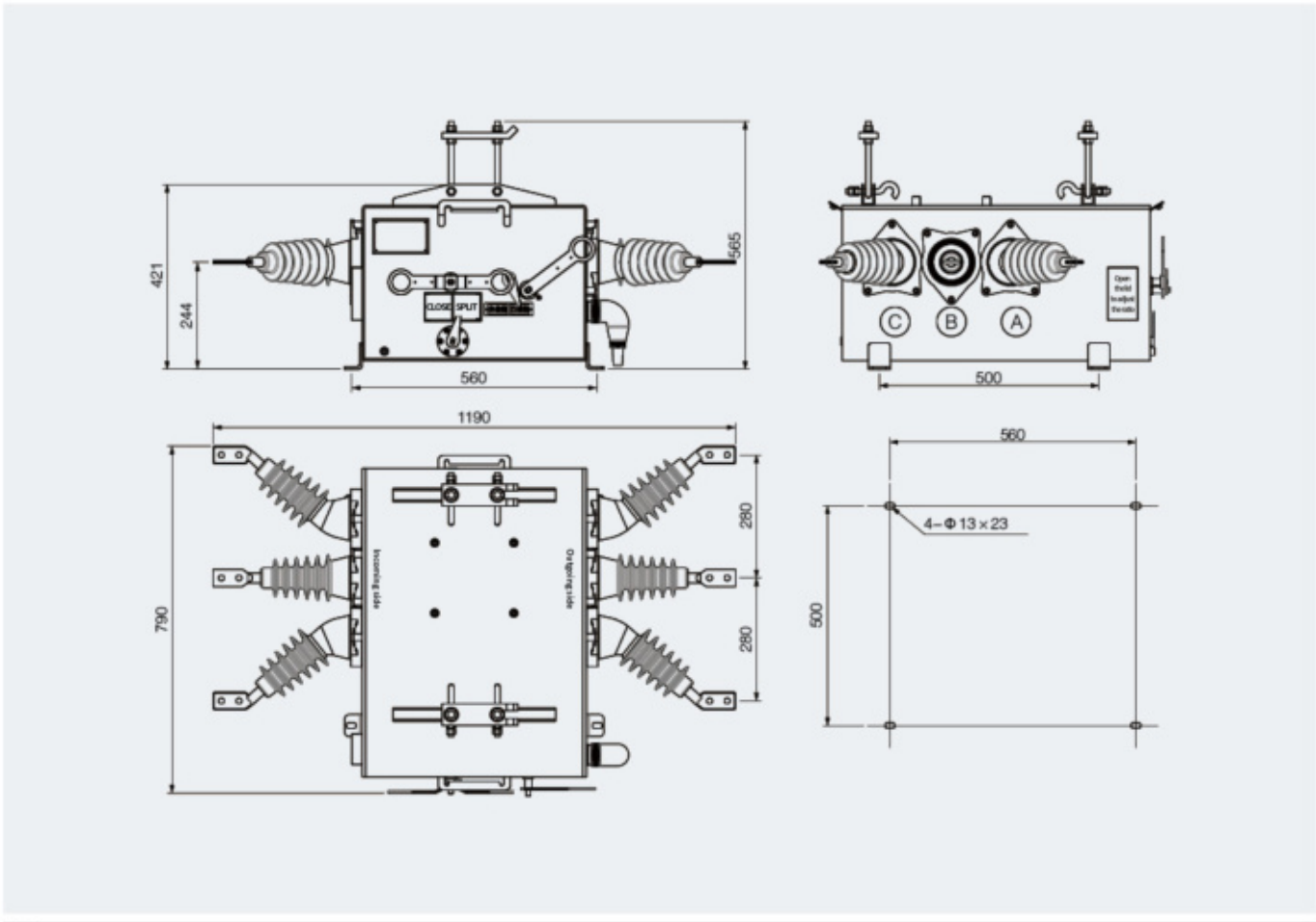
ZW20-12F(M)

Outdoor High Voltage Intelligent (permanent magnet) Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter	
Rated voltage	kV	12	
Rated current	A	630、1250	
Rated frequency	Hz	50/60	
Power frequency withstand voltage (1min)	Dry (Phase, to ground / fracture)	42/48	
	Wet (To ground, external insulation)	34	
Lightning Impulse Withstand Current (Peak) (Phase, to ground / fracture)	kV	75/85	
Rated short circuit breaking current	kA	20	25
Rated short-circuit closing current (Peak)	kA	50	63
Rated peak withstand current	kA	50	63
4S short-term withstand current	kA	20	25
Rated operation cycle		Off-0.3s-on-180s-off	
Rated short-circuit current breaking times	Times	30	
Mechanical life	Times	10000	
Secondary circuit 1min power frequency withstand voltage	kV	2	

Shape and mounting dimension (mm)



ZW20-12F

Outdoor High Voltage Intelligent Boundary Vacuum Circuit Breaker

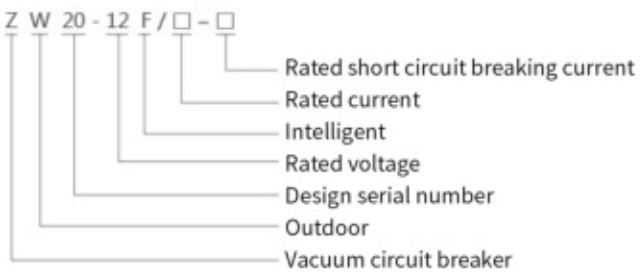


Overview

ZW20-12F outdoor high voltage intelligent demarcation vacuum circuit breaker is an outdoor high voltage switch-gear with rated voltage 12kV and three-phase AC 50Hz. It is mainly used to turn off the load current, overload current and short circuit current of the power system.

It is suitable for protection and control of substations, industrial and mining enterprises and urban and rural distribution networks, especially for places with frequent operation and automatic distribution networks of urban power networks. This product is matched with the controller, can meet the requirements of the distribution automation system, and can reliably and effectively complete the traditional re-closer function. It adopts mature box sealing structure and is filled with SF6 gas. It has good sealing performance and is not affected by the external environment. It is a maintenance-free product. Its spring operating mechanism adopts straight chain main drive and multi-stage tripping system, which has high reliability and is a good product for upper circuit breakers.

Model meaning



Environmental condition

- ◆The altitude does not exceed 3000m.
- ◆Ambient air temperature:-40 °C + 40 °C;
daily temperature difference: daily temperature change 25 °C.
- ◆The wind speed is not greater than 35m/ s.
- ◆A place where there is no flammable, explosive danger and strong chemical corrosion (such as various acids, alkalis or smoke, etc.).

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	12
Rated frequency	Hz	50
Rated current	A	630、1000、1250
Rated short circuit Breaking current	kA	20、25
Rated peak withstand current (Peak)	kA	50、63
Rated short-time withstand current (4s)	kA	20、25
Rated short-circuit closing current (Peak)	kA	50、63
Mechanical life	次	10000
Rated current break times	次	10000
Rated short circuit Arbitrary current Arbitrary times	次	30
Power frequency withstand voltage (1min): Phase, to ground / fracture	kV	42/48
Lightning Impulse Withstand Current (Peak) (Phase, to ground / fracture)	kV	75/85
Secondary circuit 1min power frequency withstand voltage	kV	2
Net weight	kg	140(With isolation≤170)

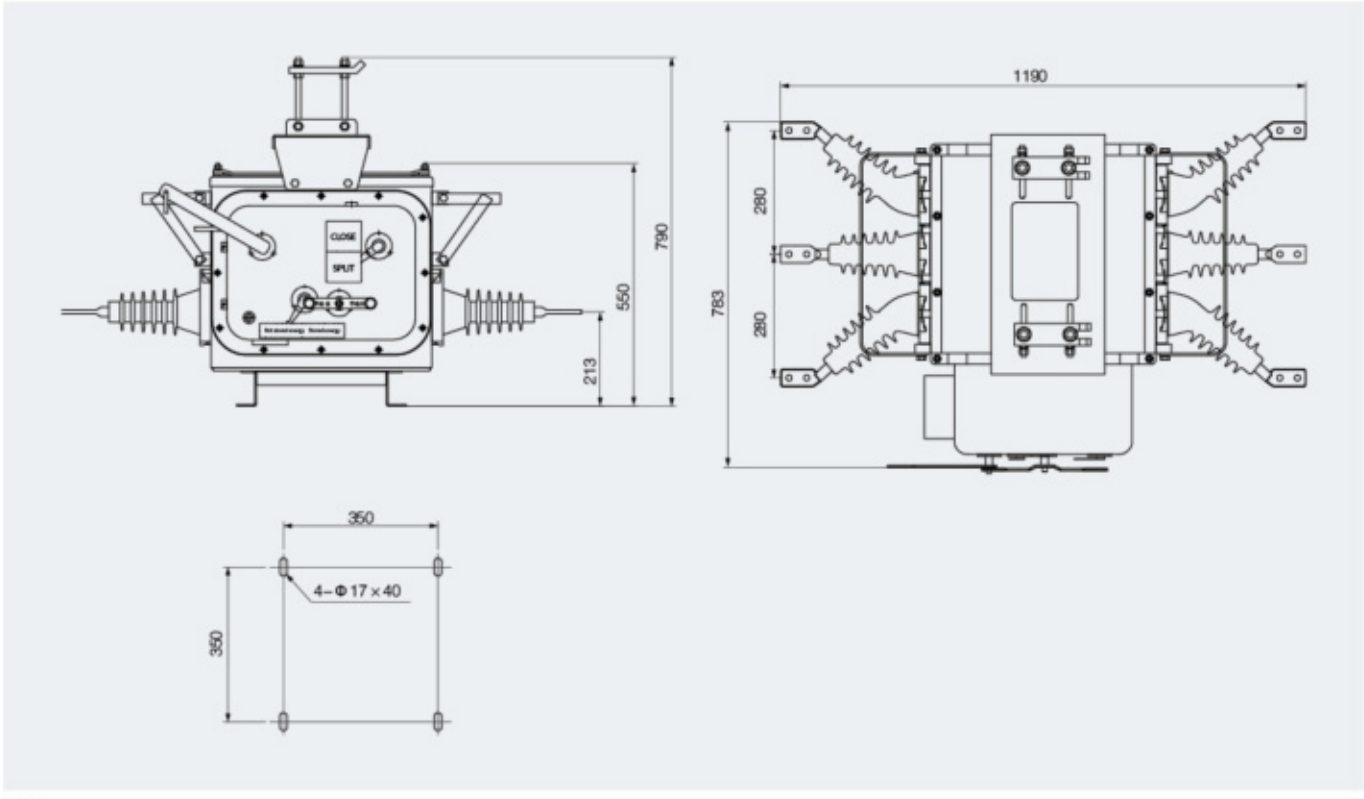
ZW20-12F

ZW20-12F Outdoor High Voltage Intelligent Boundary Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter
Contact distance	mm	9±0.5
Contact over-travel	mm	3±0.5
Opening speed	m/s	1.2±0.2
Closing speed	m/s	0.6±0.2
Contact closing bounce time	ms	≤ 2
Phase center distance	mm	135±1.5
External electrified air insulation distance	mm	240±2
External creeping specific distance	cm/kV	3.8
Different periods of three-phase opening	ms	≤ 2
Conductive circuit resistance of each phase	μΩ	≤150 (With isolation≤200)
Closing time	ms	≤ 45
Opening time	ms	≤ 45
Isolation fracture distance	mm	≥ 190
The rigid position of the contact knife is skewed	mm	≤ 2
Manual opening and closing operating torque	N.m	≤ 150
Rated power of energy storage motor	W	≥ 40
Rated voltage of energy storage motor	V	AC220
Rated closing operating voltage	V	AC220
Maximum / minimum closing operating voltage	V	AC264/143
Rated opening operating voltage	V	AC220
Maximum / minimum opening operating voltage	V	AC264/143
Maximum / minimum motor voltage	V	AC242/187
Rated pressure of SF6 gas (gauge pressure)	MPa	"0"

Shape and mounting dimension (mm)



ZW32-40.5F(M)

Outdoor High Voltage Intelligent (permanent magnet) Vacuum Circuit Breaker

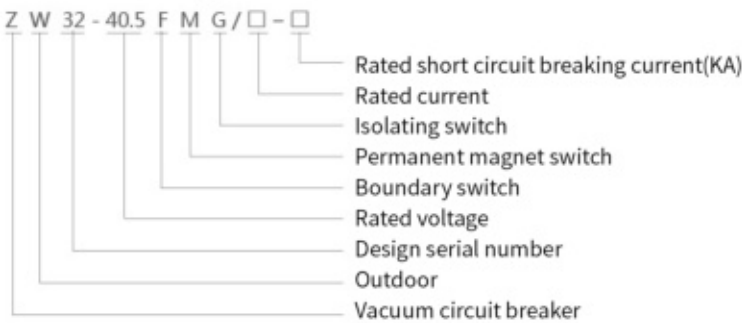


Overview

ZW32-40.5F (M) Outdoor High Voltage Intelligent (permanent Magnet) Vacuum Circuit Breaker is mainly composed of integrated sealing pole column, current transformer, operating mechanism and box. It can be equipped with isolation switch, this type of circuit breaker is miniaturized design, the shell adopts high-quality steel box. The current transformer can be selected according to the needs of users.

The device is mainly used in medium voltage overhead line power network for dividing and closing load current, overload current and short circuit current.

Model meaning



Use Condition

- ◆Ambient air temperature: -30C~+60C.
- ◆Altitude: no more than 3000 m.
- ◆The wind speed does not exceed 34m/ s.
- ◆Vibration or ground motion from outside the switch-gear and control equipment can be ignored.
- ◆Pollution level: IV level.
- ◆Storage temperature: -40C~+85 °C.

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	40.5
Rated current	A	1250/1600
Rated frequency	Hz	50 或 60
Power frequency withstand voltage (1min)	kV	80 95/95
Lightning impulse Withstand Current (Peak) Phase, to ground / fracture	kV	185
Rated short circuit Breaking current	kA	25/31.5
Rated short-circuit closing current (Peak)	kA	63/80
Rated peak withstand voltage	kA	63/80
4S short time withstand voltage	kA	25/31.5
Rated operating cycle		Off-0.1S-On Off-3S-On Off-60S Recover
Rated short-circuit current breaking times	Time	30
Mechanical life	Time	10000
Mechanism control voltage	V	AC/DC220
Secondary circuit 1min power frequency withstand voltage	kV	2

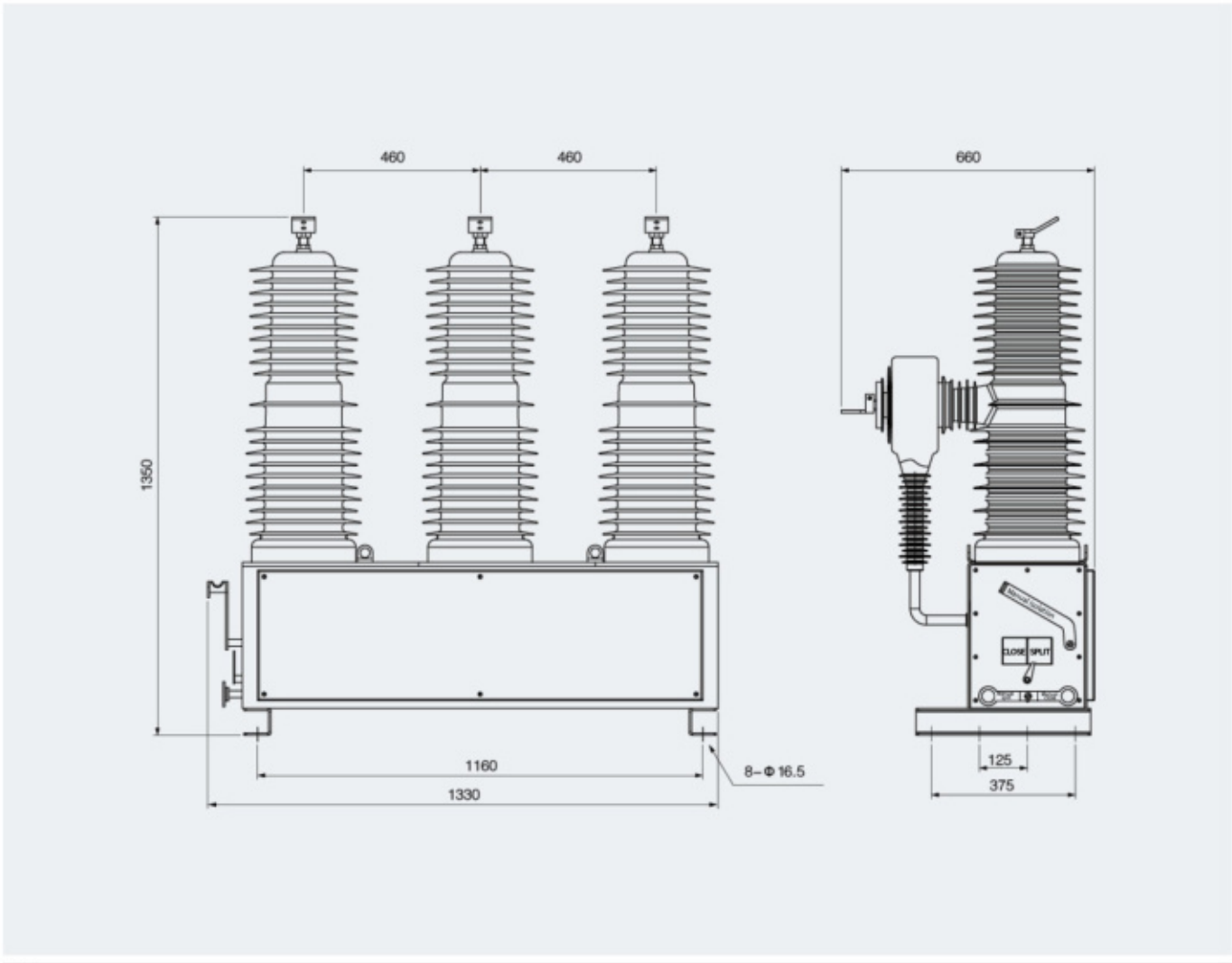
ZW32-40.5F(M)

Outdoor High Voltage Intelligent (permanent magnet) Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter
Contact distance	mm	16±1
Contact over-travel	mm	4±0.5
Opening speed	m/s	1.4-1.8
Closing speed	m/s	0.4-0.8
Contact closing bounce time	ms	≤ 5
Phase center distance	mm	460±2
Different periods of three-phase opening	ms	≤ 2
Conductive circuit resistance of each phase	μΩ	< 80
Closing time	ms	≤ 100
Opening time	ms	≤ 50
Weight	Kg	270

Shape and mounting dimension (mm)



AB-3S-40.5

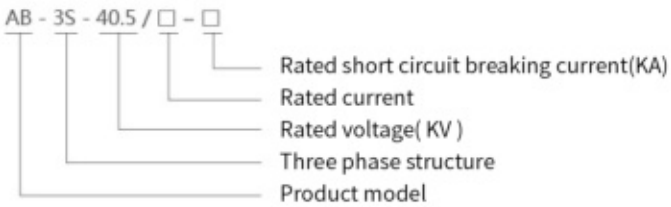
Outdoor Permanent Magnet Vacuum Circuit Breaker on Column



Overview

AB-3S-40.5 outdoor permanent magnet vacuum circuit breaker is a new generation of on-column intelligent vacuum circuit breaker, which integrates advanced technology at home and abroad, adopts brand-new design concept, chooses high-tech means and is newly developed by our company. As the switch of the main transformer line of 35kV substation, this product can also be used as the column switch of distribution network. Combined with various control units produced by our company, it can easily realize control, protection, measurement and communication. It is the preferred equipment to realize distribution automation and miniaturization.

Model meaning



Use Condition

- ◆Working temperature: not more than 40C; daily average temperature not more than 35 °C; minimum ambient air temperature is -25 °C.
- ◆Air relative humidity: daily average is not more than 95%, monthly average is not more than 90%; daily average water vapor pressure is not more than 2.2 KPa; monthly average is not more than 1.8 KPa.
- ◆Altitude: no more than 2000m.
- ◆The surroundings are not obviously contaminated by dust, smoke, corrosive and/or combustible gases, vapors or salt spray.
- ◆Vibration or ground motion from outside the switch-gear and control equipment can be ignored.
- ◆The amplitude of induced electromagnetic interference in the secondary system does not exceed 1.6 KV.

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	40.5
Rated current	A	1250/1600
Rated frequency	Hz	50 或 60
Power frequency withstand voltage (1min) (Wet) (Dry)	kV	80/95
Lightning impulse withstand voltage (Peak)	kV	185
Rated short circuit Breaking current	kA	31.5
Rated short-circuit closing current (Peak)	kA	80
Rated peak withstand current	kA	80
4S short time withstand voltage	kA	31.5
Rated operating cycle		off-0.1S-on off-3S-on off-6S on off-60S
Rated short-circuit current breaking times	次	30
Mechanical life	次	20000
Permanent magnet mechanism control voltage	V	DC220
Secondary circuit 1min power frequency withstand voltage	kV	2

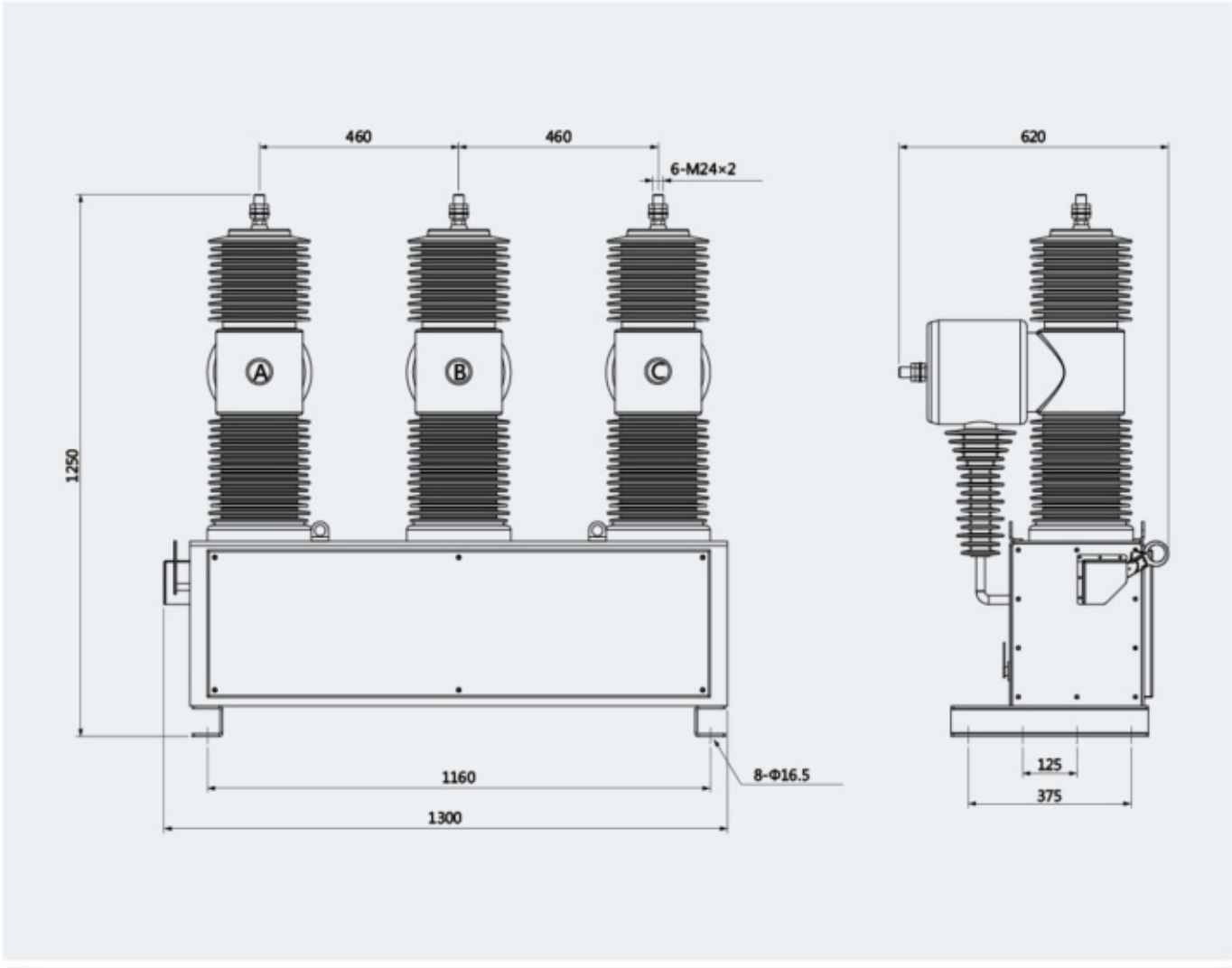
AB-3S-40.5

Outdoor Permanent Magnet Vacuum Circuit Breaker on Column

Main technical parameter

Project	Unit	Parameter
Contact distance	mm	16±1
Contact over-travel	mm	4±0.5
Opening speed	m/s	1.4-1.8
Closing speed	m/s	0.4-0.8
Contact closing bounce time	ms	≤ 5
Phase center distance	mm	460±2
Different periods of three-phase opening	ms	≤ 2
Conductive circuit resistance of each phase	μΩ	< 120
Closing time	ms	25~45
Opening time	ms	20~45
Weight	Kg	295

Shape and mounting dimension (mm)



AB-3S-12

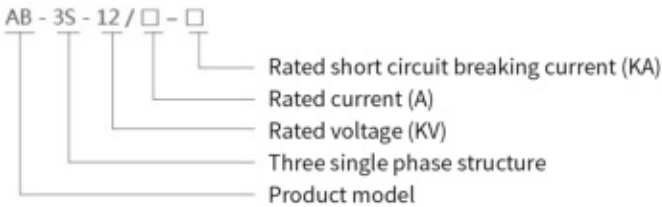
Outdoor High Voltage Fast Permanent Magnet Vacuum Circuit Breaker



Overview

AB-3S- 12 series outdoor high voltage three-phase permanent magnet vacuum circuit breaker is a new generation of on-column intelligent vacuum circuit breaker, which integrates advanced technology at home and abroad, adopts brand-new design concept, chooses high-tech means and is newly developed. The product can be used as the switch on the 10kV side of the main transformer and 10kV outlet of the 35kV substation, and can also be used as the post switch of the distribution network. Combined with various control units produced by our company, it can easily realize control, protection, measurement and communication, and is the preferred equipment to realize distribution automation and miniaturization.

Model meaning



Use Condition

- ◆Working temperature: not more than 40 °C; daily average temperature not more than 35 °C; minimum ambient air temperature is -25 °C.
- ◆Air relative humidity: daily average is not more than 95%, monthly average is not more than 90%; daily average water vapor pressure is not more than 2.2 KPa; monthly average is not greater than 1.8kPa.
- ◆Altitude: no more than 2000m.
- ◆The surroundings are not obviously contaminated by dust, smoke, corrosive and/or combustible gases, vapors or salt fog; vibrations or ground motions from outside switch-gear and control equipment are negligible.
- ◆The amplitude of induced electromagnetic interference in the secondary system does not exceed 1.6kV.

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	12
Rated insulation level	kV	42
Rated frequency	Hz	50
Rated current	A	630/1250
Rated short circuit breaking current	kA	20
Rated short circuit turn-off current (peak)	kA	50
Rated operation sequence		Ot1(0.3s)-COT2(3s)-COT2(3s)-CO
Thermally stable current (4S)	kA	20
Dynamically stabilized current (bee value)	kA	50
Rated short-circuit current breaking times	次	30
CT ratio		30-1250/1 (5)
Working power supply voltage	V	-220 (-110)
Creeping specific distance		≥ 31
Mechanical times	次	10000
Weight	kg	90+40 (Isolation)

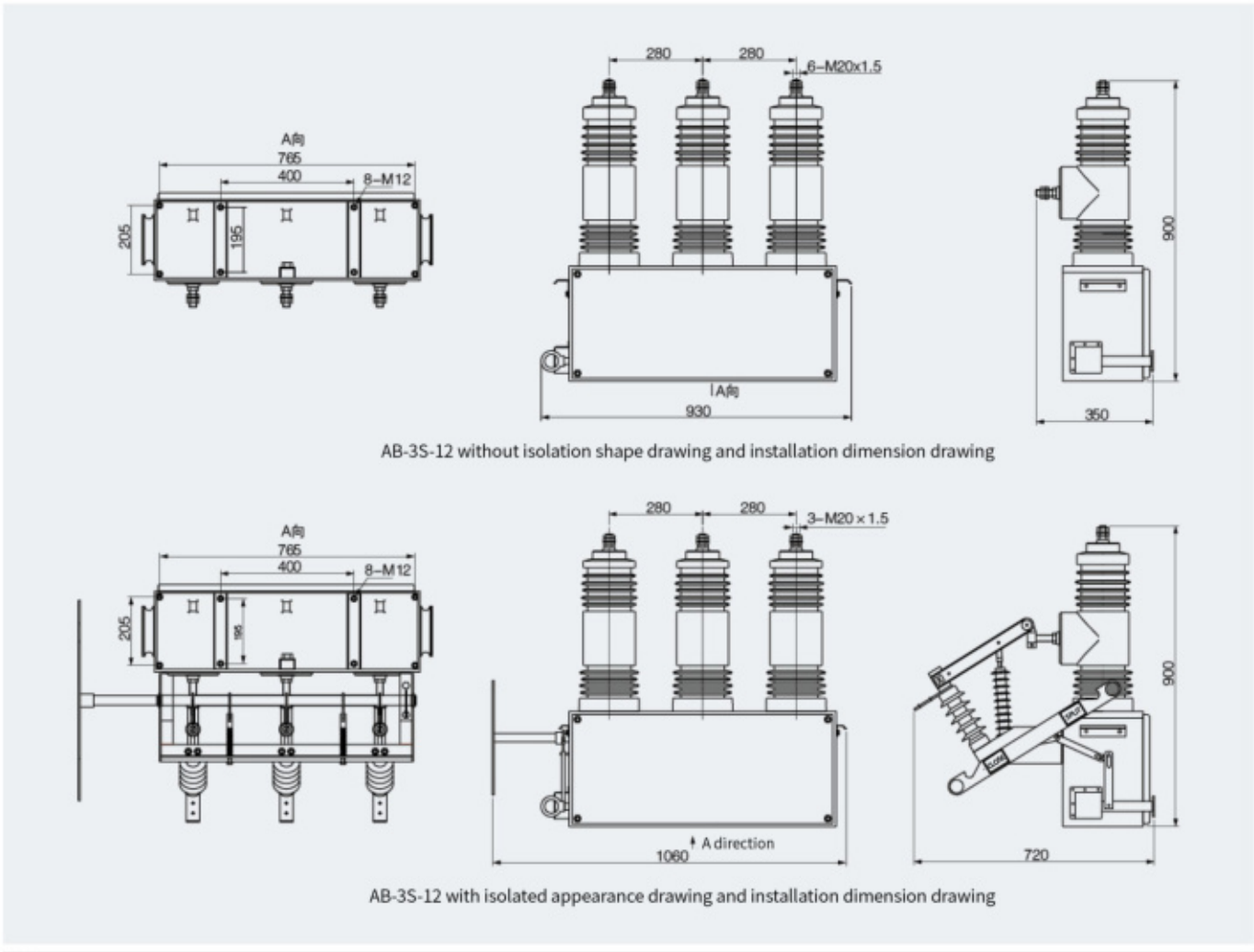
AB-3S-12

Outdoor High Voltage Fast Permanent Magnet Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter
Contact distance	mm	11±1
Contact line stroke (measuring the relative position of the contact spring)	mm	3±0.5
Average closing speed	m/s	0.6±0.2
Average opening speed (running 10mm)	m/s	1.0-1.4
Closing time	ms	30-50
Opening time	ms	30~70
Contact closing bounce time	ms	≤ 2
Three-phase contact closing in different periods	ms	≤ 2
Different periods of three-phase contact opening	ms	≤ 2
Conductive circuit resistance of each phase	μΩ	≤120; With isolation ≤170
Phase center distance	mm	280±2

Shape and mounting dimension (mm)



ZW32-12F

Outdoor High Voltage Intelligent Boundary Vacuum Circuit Breaker (watchdog)



Overview

When a fault occurs within a T-connected branch line or end user of a 12kV overhead distribution line, the incoming switch protection action time limit and the substation outgoing switch protection time limit cannot be reasonably timed together, which will cause the substation outgoing switch to trip. If the nature of the fault is permanent, the substation re-closing will be unsuccessful, and a local accident within the boundary of a medium voltage user will cause a power outage of the entire 12kV distribution line. If an outdoor demarcation circuit breaker is installed at the T-junction or at the customer end (responsible demarcation point), the fault (over-current, short-circuit, single-phase grounding, etc.) is automatically isolated after judgment to confirm the occurrence of the fault within the customer boundary, which can ensure normal power supply to customers in the non-faulted area. The application of the ZW32-12F outdoor high-voltage intelligent boundary vacuum circuit breaker (watchdog) on the 12kV feeder overhead line can avoid collateral accidental power outage, reduce the scope of fault outage, shorten the user outage time and protect the safe operation of the main network. It also has fault detection, protection and control functions and communication functions, and can automatically remove single-phase ground faults and automatically isolate phase-to-phase short-circuit faults. The installation point is used at the responsible demarcation point with the user inlet of the 12kV distribution line, and can also be applied to the branch line connection that meets the requirements.

Model meaning

Z W 32 - 12 F G / □ - □

- Rated short circuit breaking current (KA)
- Rated current (A)
- With isolation switch
- Boundary switch
- Rated voltage (KV)
- Product design serial number
- Outdoor
- Vacuum circuit breaker

- Environmental Condition**
- ◆Ambient temperature: not higher than + 40 °C, not lower than-40 °C.
 - ◆Air relative humidity: daily average no more than 95%, monthly average no more than 90%.
 - ◆Altitude: no more than 2000m.
 - ◆The wind pressure does not exceed 700Pa (equivalent to the wind speed 34m/ s).
 - ◆The earthquake intensity does not exceed magnitude 8.
 - ◆A place free of fire, explosion, serious pollution, chemical corrosion and severe vibration.

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	12
Rated current	A	630, 1250
Rated frequency	Hz	50
Power frequency withstand voltage (1min)	kV	Dry (phase, to ground/fracture)
		Wet (To ground, external insulation)
Lightning impulse withstand current(phase, to ground / fracture)	kA	42/48
		34
Rated short circuit breaking current	kA	75/85
Rated short circuit turn-off current (peak)	kA	20 25
Rated bee withstand current	kA	50 63
4S short-term withstand current	kA	20 25
Rated operation cycle		off-0.3s-on off-180s-on
Rated short-circuit current breaking times	Times	30
Mechanical life	Times	10000
Secondary circuit 1min power frequency withstand voltage	kV	2

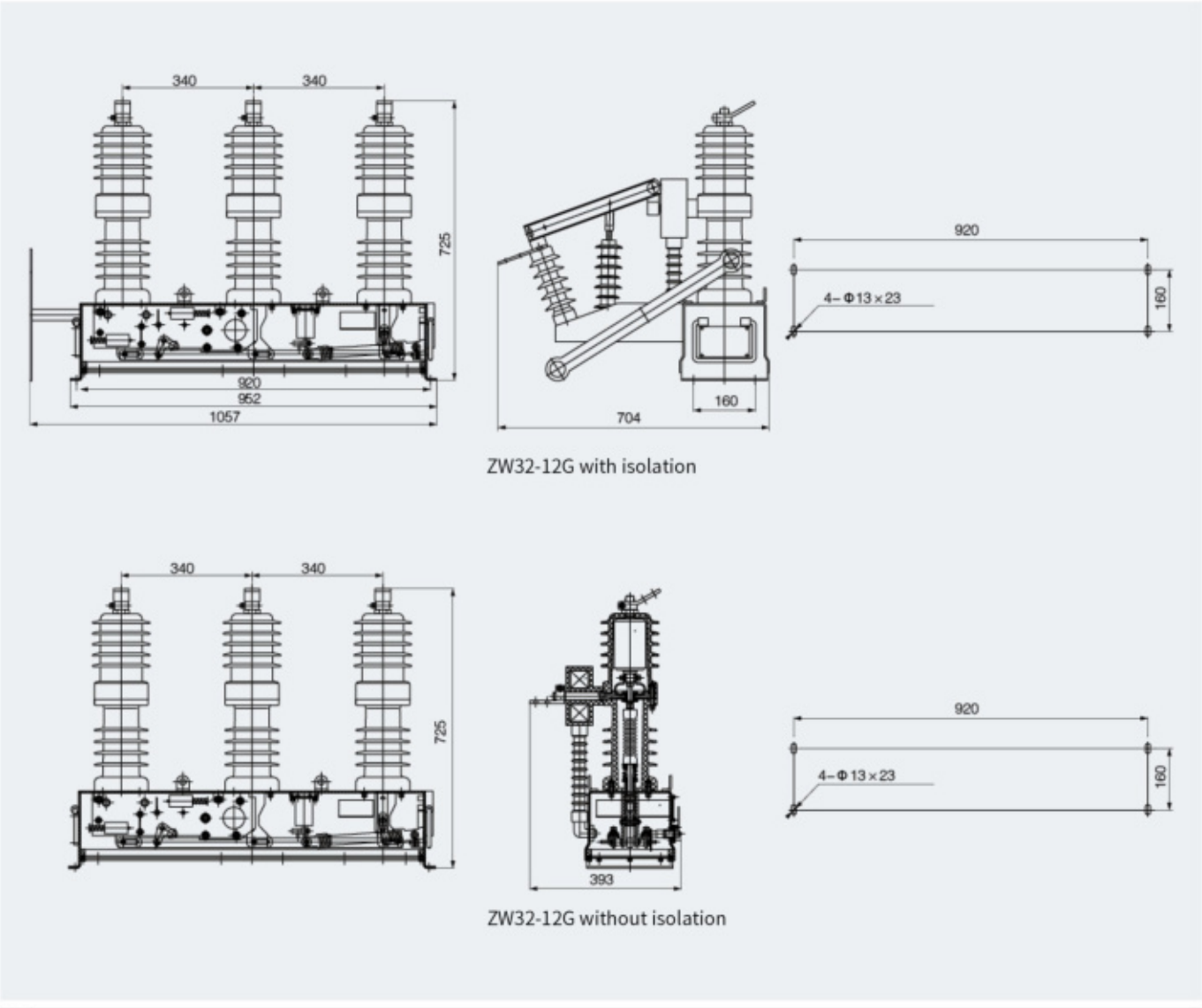
ZW32-12F

Outdoor High Voltage Intelligent Boundary Vacuum Circuit Breaker (watchdog)

Main technical parameter

Project	Unit	Parameter
Contact distance	mm	9±1
Contact over-stroke	mm	2.5 ±1
Opening speed	m/s	1.1 ±0.3
Closing speed	m/s	0.6 ±0.2
Contact closing bounce time	ms	≤ 2
Phase center distance	mm	340 ±2
Different stages of three-phase opening and closing	ms	≤ 2
Conductive circuit resistance of each phase	μΩ	≤80; With isolation≤150
Weight	kg	about 70

Shape and mounting dimension (mm)



ZW32-12MF

Outdoor High Voltage Permanent Magnet Vacuum Circuit Breaker



Overview

When a fault occurs within a T-connected branch line or end user of a 12kV overhead distribution line, the incoming switch protection action time limit and the substation outgoing switch protection time limit cannot be reasonably timed together, which will cause the substation outgoing switch to trip. If the nature of the fault is permanent, the substation re-closing will be unsuccessful, and a local accident within the boundary of a medium voltage user will cause a power outage of the entire 12kV distribution line. If an outdoor demarcation circuit breaker is installed at the T-junction or at the customer end (responsible demarcation point), the fault (over-current, short-circuit, single-phase grounding, etc.) is automatically isolated after judgment to confirm the occurrence of the fault within the customer boundary, which can ensure normal power supply to customers in the non-faulted area. The application of the ZW32-12F outdoor high-voltage intelligent boundary vacuum circuit breaker (watchdog) on the 12kV feeder overhead line can avoid collateral accidental power outage, reduce the scope of fault outage, shorten the user outage time and protect the safe operation of the main network. It also has fault detection, protection and control functions and communication functions, and can automatically remove single-phase ground faults and automatically isolate phase-to-phase short-circuit faults. The installation point is used at the responsible demarcation point with the user inlet of the 12kV distribution line, and can also be applied to the branch line connection that meets the requirements.

Model meaning

Z W 32 - 12 M F G / □ - □

- Rated short circuit breaking current (KA)
- Rated current (A)
- With isolation switch
- Boundary switch
- Permanent magnet switch
- Rated voltage (KV)
- Product design serial number
- Outdoor
- Vacuum circuit breaker

- Environmental Condition**
- ◆Ambient temperature: not higher than + 40 °C, not lower than-40 °C.
 - ◆Air relative humidity: daily average is not more than 95%, monthly average is not more than 90.
 - ◆Altitude: no more than 2000m.
 - ◆The wind pressure does not exceed 700Pa (equivalent to the wind speed 34m/ s).
 - ◆The earthquake intensity does not exceed magnitude 8.
 - ◆A place free of fire, explosion, serious pollution, chemical corrosion and severe vibration.

Main technical parameter

Project	Unit	Parameter	
Rated voltage	kV	12	
Rated current	A	630. 1250	
Rated frequency	Hz	50	
Power frequency withstand voltage (1min)	kV	Dry (phase, to ground/fracture)	42/48
		Wet (To ground, external insulation)	34
Lightning impulse withstand current(phase, to ground / fracture)	kA	75/85	
Rated short circuit breaking current	kA	20	25
Rated short circuit turn-off current (peak)	kA	50	63
Rated bee withstand current	kA	50	63
4S short-term withstand current	kA	20	25
Rated operation cycle		off-0.3s-on off-180s-on	
Rated short-circuit current breaking times	Times	30	
Mechanical life	Times	30000	
Secondary circuit 1min power frequency withstand voltage	kV	2	

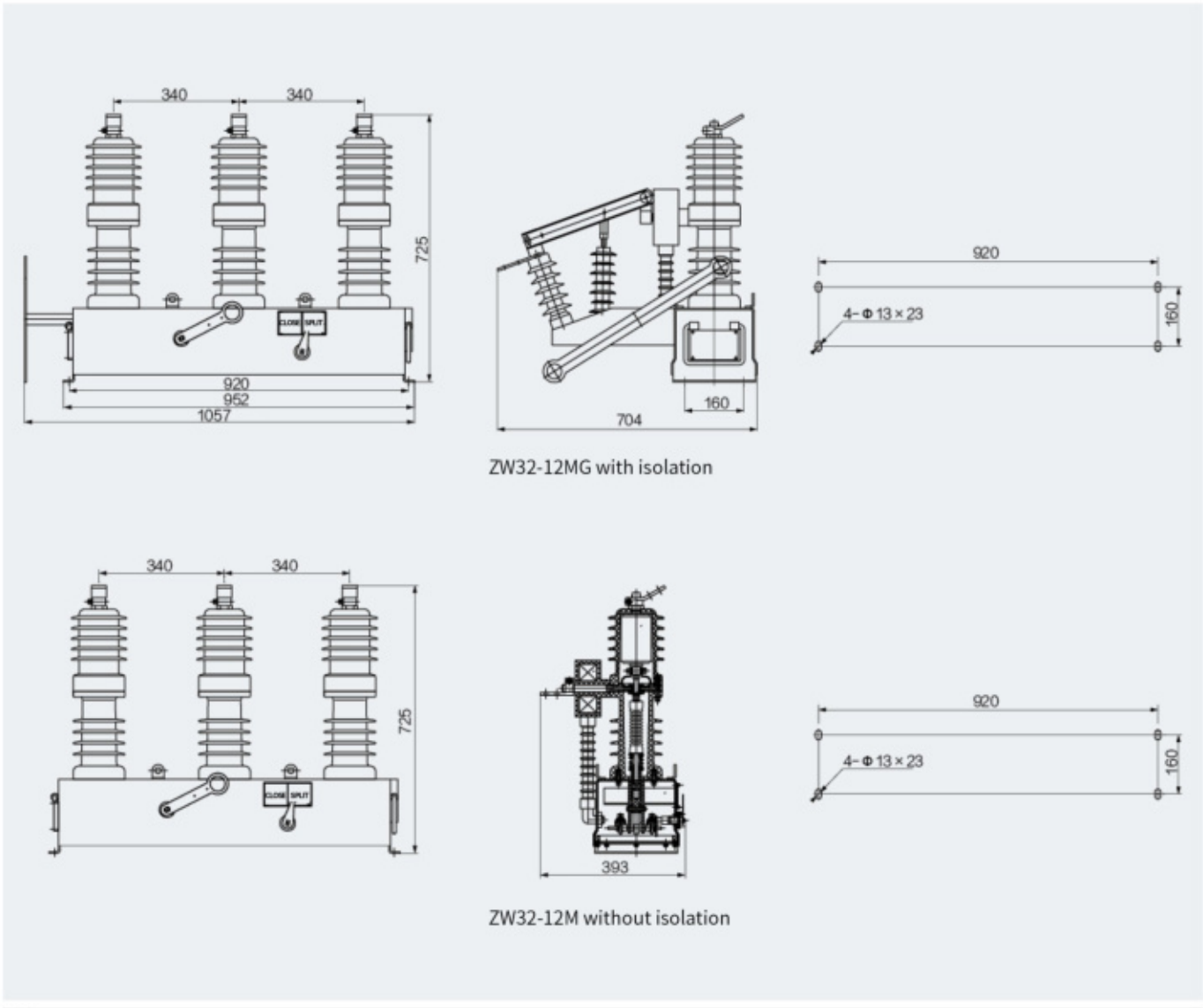
ZW32-12MF

Outdoor High Voltage Permanent Magnet Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter
Contact distance	mm	9±1
Contact over-stroke	mm	2.5 ±1
Opening speed	m/s	1.1 ±0.3
Closing speed	m/s	0.6 ±0.2
Contact closing time	ms	≤ 2
Phase center distance	mm	340 ±2
Different stages of three-phase opening and closing	ms	≤ 2
Conductive circuit resistance of each phase	μΩ	≤80; With isolation ≤150
Weight	kg	about 70

Shape and mounting dimension (mm)



ZW32-24F

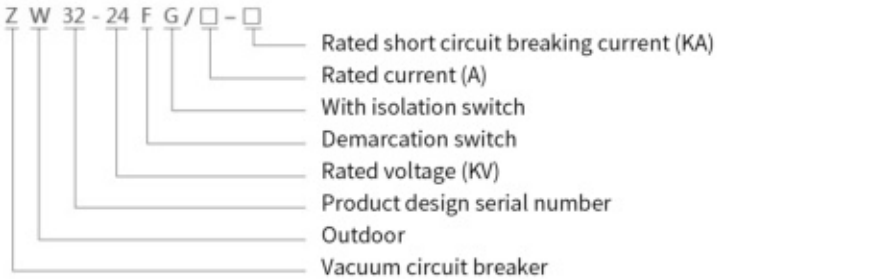
Outdoor High Voltage Intelligent Boundary Vacuum Circuit Breaker (watchdog)



Overview

ZW32-24 outdoor high voltage intelligent boundary vacuum circuit breaker (hereinafter referred to as circuit breaker) is an outdoor power distribution equipment with a rated voltage of 24kV 50H three-phase AC. It is mainly used to turn off the load current, overload current and short circuit current in the distribution network. For protection and control in substations and power distribution systems of industrial and mining enterprises, it is more suitable for rural power grids and places of frequent operation, especially for the transformation of urban and rural power grids.

Model meaning



Environmental Condition

- ◆Ambient temperature: not higher than + 40 °C, not lower than-40 °C.
- ◆Air relative humidity: daily average is not more than 95%, monthly average is not more than 90.
- ◆Altitude: no more than 2000m.
- ◆The wind pressure does not exceed 700Pa (equivalent to the wind speed 34m/ s).
- ◆The earthquake intensity does not exceed magnitude 8.
- ◆A place free of fire, explosion, serious pollution, chemical corrosion and severe vibration.

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	24
Rated power frequency withstand voltage of 1min		Phase, to ground 65, fracture 65
Rated lightning impulse withstand (peak)		Phase, to ground 125, fracture 145
Rated current	kA	630、 1250
Rated frequency	Hz	50
Rated short circuit breaking current (peak)	kA	20 25 31.5
Rated short circuit withstand current		50 63 80
Rated peak withstand current		50 63 80
4s rated short-term withstand current	kA	20 25 31.5
Rated operation sequence		off-0.3s-off-180s-on off
Closing time	ms	25~60
Opening time		18~45
Rated short circuit breaking current breaking times	Times	30
Mechanical life		10000
Secondary circuit 1min power frequency withstand voltage	V	2000
Rated power of energy storage motor	W	40
Rated voltage of energy storage motor	v	DC220、 110、 DC24
Rated closing operating voltage		AC/DC220、 110 ; DC24
Rated switching voltage		AC/DC220、 110 ; DC24
Motor energy storage time.	s	≤ 8

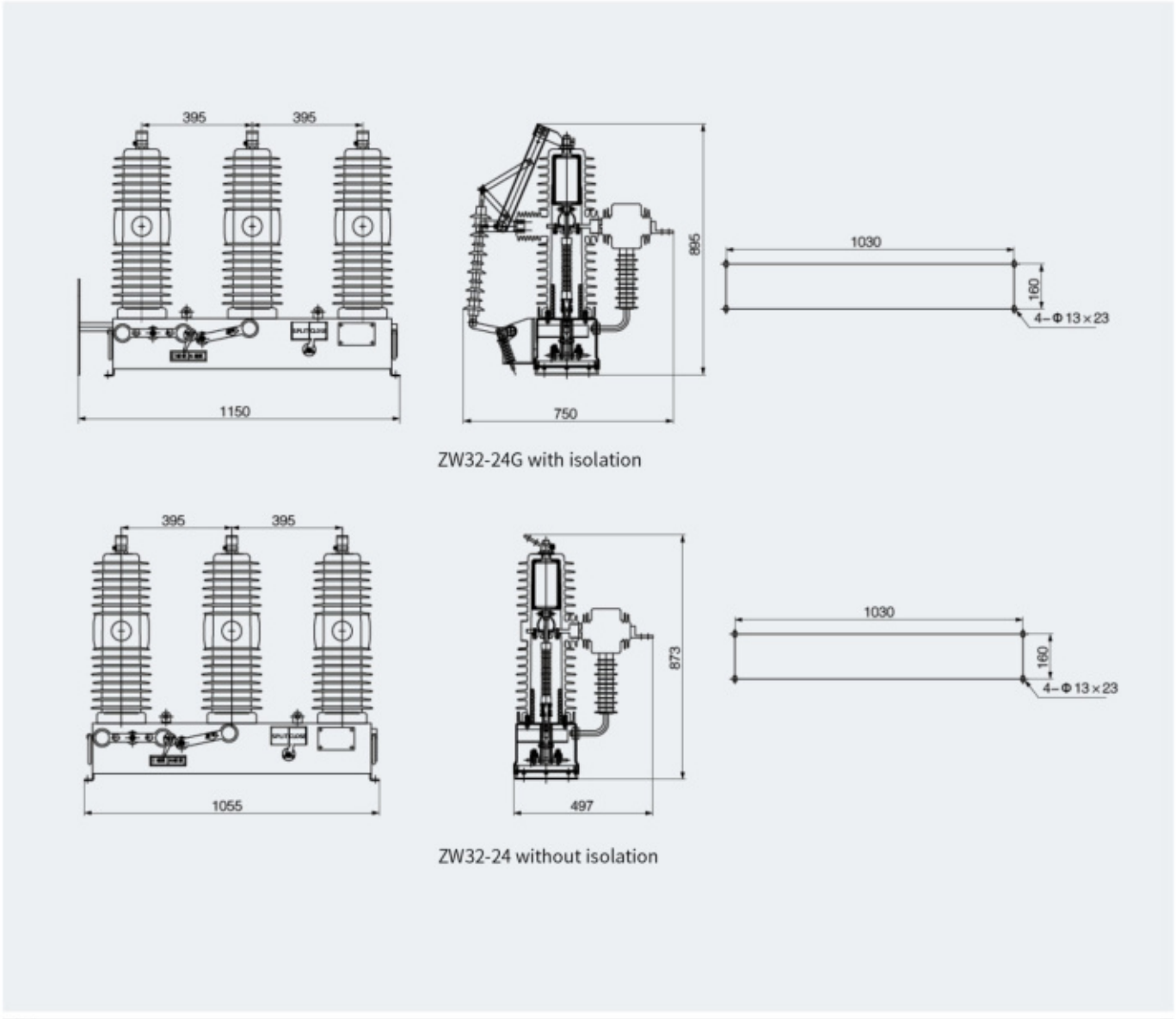
ZW32-24F

Outdoor High Voltage Intelligent Boundary Vacuum Circuit Breaker (watchdog)

Main technical parameter

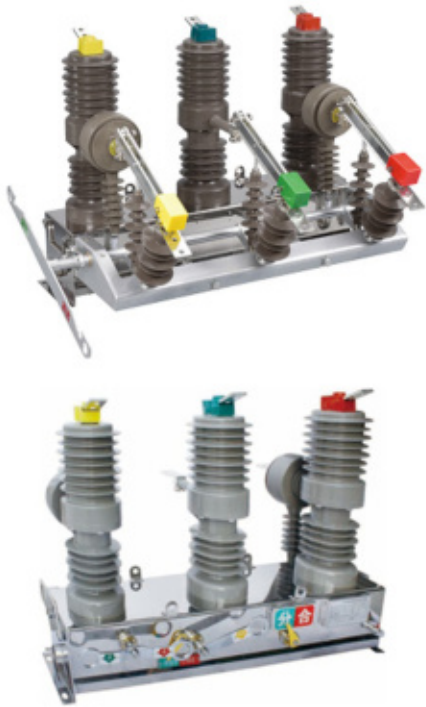
Project	Unit	Parameter
Contact distance	mm	12±1
Overrun		3 ±1
Phase center distance		395 ±2
Contact closing bounce time	ms	≤ 2
Synchronization of three-phase opening and closing		≤ 2
Average opening speed	m/s	1.1~1.7
Average closing speed		0.5~1.0
Main circuit resistance	μΩ	≤ 100

Shape and mounting dimension (mm)



ZW32-12

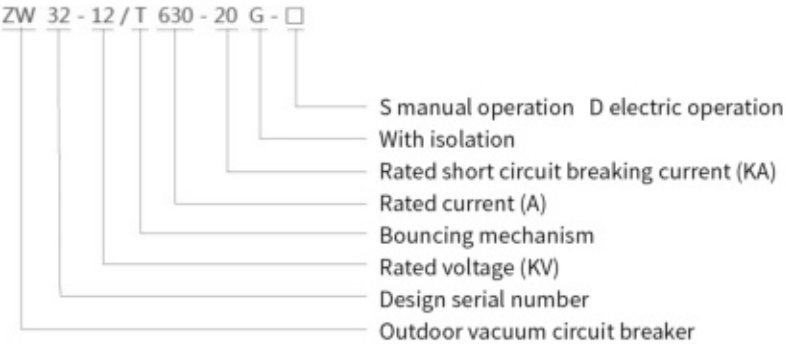
Outdoor High Voltage Vacuum Circuit Breaker



Overview

ZW32-12 outdoor vacuum circuit breaker (hereinafter referred to as circuit breaker) is a rated voltage 12KV, three-phase AC 50HZ outdoor power distribution equipment. It is mainly used to turn on and off the load current, overload current and short circuit current in the power system. It is suitable for protection and control in substations and power distribution systems of industrial and mining enterprises, as well as places where rural power grids operate frequently. The circuit breaker has the characteristics of small size, light weight, anti-condensation, maintenance-free, etc., and can adapt to harsh climatic conditions and pollution environment.

Model meaning



Conform to the standard

- GB1984 "AC High Voltage Circuit Breaker"
- GB11022 "Common Technical Requirements for High Voltage Switch-gear and Control Equipment Standards"
- GB311.1-6 "Insulation Coordination of High Voltage Transmission and Transformation Equipment"
- GB763 "Heating of AC High Voltage Appliances during Long-term Operation"
- GB2706 "Test Method for Dynamic and Thermal Stability of AC High Voltage Electrical Appliances"
- GB3309 "Mechanical Test of High Voltage Switch-gear at Room Temperature"
- DL/T593 "Technical Conditions for Common Order of High Voltage Switch-gear"

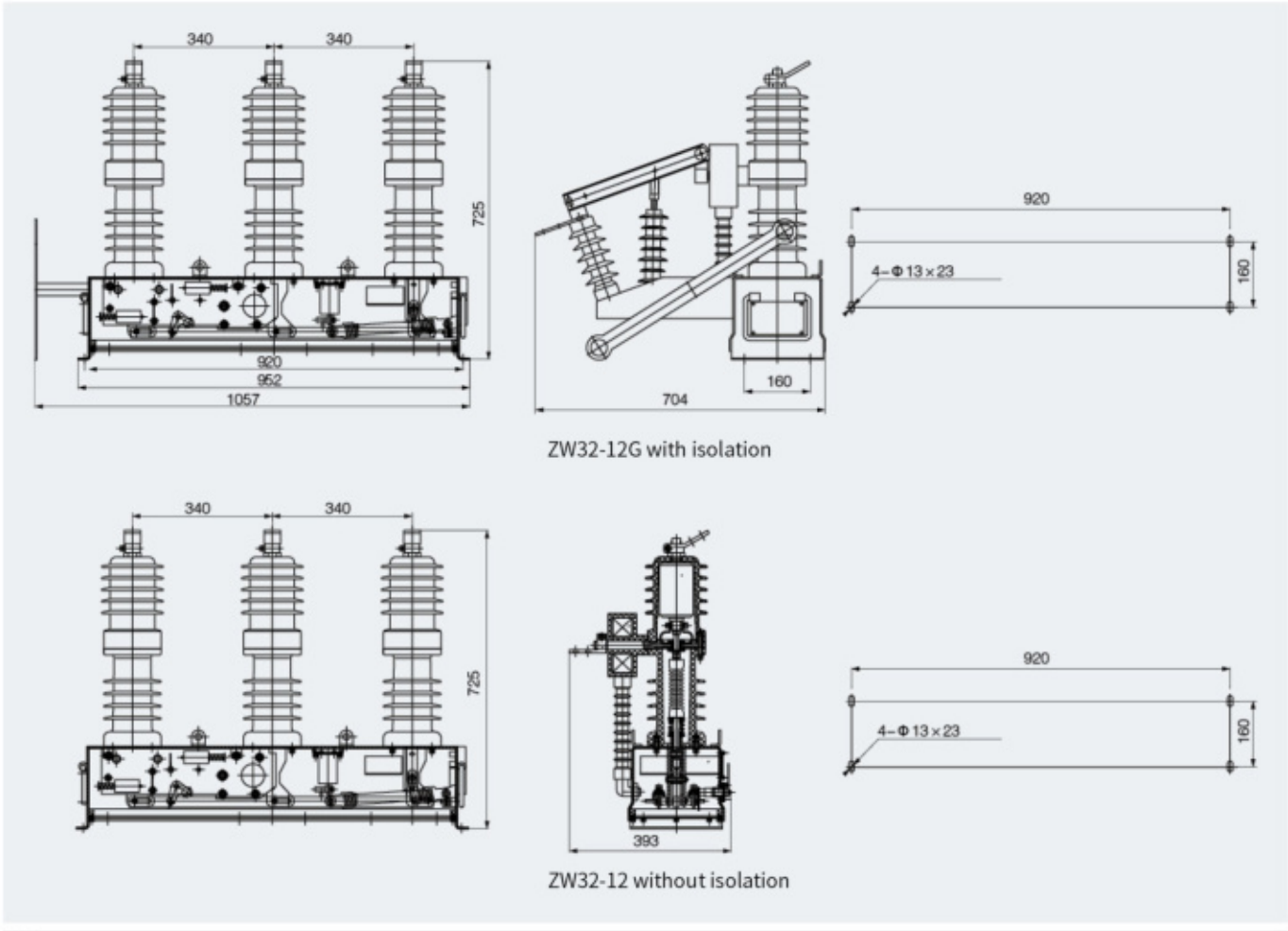
ZW32-12

Outdoor High Voltage Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter
Rated voltage	kV	12
Rated frequency	Hz	50
Rated current	A	630
Rated short circuit breaking current	kA	20
Rated peak withstand current (peak)	kA	50
Rated short-term withstand current	kA	20
Rated short circuit turn-off current (peak)	kA	50
Mechanical life	Times	10000
Rated short circuit breaking current breaking times	Times	30
Power frequency withstand voltage (1min): (wet) (dry) phase, to ground / fracture	kV	42/48
Lightning impulse withstand voltage (peak) phase, to ground / fracture	kV	75/85
Secondary circuit 1min power frequency withstand voltage	kV	2

Shape and mounting dimension (mm)



ZW8-12

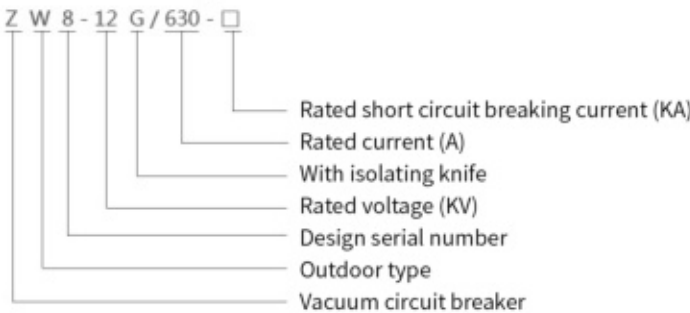
Outdoor High Voltage Vacuum Circuit Breaker

Overview

ZW8-12 series vacuum circuit breaker is a high voltage outdoor switchgear with rated voltage 12KV and three-phase AC 50HZ, which is mainly used to turn on and off the load current, overload current and short circuit current of rural power network, urban power network and small power system. The overall structure of the product is three-phase common box type, three-phase vacuum interrupter is placed in a metal box, using SMC insulation material phase insulation and ground insulation, reliable performance and high insulation strength.

ZW8-12G is a combination of ZW8-12 circuit breaker and isolation knife, which is called combined circuit breaker and can be used as a section switch. The operating mechanism of this series of products is CT23 spring energy storage operating mechanism, which is divided into electric and manual. The circuit breaker has the function of closing inrush current to meet the requirements of control and measurement. Equipped with electronic control unit, the "four remote" monitoring can be realized.

Model meaning



Main technical parameter

Project	Unit	6.3kA	12.5kA	20kA
Rated voltage	kV	12		
Rated current	A	630		
Rated short circuit breaking current	kA	6.3	12.5	20
Rated short circuit turn-off current (peak)	kA	16	31.5	50
Rated peak withstand current	kA	16	31.5	50
Rated short-term withstand current	kA	6.3	12.5	20
Rated insulation level	Lightning impulse withstand voltage (peak)	kV	75	
Rated insulation level	1min power frequency withstand voltage	kV	42	

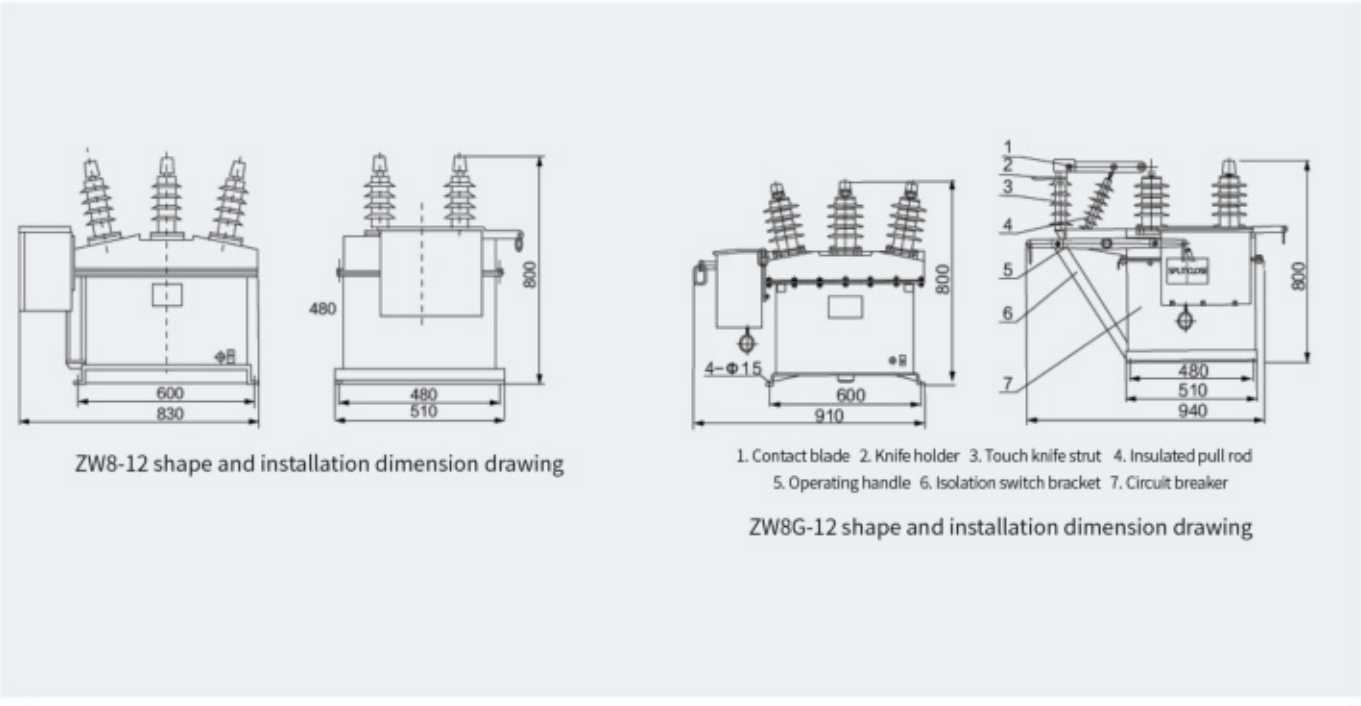
ZW8-12

Outdoor High Voltage Vacuum Circuit Breaker

Main technical parameter

Project		Unit	6.3kA	12.5kA	20kA
Rated operation sequence			off-0.3s-on off-180s-off		
Mechanical life		Times	10000		
Rated short circuit breaking current breaking times		Times	30		
Rated closing voltage of operating mechanism		V	110 , 220		
Rated opening voltage of operating mechanism		V	110 , 220		
Contact distance		mm	11±1		
Over-stroke (contact spring compression length)		mm	3±0.3		
Different stages of three-phase separation and closing		ms	≤ 2		
Contact closing bounce time		ms	≤ 2		
Average opening speed		m/s	1.0±0.2		
Average closing speed		m/s	0.7±0.15		
Opening time	At the highest operating voltage	ms	15-50		
Opening time	At the lowest operating voltage	ms	30-60		
Closing time		ms	25-50		
Main circuit resistance of each phase		μΩ	≤120 (with G ≤200)		
Allowable cumulative wear thickness of dynamic and static contacts		mm	3		
Weight		kg	152 (with G180)		
Same intermediate distance		mm	175±1.5		

Shape and mounting dimension (mm)



ZW10-12

Outdoor AC High-voltage Vacuum Circuit Breaker

Overview

ZW10-12/630-20 series outdoor AC high-voltage vacuum circuit breaker is a three-phase AC 50Hz, outdoor high-voltage switch-gear, mainly used in 12KV agricultural network and urban network power system, as the division and closing of load current, overload current and short-circuit current, also can be used in other similar places.

The circuit breaker can be combined with isolation switch to form a combination appliance.

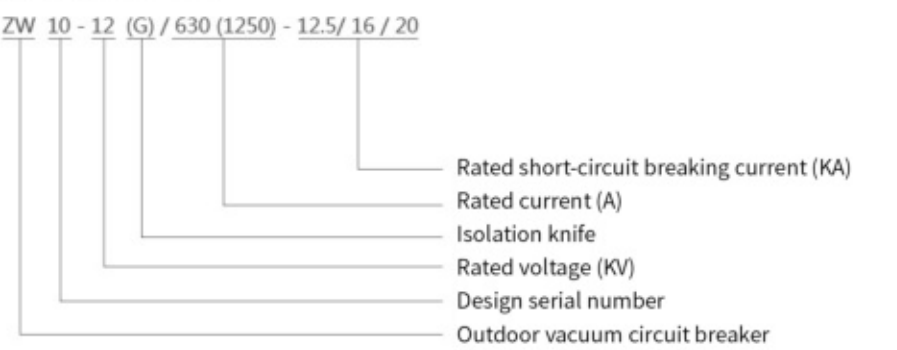
It can be combined with re-closing controller to form re-closer.

It can be combined with FTU and RTU to form an automatic distribution network switch to clear and isolate faults, automatically transfer power supply and automatically restore power supply. Through remote control device, it can communicate with DMS system of distribution management center to realize four remote functions.

Configured with intelligent IC card prepaid distribution control box, it can realize automatic power off without charge and automatic power restoration with purchase of power, which can meet the current demand of power supply department's electric energy management reform.



Model meaning



Product features

- ◆Special anti-condensation measures are adopted inside to ensure insulation inside the box.
- ◆The transmission method adopts patented technology, easy installation and reliable action, avoiding the performance of the circuit breaker due to mechanical failure.
- ◆Non-oil-filled, non-inflatable, small volume, light weight and CT protection.
- ◆Manipulation can be both electric and manual.

ZW10-12

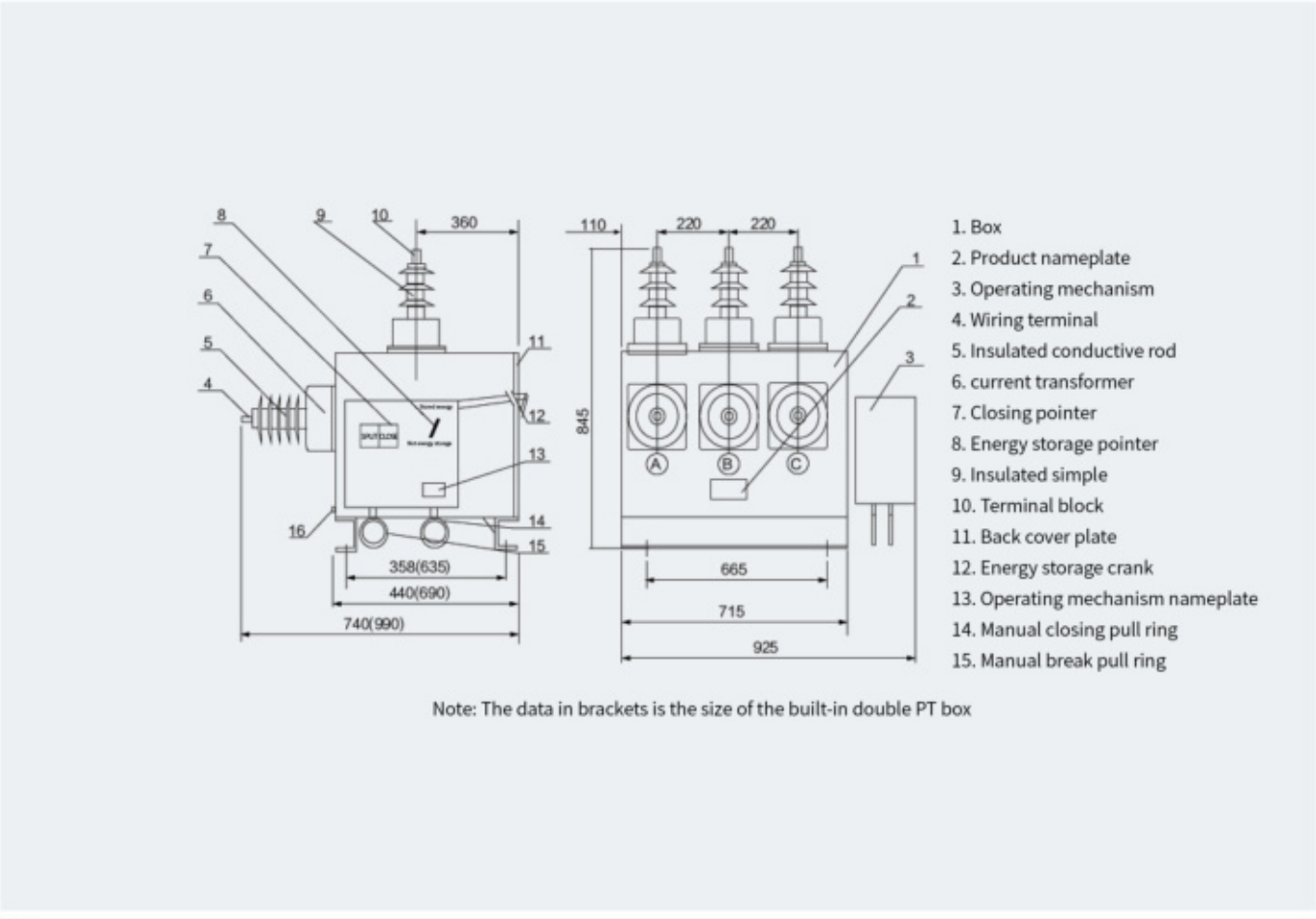
Outdoor AC High-voltage Vacuum Circuit Breaker

Main technical parameter

Project	Unit	Parameter		
Rated voltage	kV	12		
Rated current	A	630	1250	
Rated frequency	Hz	50		
Rated short-circuit breaking current	kA	12.5	16	20
Rated peak withstand current (peak)	kA	31.5	40	50
Rated short time withstand current (4s)	kA	12.5	16	20
Rated short-circuit closing current (peak)	kA	31.5	40	50
Rated short-circuit breaking current breaking times	次	30		
Mechanical life	次	10000		
Industrial frequency withstand voltage(1min)	kV	42		
Lightning surge withstand voltage (peak)	kV	75		
Secondary circuit 1min industrial frequency withstand voltage	kV	2		

Note: When the product is used in places over 1000m, the insulation level should be corrected.

Shape and mounting dimension (mm)



FZW28-12F

Outdoor Boundary Vacuum Load Switch



Overview

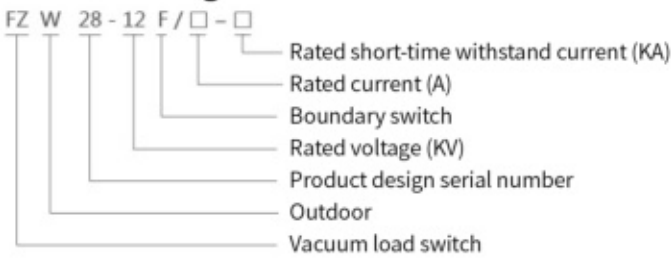
FZW28-12F outdoor demarcation vacuum load switch (referred to as demarcation switch) is used in outdoor column installation, with manual and electric operation functions. The switch body introduces VSP5-12 technology from Toshiba, Japan, and is a maintenance-free load switch.

It adopts vacuum arc extinguishing and SF6 gas as ground and inter-phase insulation medium.

This product conforms to: GB3804 "HighVoltage AC Load Switch" and GBT11022 "Common Technical Requirements for High Voltage Switch-gear and Control Equipment Standards".

FZW28-12F outdoor Boundary vacuum load switch has fault detection function, protection and control function and communication function. It is installed on 10KV overhead line and can realize automatic excision of single-phase ground fault and automatic isolation of phase-to-phase short-circuit fault. The installation point is applicable at the responsible demarcation point of the user inlet line of 10KV distribution line, and also at the branch line connection which meets the requirements.

Model meaning



Normal use condition

- ◆The upper limit of surrounding air temperature is not more than 40°C, and the lower limit is not more than -45°C;
 - ◆The wind speed is not more than 35m/s ;
 - ◆altitude not higher than 1000m, seismic intensity not more than 8 degrees;
 - ◆Ambient humidity: monthly average relative humidity is not more than 90%; daily average relative humidity is not more than 95%;
 - ◆The thickness of ice cover should not exceed 10mm;
 - ◆The installation site should be a site without flammable, explosive, chemical corrosion and regular violent vibration;
 - ◆Neutral point grounding mode: neutral point is not grounded, neutral point is grounded by arc extinguishing coil, neutral point is grounded by small resistance.
- If customers have other special requirements, they can put forward at the time of order, and our company will give maximum satisfaction.

Main technical parameter

Project	Unit	Parameter
Operation method		Manual or automatic (electromagnetic)
Rated value	Rated voltage	kV 12
	Rated current	A 630
	Rated short-time withstand current (4s)	kA 12.5 16 20
	Rated closing short-circuit current (peak)	kA 31.5 40 50
	Rated frequency	Hz 50
	Operating voltage	AC220V(80%~110%)
Frequency withstand voltage (1min)	To ground	kV 42
	Inter-phase	kV 42
	Fracture	kV 48
	Sub-to- ground	kV 2
Shock withstand voltage (peak)	To ground	kV 75
	Inter-phase	kV 75
	Fracture	kV 84

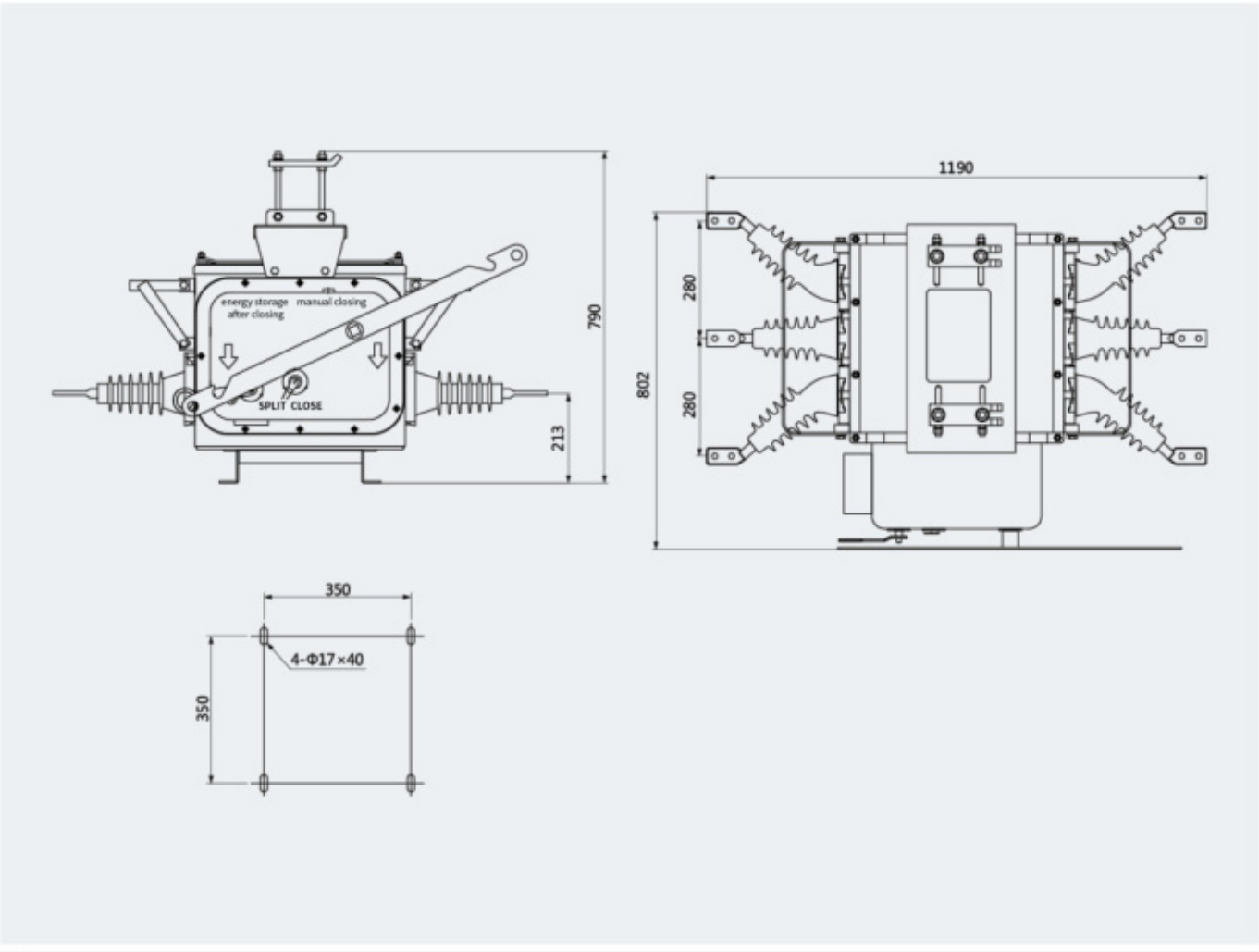
FZW28-12F

Outdoor Boundary Vacuum Load Switch

Main technical parameter

Project	Unit	Parameter
Net weight	kg	185
Rated gauge pressure of SF6 gas		0 Table voltage of 93% or more
Measurement of operating handle manual power	N	100~400
Main circuit resistance	μΩ	≤ 500
Closing operation	184~220V	1.Closing time 120~180ms (220V)/2.Bounce time is not more than 10ms 3.Closing current (peak) 17A or less/4.Holding current not more than 0.45A
	Minimum closing voltage	V 120-160
Breaking operation	184~220V	1.Breaking time 1.5s or less/2.The time of the different period is 30ms or less
	Minimum hold closing voltage	V 65~85V
Isolation break and vacuum arc chamber closing and dividing operation time difference	ms	10±2
Gas tightness test (leak detection)		0.2 M pa gauge pressure without air leakage
Vacuum interrupter contact opening distance	mm	7~9
Vacuum interrupter contact over distance	mm	3~3.5
Isolation fracture opening distance	mm	25~30
Isolation break over distance	mm	6~13

Shape and mounting dimension (mm)



ZW7-40.5

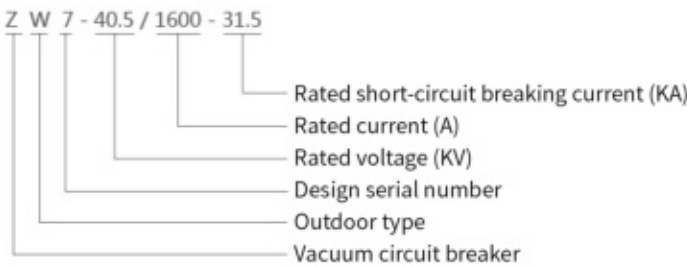
Outdoor High Voltage Vacuum Circuit Breaker



Overview

ZW7-40.5 outdoor high-voltage vacuum circuit breaker is used for three-phase power system with AC 50Hz and rated voltage of 40.5KV, as breaking and closing load current, overload current and short-circuit current.

Model Meaning



Environmental Condition

- ◆Air temperature: upper limit +40°C, lower limit -30°C;
- ◆Altitude: ≤2000m (if the altitude needs to be increased, the rated insulation level will be increased accordingly);
- ◆Wind pressure: not more than 700Pa (equivalent to wind speed 34m/ s);
- ◆Seismic intensity: 8 degrees;
- ◆Fouling grade: III;
- ◆Maximum daily temperature difference: not more than 25°C.

Main function

- ◆Adopting vacuum interrupting arc, with strong opening capacity, long electric life and mechanical life of 10000 times.
- ◆Simple structure, maintenance-free, long non-overhaul cycle.
- ◆Good insulation performance, strong anti-fouling ability.
- ◆Can be equipped with spring or electromagnetic operating mechanism, mechanical performance is reliable, can be operated frequently; no fire and explosion hazards.
- ◆Built-in current transformer, the calculation accuracy reaches 0.2 level, which can realize three-phase interactive protection.
- ◆Condensation controller is included, which can keep the circuit breaker operating reliably under certain temperature and humidity.

ZW7-40.5

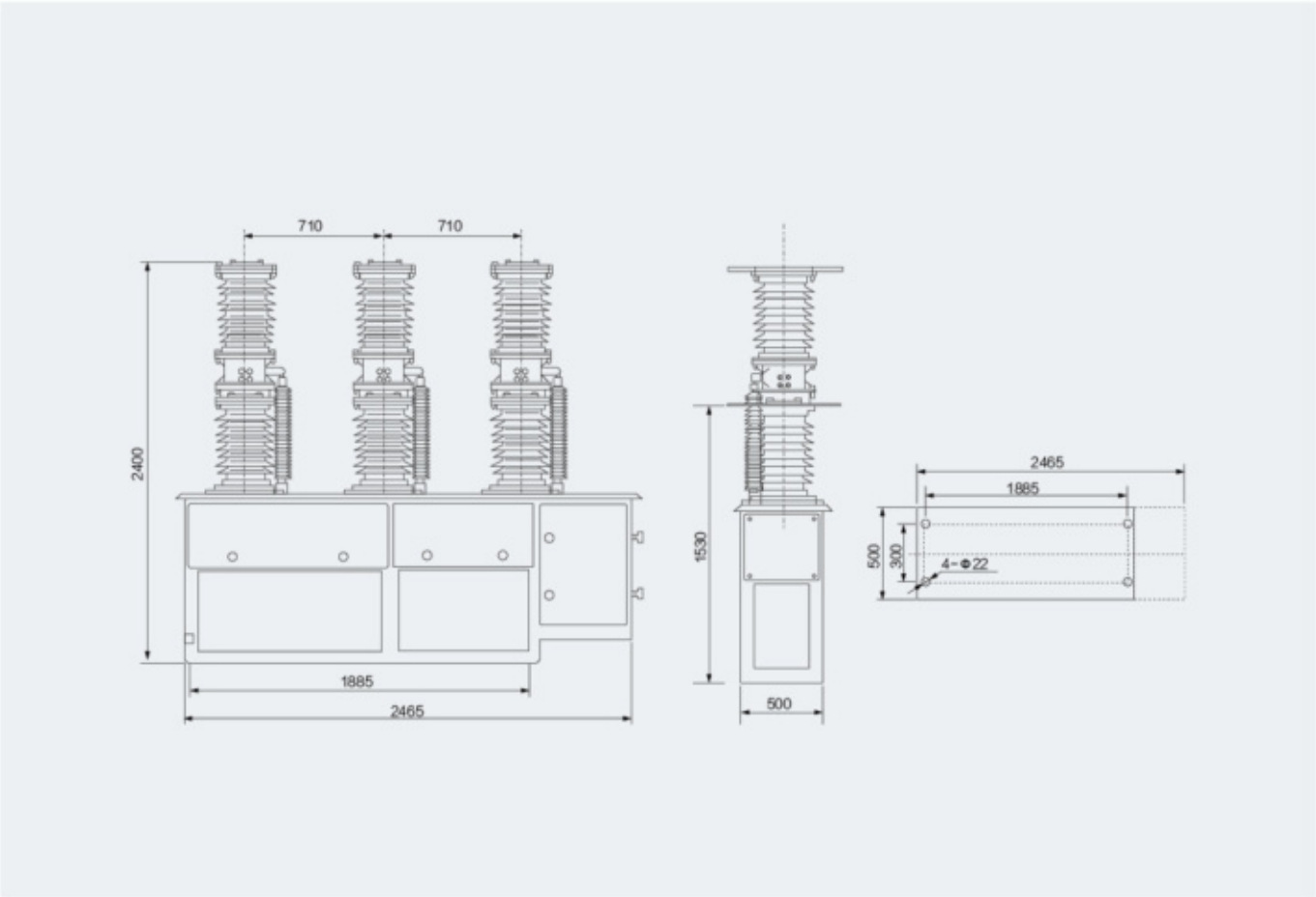
Outdoor High Voltage Vacuum Circuit Breaker

Main technical parameter

Project			Unit	Parameter
Rated voltage			kV	40.5
Rated insulation level	Work frequency withstand voltage	Dry	kV	95
		Wet	kV	80
	Lightning surge withstand voltage (peak)		kV	185
Rated current			A	1250、1600、2000
Rated short-circuit breaking current			kA	20、25、31.5
Rated operation sequence				off-0.3s on off-180s on off
Rated short-circuit current opening and closing times			次	12
Rated short-circuit closing current (peak)			kA	50、63、80
Rated peak withstand current			kA	50、63、80
Rated short time withstand current			kA	20、25、31.5
Rated short-break continuous current			S	4

Project	Unit	Parameter
Average breaking speed	m/s	1.5±0.2
Average closing speed	m/s	0.7±0.2
Contact closing single trip time	s	≤ 2
Three-phase closing (breaking) simultaneity difference	s	≤ 2
Closing time	s	≤ 150
Breaking time	s	≤ 60
Mechanical life	次	10000
Rated operating voltage and rated voltage of auxiliary circuit	V	DC220、110、24
Rated operating voltage and rated voltage of auxiliary circuit	V	AC220、110、24
DC resistance of each phase circuit (excluding transformer)	μΩ	≤ 100
Allowable wear thickness of dynamic and static contacts	mm	3
Weight	kg	800

Shape and mounting dimension (mm)



Indoor High Voltage Vacuum Circuit Breaker Series



ZN63A(VS1)-12
Indoor High Voltage Vacuum Circuit Breaker

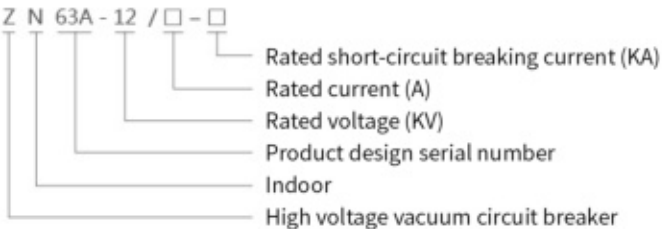


Overview

ZN63A-12 indoor high voltage vacuum circuit breaker is an indoor switch-gear for three-phase AC 50HZ rated voltage of 12KV power system, as a protection and control unit for power equipment of power grid and industrial and mining enterprises. It is suitable for frequent operation under the rated working current, or for the place where the short-circuit current is broken by multiple crossings.

The circuit breaker adopts the integrated design of operating mechanism and circuit breaker body, which can be used as fixed installation unit or equipped with special propulsion mechanism to form the role of trolley unit.

Model Meaning



Conditions of use

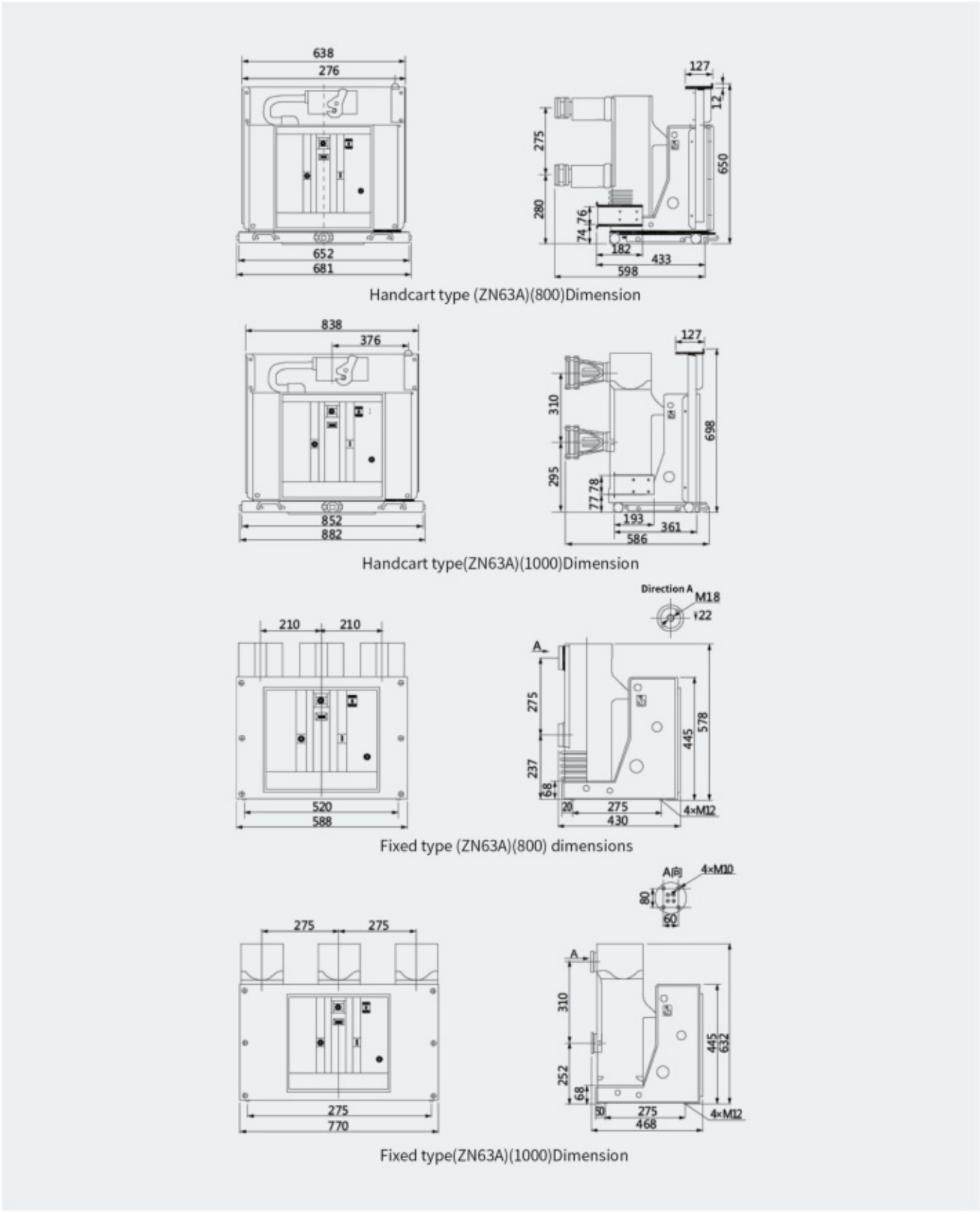
- ◆ Ambient temperature: not higher than +40°C, not lower than -15°C (storage and transportation at -30°C is not allowed);
- ◆ Altitude: not more than 1000m;
- Relative humidity: daily average not more than 95%, monthly average not more than 90%, saturated vapor pressure average not more than 2.2x10⁻³MPa;
- ◆ Monthly average is not more than 1.8x10⁻³MPa;
- ◆ Earthquake intensity: not more than 8 levels;
- ◆ No fire, explosion, serious dirt, chemical corrosion and violent vibration in the place.

Main technical parameter

Project	Unit	Parameter		
Rated voltage	kV	12		
Rated insulation level	kV	Rated lightning surge withstand voltage peak	75	
		1min frequency withstand voltage	42	
Rated short-circuit breaking current	kA	20/25	31.5	40
Rated current	A	630	630, 1250, 1600	1250, 1600, 2000
		1250	2000, 2500, 3150	2500, 3150
Rated thermal stability current (RMS)	kA	20/25	31.5	40
Rated dynamic stability current (peak)		63	80	100
Rated short-circuit closing current (peak)		63	80	100
Rated short-circuit breaking current breaking times	Times	50		
Secondary circuit frequency withstand voltage (1min) s	V	2000		
Rated operation sequence		O-0.3-CO-180s-CO		
		O-180s-CO-180s-CO		
Rated thermal stability time	S	4		
Rated single/back-to-back capacitor bank breaking current	A	630/400 800/400(40kA)		
Mechanical life	Times	10000		

ZN63A(VS1)-12
Indoor High Voltage Vacuum Circuit Breaker

Shape and mounting dimension (mm)





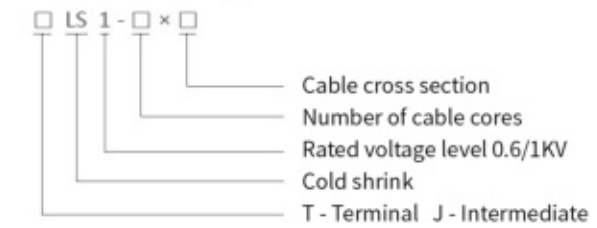
Cold Shrinking & Heat Shrinkable Cable Accessories Series

0.6/1kV

Cold Shrinking & Heat Shrinkable Cable Accessories Series



Model meaning



Cold shrinkage technology

Making use of the advantage of rubber "elastic memory" and adopting advanced expansion technology, the rubber of the cable terminal are pre-stretched in the elastic range and inserted into the plastic support strip. During installation, as long as the plastic support strip is pulled out, the rubber of the cable terminal will quickly contract and hold on to the cable.

Reliable Insulation

The raw materials are made of high-quality liquid silicone rubber from international famous companies GE (American General Electric), DOW CORNING (American Dow Corning) and Wacker (WACKER, Germany), with reliable insulation and excellent electrical performance. Silicone rubber material, strong anti-pollution and corrosion resistance, long service life. The stress cone curve enhances the margin design, so the insulation performance is more reliable.

Good sealing

In each connection part of the cable terminal, a special sealing glue is used to seal the whole cable terminal, which is isolated from the atmospheric environment and avoids the operation accident caused by environmental problems.

Easy to install

All the cable terminal have been prefabricated in the factory, as long as they are installed in accordance with the instructions; no professional installation tools, simple and fast; no fire, safe and reliable.

Advanced equipment

In the environment of the dust-free workshop, advanced glue injection production equipment is used for production.

High pressure test

The electrical performance of the cable terminal is tested in the 200KV full shielded and non-local discharge laboratory to ensure the quality of the products.

Widely used

Because the silicone rubber has good anti-pollution performance, strong aging resistance, strong waterproof performance and strong cold resistance, the cable terminal is suitable for high altitude areas, humid areas, cold areas, salt fog areas and heavily polluted areas, especially suitable for flammable industries such as petroleum, chemical industry, mining and so on.

Applicable standard

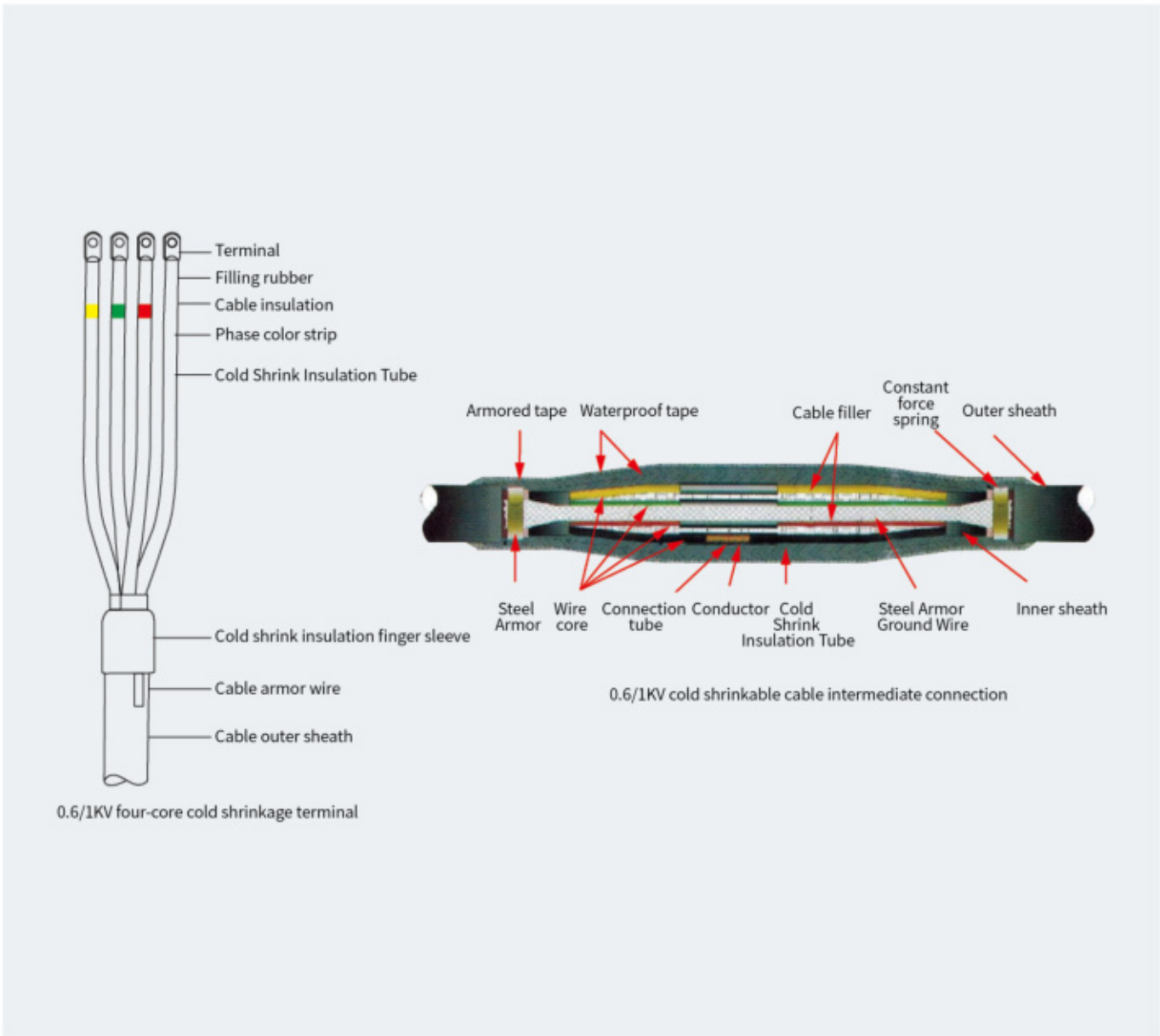
GB/T12706.4-2002; IEC 60502.

0.6/1kA

0.6/1KA Cold Shrinkage Cable Accessories

Order information

Test item	Standard requirement	Test result	Note
1min industrial frequency withstand voltage test	4KV no flash-over, no breakdown	4KV/1min no flash-over, no breakdown	Pass
Load cycle test (3 cycles) 4h industrial frequency	5h heating, 3h cooling, during heating, conductor temperature is 75 °C	5h heating, 3h cooling, during heating, conductor temperature is 75 °C	Assessed by the following tests
voltage test	2.4KV, no flash-over, no breakdown	2.4KV/1min, no flash-over, no breakdown	Pass



0.6/1kV

Two-core Cold Shrinkage Terminal



Order information

Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Two-core terminal	0.6/1kV	2.0 [#]	TLS1-2×0	10~16	14.8~17.4	0.32
	0.6/1kV	2.1 [#]	TLS1-2×1	25~50	20.4~23.0	0.33
	0.6/1kV	2.2 [#]	TLS1-2×2	70~120	22.2~27.4	0.36
	0.6/1kV	2.3 [#]	TLS1-2×3	150~240	30.6~38.0	0.45
	0.6/1kV	2.4 [#]	TLS1-2×4	300~400	40.2~41	0.56
	0.6/1kV	2.5 [#]	TLS1-2×5	500~630	42~43	0.60

Standard accessories package

Product specification	Tapeline	Filling glue	Sealant	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	PVC electrical tape	Certification	Installation instruction
	roll	pack	pack	piece	pack	pair	pair	piece	piece	piece
0# (10-16mm ²)	1	1	1	2	2	1	1	2	1	1
1# (25-50mm ²)	1	1	1	2	2	1	1	2	1	1
2# (70-120mm ²)	1	1	1	2	3	1	1	2	1	1
3# (150-240mm ²)	1	2	2	2	3	1	1	2	1	1
4# (300-400mm ²)	1	2	2	2	4	1	1	2	1	1
5# (500-630mm ²)	1	2	2	2	4	1	1	2	1	1

0.6/1kV
Two-core Cold Shrinkage Intermediate Connection



Order information

Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Two-core intermediate connection	0.6/1kV	2.0*	JLS1-2×0	10~16	14.8~17.4	0.96
	0.6/1kV	2.1*	JLS1-2×1	25~50	20.4~23.0	0.97
	0.6/1kV	2.2*	JLS1-2×2	70~120	22.2~27.4	0.99
	0.6/1kV	2.3*	JLS1-2×3	150~240	30.6~38.0	1.70
	0.6/1kV	2.4*	JLS1-2×4	300~400	40.2~41	1.73
	0.6/1kV	2.5*	JLS1-2×5	500~630	42~43	1.75

Standard accessories package

Product specification	Tapeline	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	Disposable gloves	Waterproof insulating compound tape	Industrial armor bag	Certification	Installation instruction
	roll	piece	pack	pair	pair	pair	box	bag	piece	piece
0# (10-16mm ²)	1	2	2	1	1	2	2	2	1	1
1# (25-50mm ²)	1	2	2	1	1	2	2	2	1	1
2# (70-120mm ²)	1	2	3	1	1	2	2	2	1	1
3# (150-240mm ²)	1	2	3	1	1	2	2	2	1	1
4# (300-400mm ²)	1	2	4	1	1	2	2	2	1	1
5# (500-630mm ²)	1	2	4	1	1	2	2	2	1	1

0.6/1kV
Three-core Cold Shrinkage Terminal



Order information

Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core terminal	0.6/1kV	3.0*	TLS1-3×0	10~16	15.4~18.8	0.36
	0.6/1kV	3.1*	TLS1-3×1	25~50	22.2~23.5	0.39
	0.6/1kV	3.2*	TLS1-3×2	70~120	26.8~44.6	0.53
	0.6/1kV	3.3*	TLS1-3×3	150~240	36.0~44.6	0.65
	0.6/1kV	3.4*	TLS1-3×4	300~400	49.3~51.0	0.75
	0.6/1kV	3.5*	TLS1-3×5	500~630	52.0~54.0	0.82

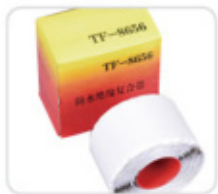
Standard accessories package

Product specification	Tapeline	Filling glue	Sealant	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	PVC electrical tape	Certification	Installation instruction
	roll	pack	pack	piece	pack	pair	pair	piece	piece	piece
0# (10-16mm ²)	1	1	1	2	3	1	1	3	1	1
1# (25-50mm ²)	1	1	1	2	3	1	1	3	1	1
2# (70-120mm ²)	1	1	1	2	4	1	1	3	1	1
3# (150-240mm ²)	1	2	2	2	4	1	1	3	1	1
4# (300-400mm ²)	1	2	2	2	5	1	1	3	1	1
5# (500-630mm ²)	1	2	2	2	5	1	1	3	1	1

0.6/1kV
Three-core Cold Shrinkage Intermediate Connection



Waterproof insulation composite tape



Band-aid



Tapeline& Sealant



Cold shrink sheathing tube



Industrial armor tape



Cable cleaning paper



Work gloves



Cold shrinkage four fingers sleeve



Cold shrinkage insulation tube



PVC electrical tape



Band-aid



Tapeline



Cable cleaning paper



Work gloves



Filler & Sealant

Order information

Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm ²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core intermediate connection	0.6/1kV	3.0 [#]	JLS1-3×0	10~16	15.4~18.8	1.13
	0.6/1kV	3.1 [#]	JLS1-3×1	25~50	22.2~23.5	1.15
	0.6/1kV	3.2 [#]	JLS1-3×2	70~120	26.8~44.6	1.18
	0.6/1kV	3.3 [#]	JLS1-3×3	150~240	36.0~44.6	1.2
	0.6/1kV	3.4 [#]	JLS1-3×4	300~400	49.3~51.0	1.36
	0.6/1kV	3.5 [#]	JLS1-3×5	500~630	52.0~54.0	1.41

Standard accessories package

Product specification	Tapeline	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	Disposable gloves	Waterproof insulating compound tape	Industrial armor bag	Certification	Installation instruction
	roll	piece	pack	pair	pair	pair	box	bag	piece	piece
0# (10-16mm ²)	1	2	3	1	1	2	2	2	1	1
1# (25-50mm ²)	1	2	3	1	1	2	2	2	1	1
2# (70-120mm ²)	1	2	4	1	1	2	2	2	1	1
3# (150-240mm ²)	1	2	4	1	1	2	2	2	1	1
4# (300-400mm ²)	1	2	5	1	1	2	2	2	1	1
5# (500-630mm ²)	1	2	5	1	1	2	2	2	1	1

0.6/1kV
Four-core Cold Shrinkage Terminal



Cold shrinkage four fingers sleeve



Cold shrinkage insulation tube



PVC electrical tape



Band-aid



Tapeline



Cable cleaning paper



Work gloves



Filler & Sealant

Order information

Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm ²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Four-core terminal	0.6/1kV	4.0 [#]	TLS1-4×0	10~16	17.6~20.2	0.85
	0.6/1kV	4.1 [#]	TLS1-4×1	25~50	24.3~25.8	0.87
	0.6/1kV	4.2 [#]	TLS1-4×2	70~120	29.8~36.9	1.03
	0.6/1kV	4.3 [#]	TLS1-4×3	150~240	41.0~50.8	1.07
	0.6/1kV	4.4 [#]	TLS1-4×4	300~400	56.2~58	1.47
	0.6/1kV	4.5 [#]	TLS1-4×5	500~630	60~62	1.72

Standard accessories package

Product specification	Tapeline	Filling glue	Sealant	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	PVC electrical tape	Certification	Installation instruction
	roll	pack	pack	piece	pack	pair	pair	piece	piece	piece
0# (10-16mm ²)	1	1	1	2	4	1	1	4	1	1
1# (25-50mm ²)	1	1	1	2	4	1	1	4	1	1
2# (70-120mm ²)	1	1	1	2	5	1	1	4	1	1
3# (150-240mm ²)	1	2	2	2	5	1	1	4	1	1
4# (300-400mm ²)	1	2	2	2	6	1	1	4	1	1
5# (500-630mm ²)	1	2	2	2	6	1	1	4	1	1

0.6/1kV

Four-core Cold Shrinkage Intermediate Connection



Order information

Product name	Voltage level	Product s pecification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Four-core intermediate connection	0.6/1kV	4.0*	JLS1-4×0	10~16	17.6~20.2	1.19
	0.6/1kV	4.1*	JLS1-4×1	25~50	24.3~25.8	1.20
	0.6/1kV	4.2*	JLS1-4×2	70~120	29.8~36.9	1.70
	0.6/1kV	4.3*	JLS1-4×3	150~240	41.0~50.8	2.07
	0.6/1kV	4.4*	JLS1-4×4	300~400	56.2~58	2.08
	0.6/1kV	4.5*	JLS1-4×5	500~630	60~62	2.15

Standard accessories package

Product specification	Tapeline	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	Disposable gloves	Waterproof insulating compound tape	Industrial armor bag	Certifi- cation	Installation instruction
	roll	piece	pack	pair	pair	pair	box	bag	piece	piece
0# (10-16mm²)	1	2	4	1	1	2	3	3	1	1
1# (25-50mm²)	1	2	4	1	1	2	3	3	1	1
2# (70-120mm²)	1	2	5	1	1	2	3	3	1	1
3# (150-240mm²)	1	2	5	1	1	2	3	3	1	1
4# (300-400mm²)	1	2	6	1	1	2	3	3	1	1
5# (500-630mm²)	1	2	6	1	1	2	3	3	1	1

0.6/1kV

Five-core Cold Shrinkage Terminal



Order information

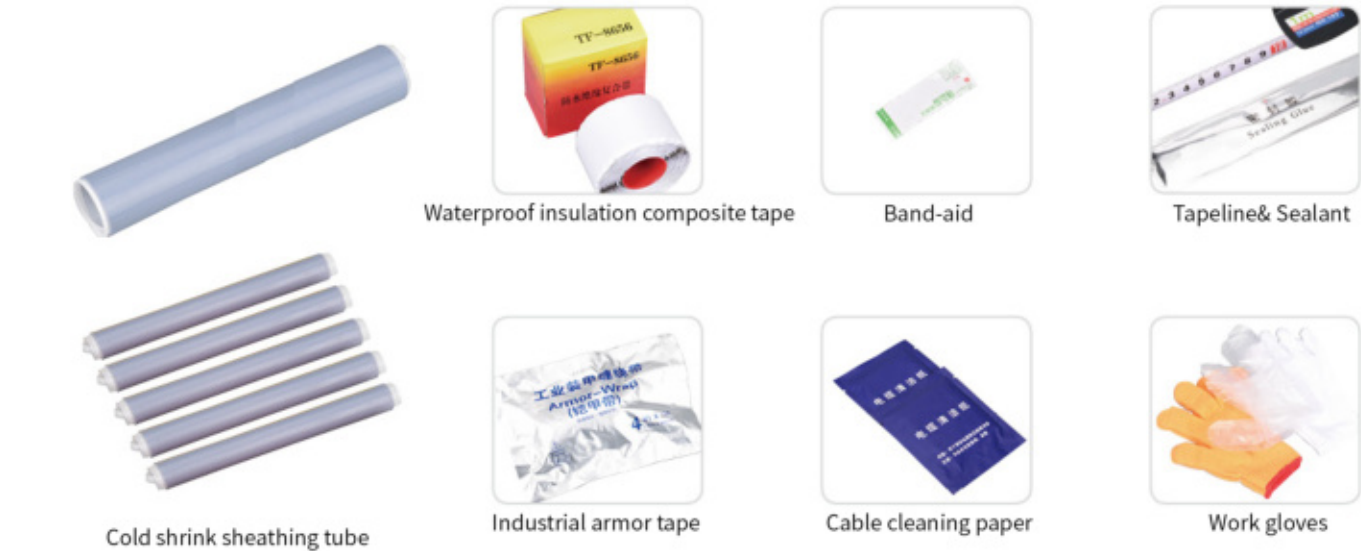
Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Four-core terminal	0.6/1kV	5.0*	TLS1-5×0	10~16	18.5~21.2	0.84
	0.6/1kV	5.1*	TLS1-5×1	25~50	25.6~32.7	0.84
	0.6/1kV	5.2*	TLS1-5×2	70~120	38.1~47.3	1.09
	0.6/1kV	5.3*	TLS1-5×3	150~240	53.2~55	1.19
	0.6/1kV	5.4*	TLS1-5×4	300~400	61-64	1.45
	0.6/1kV	5.5*	TLS1-5×5	500~630	73-75	1.48

Standard accessories package

Product specification	Tapeline	Filling glue	Sealant	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	PVC electrical tape	Certification	Installation instruction
	roll	pack	pack	piece	pack	pair	pair	piece	piece	piece
0# (10-16mm²)	1	1	1	2	5	1	1	5	1	1
1# (25-50mm²)	1	1	1	2	5	1	1	5	1	1
2# (70-120mm²)	1	1	1	2	6	1	1	5	1	1
3# (150-240mm²)	1	2	2	2	6	1	1	5	1	1
4# (300-400mm²)	1	2	2	2	7	1	1	5	1	1
5# (500-630mm²)	1	2	2	2	7	1	1	5	1	1

0.6/1kV

Five-core Cold Shrinkage Intermediate Connection



Order information

Product name	Voltage level	Product specification	Model number	Cable cross-sectional area (mm²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Four-core intermediate connection	0.6/1kV	5.0 [#]	JLS1-5×0	10~16	18.5~21.2	1.21
	0.6/1kV	5.1 [#]	JLS1-5×1	25~50	25.6~32.7	1.21
	0.6/1kV	5.2 [#]	JLS1-5×2	70~120	38.1~47.3	1.26
	0.6/1kV	5.3 [#]	JLS1-5×3	150~240	53.2~55	1.26
	0.6/1kV	5.4 [#]	JLS1-5×4	300~400	61-64	2.19
	0.6/1kV	5.5 [#]	JLS1-5×5	500~630	73-75	2.24

Standard accessories package

Product specification	Tapeline	Band-aid	Cleaning paper	Work gloves	Auxiliary gloves	Disposable gloves	Waterproof insulating compound tape	Industrial armor bag	Certification	Installation instruction
	roll	piece	pack	pair	pair	pair	box	bag	piece	piece
0# (10-16mm²)	1	2	5	1	1	2	3	3	1	1
1# (25-50mm²)	1	2	5	1	1	2	3	3	1	1
2# (70-120mm²)	1	2	6	1	1	2	3	3	1	1
3# (150-240mm²)	1	2	6	1	1	2	3	3	1	1
4# (300-400mm²)	1	2	7	1	1	2	3	3	1	1
5# (500-630mm²)	1	2	7	1	1	2	3	3	1	1

8.7/15kV

Cold Shrinkage Cable Accessory

Cold shrinkage technology

Making use of the advantage of rubber "elastic memory" and adopting advanced expansion technology, the rubber of the cable terminal are pre-stretched in the elastic range and inserted into the plastic support strip. During installation, as long as the plastic support strip is pulled out, the rubber of the cable terminal will quickly contract and hold on to the cable.

Reliable Insulation

The raw materials are made of high-quality liquid silicone rubber from international famous companies GE (American General Electric), DOW CORNING (American Dow Corning) and Wacker (WACKER, Germany), with reliable insulation and excellent electrical performance. Silicone rubber material, strong anti-pollution and corrosion resistance, long service life. The stress cone curve enhances the margin design, so the insulation performance is more reliable.

Good sealing

In each connection part of the cable terminal, a special sealing glue is used to seal the whole cable terminal, which is isolated from the atmospheric environment and avoids the operation accident caused by environmental problems.

Easy to install

All the cable terminal have been prefabricated in the factory, as long as they are installed in accordance with the instructions; no professional installation tools, simple and fast; no fire, safe and reliable.

Advanced equipment

In the environment of the dust-free workshop, advanced glue injection production equipment is used for production.

High pressure test

The electrical performance of the cable terminal is tested in the 200KV full shielded and non-local discharge laboratory to ensure the quality of the products.

Widely used

Because the silicone rubber has good anti-pollution performance, strong aging resistance, strong waterproof performance and strong cold resistance, the cable terminal is suitable for high altitude areas, humid areas, cold areas, salt fog areas and heavily polluted areas, especially suitable for flammable industries such as petroleum, chemical industry, mining and so on.

Applicable standard

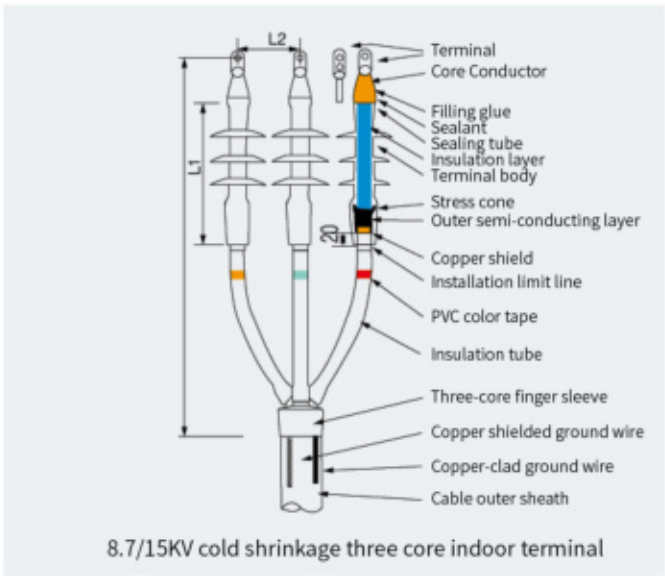
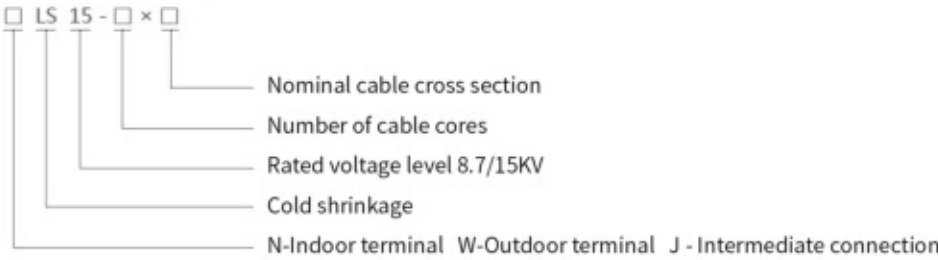
GB/T12706.4-2002; IEC 60502.

Order information

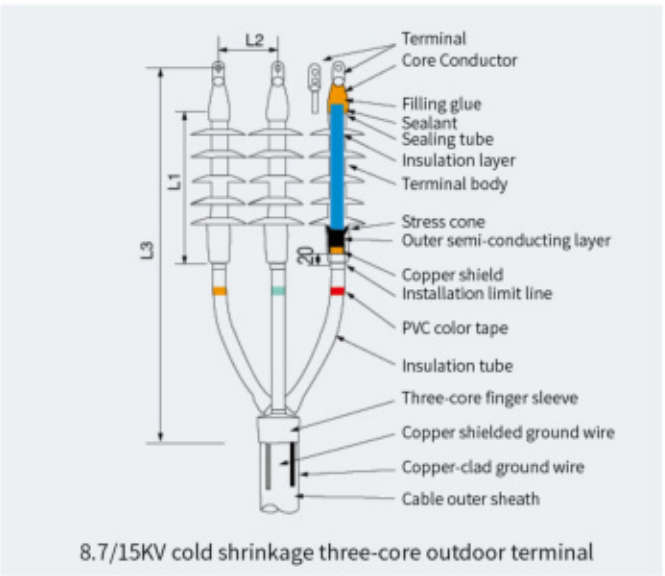
Test items	Test results		
	Outdoor terminal	Indoor terminal	Intermediate joint
Industrial frequency voltage test	39KV, 5min no flash-over, no breakdown	39KV, 5min no flash-over, no breakdown	39KV, 5min without breakdown
Partial discharge test	15KV<1pC	15KV<1pC	15KV<1pC Under 23KV, conductor
Load cycle test, 3 cycles	Undergo 3 cycles at 23KV, conductor temperature 95~100°C in total	Under 23KV, conductor temperature 95~100°C, withstand 3 cycles in total	temperature 95~100°C, withstand 3 cycles in total 95KV, positive and negative
Breakdown voltage test	95KV, positive and negative 10 times each, no flash-over, no breakdown	95KV, positive and negative 10 times each, no flash-over, no breakdown	10 times each, no flash-over, no breakdown
15min industrial frequency voltage test	23KV, 15min, no flash-over, no breakdown	23KV, 15min, no flash-over, no breakdown	23KV, 15min without breakdown
Salt spray test (outdoor) Humidity test (indoor)	At 11KV, 1000h, no flash-over, no voltage and mechanical damage	At 11KV, 3000h, no flash-over, no voltage and mechanical damage	

8.7/15kV
Cold Shrinkage Cable Accessory

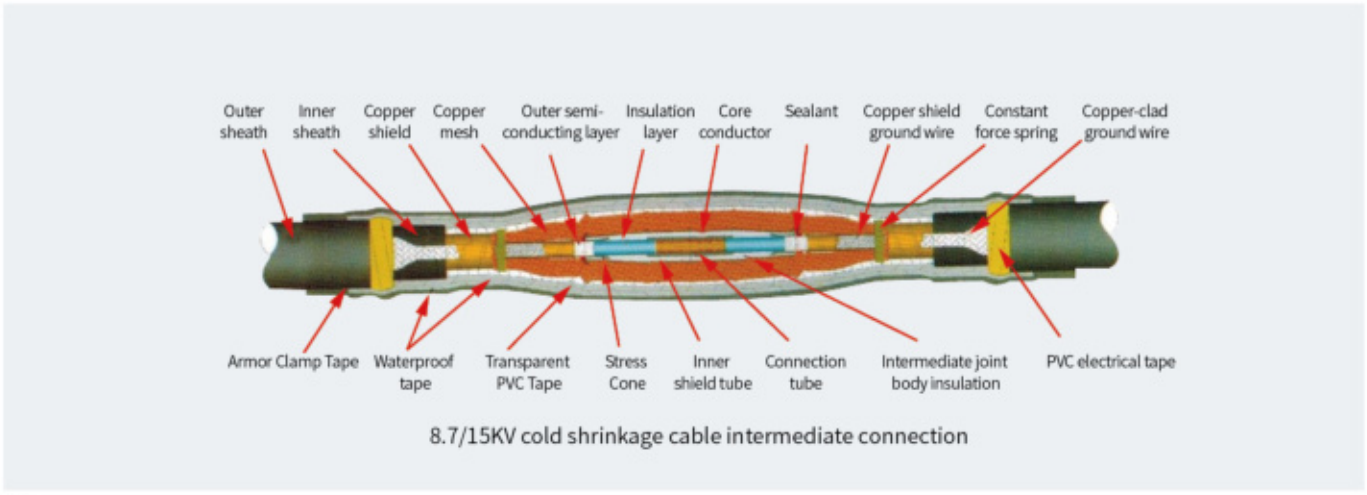
Model meaning



Parameter	Voltage level
	15kV
L1	200
L2	≥ 200
L3	~820
Note	Size L3 is the conventional size, the specific length can be according to customer requirements.



Parameter	Voltage level
	15kV
L1	290
L2	≥ 200
L3	~910
Note	Size L3 is the conventional size, the specific length can be according to customer requirements.



8.7/15kV
Cold Shrinkage Cable Accessory

8.7/15KV Cold Shrinkage Indoor Terminal Body Size Parameters

Product specification	Cross-sectional area (mm ²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	25-50	5.5	32	47	220	9	14	32	250	85	40	135
2#	70-120	5.5	36	51	220	9	16	34	250	96	46	152
3#	150-240	5.5	42	55	220	9	18	36	250	105	55	170
4#	300-400	5.5	46	61	220	9	22	40	250	123	62	195
5#	500-630	5.5	55	70	220	9	26	44	250	148	79	237
6#	700-800	5.5	60	75	220	9	30	48	250	183	104	297

*Note: The conventional color is gray, other colors can be made on request!

8.7/15KV Cold Shrinkage Outdoor Terminal Body Size Parameters

Product specification	Cross-sectional area (mm ²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	25-50	6	32	48	240	9.5	14	33	284	153	48	211
2#	70-120	6	36	52	240	9.5	16	35	284	164	52	226
3#	150-240	6	42	58	240	9.5	18	37	284	178	61	249
4#	300-400	6	46	62	240	9.5	22	41	284	200	74	284
5#	500-630	6	55	71	240	9.5	26	45	284	225	91	326
6#	700-800	6	60	76	240	9.5	30	49	284	260	116	386

*Note: The conventional color is gray, other colors can be made on request!

8.7/15KV Cold Shrinkage Intermediate Connection Body Size Parameters

Product specification	Cross-sectional area (mm ²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	25-50	9	32	64	390	13.5	14	41	440	440	75	525
2#	70-120	9	36	58	400	13.5	16	43	465	510	88	608
3#	150-240	9	42	64	410	13.5	18	45	480	560	105	675
4#	300-400	9	46	68	420	13.5	22	49	500	670	112	792
5#	500-630	9	55	77	430	13.5	26	53	520	815	125	950
6#	700-800	9	60	82	430	13.5	30	58	520	1030	153	1193

*Note: The conventional color is gray, other colors can be made on request!

8.7/15kV

Cold Shrinkage Cable Accessory

8.7/15kv Cold Shrinkage Insulation Tube Size Parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	25-50	1.5	32	39	420	3	12.5	18.5	450	64	79	153
2#	70-120	1.5	36	43	420	3	14.5	20.5	450	76	86	172
3#	150-240	1.5	42	49	420	3	16.5	22.5	450	81	107	198
4#	300-400	1.5	46	53	420	3	20.5	26.5	450	106	112	228
5#	500-630	1.5	55	62	420	3.2	24.5	30.9	450	140	167	317
6#	700-800	1.5	60	67	420	3.2	27.5	33.9	450	165	163	338

*Note: The conventional color is gray, other colors can be made on request!

8.7/15KV Cold Shrinkage Seal Tube Size Parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	25-50	1.5	32	39	80	3	12.5	18.5	105	14	17	36
2#	70-120	1.5	36	43	80	3	14.5	20.5	105	18	18	39
3#	150-240	1.5	42	49	80	3	16.5	22.5	105	23	36	64
4#	300-400	1.5	46	53	80	3	20.5	26.5	105	28	38	71
5#	500-630	1.5	55	62	80	3.2	24.5	30.9	105	39	41	85
6#	700-800	1.5	60	67	80	3.2	27.5	33.9	105	41	44	87

*Note: The conventional color is gray, other colors can be made on request!

8.7/15KV Cold Shrinkage Sheathing Tube Size Parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	25-50	1.5	36	43	200	3	12.5	18.5	230	32	46	91
2#	70-120	1.5	42	49	200	3	14.5	20.5	230	38	53	104
3#	150-240	1.5	46	53	200	3	16.5	22.5	230	41	65	109
4#	300-400	1.5	55	62	200	3	20.5	26.5	230	53	72	136
5#	500-630	1.5	60	67	200	3.2	24.5	30.9	230	76	75	161
6#	700-800	1.5	65	72	200	3.2	27.5	33.9	230	82	80	172

*Note: The conventional color is gray, other colors can be made on request!

8.7/15kV

Cold Shrinkage Cable Accessory

8.7/15kv Cold Shrinkage Three Core Finger Cover (Large Head, Small Head) Size Parameters

Product name	Product specification		1#	2#	3#	4#	5#	6#
	Cross-sectional area (mm2)		25-50	70-120	150-240	300-400	500-630	700-800
Large head	Before shrinkage (mm)	Wall thickness	1.5	1.5	1.5	1.5	1.5	1.5
		Inner diameter	97	105	113	123	125	133
		Outer diameter	104	115	123	133	135	143
		Length	140	140	140	145	145	150
	After shrinkage (mm)	Wall thickness	3	3	3	3	3	3
		Inner diameter	35	40	45	50	50	60
		Outer diameter	41	46	51	56	56	66
		Length	148	148	148	148	158	158
Small head	Before shrinkage (mm)	Wall thickness	1.5	1.5	1.5	1.5	1.5	1.5
		Inner diameter	32	36	42	46	55	58
		Outer diameter	39	43	49	53	62	65
		Length	33	33	33	33	35	35
	After shrinkage (mm)	Wall thickness	3	3	3	3	3	3
		Inner diameter	13	15	17	21	21	25
		Outer diameter	19	21	23	27	27	31
		Length	50	50	50	50	50	50
Weight (g)		Silicone rubber	120	127	140	157	157	172
		Support tube	165	191	219	251	267	305
Finished product weight (g)			295	328	369	418	434	487

*Note: The conventional color is gray, other colors can be made on request!

8.7/15kV
Cold Shrinkage Three-core Indoor Terminal



8.7/15kV
Cold Shrinkage Three-core Indoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core Indoor Terminal	8.7/15kV	3.1 [#]	NLS15-3×1	25~50	44.8~50.2	2.91
	8.7/15kV	3.2 [#]	NLS15-3×2	70~120	54.0~60.9	3.07
	8.7/15kV	3.3 [#]	NLS15-3×3	150~240	64.8~73.4	3.28
	8.7/15kV	3.4 [#]	NLS15-3×4	300~400	78.5~85.4	3.38
	8.7/15kV	3.5 [#]	NLS15-3×5	500~630	-	3.97
	8.7/15kV	3.6 [#]	NLS15-3×6	700~800	-	4.04

Standard accessories package

Product specification	Tape-line	Sandpaper strip	Band-aid	Cleaning paper	Triangle cone	Silicone grease	Filling glue	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	pack	piece	piece	pack	pack	piece	piece
1# (25-50mm ²)	1	2	2	5	1	2	2	1	1	1
2# (70-120mm ²)	1	2	2	5	1	2	2	1	1	1
3# (150-240mm ²)	1	2	2	5	1	2	2	1	1	1
4# (300-400mm ²)	1	2	2	5	1	2	2	1	1	1
5# (500-630mm ²)	1	2	2	5	1	2	2	1	1	1
6# (700-800mm ²)	1	2	2	5	1	2	2	1	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-20 self-adhesive rubber band	BDD-20 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
	pair	pair	pair	piece	quantity	piece	box	box	piece	piece	piece
1# (25-50mm ²)	1	1	2	32	2	3	1	1	1	1	1
2# (70-120mm ²)	1	1	2	36	2	3	1	1	1	1	1
3# (150-240mm ²)	1	1	2	40	2	3	1	1	1	1	1
4# (300-400mm ²)	1	1	2	45	2	3	1	1	1	1	1
5# (500-630mm ²)	1	1	2	55	2	3	2	2	1	1	1
6# (700-800mm ²)	1	1	2	60	2	3	2	2	1	1	1

8.7/15kV
Cold Shrinkage Single-core Indoor Terminal



Cold shrinkage indoor terminal body



Cold shrink sheathing tube



Cold shrinkage sealing tube



BDD-20 semi-conductive self-adhesive tape



Ground wire



Silicon grease paste



PVC electrical tape



Sealant



J-20 self-adhesive rubber Tape



Band-aid



Sandpaper strips



Tapeline



Installation ruler



Stainless steel constant force spring



Cable cleaning paper



Filling glue



Work gloves

8.7/15kV
Cold Shrinkage Single-core Indoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm ²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Single-core Indoor Terminal	8.7/15kV	1.1 [#]	NLS15-1×1	25~50	21.8~24.2	1.70
	8.7/15kV	1.2 [#]	NLS15-1×2	70~120	25.8~27.4	1.72
	8.7/15kV	1.3 [#]	NLS15-1×3	150~240	29.0~34.8	1.76
	8.7/15kV	1.4 [#]	NLS15-1×4	300~400	37.0~40.4	1.83
	8.7/15kV	1.5 [#]	NLS15-1×5	500~630	43.7~47.4	2.05
	8.7/15kV	1.6 [#]	NLS15-1×6	700~800	50~56	2.06

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Band-aid	Cleaning paper	Silicone grease	Filling glue	Sealant	Armored ground wire
	roll	piece	piece	pack	piece	pack	pack	piece
1# (25-50mm ²)	1	2	2	5	2	2	1	1
2# (70-120mm ²)	1	2	2	5	2	2	1	1
3# (150-240mm ²)	1	2	2	5	2	2	1	1
4# (300-400mm ²)	1	2	2	5	2	2	1	1
5# (500-630mm ²)	1	2	2	5	2	2	1	1
6# (700-800mm ²)	1	2	2	5	2	2	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-20 self-adhesive rubber band	BDD-20 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
				Specification	Quantity						
	pair	pair	pair	piece		piece	box	box	piece	piece	piece
1# (25-50mm ²)	1	1	2	16	1	1	1	1	1	1	1
2# (70-120mm ²)	1	1	2	18	1	1	1	1	1	1	1
3# (150-240mm ²)	1	1	2	20	1	1	1	1	1	1	1
4# (300-400mm ²)	1	1	2	22	1	1	1	1	1	1	1
5# (500-630mm ²)	1	1	2	25	1	1	1	1	1	1	1
6# (700-800mm ²)	1	1	2	30	1	1	1	1	1	1	1

8.7/15kV

Cold Shrinkage Three-core Outdoor Terminal



Cold shrinkage indoor terminal body



Cold shrinkage insulation tube



Cold shrinkage sealing tube



Cold shrinkage three finger sleeve



BDD-20 semi-conductive self-adhesive tape



Ground wire



Silicon grease paste



Band-aid



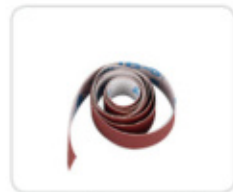
Work gloves



J-20 self-adhesive rubber Tape



Triangle cone



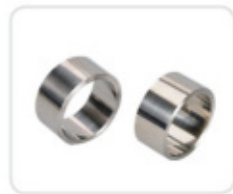
Sandpaper strips



PVC electrical tape



Sealant



Stainless steel constant force spring



Cable cleaning paper



Filling glue



Tapeline



Installation ruler

8.7/15kV

Cold Shrinkage Three-core Outdoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm ²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core Outdoor Terminal	8.7/15kV	3.1 [#]	WLS15-3×1	25~50	44.8~50.2	3.08
	8.7/15kV	3.2 [#]	WLS15-3×2	70~120	54.0~60.9	3.29
	8.7/15kV	3.3 [#]	WLS15-3×3	150~240	64.8~73.4	3.50
	8.7/15kV	3.4 [#]	WLS15-3×4	300~400	78.5~85.4	3.71
	8.7/15kV	3.5 [#]	WLS15-3×5	500~630	-	4.26
	8.7/15kV	3.6 [#]	WLS15-3×6	700~800	-	4.35

Standard accessories package

Product specification	Tape-line	Sandpaper strip	Band-aid	Cleaning paper	Triangle cone	Silicone grease	Filling glue	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	pack	piece	piece	pack	pack	piece	piece
1# (25-50mm ²)	1	2	2	5	1	2	2	1	1	1
2# (70-120mm ²)	1	2	2	5	1	2	2	1	1	1
3# (150-240mm ²)	1	2	2	5	1	2	2	1	1	1
4# (300-400mm ²)	1	2	2	5	1	2	2	1	1	1
5# (500-630mm ²)	1	2	2	5	1	2	2	1	1	1
6# (700-800mm ²)	1	2	2	5	1	2	2	1	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-20 self-adhesive rubber band	BDD-20 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
	pair	pair	pair	Specification	Quantity	piece	box	box	piece	piece	piece
1# (25-50mm ²)	1	1	2	32	2	3	1	1	1	1	1
2# (70-120mm ²)	1	1	2	36	2	3	1	1	1	1	1
3# (150-240mm ²)	1	1	2	40	2	3	1	1	1	1	1
4# (300-400mm ²)	1	1	2	45	2	3	1	1	1	1	1
5# (500-630mm ²)	1	1	2	55	2	3	2	2	1	1	1
6# (700-800mm ²)	1	1	2	60	2	3	2	2	1	1	1

8.7/15kV
Cold Shrinkage Single-core Outdoor Terminal



Cold shrinkage indoor terminal body



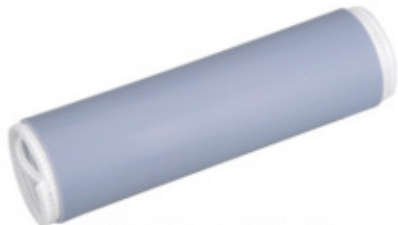
BDD-20 semi-conductive self-adhesive tape



J-20 self-adhesive rubber Tape



Stainless steel constant force spring



Cold shrink sheathing tube



Ground wire



Band-aid



Cable cleaning paper



Cold shrinkage sealing tube



Silicon grease paste



Sandpaper strips



Filling glue



PVC electrical tape



Tapeline



Work gloves



Sealant



Installation ruler

8.7/15kV
Cold Shrinkage Single-core Outdoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Single-core Outdoor Terminal	8.7/15kV	1.1#	WLS15-1×1	25~50	21.8~24.2	1.76
	8.7/15kV	1.2#	WLS15-1×2	70~120	25.8~27.4	1.80
	8.7/15kV	1.3#	WLS15-1×3	150~240	29.0~34.8	1.84
	8.7/15kV	1.4#	WLS15-1×4	300~400	37.0~40.4	1.98
	8.7/15kV	1.5#	WLS15-1×5	500~630	43.7~47.4	2.16
	8.7/15kV	1.6#	WLS15-1×6	700~800	50~56	2.17

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Band-aid	Cleaning paper	Silicone grease	Filling glue	Sealant	Armored ground wire
	roll	piece	piece	pack	piece	pack	pack	piece
1# (25-50mm ²)	1	2	2	5	2	2	1	1
2# (70-120mm ²)	1	2	2	5	2	2	1	1
3# (150-240mm ²)	1	2	2	5	2	2	1	1
4# (300-400mm ²)	1	2	2	5	2	2	1	1
5# (500-630mm ²)	1	2	2	5	2	2	1	1
6# (700-800mm ²)	1	2	2	5	2	2	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-20 self-adhesive rubber band	BDD-20 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
				Specification	Quantity						
	pair	pair	pair	piece		piece	box	box	piece	piece	piece
1# (25-50mm ²)	1	1	2	16	1	1	1	1	1	1	1
2# (70-120mm ²)	1	1	2	18	1	1	1	1	1	1	1
3# (150-240mm ²)	1	1	2	20	1	1	1	1	1	1	1
4# (300-400mm ²)	1	1	2	22	1	1	1	1	1	1	1
5# (500-630mm ²)	1	1	2	25	1	1	1	1	1	1	1
6# (700-800mm ²)	1	1	2	30	1	1	1	1	1	1	1

8.7/15kV

Cold Shrinkage Three-core Intermediate Connection



Cold shrinkage intermediate connection body



BDD-20 semi-conductive self-adhesive tape



Industrial armor tape



Stainless steel constant force spring



Ground wire copper screen



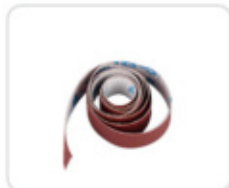
Band-aid



Cable cleaning paper



Silicon grease paste



Sandpaper strips



Film



PVC electrical tape



Tapeline



Work gloves



Sealant



Waterproof insulating tape

8.7/15kV

Cold Shrinkage Three-core Intermediate Connection

Order information


Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core Intermediate Connection	8.7/15kV	3.1 [#]	JLS15-3×1	25~50	44.8~50.2	7.53
	8.7/15kV	3.2 [#]	JLS15-3×2	70~120	54.0~60.9	7.71
	8.7/15kV	3.3 [#]	JLS15-3×3	150~240	64.8~73.4	9.47
	8.7/15kV	3.4 [#]	JLS15-3×4	300~400	78.5~85.4	9.49
	8.7/15kV	3.5 [#]	JLS15-3×5	500~630	-	10.17
	8.7/15kV	3.6 [#]	JLS15-3×6	700~800	-	10.42

Standard accessories package


Product specification	Tapeline	Sandpaper strip	Film	Copper screen	Band-aid	Cleaning paper	Silicone grease	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	piece	piece	pack	piece	pack	piece	piece
1# (25-50mm ²)	1	3	1	3	2	5	3	6	1	1
2# (70-120mm ²)	1	3	1	3	2	5	3	6	1	1
3# (150-240mm ²)	1	3	1	3	2	5	3	6	1	1
4# (300-400mm ²)	1	3	1	3	2	5	3	6	1	1
5# (500-630mm ²)	1	3	1	3	2	5	3	6	1	1
6# (700-800mm ²)	1	3	1	3	2	5	3	6	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	BDD-20 semi-conductive self-adhesive tape	Waterproof insulating tape	Industrial armor tape	Certification	Caliper	Installation instruction
				Big	Small							
	pair	pair	pair	piece		piece	box	box	bag	piece	piece	piece
1# (25-50mm ²)	1	1	2	2	6	3	2	6	4	1	1	1
2# (70-120mm ²)	1	1	2	2	6	3	2	6	4	1	1	1
3# (150-240mm ²)	1	1	2	2	6	3	2	8	5	1	1	1
4# (300-400mm ²)	1	1	2	2	6	3	2	8	5	1	1	1
5# (500-630mm ²)	1	1	2	2	6	3	2	10	6	1	1	1
6# (700-800mm ²)	1	1	2	2	6	3	2	10	6	1	1	1


8.7/15kV
Cold Shrinkage Single-core Intermediate Connection




Cold shrinkage intermediate connection body




BDD-20 semi-conductive self-adhesive tape




Industrial armor tape




Stainless steel constant force spring




Ground wire copper screen



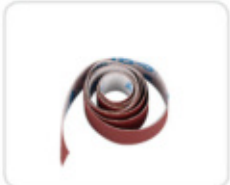
Band-aid




Cable cleaning paper




Silicon grease paste




Sandpaper strips




Film




PVC electrical tape




Tapeline



Work gloves



Sealant



Waterproof insulating tape

8.7/15kV
Cold Shrinkage Single-core Intermediate Connection

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm ²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Single-core Intermediate Connection	8.7/15kV	1.1 [#]	JLS15-1×1	25~50	21.8~24.2	5.42
	8.7/15kV	1.2 [#]	JLS15-1×2	70~120	25.8~27.4	5.49
	8.7/15kV	1.3 [#]	JLS15-1×3	150~240	29.0~34.8	5.57
	8.7/15kV	1.4 [#]	JLS15-1×4	300~400	37.0~40.4	5.69
	8.7/15kV	1.5 [#]	JLS15-1×5	500~630	43.7~47.4	5.77
	8.7/15kV	1.6 [#]	JLS15-1×6	700~800	50~56	5.80

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Film	Copper screen	Band-aid	Cleaning paper	Silicone grease	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	piece	piece	pack	piece	pack	piece	piece
1# (25-50mm ²)	1	2	1	1	2	5	3	3	1	1
2# (70-120mm ²)	1	2	1	1	2	5	3	3	1	1
3# (150-240mm ²)	1	2	1	1	2	5	3	3	1	1
4# (300-400mm ²)	1	2	1	1	2	5	3	3	1	1
5# (500-630mm ²)	1	2	1	1	2	5	3	3	1	1
6# (700-800mm ²)	1	2	1	1	2	5	3	3	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	BDD-20 semi-conductive self-adhesive tape	Waterproof insulating tape	Industrial armor tape	Certification	Caliper	Installation instruction
	pair	pair	pair	Specification	Quantity	piece	box	box	bag	piece	piece	piece
1# (25-50mm ²)	1	1	2	16	4	1	2	3	2	1	1	1
2# (70-120mm ²)	1	1	2	18	4	1	2	3	2	1	1	1
3# (150-240mm ²)	1	1	2	20	4	1	2	3	3	1	1	1
4# (300-400mm ²)	1	1	2	22	4	1	2	3	3	1	1	1
5# (500-630mm ²)	1	1	2	25	4	1	2	3	4	1	1	1
6# (700-800mm ²)	1	1	2	30	4	1	2	3	4	1	1	1

26/35kV
Cold Shrinkage Cable Accessory

Cold shrinkage technology

Making use of the advantage of rubber "elastic memory" and adopting advanced expansion technology, the rubber of the cable terminal are pre-stretched in the elastic range and inserted into the plastic support strip. During installation, as long as the plastic support strip is pulled out, the rubber of the cable terminal will quickly contract and hold on to the cable.

Reliable Insulation

The raw materials are made of high-quality liquid silicone rubber from international famous companies GE (American General Electric), DOW CORNING (American Dow Corning) and Wacker (WACKER, Germany), with reliable insulation and excellent electrical performance. Silicone rubber material, strong anti-pollution and corrosion resistance, long service life. The stress cone curve enhances the margin design, so the insulation performance is more reliable.

Good sealing

In each connection part of the cable terminal, a special sealing glue is used to seal the whole cable terminal, which is isolated from the atmospheric environment and avoids the operation accident caused by environmental problems.

Easy to install

All the cable terminal have been prefabricated in the factory, as long as they are installed in accordance with the instructions; no professional installation tools, simple and fast; no fire, safe and reliable.

Advanced equipment

In the environment of the dust-free workshop, advanced glue injection production equipment is used for production.

High pressure test

The electrical performance of the cable terminal is tested in the 200KV full shielded and non-local discharge laboratory to ensure the quality of the products.

Widely used

Because the silicone rubber has good anti-pollution performance, strong aging resistance, strong waterproof performance and strong cold resistance, the cable terminal is suitable for high altitude areas, humid areas, cold areas, salt fog areas and heavily polluted areas, especially suitable for flammable industries such as petroleum, chemical industry, mining and so on.

Applicable standard

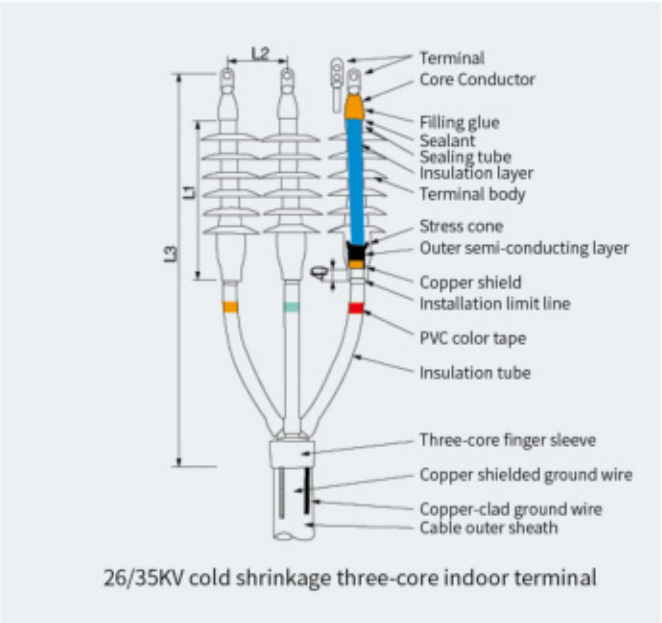
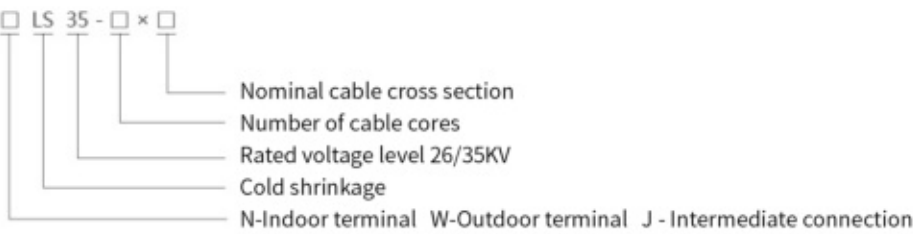
GB/T12706.4-2002; IEC 60502.

Order information

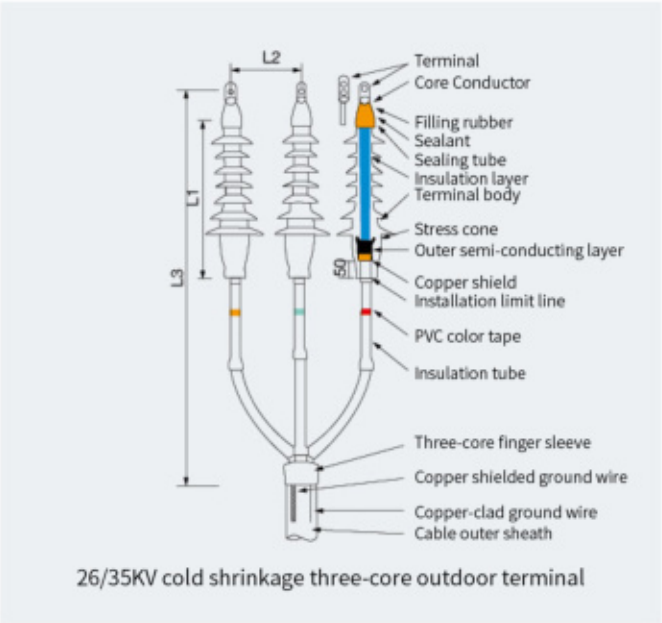
Test items	Test results		
	Outdoor terminal	Indoor terminal	Intermediate joint
Industrial frequency voltage test	117KV, 5min no flash-over, no breakdown	117KV, 5min no flash-over, no breakdown	117KV, 5min without breakdown
Partial discharge test	45KV<1pC		
Load cycle test, 3 cycles	Undergo 3 cycles at 65KV, conductor temperature 95~100°C in total	Under 65KV, conductor temperature 95~100°C, withstand 3 cycles in total	Under 65KV, conductor temperature 95~100°C, withstand 3 cycles in total
Breakdown voltage test	200KV, positive and negative 10 times each, no flash-over, no breakdown	200KV, positive and negative 10 times each, no flash-over, no breakdown	200KV, positive and negative 10 times each, no flash-over, no breakdown
15min industrial frequency voltage test	65KV, 15min, no flash-over, no breakdown	65KV, 15min, no flash-over, no breakdown	65KV, 15min without breakdown
Salt spray test (outdoor) Humidity test (indoor)	At 32.5KV, 1000h, no flash-over, no voltage and mechanical damage	At 32.5KV, 3000h, no flash-over, no voltage and mechanical damage	

26/35kV
Cold Shrinkage Cable Accessory

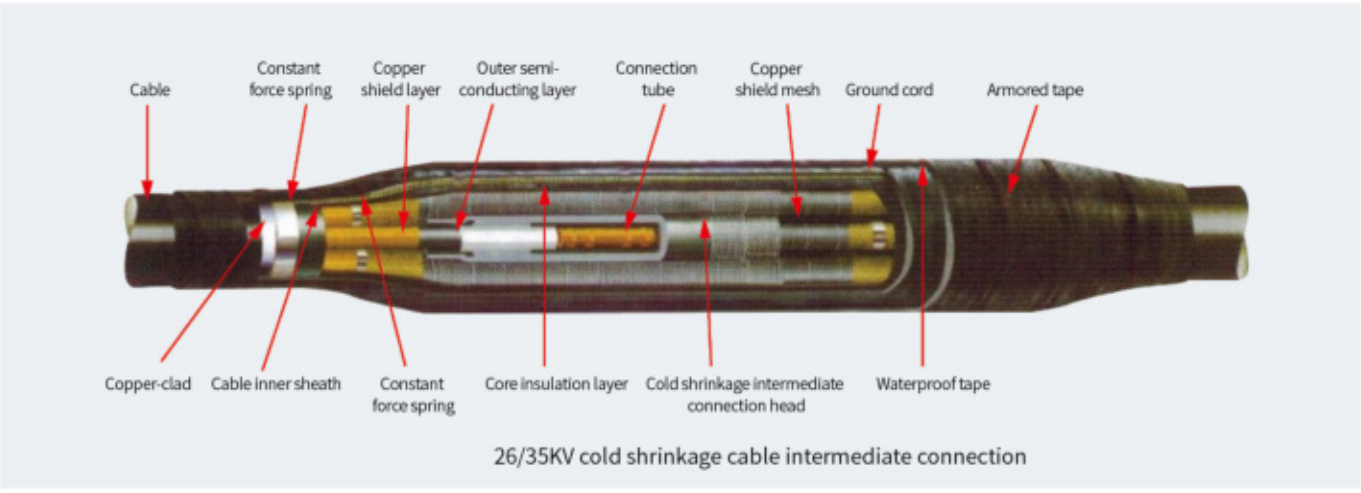
Model meaning



Parameter	Voltage level
	35kV
L1	410
L2	≥ 400
L3	~1040
备注	Size L3 is the conventional size, the specific length can be according to customer requirements.



Parameter	Voltage level
	35kV
L1	480
L2	≥ 400
L3	~1500
备注	Size L3 is the conventional size, the specific length can be according to customer requirements.



26/35kV

Cold Shrinkage Cable Accessory

26/35KV Cold Shrinkage Indoor Terminal Body Size Parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	50-95	12.5	55	85	350	19.25	23	61.5	410	540	161	768
2#	120-185	12.5	60	90	350	19.25	26	64.5	410	597	225	832
3#	240-400	12.5	65	95	350	19.25	29	67.5	410	638	230	877
4#	500-630	12.5	75	105	350	19.25	32	70.5	410	685	241	936
5#	700	12.5	85	115	350	19.25	35	73.5	410	753	264	1027
6#	800	12.5	95	125	350	19.25	38	76.5	410	831	292	1133

*Note: The conventional color is gray, other colors can be made on request!

26/35KV Cold Shrinkage Outdoor Terminal Body Size Parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	50-95	12.5	55	85	430	19.25	23	61.5	410	788	233	1031
2#	120-185	12.5	60	90	430	19.25	26	64.5	410	859	268	1136
3#	240-400	12.5	65	95	430	19.25	29	67.5	410	906	297	1214
4#	500-630	12.5	75	105	430	19.25	32	70.5	410	957	341	1308
5#	700	12.5	85	115	430	19.25	35	73.5	410	1013	380	1403
6#	800	12.5	95	125	430	19.25	39	76.5	410	1081	437	1528

*Note: The conventional color is gray, other colors can be made on request!

26/35KV Cold Shrinkage Intermediate Connection Body Size Parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	50-95	17.5	55	98	480	26.5	23	76	540	1976	247	2263
2#	120-185	18.5	60	105	490	26.5	26	79	555	2160	304	2473
3#	240-400	19	65	111	510	26.5	29	82	585	2435	357	2799
4#	500-630	20	75	123	530	26.5	32	85	620	2921	416	3347
5#	700	21	85	135	550	26.5	35	88	650	3537	468	3999
6#	800	22	95	148	580	26.5	38	92	680	4382	526	4873

*Note: The conventional color is gray, other colors can be made on request!

26/35kV

Cold Shrinkage Cable Accessory

26/35KV cold shrinkage insulation tube size parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	50-95	1.5	55	62	420	3.2	21.5	27.9	450	123	144	282
2#	120-185	1.5	60	67	420	3.2	24.5	30.9	450	140	167	317
3#	240-400	1.5	65	72	420	3.2	27.5	33.9	450	165	173	341
4#	500-630	1.5	75	82	420	3.2	30.5	36.9	450	195	189	394
5#	700	1.5	85	92	420	3.2	33.5	39.9	450	238	203	451
6#	800	1.5	95	102	420	3.2	36.5	42.9	450	277	223	510

*Note: The conventional color is gray, other colors can be made on request!

26/35KV cold shrinkage seal tube size parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	50-95	1.5	55	62	85	3.2	21.5	27.9	120	34	32	71
2#	120-185	1.5	60	67	85	3.2	24.5	30.9	120	39	41	85
3#	240-400	1.5	65	72	85	3.2	27.5	33.9	120	44	45	92
4#	500-630	1.5	75	82	85	3.2	30.5	36.9	120	50	48	102
5#	700	1.5	85	92	85	3.2	33.5	39.9	120	59	54	115
6#	800	1.5	95	102	85	3.2	36.5	42.9	120	72	58	133

*Note: The conventional color is gray, other colors can be made on request!

26/35KV cold shrinkage sheathing tube size parameters

Product specification	Cross-sectional area (mm²)	Before shrinkage (mm)				After shrinkage (mm)				Weight (g)		Weight of finished product (g)
		Wall thickness	Inner diameter	Outer diameter	Length	Wall thickness	Inner diameter	Outer diameter	Length	Silicone rubber	Support tube	
1#	50-95	1.5	60	67	200	3.2	21.5	30.9	230	61	90	156
2#	120-185	1.5	65	72	200	3.2	24.5	33.9	230	70	96	171
3#	240-400	1.5	75	82	200	3.2	27.5	36.9	230	82	101	188
4#	500-630	1.5	85	92	200	3.2	30.5	39.9	230	94	107	206
5#	700	1.5	95	102	200	3.2	33.5	42.9	230	107	118	230
6#	800	1.5	105	112	200	3.2	36.5	45.9	230	120	131	251

*Note: The conventional color is gray, other colors can be made on request!


26/35kV
Cold Shrinkage Cable Accessory

26/35kv Cold Shrinkage Three Core Finger Cover (Large Head, Small Head) Size Parameters


Product name	Product specification		1#	2#	3#	4#	5#	6#
	Cross-sectional area (mm2)		50-95	120-185	240-400	500-630	700	800
Large head	Before shrinkage (mm)	Wall thickness	1.5	1.5	1.5	1.5	1.5	1.5
		Inner diameter	125	135	145	155	165	175
		Outer diameter	135	145	155	165	175	185
		Length	150	150	150	150	150	150
	After shrinkage (mm)	Wall thickness	3	3	3	3	3	3
		Inner diameter	50	60	65	70	75	80
		Outer diameter	56	66	71	76	81	86
		Length	158	158	158	158	158	158
Small head	Before shrinkage (mm)	Wall thickness	1.5	1.5	1.5	1.5	1.5	1.5
		Inner diameter	55	60	65	75	85	95
		Outer diameter	62	67	72	82	92	102
		Length	35	35	35	35	35	35
	After shrinkage (mm)	Wall thickness	3	3	3	3	3	3
		Inner diameter	21.5	24.5	27.5	30.5	33.5	36.5
		Outer diameter	27.5	30.5	33.5	36.5	39.5	42.5
		Length	50	50	50	50	50	50
Weight (g)		Silicone rubber	157	172	190	216	233	249
		Support tube	267	305	335	361	410	447
Finished product weight (g)			434	487	535	587	642	701

*Note: The conventional color is gray, other colors can be made on request!


26/35kV
Cold Shrinkage Three-core Indoor Terminal




Cold shrinkage indoor terminal body




BDD-50 semi-conductive self-adhesive tape




J-30 self-adhesive rubber Tape




Stainless steel constant force spring




Ground wire




Triangle cone




Cable cleaning paper




Cold shrinkage sealing tube




Silicon grease paste




Sandpaper strips




Filling glue




Cold shrinkage sealing tube




Band-aid




PVC electrical tape




Tapeline




Cold shrinkage three finger sleeve



Work gloves



Sealant



Installation ruler

26/35kV

Cold Shrinkage Three-core Indoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core Indoor Terminal	26/35kV	3.1*	NLS35-3×1	50~95	86~94	6.80
	26/35kV	3.2*	NLS35-3×2	120~185	98~105	6.85
	26/35kV	3.3*	NLS35-3×3	240~400	111~124	6.93
	26/35kV	3.4*	NLS35-3×4	500~630	-	7.45
	26/35kV	3.5*	NLS35-3×5	700	-	7.80
	26/35kV	3.6*	NLS35-3×6	800	-	8.21


Standard accessories package

Product specification	Tape -line	Sandpaper strip	Band-aid	Cleaning paper	Triangle cone	Silicone grease	Filling glue	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	pack	piece	piece	pack	pack	piece	piece
1# (50-95mm²)	1	2	2	3	1	2	3	3	1	1
2# (120-185mm²)	1	2	2	3	1	2	3	3	1	1
3# (240-400mm²)	1	2	2	4	1	2	3	3	1	1
4# (500-630mm²)	1	2	2	4	1	2	3	3	1	1
5# (700mm²)	1	2	2	5	1	2	3	3	1	1
6# (800mm²)	1	2	2	5	1	2	3	3	1	1


Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J -30 self-adhesive rubber band	BDD-50 semi-conductive self-adhesive tape	Certifi -cation	Caliper	Installation instruction
				Specifi -cation	Quan -ity						
	pair	pair	pair	piece		piece	box	box	piece	piece	piece
1# (50-95mm²)	1	1	2	32	2	3	1	1	1	1	1
2# (120-185mm²)	1	1	2	36	2	3	1	1	1	1	1
3# (240-400mm²)	1	1	2	40	2	3	1	1	1	1	1
4# (500-630mm²)	1	1	2	45	2	3	1	1	1	1	1
5# (700mm²)	1	1	2	55	2	3	2	2	1	1	1
6# (800mm²)	1	1	2	60	2	3	2	2	1	1	1

26/35kV


Cold Shrinkage Single-core Indoor Terminal




Cold shrinkage indoor terminal body




Cold shrink sheathing tube




Cold shrinkage sealing tube




BDD-50 semi-conductive self-adhesive tape




Ground wire




Silicon grease paste




PVC electrical tape




Sealant




J -30 self-adhesive rubber Tape



Band-aid




Sandpaper strips




Tapeline




Installation ruler




Stainless steel constant force spring



Cable cleaning paper



Filling glue



Work gloves

26/35kV

Cold Shrinkage Single-core Indoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm²)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Single-core Indoor Terminal	26/35kV	1.1 [#]	NLS35-1×1	50~95	38.6~42.2	3.15
	26/35kV	1.2 [#]	NLS35-1×2	120~185	43.8~47.2	3.24
	26/35kV	1.3 [#]	NLS35-1×3	240~400	49.6~55.2	3.28
	26/35kV	1.4 [#]	NLS35-1×4	500~630	58.4~62.2	3.29
	26/35kV	1.5 [#]	NLS35-1×5	700	65	3.31
	26/35kV	1.6 [#]	NLS35-1×6	800	70	3.36

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Band-aid	Cleaning paper	Silicone grease	Filling glue	Sealant	Armored ground wire
	roll	piece	piece	pack	piece	pack	pack	piece
1# (50-95mm²)	1	2	2	3	2	2	1	1
2# (120-185mm²)	1	2	2	3	2	2	1	1
3# (240-400mm²)	1	2	2	3	2	2	1	1
4# (500-630mm²)	1	2	2	3	2	2	1	1
5# (700mm²)	1	2	2	3	2	2	1	1
6# (800mm²)	1	2	2	3	2	2	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-30 self-adhesive rubber band	BDD-50 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
				Specifi-cation	Quan-tity						
	pair	pair	pair	piece		piece	box	box	piece	piece	piece
1# (50-95mm²)	1	1	2	16	1	1	1	1	1	1	1
2# (120-185mm²)	1	1	2	18	1	1	1	1	1	1	1
3# (240-400mm²)	1	1	2	20	1	1	1	1	1	1	1
4# (500-630mm²)	1	1	2	22	1	1	1	1	1	1	1
5# (700mm²)	1	1	2	25	1	1	1	1	1	1	1
6# (800mm²)	1	1	2	30	1	1	1	1	1	1	1

26/35kV

Cold Shrinkage Three-core Outdoor Terminal



Cold shrinkage indoor terminal body



Cold shrinkage insulation tube



Cold shrinkage sealing tube



Cold shrinkage three finger sleeve



BDD-50 semi-conductive self-adhesive tape



Ground wire



Silicon grease paste



Band-aid



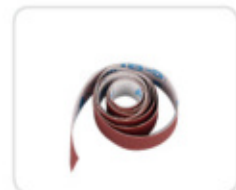
Work gloves



J-30 self-adhesive rubber Tape



Triangle cone



Sandpaper strips



PVC electrical tape



Sealant



Stainless steel constant force spring



Cable cleaning paper



Filling glue



Tapeline



Installation ruler

26/35kV

Cold Shrinkage Three-core Outdoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core Outdoor Terminal	26/35kV	3.1 [#]	WLS35-3×1	50~95	86~94	8.46
	26/35kV	3.2 [#]	WLS35-3×2	120~185	98~105	8.48
	26/35kV	3.3 [#]	WLS35-3×3	240~400	111~124	8.59
	26/35kV	3.4 [#]	WLS35-3×4	500~630	-	9.05
	26/35kV	3.5 [#]	WLS35-3×5	700	-	9.20
	26/35kV	3.6 [#]	WLS35-3×6	800	-	9.30

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Band-aid	Cleaning paper	Triangle cone	Silicone grease	Filling glue	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	pack	piece	piece	pack	pack	piece	piece
1# (50-95mm²)	1	2	2	3	1	2	3	3	1	1
2# (120-185mm²)	1	2	2	3	1	2	3	3	1	1
3# (240-400mm²)	1	2	2	4	1	2	3	3	1	1
4# (500-630mm²)	1	2	2	4	1	2	3	3	1	1
5# (700mm²)	1	2	2	5	1	2	3	3	1	1
6# (800mm²)	1	2	2	5	1	2	3	3	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-30 self-adhesive rubber band	BDD-50 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
	pair	pair	pair	piece	Quan-tity	piece	box	box	piece	piece	piece
1# (50-95mm²)	1	1	2	32	2	3	1	1	1	1	1
2# (120-185mm²)	1	1	2	36	2	3	1	1	1	1	1
3# (240-400mm²)	1	1	2	40	2	3	1	1	1	1	1
4# (500-630mm²)	1	1	2	45	2	3	1	1	1	1	1
5# (700mm²)	1	1	2	55	2	3	2	2	1	1	1
6# (800mm²)	1	1	2	60	2	3	2	2	1	1	1

26/35kV

Cold Shrinkage Single-core Outdoor Terminal



Cold shrinkage Outdoor terminal body



Cold shrink sheathing tube



Cold shrinkage sealing tube



BDD-50 semi-conductive self-adhesive tape



Ground wire



Silicon grease paste



PVC electrical tape



Sealant



J-30 self-adhesive rubber Tape



Band-aid



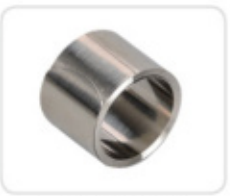
Sandpaper strips



Tapeline



Installation ruler



Stainless steel constant force spring



Cable cleaning paper



Filling glue



Work gloves

26/35kV

Cold Shrinkage Single-core Outdoor Terminal

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Single-core Outdoor Terminal	26/35kV	1.1 [#]	WLS35-1×1	50~95	38.6~42.2	3.04
	26/35kV	1.2 [#]	WLS35-1×2	120~185	43.8~47.2	3.25
	26/35kV	1.3 [#]	WLS35-1×3	240~400	49.6~55.2	3.30
	26/35kV	1.4 [#]	WLS35-1×4	500~630	58.4~62.2	3.35
	26/35kV	1.5 [#]	WLS35-1×5	700	65	3.37
	26/35kV	1.6 [#]	WLS35-1×6	800	70	3.36

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Band-aid	Cleaning paper	Silicone grease	Filling glue	Sealant	Armored ground wire
	roll	piece	piece	pack	piece	pack	pack	piece
1# (50-95mm²)	1	2	2	3	2	2	1	1
2# (120-185mm²)	1	2	2	3	2	2	1	1
3# (240-400mm²)	1	2	2	3	2	2	1	1
4# (500-630mm²)	1	2	2	3	2	2	1	1
5# (700mm²)	1	2	2	3	2	2	1	1
6# (800mm²)	1	2	2	3	2	2	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	J-30 self-adhesive rubber band	BDD-50 semi-conductive self-adhesive tape	Certification	Caliper	Installation instruction
				Specifi-cation	Quan-tity						
	pair	pair	pair	piece		piece	box	box	piece	piece	piece
1# (50-95mm²)	1	1	2	16	1	1	1	1	1	1	1
2# (120-185mm²)	1	1	2	18	1	1	1	1	1	1	1
3# (240-400mm²)	1	1	2	20	1	1	1	1	1	1	1
4# (500-630mm²)	1	1	2	22	1	1	1	1	1	1	1
5# (700mm²)	1	1	2	25	1	1	1	1	1	1	1
6# (800mm²)	1	1	2	30	1	1	1	1	1	1	1

26/35kV

Cold Shrinkage Three-core Intermediate Connection



Cold shrinkage intermediate connection body



BDD-50 semi-conductive self-adhesive tape



Industrial armor tape



Stainless steel constant force spring



Ground wire copper screen



Band-aid



Cable cleaning paper



Silicon grease paste



Sandpaper strips



Film



PVC electrical tape



Tapeline



Work gloves



Sealant



Waterproof insulating tape

26/35kV

Cold Shrinkage Three-core Intermediate Connection

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Three-core Intermediate Connection	26/35kV	3.1*	JLS35-3×1	50~95	86~94	8.57
	26/35kV	3.2*	JLS35-3×2	120~185	98~105	8.57
	26/35kV	3.3*	JLS35-3×3	240~400	111~124	9.20
	26/35kV	3.4*	JLS35-3×4	500~630	-	13.14
	26/35kV	3.5*	JLS35-3×5	700	-	14.16
	26/35kV	3.6*	JLS35-3×6	800	-	15.17


Standard accessories package

Product specification	Tapeline	Sandpaper strip	Film	Copper screen	Band-aid	Cleaning paper	Silicone grease	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	piece	piece	pack	piece	pack	piece	piece
1# (50-95mm²)	1	2	1	3	2	5	3	20	1	1
2# (120-185mm²)	1	2	1	3	2	5	3	20	1	1
3# (240-400mm²)	1	2	1	3	2	6	3	20	1	1
4# (500-630mm²)	1	2	1	3	2	6	3	20	1	1
5# (700mm²)	1	2	1	3	2	7	3	20	1	1
6# (800mm²)	1	2	1	3	2	7	3	20	1	1


Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	BDD-20 semi-conductive self-adhesive tape	Waterproof insulating tape	Industrial armor tape	Certification	Caliper	Installation instruction
				Specifi-cation	Quan-tity							
	pair	pair	pair	piece		piece	box	box	bag	piece	piece	piece
1# (50-95mm²)	1	1	2	32	4	3	2	8	5	1	1	1
2# (120-185mm²)	1	1	2	36	4	3	2	8	5	1	1	1
3# (240-400mm²)	1	1	2	40	4	3	2	8	5	1	1	1
4# (500-630mm²)	1	1	2	45	4	3	2	8	5	1	1	1
5# (700mm²)	1	1	2	55	4	3	3	10	6	1	1	1
6# (800mm²)	1	1	2	60	4	3	3	10	6	1	1	1

26/35kV


Cold Shrinkage Single-core Intermediate Connection




Cold shrinkage intermediate connection body




BDD-50 semi-conductive self-adhesive tape




Industrial armor tape




Stainless steel constant force spring




Ground wire copper screen



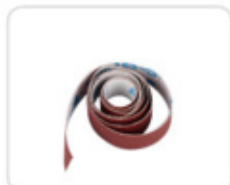
Band-aid




Cable cleaning paper




Silicon grease paste




Sandpaper strips




Film




PVC electrical tape




Tapeline



Work gloves



Sealant



Waterproof insulating tape

26/35kV

Cold Shrinkage Single-core Intermediate Connection

Order information

Product name	Voltage level	Specification	Model number	Cable cross-sectional area (mm)	Main insulation outer diameter of the matched cable (mm)	Set/weight (kg)
Single-core Intermediate Connection	26/35kV	1.1#	JLS35-1×1	50~95	38.6~42.2	7.53
	26/35kV	1.2#	JLS35-1×2	120~185	43.8~47.2	7.77
	26/35kV	1.3#	JLS35-1×3	240~400	49.6~55.2	8.52
	26/35kV	1.4#	JLS35-1×4	500~630	58.4~62.2	9.65
	26/35kV	1.5#	JLS35-1×5	700	65	9.68
	26/35kV	1.6#	JLS35-1×6	800	70	9.78

Standard accessories package

Product specification	Tapeline	Sandpaper strip	Film	Copper screen	Band-aid	Cleaning paper	Silicone grease	Sealant	Shielded ground wire	Armored ground wire
	roll	piece	piece	piece	piece	pack	piece	pack	piece	piece
1# (50-95mm²)	1	2	1	1	2	3	3	6	1	1
2# (120-185mm²)	1	2	1	1	2	3	3	6	1	1
3# (240-400mm²)	1	2	1	1	2	4	3	6	1	1
4# (500-630mm²)	1	2	1	1	2	4	3	6	1	1
5# (700mm²)	1	2	1	1	2	5	3	6	1	1
6# (800mm²)	1	2	1	1	2	5	3	6	1	1

Product specification	Auxiliary gloves	Work gloves	Disposable gloves	Constant force spring		PVC electrical tape	BDD-20 semi-conductive self-adhesive tape	Waterproof insulating tape	Industrial armor tape	Certification	Caliper	Installation instruction
				Specification	Quantity							
	pair	pair	pair	piece		piece	box	box	bag	piece	piece	piece
1# (50-95mm²)	1	1	2	16	4	1	4	7	7	1	1	1
2# (120-185mm²)	1	1	2	18	4	1	4	7	7	1	1	1
3# (240-400mm²)	1	1	2	20	4	1	4	7	7	1	1	1
4# (500-630mm²)	1	1	2	22	4	1	4	7	7	1	1	1
5# (700mm²)	1	1	2	25	4	1	4	7	7	1	1	1
6# (800mm²)	1	1	2	30	4	1	4	7	7	1	1	1

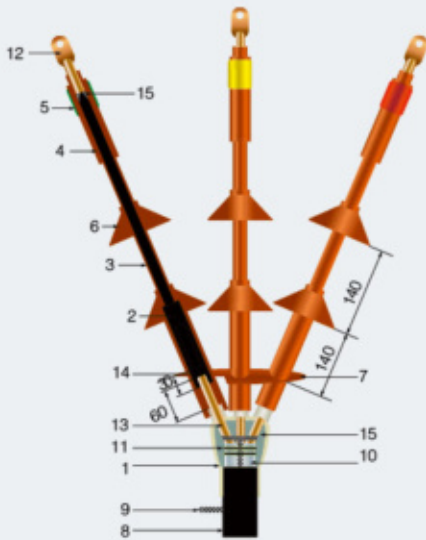
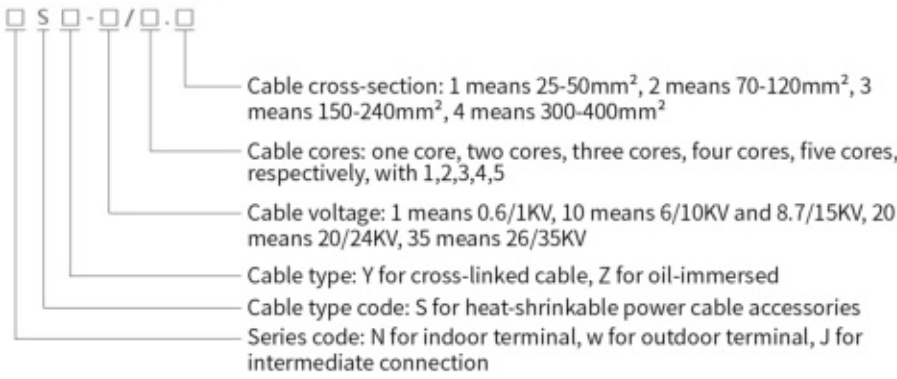
Heat Shrinkable Cable Termination, Intermediate Joints



Overview

Radiation cross-linked heat-shrinkable cable accessories are new products in the domestic cable accessories industry, featuring small volume, light weight, reliable performance, strong adaptability, easy installation and low price. It is suitable for indoor and outdoor termination and intermediate connection of various power cables (cross-linked cables, plastic cables and oil-immersed cables) as well as communication cable connection, insulation and transmission and distribution items in various fields.

Model meaning



1. Heat shrinkable finger tube

2. Stress tube

3. Insulation tube

4. Sealing tube

5. Marking tube

6. Single hole rain skirt

7. Three holes rain skirt

8. Cable outer sheath
9. Ground wire

10. Steel armor

11. Constant force spring

12. Terminal block

13. Copper shield

14. Semi-conducting layer

15. Filling glue

Heat Shrinkable Cable Termination, Intermediate Joints



Features

Suitable for 0.6/1KV single-core, two-core, three-core, four-core, five-core PVC, cross-linked polyethylene, rubber-plastic power cable terminal joints and intermediate connections, with good electrical and mechanical properties.

Technical Data

Material name	Performance	Parameters
Main heat shrink material	Hardness Shore (A)	84±3
	Tensile strength (Mpa)	≥ 12
	Shrinkage temperature (°C)	120-130
Insulation tube	Volume resistivity (Ω. cm)	≥ 1×10 ¹⁴
	Breakdown strength (KV/mm)	≥ 20
Radial shrinkage rate		2.5:1
Longitudinal shrinkage rate %		±5
Industrial frequency long-term pressure (KV /4h)		2.4
Work frequency dry state withstand voltage (KV /5min)		4

Selection size

Applicable cable cross section mm ²		Number of cable cores				
		One core	Two cores	Three cores	Four cores	Five cores
Terminal connection	10,16	SY-1/1.0	SY-1/2.0	SY-1/3.0	SY-1/4.0	SY-1/5.0
	25,35,50	SY-1/1.1	SY-1/2.1	SY-1/3.1	SY-1/4.1	SY-1/5.1
	70,95,120	SY-1/1.2	SY-1/2.2	SY-1/3.2	SY-1/4.2	SY-1/5.2
	150,185,240	SY-1/1.3	SY-1/2.3	SY-1/3.3	SY-1/4.3	SY-1/5.3
	300,400	SY-1/1.4	SY-1/2.4	SY-1/3.4	SY-1/4.4	SY-1/5.4
Intermediate connection	10,16	JSY-1/1.0	JSY-1/2.0	JSY-1/3.0	JSY-1/4.0	JSY-1/5.0
	25,35,50	JSY-1/1.1	JSY-1/2.1	JSY-1/3.1	JSY-1/4.1	JSY-1/5.1
	70,95,120	JSY-1/1.2	JSY-1/2.2	JSY-1/3.2	JSY-1/4.2	JSY-1/5.2
	150,185,240	JSY-1/1.3	JSY-1/2.3	JSY-1/3.3	JSY-1/4.3	JSY-1/5.3
	300,400	JSY-1/1.4	JSY-1/2.4	JSY-1/3.4	JSY-1/4.4	JSY-1/5.4

8.7/15kV

Heat Shrinkable Cable Termination, Intermediate Joints



Features

Suitable for 6/10KV and 8.7/15KV single-core and three-core PVC, cross-linked polyethylene, rubber-plastic power cable terminal joints and intermediate connections, with good electrical and mechanical properties.

Technical Data

Project	Parameters	Rating
Work frequency dry state withstand voltage (KV /5min)	39	No flash-over, no breakdown
Work frequency wet state withstand voltage (KV /5min)	39	No flash-over, no breakdown
Work frequency long-term withstand voltage (KV /4h)	35	No flash-over, no breakdown
Shock withstand voltage (KV /1.2/50μs±10 times)	105	No breakdown
DC withstand voltage (KV /15min)	52	No flash-over, No Breakdown
Partial discharge (KV. PC /1.5uo)	10	Pass

Selection size

Applicable cable cross section mm ²	Indoor terminal		Outdoor terminal		Intermediate connection	
	One-core	Three-cores	One-core	Three-cores	One-core	Three-cores
25,35,50	NSY-10/1.1	NSY-10/3.1	WSY-10/1.1	WSY-10/3.1	JSY-10/1.1	JSY-10/3.1
70,95,120	NSY-10/1.2	NSY-10/3.2	WSY-10/1.2	WSY-10/3.2	JSY-10/1.2	JSY-10/3.2
150,185,240	NSY-10/1.3	NSY-10/3.3	WSY-10/1.3	WSY-10/3.3	JSY-10/1.3	JSY-10/3.3
300,400	NSY-10/1.4	NSY-10/3.4	WSY-10/1.4	WSY-10/3.4	JSY-10/1.4	JSY-10/3.4

20/24kV

Heat Shrinkable Cable Termination, Intermediate Joints



Features

Suitable for 20/24KV single-core and three-core PVC, cross-linked polyethylene, rubber-plastic power cable terminal joints and intermediate connections, with good electrical and mechanical properties.

Technical Data

Project	Parameters	Rating
Work frequency dry state withstand voltage (KV /5min)	54	No flash-over, no breakdown
Work frequency wet state withstand voltage (KV /5min)	54	No flash-over, no breakdown
Work frequency long-term withstand voltage (KV /4h)	48	No flash-over, no breakdown
Shock withstand voltage (KV /1.2/50μs ± 10 times)	125	No breakdown
DC withstand voltage (KV /15min)	96	No flash-over, No Breakdown
Partial discharge (KV. PC /1.5uo)	10	Pass

Selection size

Applicable cable cross section mm ²	Indoor terminal		Outdoor terminal		Intermediate connection	
	One-core	Three-cores	One-core	Three-cores	One-core	Three-cores
25,35,50	NSY-20/1.1	NSY-20/3.1	WSY-20/1.1	WSY-20/3.1	JSY-20/1.1	JSY-20/3.1
70,95,120	NSY-20/1.2	NSY-20/3.2	WSY-20/1.2	WSY-20/3.2	JSY-20/1.2	JSY-20/3.2
150,185,240	NSY-20/1.3	NSY-20/3.3	WSY-20/1.3	WSY-20/3.3	JSY-20/1.3	JSY-20/3.3
300,400	NSY-20/1.4	NSY-20/3.4	WSY-20/1.4	WSY-20/3.4	JSY-20/3.4	JSY-20/3.4

26/35kV

Heat Shrinkable Cable Termination, Intermediate Joints



Features

Suitable for 20/24KV single-core and three-core PVC, cross-linked polyethylene, rubber-plastic power cable terminal joints and intermediate connections, with good electrical and mechanical properties.

Technical Data

Project	Parameters	Rating
Work frequency dry state withstand voltage (KV /5min)	105	No flash-over, no breakdown
Work frequency wet state withstand voltage (KV /5min)	105	No flash-over, no breakdown
Work frequency long-term withstand voltage (KV /4h)	78	No flash-over, no breakdown
Shock withstand voltage (KV /1.2/50μs ± 10 times)	140	No breakdown
DC withstand voltage (KV /15min)	156	No flash-over, No Breakdown
Partial discharge (KV. PC /1.5uo)	10	Pass

Selection size

Applicable cable cross section mm ²	Indoor terminal		Outdoor terminal		Intermediate connection	
	One-core	Three-cores	One-core	Three-cores	One-core	Three-cores
50,70,95,120	NSY-35/1.1	NSY-35/3.1	WSY-35/1.1	WSY-35/3.1	JSY-35/1.1	JSY-35/3.1
150,185,240	NSY-35/1.2	NSY-35/3.2	WSY-35/1.2	WSY-35/3.2	JSY-35/1.2	JSY-35/3.2
300,400	NSY-35/1.3	NSY-35/3.3	WSY-35/1.3	WSY-35/3.3	JSY-35/1.3	JSY-35/3.3

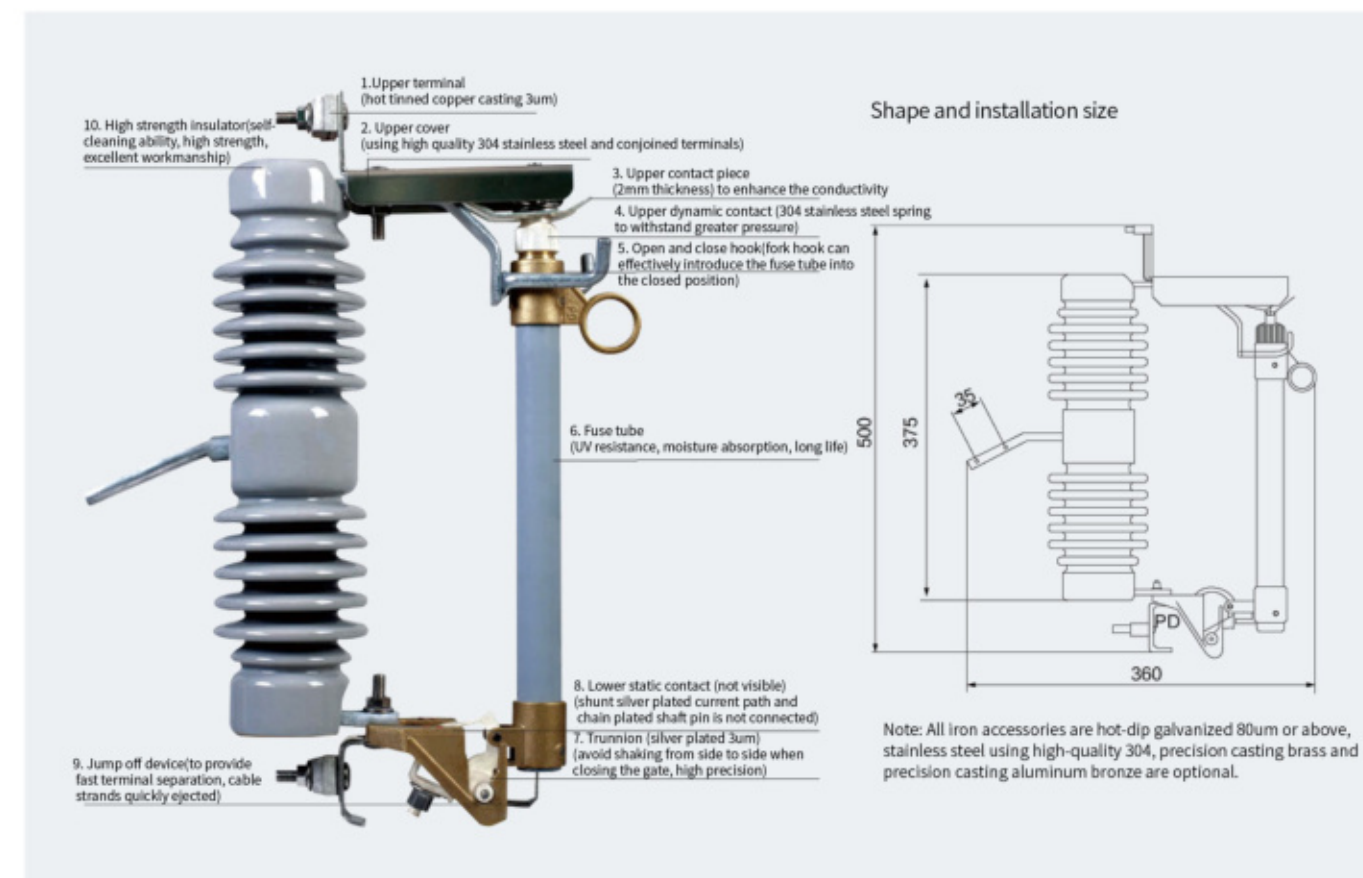


Drop-out fuses series

RW12

Jet Fuse (high-performance type)

RW12-15 Jet Fuse (high-performance type)



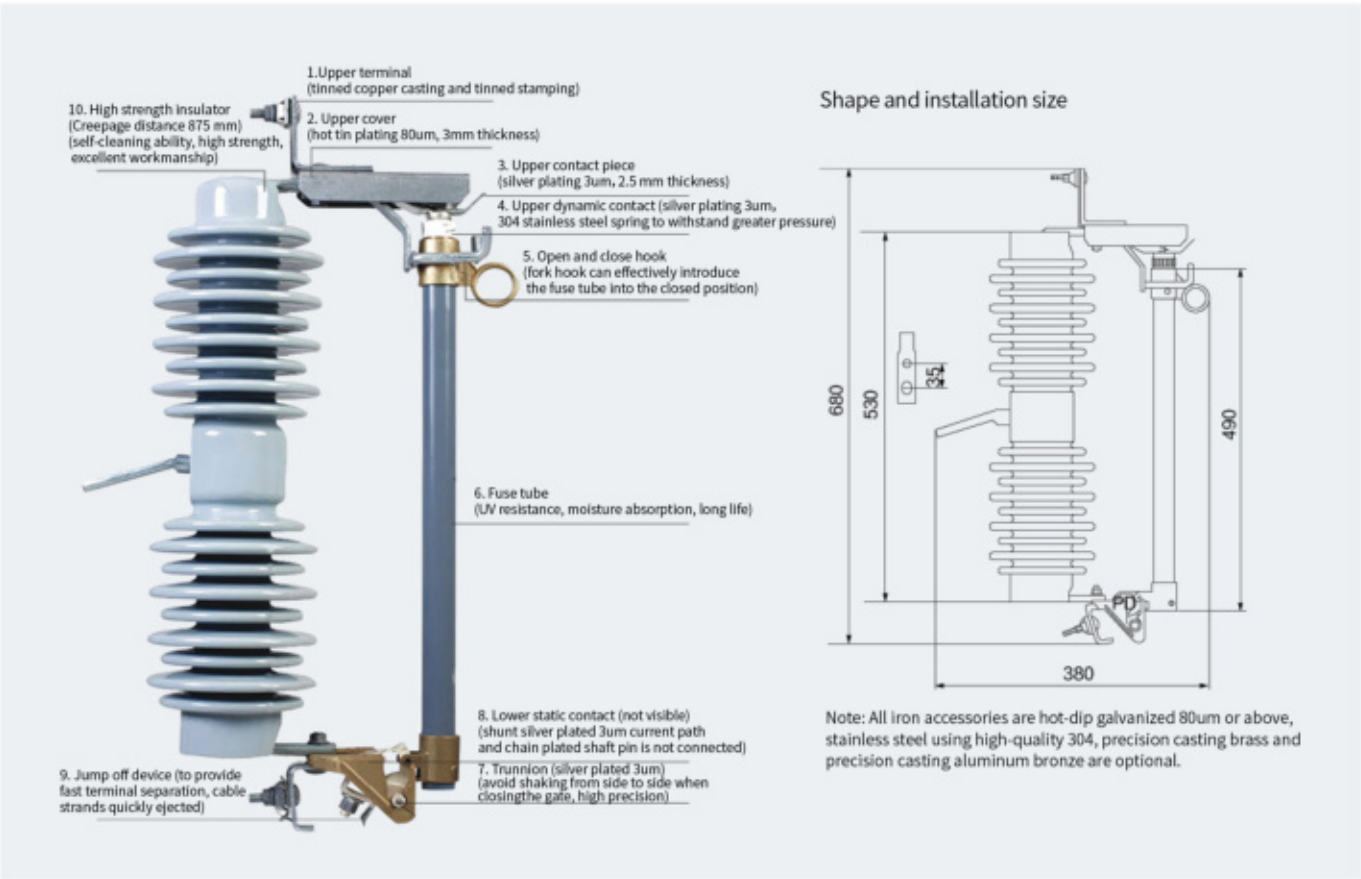
Main technical parameters

Project	RW12	RW12
Rated voltage (KV)	12(15)	12(15)
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	8/100, 12.5/100, 16/100	12.5/200, 16/200
Power frequency withstand voltage wet test (KV)	45/55	45/55
Power frequency withstand voltage dry test (KV)	50/55	50/55
Rated lightning surge voltage (KV)	125	125
Creepage distance (mm/KV)	330	330
Mechanical life (times)	500	500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-40°C ~ +70°C	-40°C ~ +70°C
Dimension (cm)	50×36×12.5	50×36×12.5

RW12

Jet Fuse (high-performance type)

RW12-35 Jet Fuse (high-performance type)



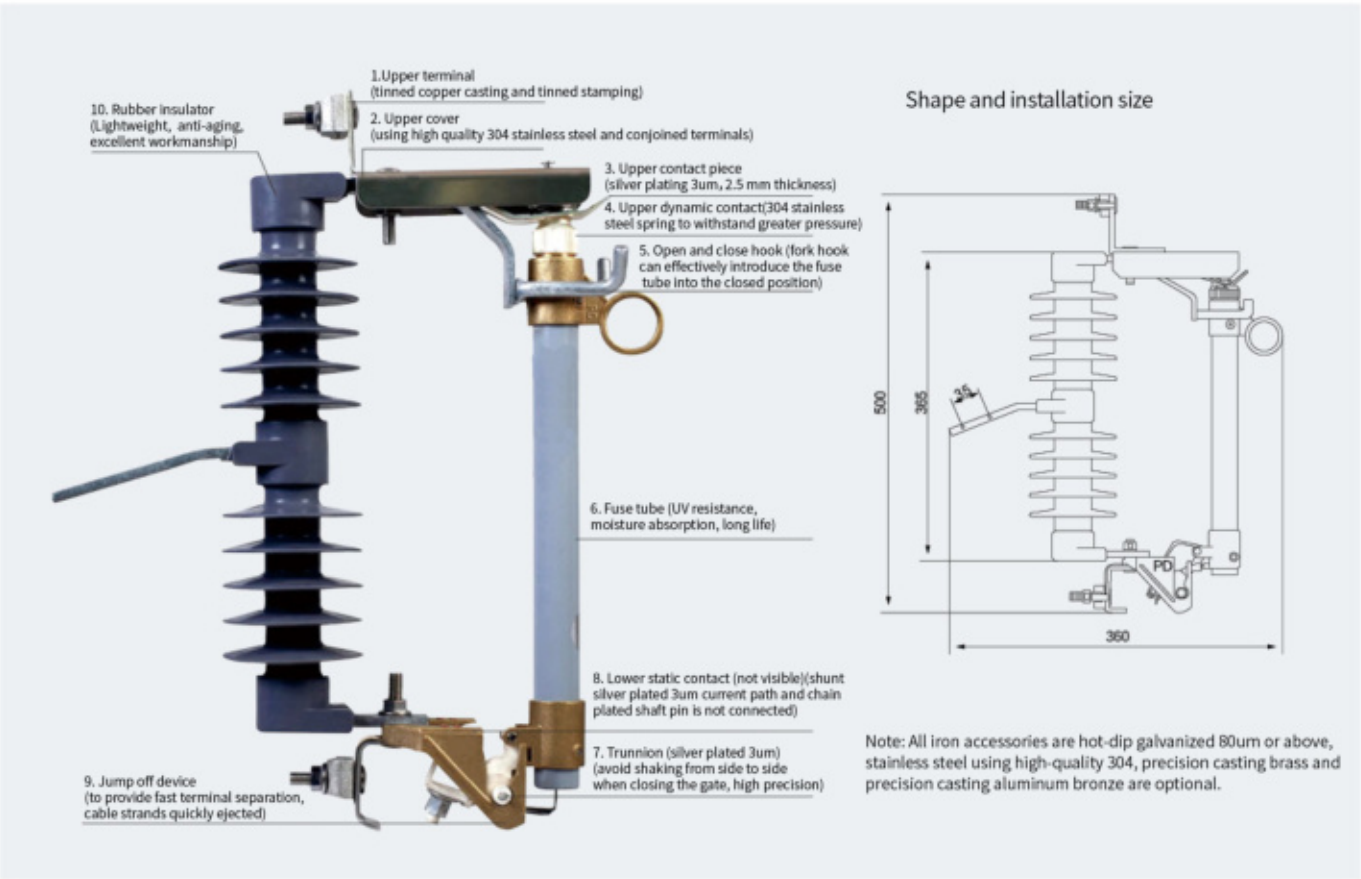
Main technical parameters

Project	RW12	RW12
Rated voltage (KV)	35	35
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	12.5/100、16/100	12.5/200、16/200
Power frequency withstand voltage wet test (KV)	85/95	85/95
Power frequency withstand voltage dry test (KV)	90/95	90/95
Rated lightning surge voltage (KV)	170	170
Creepage distance (mm/KV)	875	875
Mechanical life (times)	500	500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-40°C ~ +70°C	-40°C ~ +70°C
Dimension (cm)	68×38×16	68×38×16

RW12

Jet Fuse (high-performance type)

RW12-15 Jet Fuse (high-performance type)



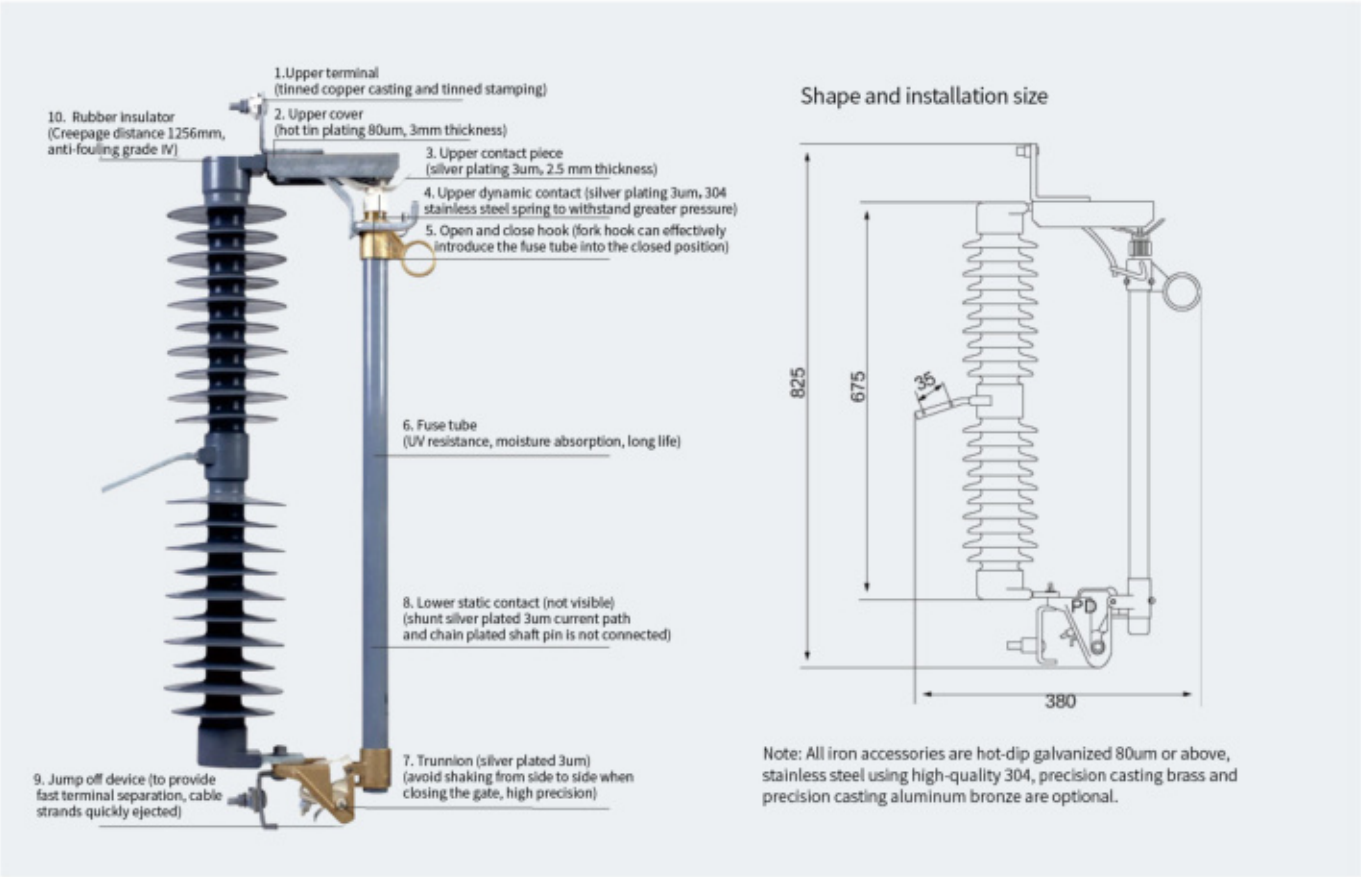
Main technical parameters

Project	RW12	RW12
Rated voltage (KV)	12(15)	12(15)
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	8/100、12.5/100、16/100	12.5/200、16/200
Power frequency withstand voltage wet test (KV)	45/55	45/55
Power frequency withstand voltage dry test (KV)	50/55	50/55
Rated lightning surge voltage (KV)	125	125
Creepage distance (mm/KV)	330	330
Mechanical life (times)	500	500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-30°C ~ +40°C	-30°C ~ +40°C
Dimension (cm)	50×36×12.5	50×36×12.5

RW12

Jet Fuse (high-performance type)

RW12-35 Jet Fuse (high-performance type)



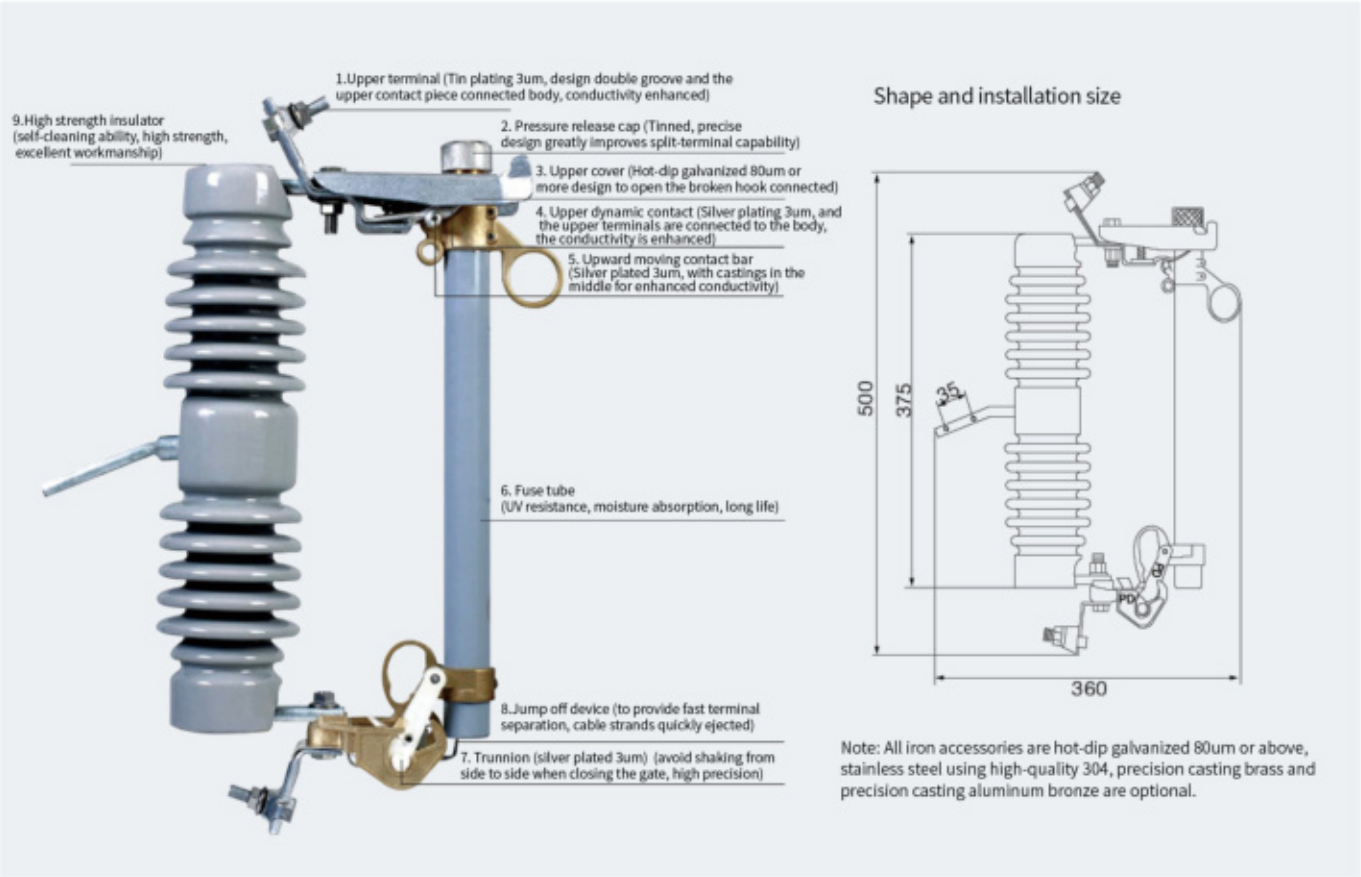
Main technical parameters

Project	RW12	RW12
Rated voltage (KV)	35	35
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	8/100、12.5/100、16/100	12.5/2100、16/200
Power frequency withstand voltage wet test (KV)	95	95
Power frequency withstand voltage dry test (KV)	95	95
Rated lightning surge voltage (KV)	200	200
Creepage distance (mm/KV)	125.6	125.6
Mechanical life (times)	500	500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-10°C ~+70°C	-10°C ~+70°C
Dimension (cm)	90×40×17	90×40×17

RW33-15

Jet Fuse (high-performance type)

RW33-15 Jet Fuse (high-performance type)



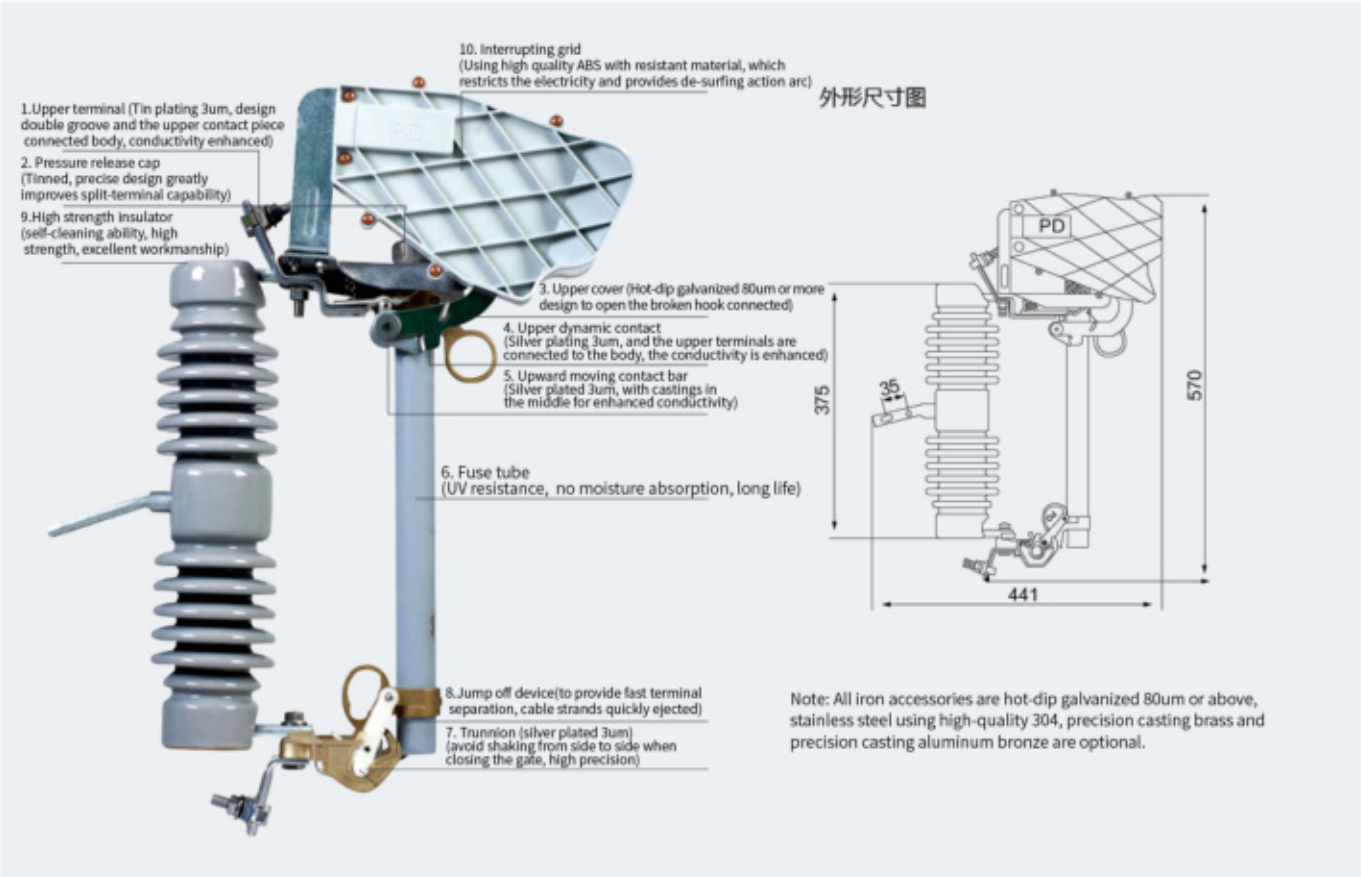
Main technical parameters

Project	RW33	RW33
Rated voltage (KV)	12(15)	12(15)
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	12.5/100、16/100	12.5/200、16/200
Power frequency withstand voltage wet test (KV)	45/55	45/55
Power frequency withstand voltage dry test (KV)	50/55	50/55
Rated lightning surge voltage (KV)	125	125
Creepage distance (mm/KV)	330	330
Mechanical life (times)	500	500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-40°C ~+70°C	-40°C ~+70°C
Dimension (cm)	50×36×12.5	50×36×12.5

RW12-15F

Jet Fuse (high-performance type)

RW12-15F Jet Fuse (high-performance type)



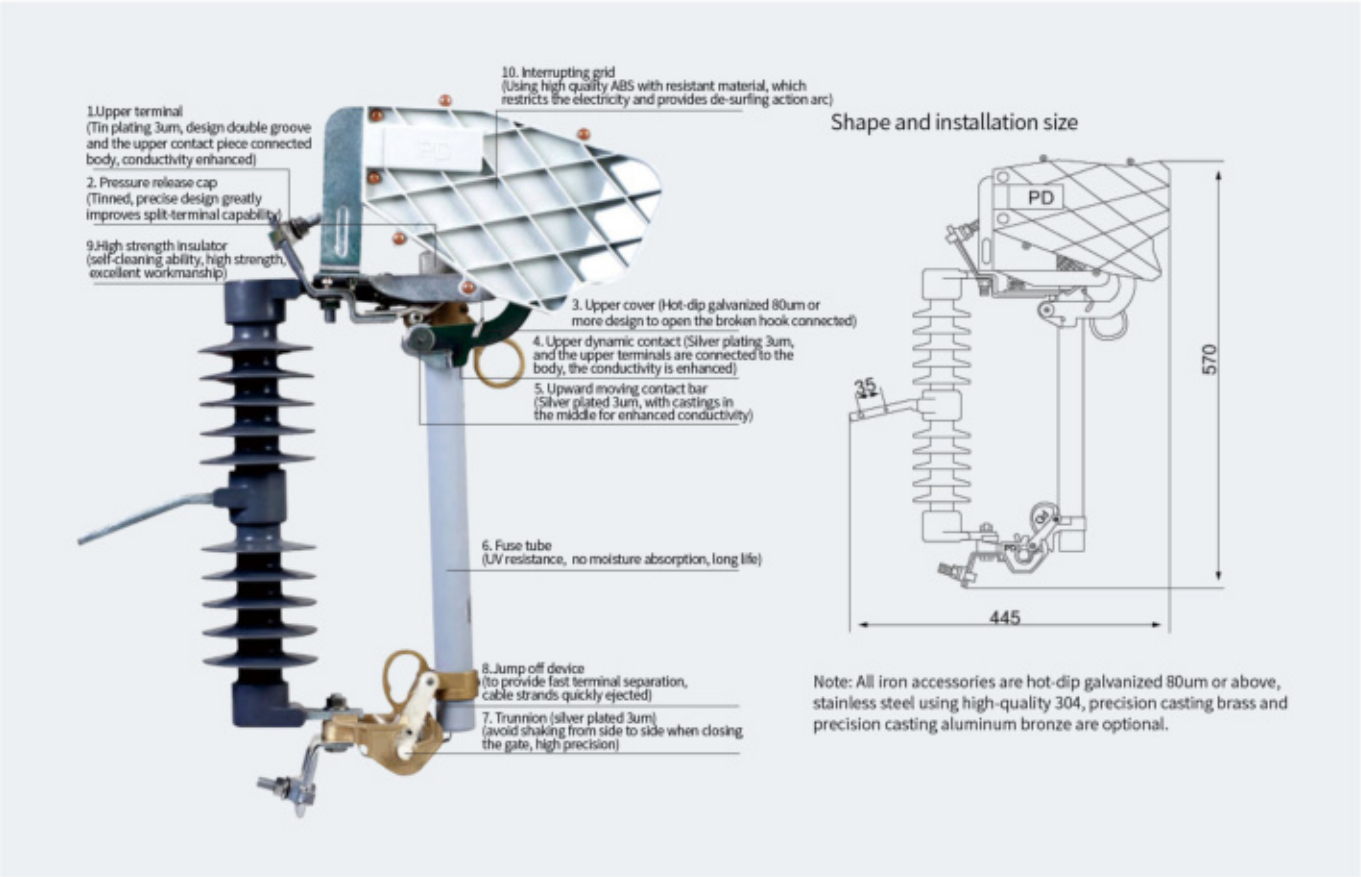
Main technical parameters

Project	RW12	RW12
Rated voltage (KV)	12(15)	12(15)
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	12.5/100、16/100	12.5/200、16/200
Power frequency withstand voltage wet test (KV)	45/55	45/55
Power frequency withstand voltage dry test (KV)	50/55	50/55
Rated lightning surge voltage (KV)	125	125
Creepage distance (mm/KV)	330	330
Mechanical life (times)	500	500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-40°C ~ +70°C	-40°C ~ +70°C
Dimension (cm)	60×40×15	60×40×15

HRW12-15F

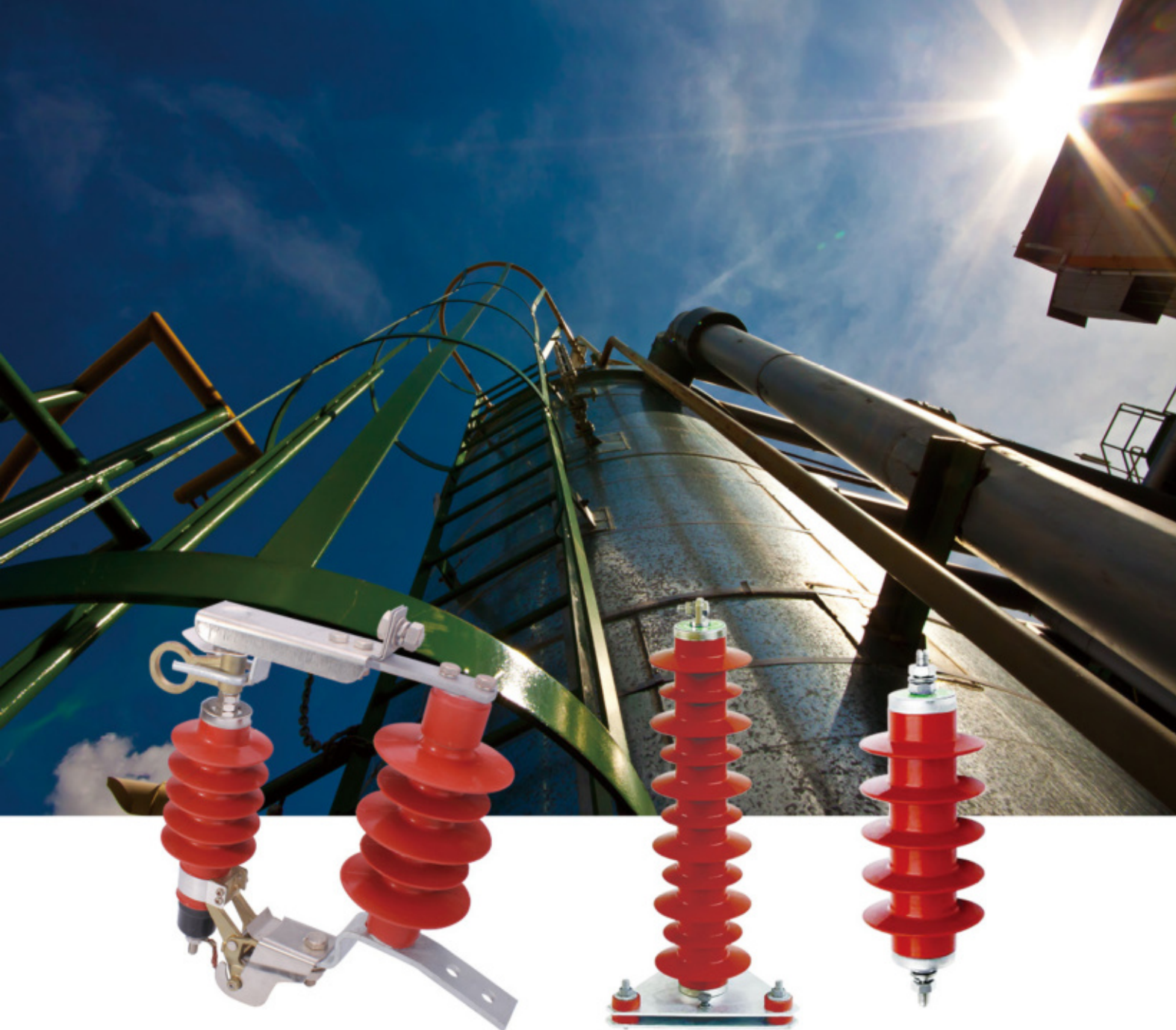
Jet Fuse (high-performance type)

HRW12-15F Jet Fuse (high-performance type)



Main technical parameters

Project	HRW12	HRW12
Rated voltage (KV)	12(15)	12(15)
Rated current (A)	100	200
Rated frequency (Hz)	50	50
Rated current of the base (A)	100	200
Rated short-circuit breaking current (KA/A)	12.5/100、16/100	12.5/200、16/200
Power frequency withstand voltage wet test (KV)	45/55	45/55
Power frequency withstand voltage dry test (KV)	50/55	50/55
Rated lightning surge voltage (KV)	125	125
Creepage distance (mm/KV)	330	330
Mechanical life (times)	≥ 500	≥ 500
Altitude (mm)	1000	1000
Ambient temperature (°C)	-30°C ~ +40°C	-30°C ~ +40°C
Dimension (cm)	60×40×15	60×40×15



Zinc oxide Lightning arrester series

YH(HY) Composite Jacket Arrester

Overview

Lightning arrester is the basis of the insulation of all kinds of electrical equipment (transformers, reactors, capacitors, generators, motors, PT, CT, circuit breakers, contactors, etc.) in the power system, and the protection performance of the arrester determines the internal and external insulation index of all electrical equipment in the power system (short-time frequency withstand voltage, lightning shock withstand voltage and operating shock withstand voltage).

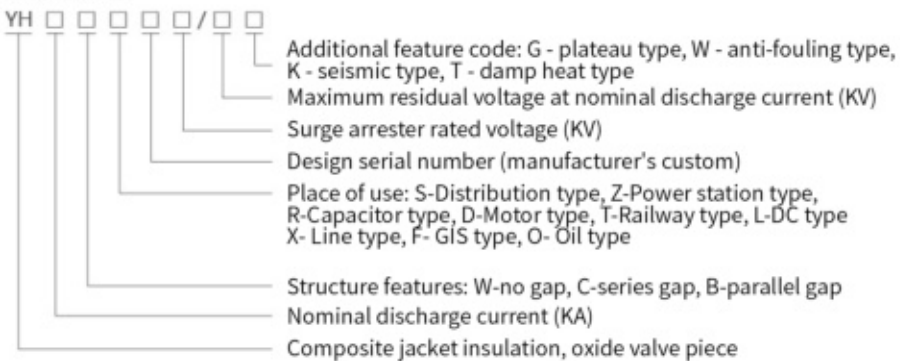
Metal oxide arrester, commonly known as "zinc oxide arrester", is a new generation of lightning arrester popularized by the United States, Japan and other countries in the 1980s, and it is the most advanced product in conventional lightning arrester. Since China fully entered this technology in the mid-1980s, through many years of practice and digestion, the performance of AC lightning arrester in various professional lightning arrester factories is comparable to that of the most advanced products in the United States, Japan, Western Europe and other countries, and the products that really meet all the requirements of the national standard can also meet the requirements of the international IEC standard.

The nuclear working element of the product is fired with zinc oxide-based multi-metal oxide powder, which has excellent nonlinear volt-ampere characteristics, fast steep wave response and large flow capacity. The products with gaps adopt self-blowing gap and uniform voltage irradiation structure, which reduces the dispersion of discharge and reduces the impact coefficient.

The adoption of composite insulation jacket conforms to the development trend of miniaturization, safety and maintenance-free of international power products. Compared with traditional inorganic materials such as ceramics and glass, polymer organic composites are small in size, light in weight, pollution-resistant, cleaning-free, explosion-proof and shock-proof.

Model meaning

The model definition of this product fully implements the provisions of JB/T8459-2006 "Product Model compilation method for Lightning arrester". The specific model description is as follows:



Use and enforcement standards

This product is used in AC 220KV and below power generation, transmission, substation and distribution systems to limit the amplitude of lightning and internal operating over-voltage to a specified level. It is the basic equipment for insulation coordination of the whole system.

At the same time, this product can not be used to limit resonant over-voltage, and the harmonic elimination of the system needs to be done in other ways.

This product model is compiled according to JB/T8459-1996 "Product Model compilation method of Lightning arrester", non-gap products implement GB11032-2000 "AC non-gap metal oxide arrester" standard; gap products implement JB/T9672-2005 "metal oxide arrester with series gap" standard. The important parameters and configuration modes which are not clearly defined in the above standards shall be revised and implemented in accordance with the requirements of DL/T620-1997 "Over-voltage Protection and Insulation Coordination of AC Electrical equipment".

YH(HY)
Composite Jacket Arrestor

Environmental condition

The normal conditions of use of conventional products are as follows:

Ambient temperature: not higher than +40°C, not lower than -40°C;

Altitude: not more than 3000m;

Power frequency: 50±2Hz; 60±2Hz;

Maximum wind speed: 35m/ s ;

Clearance-free conditions: moderately dirty areas and below;

For gap-less products, the long-term applied frequency voltage shall not exceed the continuous operating voltage of the surge arrester;

For products with gaps, the installation point short-time industrial frequency voltage rise shall not exceed the rated voltage of the arrester;

Long-term use in the following abnormal conditions, the arrester needs special production, the order should be stated;

Temperature or altitude exceeds the standard (plateau, tropical, cold, fully enclosed cabinet with, near the electric furnace, etc.);

The use of severe moisture or corrosive gas impurities in the environment (water, salt field, chemical plants, etc.);

Strong ultraviolet radiation (plateau, strong sunlight arid areas, etc.);

Special heavy dirt area (mining work surface, construction site work surface, etc.)

Technical parameter (conventional products)

The following is a table of typical parameters of conventional lightning arrester, arranged according to the voltage level from low to high, easy for users to find.

Note:

Each national standard model can derive several models of products, which are limited by space and are not listed one by one. If users have questions about the model, they can directly ask our company's technical department.

In the "system nominal voltage" column, the data with * is the rated voltage of the motor corresponding to the motor protective lightning arrester; in the "power frequency discharge voltage" column, the data with * is the effective value of the power frequency withstand voltage of the high voltage arrester above 110KV.

Due to a large number of uses and voltage levels, the impulse current value corresponding to the operating impulse residual voltage of the arrester 30/60 is not specifically specified:

The vast majority of products can be equipped with disconnectors, counters and other accessories, with disconnectors plus "L", and counters with "J" after the model.

Voltage Rating (kV)	Place of use	System nominal voltage (kV) effective value	Lightning arrester National standard model	Arrester nominal voltage (kV) effective value	Gap-less arrester			Gap arrester			Residual voltage (kV) peak (not more than)			2000μS square wave through-current capacity (A)	4/10 high current withstand capacity (kA)
					Arrester continuous operation voltage (kV) effective value	DC 1mA reference (kV) not less than	0.75 times the maximum leakage under the DC reference voltage(μA)	The effective value of the frequency discharge voltage (kV) is not less than	1.2/50 impact discharge voltage (kV) peak value is not more than	Maximum conductive current(μA)	8/20 under lightning inrush current	30/60 under operating inrush current	1/4 under steep slope inrush current		
Low voltage	Distri-bution type	0.22	YH1.5W-0.28/13	0.28	0.24	0.6	50	-	-	-	1.3	-	-	75	25
Low voltage	Distri-bution type	0.38	YH1.5W-0.5/2.6	0.5	0.42	1.2	50	-	-	-	2.6	-	-	75	25
Low voltage	Motor type	0.66*	YH2.5WD-1.3/3.6	1.3	0.95	1.8	50	-	-	-	3.6	-	-	200	40
Low voltage	Motor type	1.14*	YH2.5WD-2.6/7.2	2.6	1.9	3.6	50	-	-	-	7.2	-	-	200	40
3kV	Distri-bution type	3	YH5WS-3.8/15	3.8	2.0	7.5	50	-	-	-	15.0	12.8	17.3	75	40

YH(HY)
Composite Jacket Arrestor

Connect to the table above

Voltage Rating (kV)	Place of use	System nominal voltage (kV) effective value	Lightning arrester National standard model	Arrester nominal voltage (kV) effective value	Gap-less arrester			Gap arrester			Residual voltage (kV) peak (not more than)			2000μS square wave through-current capacity (A)	4/10 high current withstand capacity (kA)
					Arrester continuous operation voltage (kV) effective value	DC 1mA reference (kV) not less than	0.75 times the maximum leakage under the DC reference voltage(μA)	The effective value of the frequency discharge voltage (kV) is not less than	1.2/50 impact discharge voltage (kV) peak value is not more than	Maximum conductive current(μA)	8/20 under lightning inrush current	30/60 under operating inrush current	1/4 under steep slope inrush current		
3	Distribution	3	YH5WS-5/15	5	4.0	7.5	50	-	-	-	15.0	12.8	17.3	75	40
3	Distribution	3	YH5CS-3.8/13.5	3.8	-	-	-	9.0	13.5	20	13.5	11.4	15.0	75	40
3	Power Station	3	YH5WZ-3.8/13.5	3.8	2.0	7.2	50	-	-	-	13.5	11.5	15.5	200	65
3	Power Station	3	YH5WZ-5/13.5	5	4.0	7.2	50	-	-	-	13.5	11.5	15.5	200	65
3	Power Station	3	YH5CZ-3.8/12.0	3.8	-	-	-	8.0	12.0	20	12.0	10.2	13.5	200	65
3	Capacitor	3	YH5WR-3.8/13.5	3.8	2.0	7.2	50	-	-	-	13.5	10.5	-	400	65
3	Capacitor	3	YH5WR-5/13.5	5	4.0	7.2	50	-	-	-	13.5	10.5	-	400	65
3	Capacitor	3	YH5CR-3.8/12.0	3.8	-	-	-	8.0	12.0	20	12.0	9.6	-	400	65
3	Generator	3.15*	YH5WD-3.8/9.5	3.8	2.0	5.7	50	-	-	-	9.5	7.6	10.7	400	65
3	Generator	3.15*	YH5WD-4/9.5	4	3.15	5.7	50	-	-	-	9.5	7.6	10.7	400	65
3	Generator	3.15*	YH5CD-3.8/8.6	3.8	-	-	-	7.5	8.6	20	8.6	6.9	9.8	400	65
3	Motor	3.15*	YH2.5WD-3.8/9.5	3.8	2.0	5.7	50	-	-	-	9.5	7.6	10.7	200	65
3	Motor	3.15*	YH2.5WD-4/9.5	4	3.15	5.7	50	-	-	-	9.5	7.6	10.7	200	65
3	Motor	3.15*	YH2.5CD-3.8/8.6	3.8	-	-	-	7.5	8.6	20	8.6	6.9	9.8	200	65
3	Neutral Point	3.15*	YH1.5W-2.4/6	2.4	1.9	3.4	50	-	-	-	6.0	5.0	-	200	65
6	Distribution	6	YH5WS-7.6/30	7.6	4.0	15.0	50	-	-	-	30.0	25.6	34.6	75	40
6	Distribution	6	YH5WS-10/30	10	8.0	15.0	50	-	-	-	30.0	25.6	34.6	75	40
6	Distribution	6	YH5CS-7.6/27	7.6	-	-	-	16.0	27.0	20	27.0	22.5	30.0	75	40
6	Power Station	6	YH5WZ-7.6/27	7.6	4.0	14.4	50	-	-	-	27.0	23.0	31.0	200	65
6	Power Station	6	YH5WZ-10/27	10	8.0	14.4	50	-	-	-	27.0	23.0	31.0	200	65
6	Power Station	6	YH5CZ-7.6/24	7.6	-	-	-	16.0	24.0	20	24.0	20.4	27.0	200	65
6	Capacitor	6	YH5WR-7.6/27	7.6	4.0	14.4	50	-	-	-	27.0	21.0	-	400	65
6	Capacitor	6	YH5WR-10/27	10	8.0	14.4	50	-	-	-	27.0	21.0	-	400	65
6	Capacitor	6	YH5CR-7.6/24	7.6	-	-	-	16.0	24.0	20	24.0	19.5	-	400	65
6	Generator	6.3*	YH5WD-7.6/18.7	7.6	4.0	11.2	50	-	-	-	18.7	15.0	21.0	400	65
6	Generator	6.3*	YH5WD-8/18.7	8	6.3	11.2	50	-	-	-	18.7	15.0	21.0	400	65
6	Generator	6.3*	YH5CD-7.6/17	7.6	-	-	-	15.0	17.0	20	17.0	13.8	19.6	400	65
6	Motor	6.3*	YH2.5WD-7.6/18.7	7.6	4.0	11.2	50	-	-	-	18.7	15.0	21.0	200	65
6	Motor	6.3*	YH2.5WD-8/18.7	8	6.3	11.2	50	-	-	-	18.7	15.0	21.0	200	65
6	Motor	6.3*	YH2.5CD-7.6/17	7.6	-	-	50	15.0	17.0	20	17.0	13.8	19.6	200	65
6	Neutral Point	6.3*	YH1.5W-4.8/12	4.8	3.8	6.8	-	-	-	-	12.0	10.0	-	200	65
10	Distribution	10	YH5WS-12.7/50	12.7	6.6	25	50	-	-	-	50	42.5	57.5	75	40
10	Distribution	10	YH5WS-17/50	17	13.6	25	50	-	-	-	50	42.5	57.5	75	40

YH(HY)
Composite Jacket Arrestor

Connect to the table above

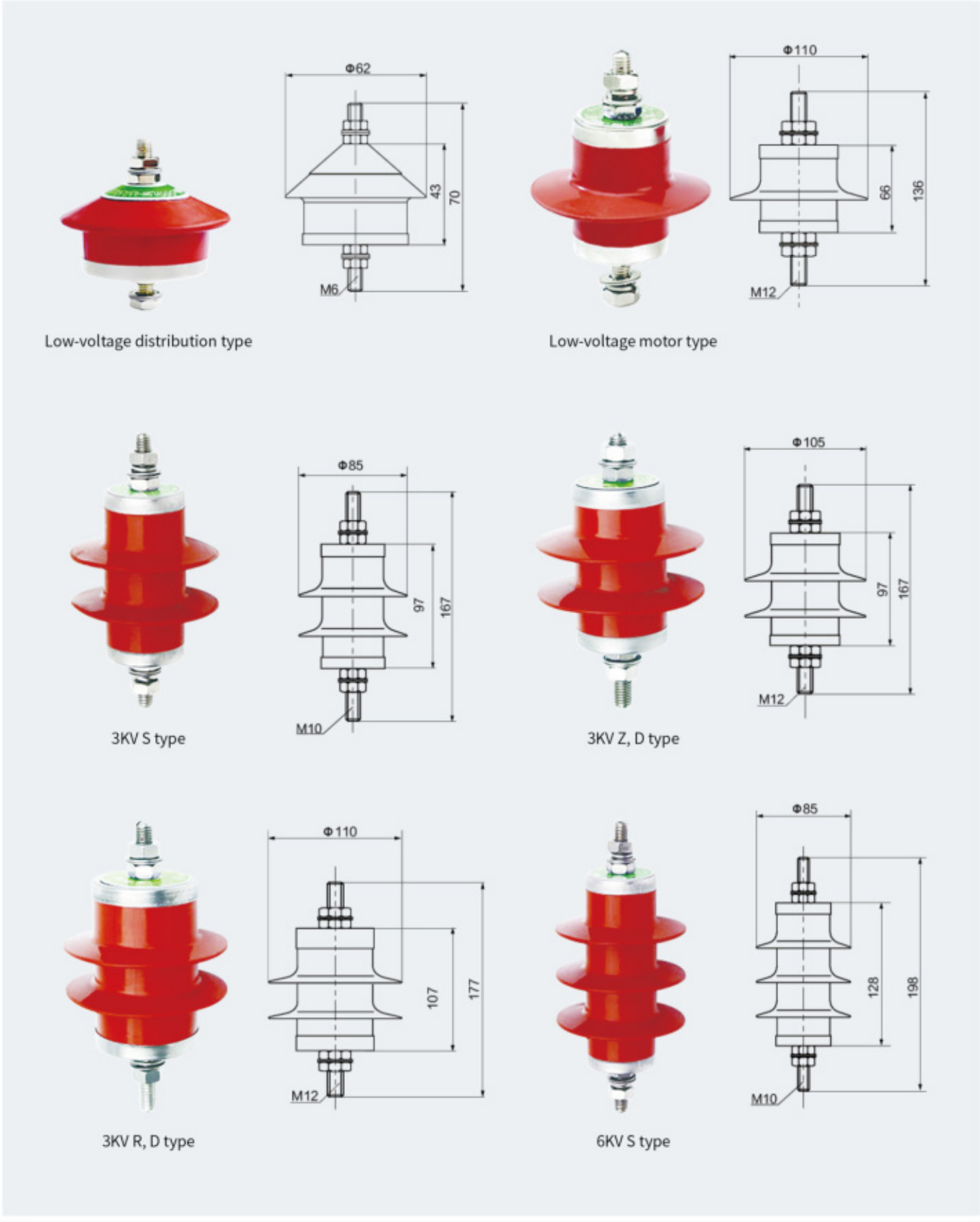
Voltage Rating (kV)	Place of use	System nominal voltage (kV) effective value	Lightning arrester National standard model	Arrester nominal voltage (kV) effective value	Gap-less arrester			Gap arrester			Residual voltage (kV) peak (not more than)			2000μS square wave through-current capacity (A)	4/10 high current withstand capacity (kA)
					Arrester continuous operation voltage (kV) effective value	DC 1mA reference (kV) not less than	0.75 times the maximum leakage under the DC reference voltage(μA)	The effective value of the frequency discharge voltage (kV) is not less than	1.2/50 impact discharge voltage (kV) peak value is not more than	Maximum conductive current (μA)	8/20 under lightning inrush current	30/60 under operating inrush current	1/4 under steep slope inrush current		
10	Distribution	10	YH5CS-12.7/45	12.7	-	-	-	26.0	45	20	45	38.4	51.0	75	40
10	Power Station	10	YH5WZ-12.7/45	12.7	6.6	24	50	-	-	-	45	38.3	51.8	200	65
10	Power Station	10	YH5WZ-17/45	17	13.6	24	50	-	-	-	45	38.3	51.8	200	65
10	Power Station	10	YH5CZ-12.7/41	12.7	-	-	-	26.0	41	20	41	35.0	46.0	200	65
10	Capacitor	10	YH5WR-12.7/46	12.7	6.6	24	50	-	-	-	46	35.0	-	400	65
10	Capacitor	10	YH5WR-17/46	17	13.6	24	50	-	-	-	46	35.0	-	400	65
10	Capacitor	10	YH5CR-12.7/41	12.7	-	-	-	26.0	41	20	41	33.0	-	400	65
10	Generator	10.5*	YH5WD-12.7/31	12.7	6.6	18.6	50	-	-	-	31	25	34.7	400	65
10	Generator	10.5*	YH5WD-13.5/31	13.5	10.5	18.6	50	-	-	-	31	25	34.7	400	65
10	Generator	10.5*	YH5CD-12.7/28	12.7	-	-	-	25.0	28.0	20	28	22.5	32.0	400	65
10	Generator	13.8*	YH5WD-17.5/40	17.5	13.8	24.4	50	-	-	-	40.0	32.0	44.8	400	65
10	Generator	15.75*	YH5WD-20/45	20.0	15.75	28.0	50	-	-	-	45.0	36.0	50.4	400	65
10	Generator	18.0*	YH5WD-23/51	23.0	18.0	31.9	50	-	-	-	51.0	40.8	57.2	400	65
10	Generator	20.0*	YH5WD-25/56.2	25.0	20.0	35.4	50	-	-	-	56.2	45.0	62.9	400	65
10	Motor	10.5*	YH2.5WD-12.7/31	12.7	6.6	18.6	50	-	-	-	31	25	34.7	200	65
10	Motor	10.5*	YH2.5WD-13.5/31	13.5	10.5	18.6	50	-	-	-	31	25	34.7	200	65
10	Motor	10.5*	YH2.5CD-12.7/28	12.7	-	-	-	25.0	28.0	20	28	22.5	32.0	200	65
10	Neutral Point	10.5*	YH1.5W-8/19	8	6.4	11.4	50	-	-	-	19.0	15.9	-	400	65
10	Neutral Point	13.8*	YH1.5W-10.5/23	10.5	8.4	14.9	50	-	-	-	23.0	19.2	-	400	65
10	Neutral Point	15.75*	YH1.5W-12/26	12	9.6	17.0	50	-	-	-	26.0	21.6	-	400	65
10	Neutral Point	18.0*	YH1.5W-13.7/29.2	13.7	11.0	19.5	50	-	-	-	29.2	24.3	-	400	65
10	Neutral Point	20.0*	YH1.5W-15.2/31.7	15.2	12.2	21.6	50	-	-	-	31.7	26.4	-	400	65
35	Power Station	35	YH5WZ-51/134	51	40.8	73	50	-	-	-	134	114	154	400	65
35	Power Station	35	YH5WZ-42/134	42	23.4	73	50	-	-	-	134	114	154	400	65
35	Power Station	35	YH5CZ-42/124	42	-	-	-	80.0	124	20	124	100	143	400	65
35	Capacitor	35	YH5WR-51/134	51	40.8	73	50	-	-	-	134	105	-	400	65
35	Capacitor	35	YH5WR-42/134	42	23.4	73	50	-	-	-	134	105	-	400	65
35	Capacitor	35	YH5CR-42/124	42	-	-	-	80.0	124	20	124	100	-	400	65
35	Line Type	35	YH5WX-51/134	51	40.8	73	50	-	-	-	134	114	154	400	65
35	Line Type	35	YH5WX-54/150	54	43.2	77	50	-	-	-	150	128	169	400	65
35	Line Type	35	YH5CX-42/120	42	-	-	-	80.0	120	20	120	100	138	400	65
35	Line Type	35	YH5CX-42/150	42	-	-	-	80.0	150	20	150	128	169	400	65
35	Neutral Point	35	YH1.5W-30/80	30	24	44	50	-	-	-	80	67.5	-	400	65

YH(HY)
Composite Jacket Arrestor

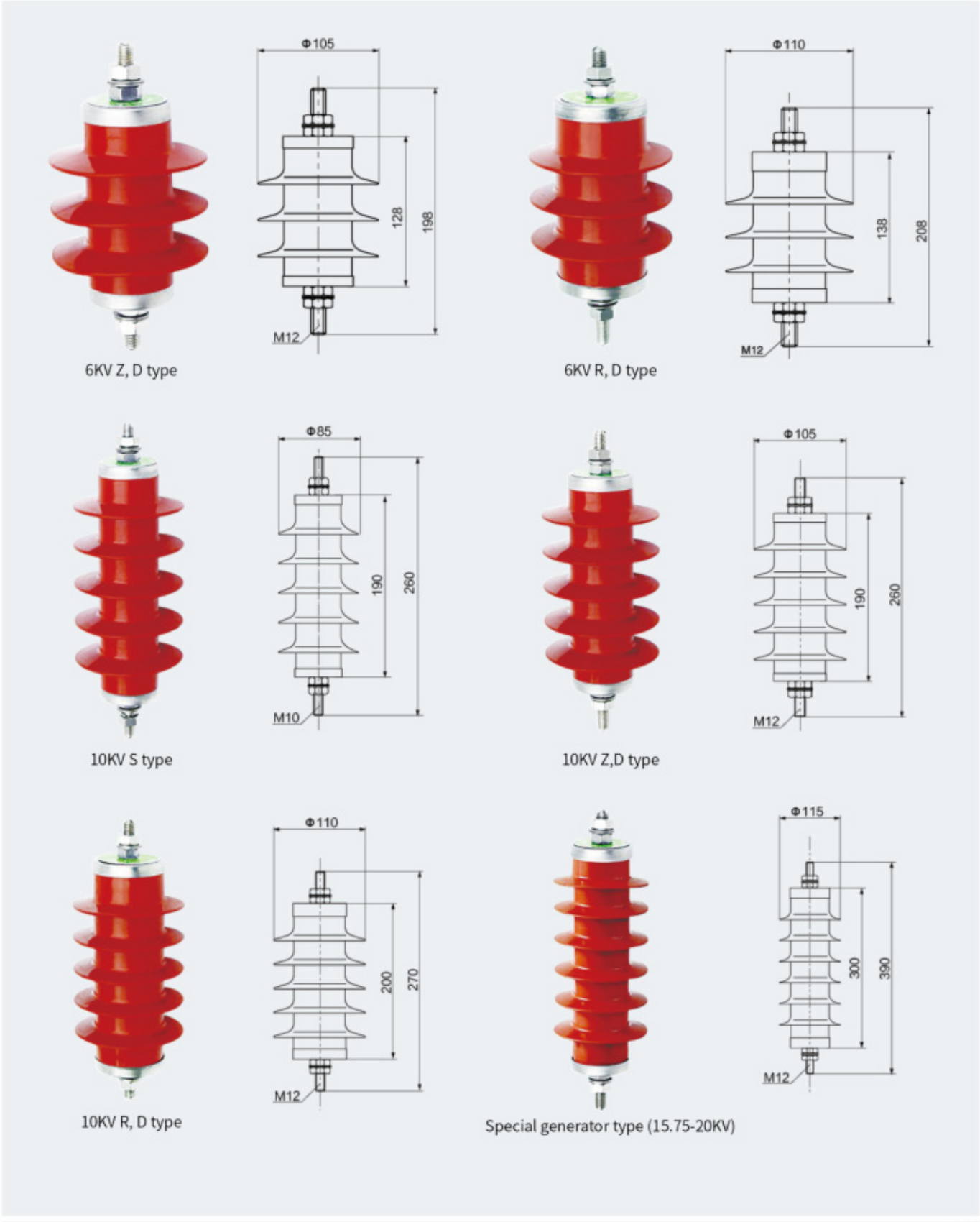
Connect to the table above

Voltage Rating (kV)	Place of use	System nominal voltage (kV) effective value	Lightning arrester National standard model	Arrester nominal voltage (kV) effective value	Gap-less arrester			Gap arrester			Residual voltage (kV) peak (not more than)			2000μS square wave through-current capacity (A)	4/10 high current withstand capacity (kA)
					Arrester continuous operation voltage (kV) effective value	DC 1mA reference (kV) not less than	0.75 times the maximum leakage under the DC reference voltage(μA)	The effective value of the frequency discharge voltage (kV) is not less than	1.2/50 impact discharge voltage (kV) peak value is not more than	Max-mum conductive current (μA)	8/20 under lightning inrush current	30/60 under operating inrush current	1/4 under steep slope inrush current		
66	Power Station	66	YH5WZ-84/221	84	67.2	121	50	-	-	-	221	188	254	600	65
66	Power Station	66	YH5WZ-90/235	90	72.5	130	50	-	-	-	235	201	270	600	65
66	Power Station	66	YH10WZ-84/221	84	67.2	121	50	-	-	-	221	188	248	600	100
66	Line Type	66	YH10WZ-90/235	90	72.5	130	50	-	-	-	235	201	264	600	100
66	Line Type	66	YH5WX-96/250	96	75	140	50	-	-	-	250	213	288	600	65
66	Line Type	66	YH5WX-96/275	96	75	154	50	-	-	-	275	234	316	600	65
110	Power Station	110	YH5WZ-100/260	100	78	145	50	-	-	-	260	221	299	600	65
110	Power Station	110	YH5WZ-102/266	102	79.6	148	50	-	-	-	266	226	305	600	65
110	Power Station	110	YH5WZ-108/281	108	84	157	50	-	-	-	281	239	323	600	65
110	Power Station	110	YH10WZ-100/260	100	78	145	50	-	-	-	260	221	291	600	100
110	Power Station	110	YH10WZ-102/266	102	79.6	148	50	-	-	-	266	226	297	600	100
110	Power Station	110	YH10WZ-108/281	108	84	157	50	-	-	-	281	239	315	600	100
110	Line Type	110	YH5WX-108/281	108	84	157	50	-	-	-	281	239	323	600	65
110	Line Type	110	YH5WX-108/309	108	84	173	50	-	-	-	309	263	348	600	65
110	Line Type	110	YH10WX-108/281	108	84	157	50	-	-	-	281	239	315	600	100
110	Line Type	110	YH10WX-108/309	108	84	173	50	-	-	-	309	263	348	600	100
110	Line Type	110	YH5CX-90/260	90	-	130	50	170*	525*	-	260	-	292	400	65
110	Line Type	110	YH10CX-90/260	90	-	130	50	170*	525*	-	260	-	292	600	100
110	Line Type	110	YH10CX-96/280	96	-	140	50	170*	525*	-	280	-	314	600	100
110	Line Type	110	YH10CX-102/296	102	-	148	50	170*	525*	-	296	-	332	600	100
110	Neutral Point	110	YH1.5W-60/144	60	48	85	50	-	-	-	144	135	-	400	65
110	Neutral Point	110	YH1.5W-72/186	72	58	103	50	-	-	-	186	174	-	400	65
220	Power Station	220	YH10WZ-192/500	192	150	280	50	-	-	-	500	426	560	800	100
220	Power Station	220	YH10WZ-200/520	200	156	290	50	-	-	-	520	442	582	800	100
220	Power Station	220	YH10WZ-204/532	204	159	296	50	-	-	-	532	452	594	800	100
220	Power Station	220	YH10WZ-216/562	216	168.5	314	50	-	-	-	562	478	630	800	100
220	Line Type	220	YH10WX-216/562	216	168	314	50	-	-	-	562	478	630	600	100
220	Line Type	220	YH10WX-216/618	216	168	346	50	-	-	-	618	526	693	600	100
220	Line Type	220	YH10CX-185/520	180	-	260	50	340*	900*	-	520	-	584	600	100
220	Line Type	220	YH10CX-192/560	192	-	280	50	340*	900*	-	560	-	628	600	100
220	Line Type	220	YH10CX-204/592	204	-	296	50	340*	900*	-	592	-	664	600	100
220	Neutral Point	220	YH1.5W-144/320	144	116	205	50	-	-	-	320	299	-	600	65
27.5	Railway Type	27.5	YH5WT-42/120	42	34	65	50	-	-	-	120	98	138	400	65
55	Railway Type	55	YH5WT-84/240	84	68	130	50	-	-	-	240	276	276	400	65

Installation size (picture)

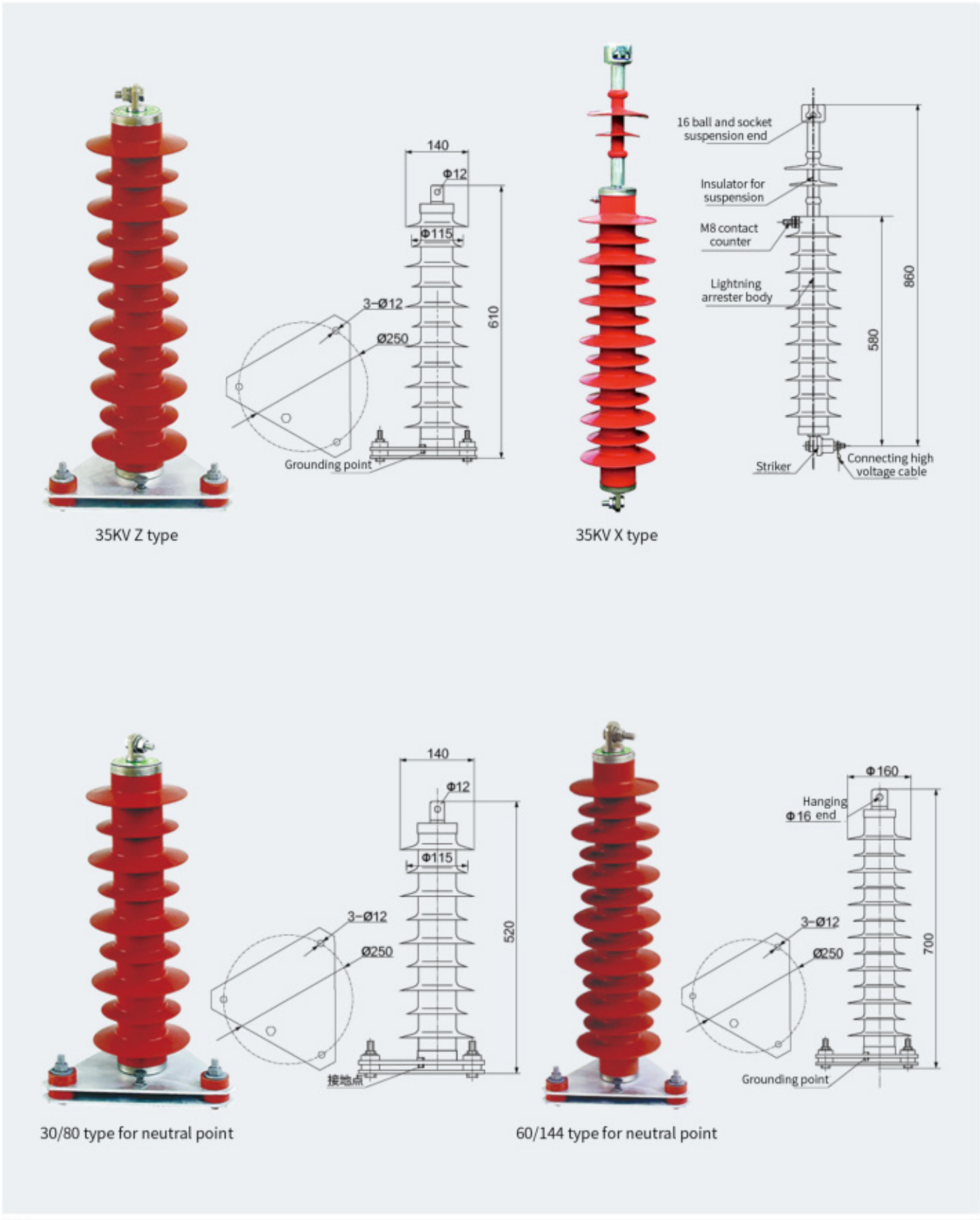


Installation size (picture)



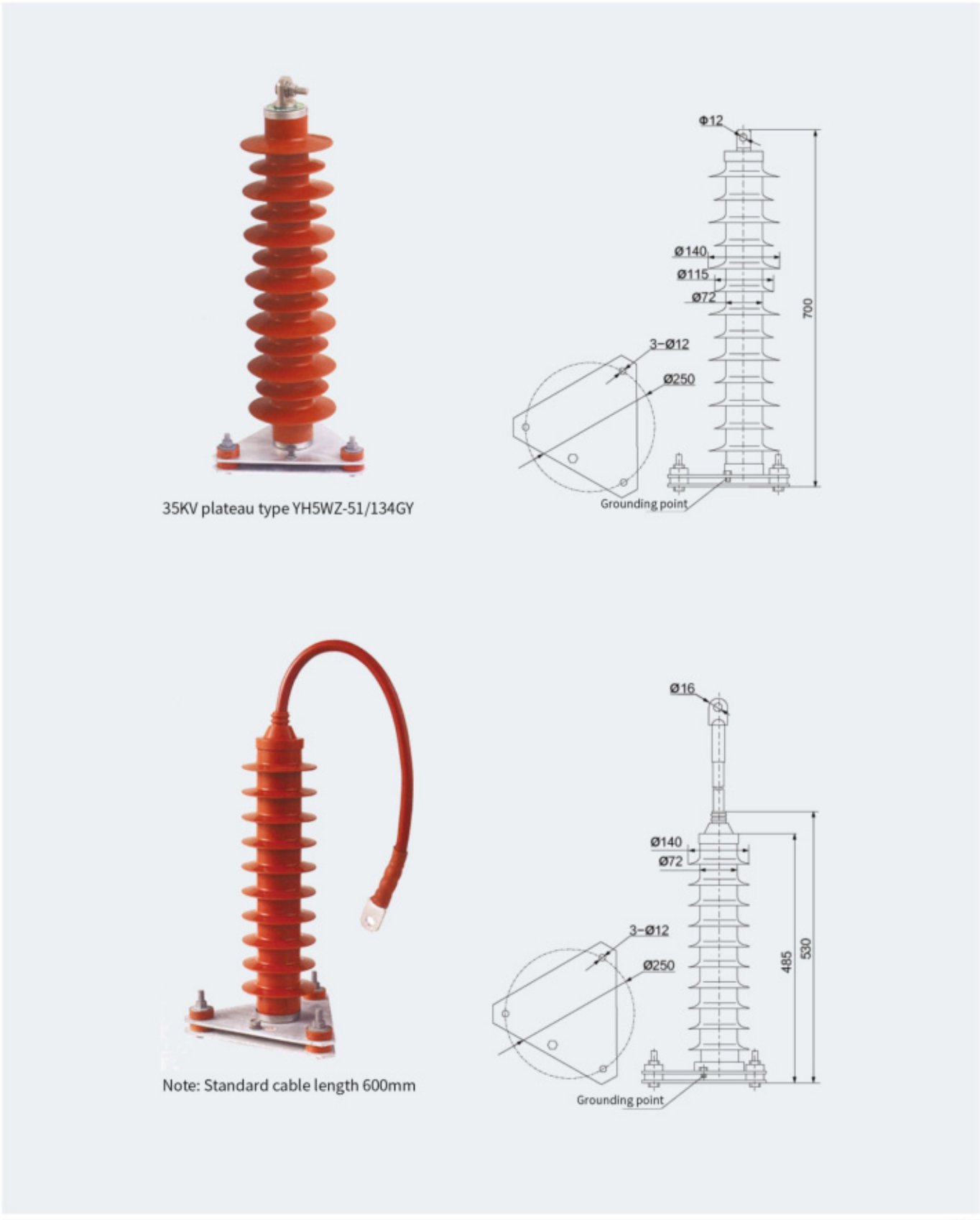
YH(HY)
Composite Jacket Arrester

Installation size (picture)



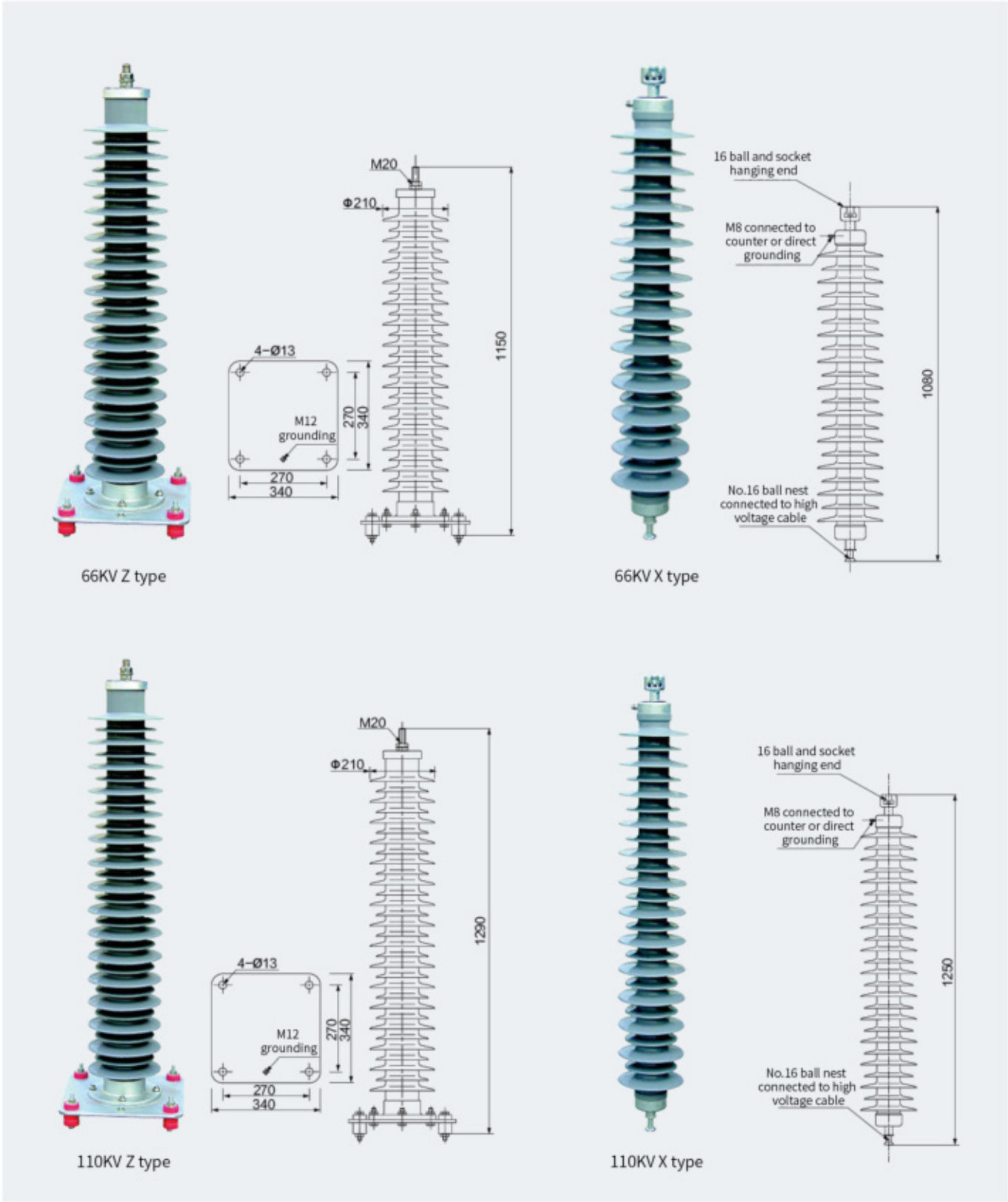
YH(HY)
Composite Jacket Arrester

Installation size (picture)



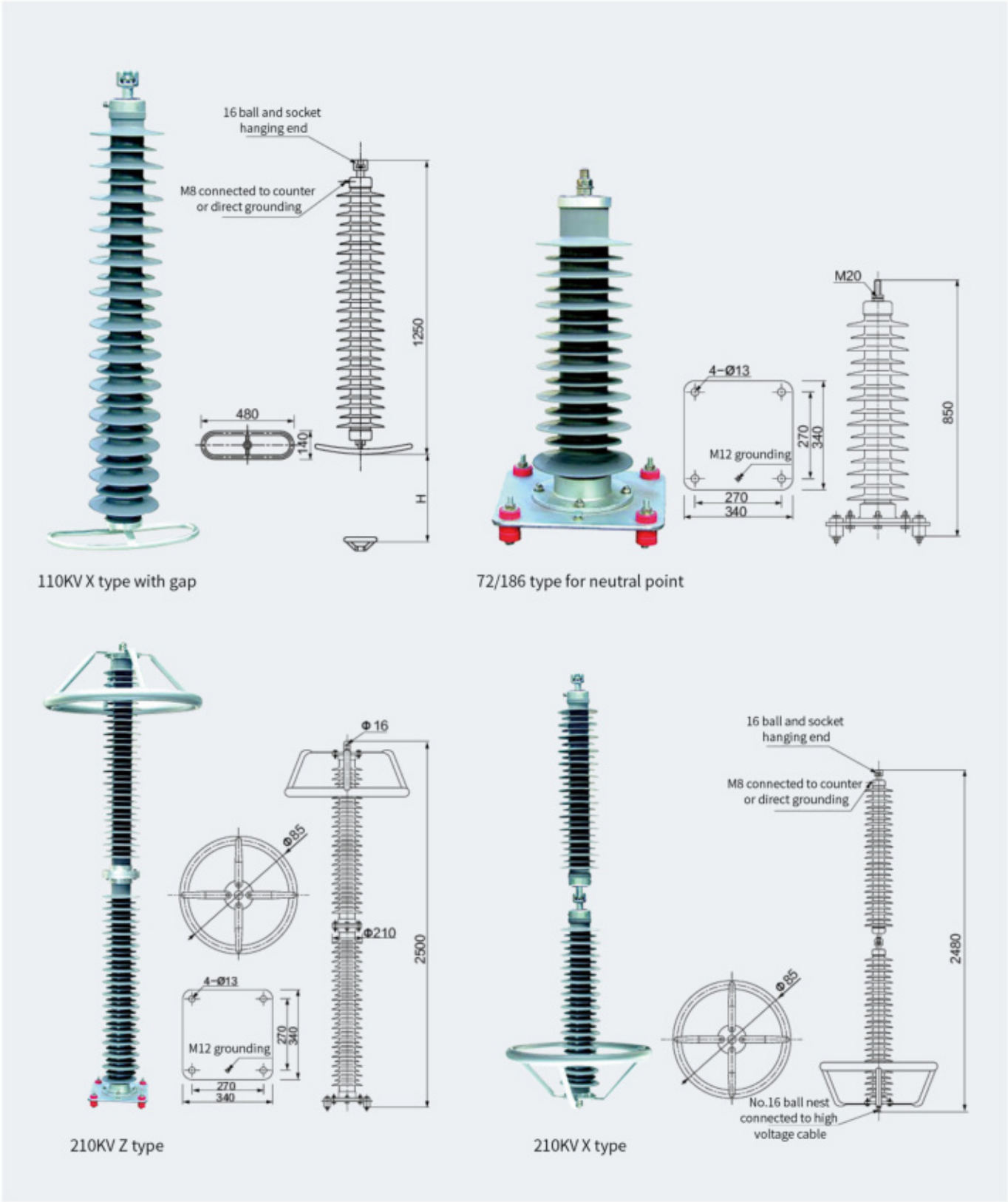
YH(HY)
Composite Jacket Arrester

Installation size (picture)

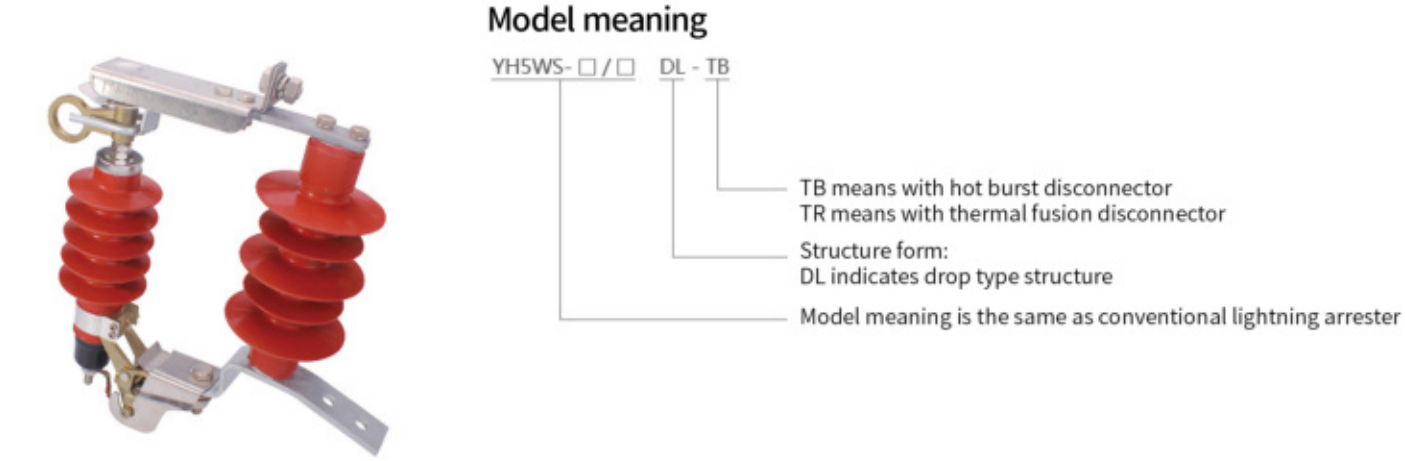
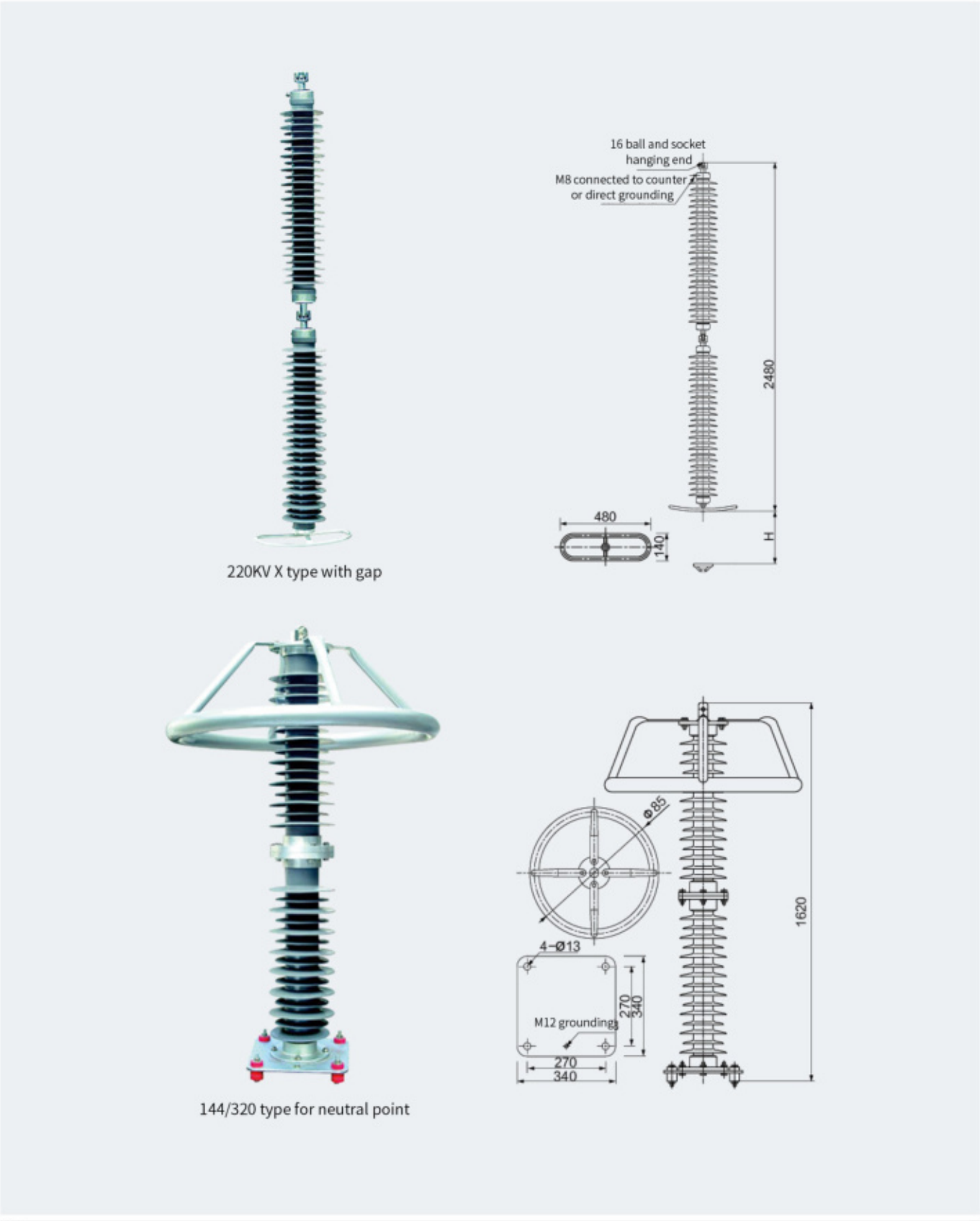


YH(HY)
Composite Jacket Arrester

Installation size (picture)



Installation size (picture)



Main technical parameters

Arrester model	System rated voltage (KV)	Surge arrester rated voltage (KV)	Continuous operation voltage (KV)	DC reference voltage (<KV)	Leakage current under 0.75U1mA (KV>μA)	Residual voltage under lightning inrush current (KV>μA)	Residual voltage under operating inrush current (>A)	Square wave through capacity (2ms<A)	High current inrush withstand (<KA)	Place of use
YH5WS-10/30DL	6	10	8.0	15.0	30	25.6	30	150	40	Power distribution
YH5WS-10/30KL-TB	6	10	8.0	15.0	30	25.6	30	150	40	Power distribution
YH5WS-17/50DL	10	17	13.6	25.0	30	42.5	50	150	40	Power distribution
YH5WS-17/50DL-TB	10	17	13.6	25.0	30	42.5	50	150	40	Power distribution

Puncture Type External Clearance Arrester



Principle and characteristics

The puncture type external clearance arrester is suitable for distribution 10KV overhead insulated conductor. It adopts the patented piercing type arc head structure, which can penetrate the conductor insulation layer to form an electrical connection. The lower end of the arc head and the arc head of the upper end of the arrester form a series external discharge gap with a spacing of 60-130mm. The spacing is adjusted by the relative movement of the two mounting plates in the lower part of the arrester. In the normal state, the resistor and discharge gap of the high resistance arrester do not operate. Only when the lightning over-voltage is exceeded can the discharge gap be broken down and form a short-circuit channel, and the subsequent power frequency arc will burn between the outer gap and release voltage energy to protect the wire from burn. After the voltage is released, the resistor of the lightning arrester returns to high resistance.

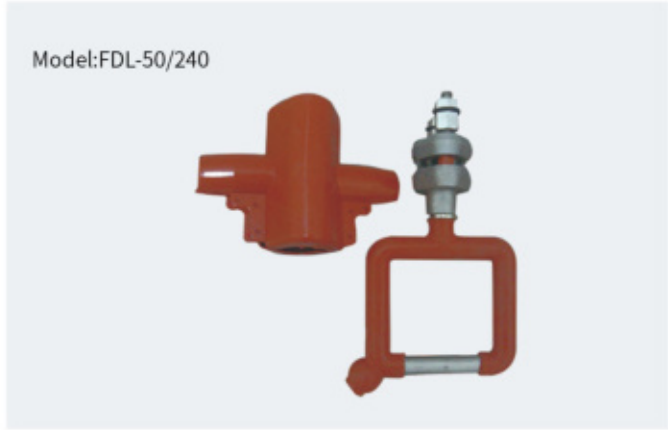
Technical parameters and selection table

Product Model	System nominal voltage KV	Surge arrester rated voltage KV	DC reference voltage KV	Work frequency withstand voltage KV	Lightning shock 50% discharge voltage KV	Clamp wire range (mm)	Use wire specification	Conductor diameter (mm)	Insulation outer diameter (mm)	Applicable torque (N*m)
FHY5C-10C-1	10	13	≥ 20	≥ 80	≤ 160	Φ16~22	JKLY-50~120	8.8~13	16.1~21	23
FHY5C-10C-1	10	13	≥ 20	≥ 80	≤ 160	Φ16~22	JKGY-35/6~95/20	7.75~13.18	16.6~22	23
FHY5C-10C-2	10	13	≥ 20	≥ 80	≤ 160	Φ22~28	JKLY-120~240	14.6~18.4	22.6~26.4	26
FHY5C-10C-2	10	13	≥ 20	≥ 80	≤ 160	Φ22~28	JKGY-120/7~185/45	13.718~18.62	22.6~27.4	26
FHY5C-10C-3	10	13	≥ 20	≥ 80	≤ 160	Φ26~30	JKLY-300	20.6	28.6	28
FHY5C-10C-3	10	13	≥ 20	≥ 80	≤ 160	Φ26~30	JKGY-240/30~240/40	20.52~20.58	29.3~29.4	28

Line type overcharge protector



Electricity detection grounding ring



Line Fault Indicator Series

JDX

Ground Short Circuit (two in one) Overhead Line Fault Indicator



Overview

JDX and 1DX have the same appearance, features, functions, applications and technical specifications, but their internal structure and working principle are different. There is only one core chip in 1DX that can detect short circuit, while JDX has an intelligent detection core that can detect short circuit and ground fault in one. The accuracy of grounding detection by passive fault indicator is relatively high, after connecting asymmetric current source (signal source), the correct rate of grounding detection can reach more than 95%.

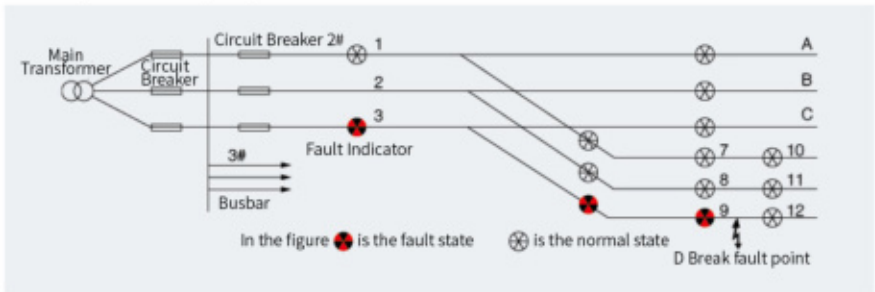
Performance characteristics

- ◆ Fault indication: When normal operation, the window is white display; when short circuit or ground fault occurs, the window is red display.
- ◆ On-line operation: directly installed on the line, maintenance-free.
- ◆ Strong anti-interference: the signal is not affected by the line, excitation inrush, high harmonics, current fluctuation, cable distribution capacitor bypass.
- ◆ Automatic reset: After the action flip, it is automatically reset according to the set time.
- ◆ Loading and unloading with electricity: loading and unloading with electricity is extremely simple and does not affect the line operation.

Working Principle

The principle of short circuit fault in the two-in-one principle of grounding short circuit is the same as that of 1DX.

The principle of grounding detection: sample the first half wave of capacitive current at the moment of grounding and the first half wave of voltage at the moment of grounding, compare their phase, when the capacitive current at the moment of sampling grounding suddenly changes and is greater than a certain value, and is in the same phase with the first half wave of voltage at the moment of grounding, at the same time, when the voltage of the wire to the ground decreases, it is judged that the line is grounded. The fault indication schematic diagram used to judge the grounding is shown by the red card of the 2#C phase 3, 6, 9 indicators of the grounding line, while the 12 indicator is still white, so that the fault at the exit point can be judged.



Applied range

- ◆ Installed at the middle section and branch entrance of long lines, it can indicate the fault section and fault branch of the line.
- ◆ Installed at the outlet of the transformer, it can tell whether the fault is caused by the user.
- ◆ Installed at the voltage inlet of the user's distribution substation, it can tell whether the fault is caused by the user.
- ◆ Installed at the connection of cable and overhead line, it can distinguish whether the fault is in the cable section or not.

Installation tool

Picture A shows the installation tools of 1DX, JDX and JDG. The specific installation method is to place an insulation rod at the bottom of the installation tool, unscrew the top bolt of the indicator and put it into the installation tool, and then clip the indicator into the cable to install successfully. Figure B shows the installation tool for JDX-Y.

JDG-Y

Multifunctional (four in one) Overhead Line Fault Indicator



Overview

JDG-Y and JDX-Y are similar in appearance, feature, function, application and technical index, their internal structure and working principle are the same. But JDG-Y is equipped with a device that glows at night.

Four-in-one intelligent multi-function indicator: in response to the majority of domestic customers, it is necessary to turn on the flashlight at night to see clearly, and the light must be illuminated one by one in order to find the fault point one by one, and the visual distance is short. The speed of finding faults at night is relatively slow, so our company adds a very fast and intuitive luminous device to find out at night to meet the needs of customers. That is, the JDG-W series that turns cards during the day and glows at night.

Working principle

The principle of grounding short circuit fault is the same as the two-in-one fault indicator: three photocells and bright light-emitting diodes are installed on the original two-in-one fault indicator. When a line failure occurs during the day, the indicator will flip the card. When it is dark at night, the resistance of the photocell becomes larger. Therefore, turn on the single-chip microcomputer, flip the card to reset, and turn on the light-emitting tube to work at the same time. At dawn, because the predetermined reset time of the indicator has not arrived, the light resistance value received by the photocell is reduced, the single-chip microcomputer resets, the light-emitting tube works, and the flip mechanism is turned on,

Applied range

- ◆ Installed at the middle section and branch entrance of the long line, the fault section and fault branch of the line can be indicated.
- ◆ Installed at the exit of the substation, you can judge whether the fault is caused by the user.
- ◆ Installed in the user transformer line, you can tell whether the fault is caused by the user.
- ◆ Installed at the connection between the cable and the overhead line, you can distinguish whether the fault is in the cable section.



Overview

The development of economy and the improvement of people's quality of life put forward higher requirements for the construction of distribution network. The distribution network is complex and prone to failure. It is extremely disadvantageous to the safety of lines and equipment to determine the fault area by pulling the sectional switch and trying to send electricity. The highly integrated distribution interruption is used to realize the functions of fault identification, fault isolation, network reconfiguration, reactive power, voltage control and optimal operation of the distribution network. Installation and operation is relatively complex, and it is difficult to promote in some places. Using a simple and low-cost fault indicator to achieve rapid fault location, or by fault indicator plus communication to achieve remote transmission of fault information, the formation of on-line fault monitoring system is of great significance for fault troubleshooting.

Use environment

- ◆ Working altitude: $\leq 3000\text{m}$.
- ◆ Ambient temperature: $-30^{\circ}\text{C} \sim +75^{\circ}\text{C}$, maximum daily temperature difference: 25°C .
- ◆ Working humidity: $\leq 99\%$ (relative humidity).
- ◆ Seismic capacity: seismic intensity 8 degrees, ground horizontal acceleration $0.3g$, ground vertical acceleration $0.15g$, and the safety factor of three sinusoidal crossings lasts 1.67 at the same time.
- ◆ Ac sampling.
- ◆ Current sampling range: $0\sim 800\text{A}$.
- ◆ Current sampling accuracy: $\pm 5\%$.
- ◆ Long-term withstand current: 630A .
- ◆ Short-term withstand current: $31.5\text{KA}/4\text{S}$.

Technical parameters

- ◆ Action response time: $0.03 \leq t \leq 3\text{s}$.
- ◆ Movement times: ≥ 5000 .
- ◆ Static power consumption: $\leq 10\text{W}$.
- ◆ Display method: flip and light display at the same time, in the range of $500\text{m} \sim 360^{\circ}\text{C}$.
- ◆ Restrain inrush current: put an end to the misoperation caused by closing excitation inrush current.
- ◆ Fault reset time: 24 hours by default, maintain the action state during the permanent fault power outage, and reset within 5 minutes after power on.
- ◆ Applicable voltage level: $U \geq 6\text{kV}$.
- ◆ Applicable wire current: $1 \geq 10\text{A}$.
- ◆ Applicable wire diameter: $5 \leq d \leq 45\text{mm}$.

Indicator recommended installation site

- ◆ Installed in the middle of the long line, the fault section of the long line can be judged.
- ◆ Installed at the entrance of the branch, you can determine whether the line fault is on the trunk line or the branch.
- ◆ Installed at the exit of the substation, you can judge whether the fault is inside or outside the station.
- ◆ Installed at the connection between the cable and the overhead line, it can be distinguished that the fault is on the cable section or foot overhead line.
- ◆ Installation in plain or empty area can greatly reduce the work pressure of line hunters.
- ◆ Installation in buildings or wooded areas can greatly reduce the impact of the environment on work.

Principle of rapid fault location and on-line fault monitoring.

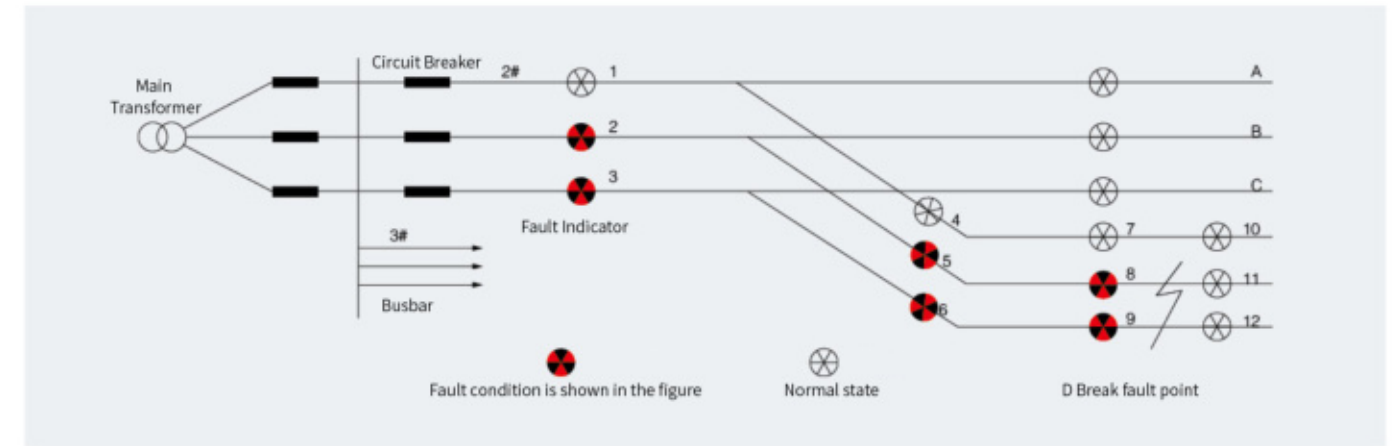
Principle and location of short circuit detection.

When a phase-to-phase short circuit occurs in the distribution line, a large current will flow through the circuit between the substation and the fault point, the relay protection device will start the protection, and the line will trip. Therefore, the short circuit fault criterion has four conditions:

- (1) the line has electricity.
- (2) if there is a sudden change in the line $I_t \geq 200\text{A}$ (I_t is a sudden variable), the current starts, which can be adjusted according to the actual line.
- (3) the duration of large current is $0.02\text{s} \leq T \leq 3\text{s}$ (T is the sudden change time of current).
- (4) Line power outage.

The above four conditions are met at the same time, and the short circuit fault occurs after detecting and judging the line at this location.

When there is a short circuit fault in the line, the short circuit fault indicator senses the fault current, then the indicator display window will turn from white to red (or from non-luminous to luminous). According to 2 # line phase indicator 2,6,8 and 3 # line C phase indicator 3,6,9 flip (or luminous) and 11,12 indicator did not flip (or did not luminous), you can quickly determine the fault for D point.



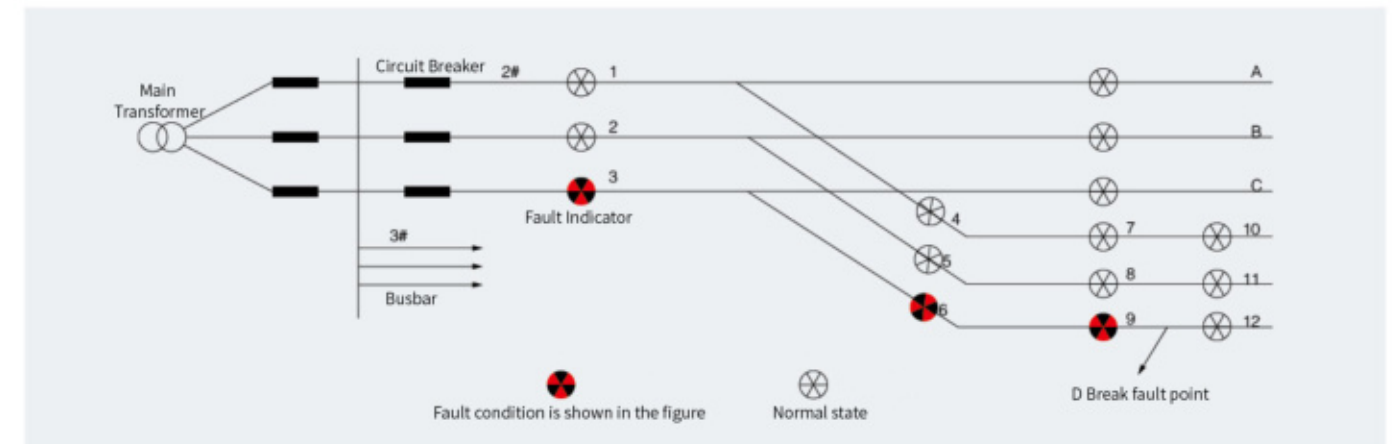
Grounding detection principle and positioning

For overhead lines, when single-phase grounding occurs, according to different grounding conditions (such as metal grounding, high resistance grounding, etc.), there will be a variety of complex transient phenomena, including line-to-ground distributed capacitive discharge current, grounding line-to-ground voltage drop. Based on the above, the grounding criteria used by our products are as follows:

- (1) the line has electricity.
- (2) there is a sudden increase of transient capacitive current in the line: the transient capacitive current at the moment of grounding is greater than a certain value.
- (3) the voltage of grounding line is reduced by more than 3kV .
- (4) No power outage on the line.

When the above four conditions are met at the same time, the detection terminal judges that the location has a grounding fault.

For cable lines, the zero sequence current detection method is adopted. Set the start-up value before leaving the factory and put it on the in and out cable. In the event of a grounding fault, the zero sequence current value exceeds the set start-up value.



By 2 # line C phase 3, 6, 9 indicator flip to show (or light) and 12 indicator is still not action (not flip or not light), you can determine the point D ground fault.

Rapid fault location

When there is a change in the operating state of the line, such as short circuit, grounding, power outage and power transmission, the fault indicator detects the changed signal and determines whether the line is faulty, and all indicators on the fault circuit of the substation before the fault point will act. and give instructions on the spot.

2DG

Cable Line Fault Indicator



Overview

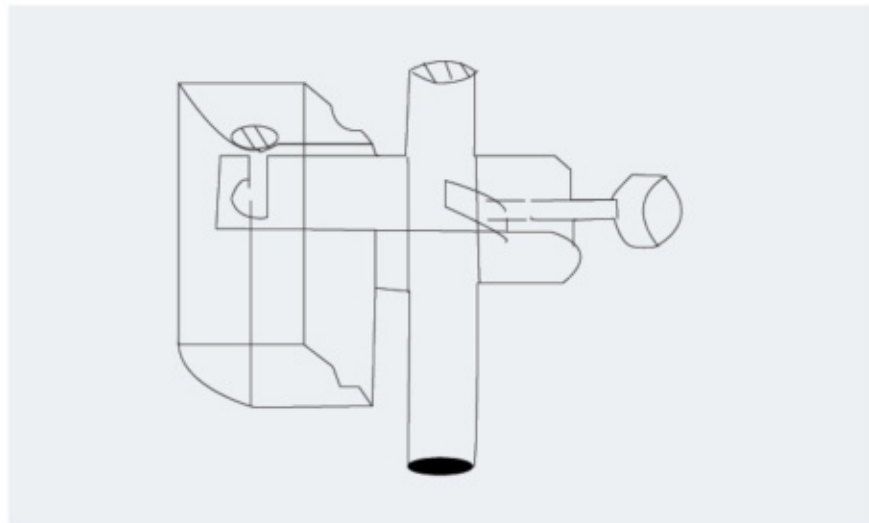
2DG fault indicator (hereinafter referred to as indicator) is a newly developed high-tech product, which is suitable for the detection and indication of cable short-circuit faults such as cable branch box and ring network switch-gear. The indicator is embedded with advanced microchip, which has the advantages of intelligence and low power consumption. There are 1 switch and 2 indicator lights on the indicator surface, the middle one is the photosensitive switch, the green light is the normal state indication, and the red light is the fault status indication. The photosensitive switch of the indicator indicates the status of each contact (from no light to light state). The line is in normal state, the indicator passes self-test and the green light flashes for about 30 seconds and then stops automatically. When a short-circuit fault occurs on the line, the indicator detects the short-circuit current and carries on the operation to memorize the fault state. In the automatic reset time, the red light flashes for about 3 minutes and then stops automatically. Outside the automatic reset time, the indicator automatically resets and clears the fault record.

Technical parameters

- ◆Short-circuit action current: $\geq 800A$ (error ± 10 , can be adjusted according to demand)
- ◆Short circuit action response time: $0.02 \leq T \leq 4S$
- ◆Working environment range: $-40^{\circ}C - +85^{\circ}C$
- ◆Working power: built-in 2000 ma lithium battery, service life of 8-10 years, voltage 3 volts
- ◆Automatic reset time: 12 hours (optional, user can determine at the time of ordering)
- ◆Cable range: cable diameter (with outer skin) $\leq 35mm$

Installation

Before installation, please make sure the indicator can work properly: before use, please remove the black tape on the indicator photosensitive switch and expose it to the light, the green light will stop flashing after about 3 seconds as the normal state. When the indicator is not used for a while and needs to be removed, please cover the photosensitive switch with black tape and store it. Remove the "U" clamp from the indicator, place the indicator on the cable, let the "V" slot of the indicator bite into the cable, with the panel with the indicator facing the direction of easy observation, and put the "U" clamp back on the cable. Put the "U" clamp back on the indicator, the cable is now in the "U" clamp, tighten the bolt on the "U" clamp until the indicator cannot slip off the cable.



Note

Photosensitive switch triggering: Users can trigger the photosensitive switch by pressing the photosensitive switch hole with their hands and then exposing to the light. When the light is very weak (such as at night or in a culvert), it is better to bring your own flashlight to shine on the photosensitive switch to strengthen the light intensity. Otherwise, the photosensitive switch may not be able to be triggered.

2DX

Cable Line Fault Indicator



Overview

2DX Fault Indicator is a newly developed high-tech product for real-time monitoring of cable short circuit and single-phase ground fault in cable branch boxes and ring switch-gear. The indicator is embedded with an advanced microchip. With the advantages of intelligence and low power consumption, when a fault occurs in the line, the staff can quickly determine the fault section and find the fault point with the help of the alarm indication of the indicator. The indicator automatically identifies the sudden change of current, without setting the fault current. The indicator detects the sudden change of current and conducts arithmetic processing to memorize the fault state, while the indicator has two ways of displaying the fault: flip-flop and indicator. During the automatic reset time, the indicator flips and flashes continuously, and the indicator is automatically reset after 24 hours of automatic reset or one minute of normal power supply after the line fault is removed.

The indicator provides the best solution for fault investigation, which is of great importance to improve efficiency, shorten outage time and quickly restore power supply.

Technical parameters

- ◆Applicable voltage level: $U \geq 6kV$
- ◆Applicable wire current: $I \geq 10A$
- ◆Applicable wire diameter: $5 \leq d \leq 45mm$
- ◆Action response time: $0.03 \leq t \leq 3s$
- ◆Action times: ≥ 5000 times
- ◆Static power abundance: $E \leq 10Uw$
- ◆Display mode: flip sign and luminous display at the same time (500m 360°C range)
- ◆Fault reset time: 6, 12, 24, 36 (h) optional
- ◆Long-term withstand current: 600A
- ◆Short-term withstand current: 30KA(3S)
- ◆Current sampling range: 0-800A
- ◆Current sampling accuracy: $\pm 5\%$

Use environment

- ◆Working altitude: $\leq 3000m$
- ◆Ambient temperature: $-30^{\circ}C - +75^{\circ}C$, maximum temperature difference: $25^{\circ}C$
- ◆Working environment humidity: $\leq 99\%$ (relative humidity)
- ◆Seismic capacity: seismic intensity 8 degrees ground horizontal acceleration 0.3g
- ◆Ground vertical acceleration 0.15g, while the action lasts three sine waves
- ◆Security factor 1.67

EKL4(JD)

Panel Type Ground Short Circuit Fault Indicator



Overview

With the extensive use of ring network switch-gear and cable branch box in the power grid, the problem of how to find the cable fault section in time becomes more and more prominent. EKL4 short circuit and ground fault indicators provide the best way to solve this problem. The EKL4 short circuit and ground fault indicator can be installed on the ring network switch-gear and cable branch box in the 6KV-36KV distribution network system to indicate the time short circuit and single-phase ground fault in the corresponding cable section. When a short circuit or ground fault occurs in the ring network system, all fault indicators between circuit breaker An and the fault point pass through the fault current. After the indicator detects the fault current, the host indicator flashes and gives an alarm, while the indicator between the fault point and the normal open point is in a normal state (no flicker, no alarm) because it does not pass through the fault current. The line maintenance personnel can judge the fault section in time according to whether the indicator lights are flashing or not.

Main function

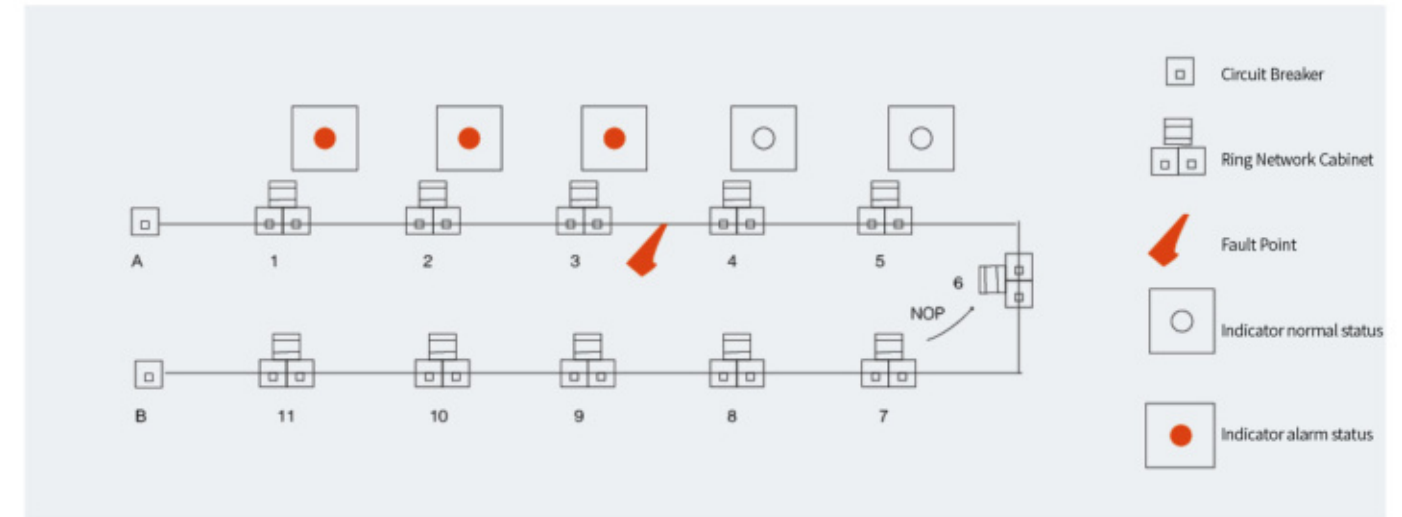
- ◆Short-circuit fault alarm prompt: the short-circuit fault sensor is installed on the single-phase cable to monitor the current change in the power supply line all the time. When current reaches or exceeds the short-circuit current action alarm setting value (which can be set before leaving the factory according to user requirements), the short-circuit fault sensor sends out an alarm signal, which is sent to the indicator host through the optical fiber, and the corresponding short-circuit fault indicator flashes and sends out an alarm indication.
- ◆Ground fault alarm indication: the ground fault sensor is installed on the unshielded part of the three-phase cable bifurcation to detect the zero sequence current of the three-phase cable. When the current reaches or exceeds the ground current action alarm setting value (this current can be set before leaving the factory according to user requirements), the short-circuit fault sensor sends out an alarm signal, which is mentioned that the optical fiber transmits this signal to the indicator host. The ground fault indicator flashes and send out alarm instructions.
- ◆Low battery alarm indication: when the internal battery voltage of the indicator host is reduced to 2.7V, an alarm signal is generated to prompt the maintenance personnel to replace the battery, which can last for about two months. The indicator is equipped with an external power supply interface and an external source can be used.

Technical parameters

- ◆Short circuit action current: 400~1500A optional (accuracy $\pm 10\%$) delay time 20~300ms can be determined by the user at the time of order (default factory calibration value is 800A, 20ms);
- ◆Grounding action current: 5~50A optional (accuracy $\pm 10\%$) delay time 20~300ms optional, determined by the user at the time of order (default factory calibration value is 15A, 20ms);
- ◆Short circuit sensor cable diameter: cable outside diameter $\leq 40\text{mm}$ (other specifications are customized);
- ◆Grounding sensor snap wire diameter: cable outside diameter $\leq 120\text{mm}$ (other specifications are customized);
- ◆Working environment: $-40^{\circ}\text{C}\sim 75^{\circ}\text{C}$, relative humidity $\leq 95\%$ RH waterproof, acid-proof, salt spray-proof;
- ◆Working power supply lithium battery power supply or AC (DC (5V~10V) $\pm 15\%$);
- ◆Remote signal contact capacity: AC220V/1A;
- ◆Remote signal contact reset mode: manual button reset/automatic reset.

EKL4(JD)

Panel Type Ground Short Circuit Fault Indicator



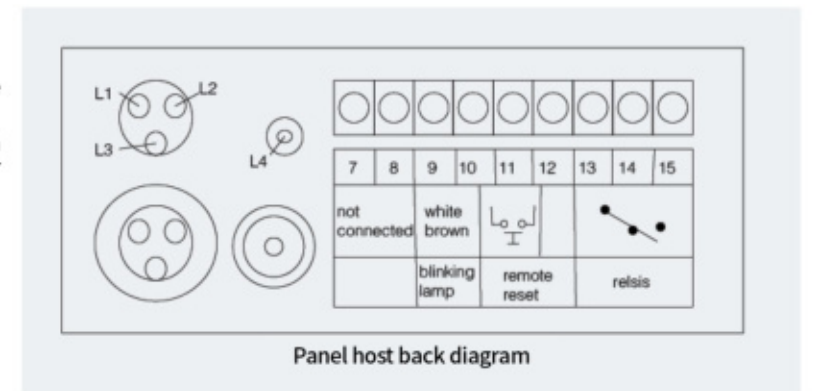
As shown in the figure, the fault occurs between No. 3 and No. 4 ring network cabinets, so disconnect the load switch of No. 3 cabinet and close the circuit breaker A, then the power supply of No. 1,2,3 ring network cabinet and its branch system will be restored, while the power supply of No. 4 and No. 5 cabinets will be realized by closing the normal open point of No. 6. In this way, the isolating switch is only a section of faulty cable, so as to ensure that all loads can be restored in time.

The speed and efficiency of using fault indicator to find fault section is much higher than that of traditional dichotomy and on-off gate trial power supply method, and there are no risks brought by these traditional methods (such as injury accidents caused by insulation test). It is a good way to improve the reliability of power supply.

Technical parameters

Host

- ◆Automatic reset time: 1s~40h, continuously adjustable (factory rectified), accuracy $\pm 1\%$
- ◆Working power supply: 3.6V high-efficiency lithium battery power supply, the host has an alarm function for battery replacement
- ◆Working current: $< 5\mu\text{A}$
- ◆Alarm indication working current: $< 0.5\text{mA}$
- ◆Battery working life: ≥ 5 years
- ◆Capacity of remote hand output relay: 230VAC/2A



Working conditions

- ◆Ambient temperature: $-40^{\circ}\text{C}\sim 75^{\circ}\text{C}$
- ◆Ambient humidity: $\leq 95\%$ (relative humidity), no condensation
- ◆Maximum withstand current of short-circuit fault sensor: thermally stable 20KV/4s, dynamically stable 50KV/0.3s
- ◆Host size: $96 \times 48 \times 80\text{mm}$

Sensor

- ◆Short-circuit fault alarm current: $\geq 150\text{A}$ continuously adjustable (factory set)
- ◆Accuracy: full temperature range error $< \pm 10\%$
- ◆Delay time: 20~300ms adjustable (factory set)
- ◆Grounding fault alarm current: use with neutral point not grounded or small current
- ◆Grounding system 10A~40A continuously adjustable (factory set)
- ◆Accuracy: full temperature range error $< \pm 10\%$

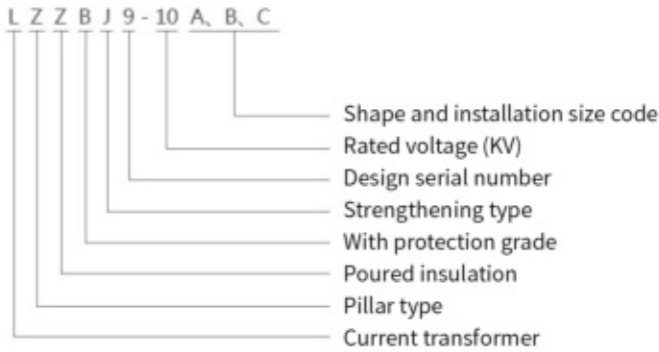


Transformer Series

LZZBJ9-10 Current Transformer



Model meaning

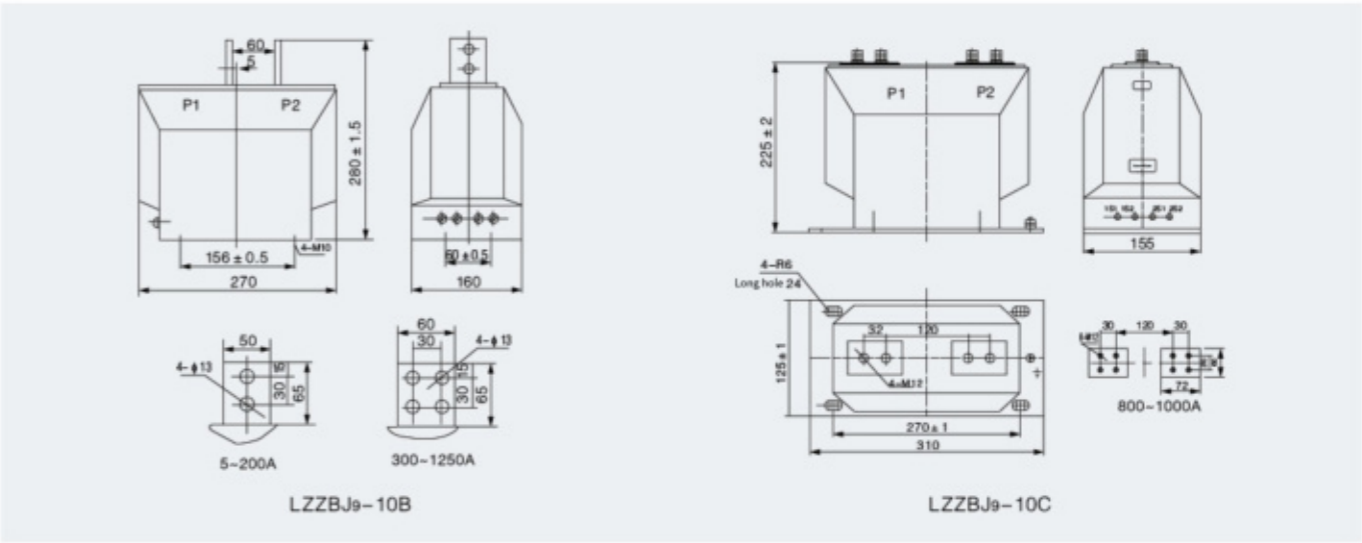


Main technical parameters

Model number	Rated current ratio (A)	Level combination	Accuracy level and rated output (VA) $\cos\Phi=0.8$				One second thermal stabilization current	Dynamic stable current
			0.2S	0.2	0.5	10P15		
LZZBJ9-10B LZZBJ9-10C	5/5	0.2S/10P15 0.2/10P15 0.5/10P15 0.2S/0.5/10P15 0.2/0.5/10P15	10	10	10	15	0.8	1.9
	10/5		10	10	10	15	1.5	3.8
	15/5		10	10	10	15	2.3	5.8
	20/5		10	10	10	15	3	7.5
	30/5		10	10	10	15	4.5	11.2
	40/5		10	10	10	15	6	15
	50/5		10	10	10	15	7.5	18.8
	75/5		10	10	10	15	11.5	29
	100/5		10	10	10	15	15	37.5
	150~200/5		10	10	10	15	22.5	56.5
	300~600/5		10	10	10	15	45	112.5
	800~2500/5		10	10	10	15	63	157.5

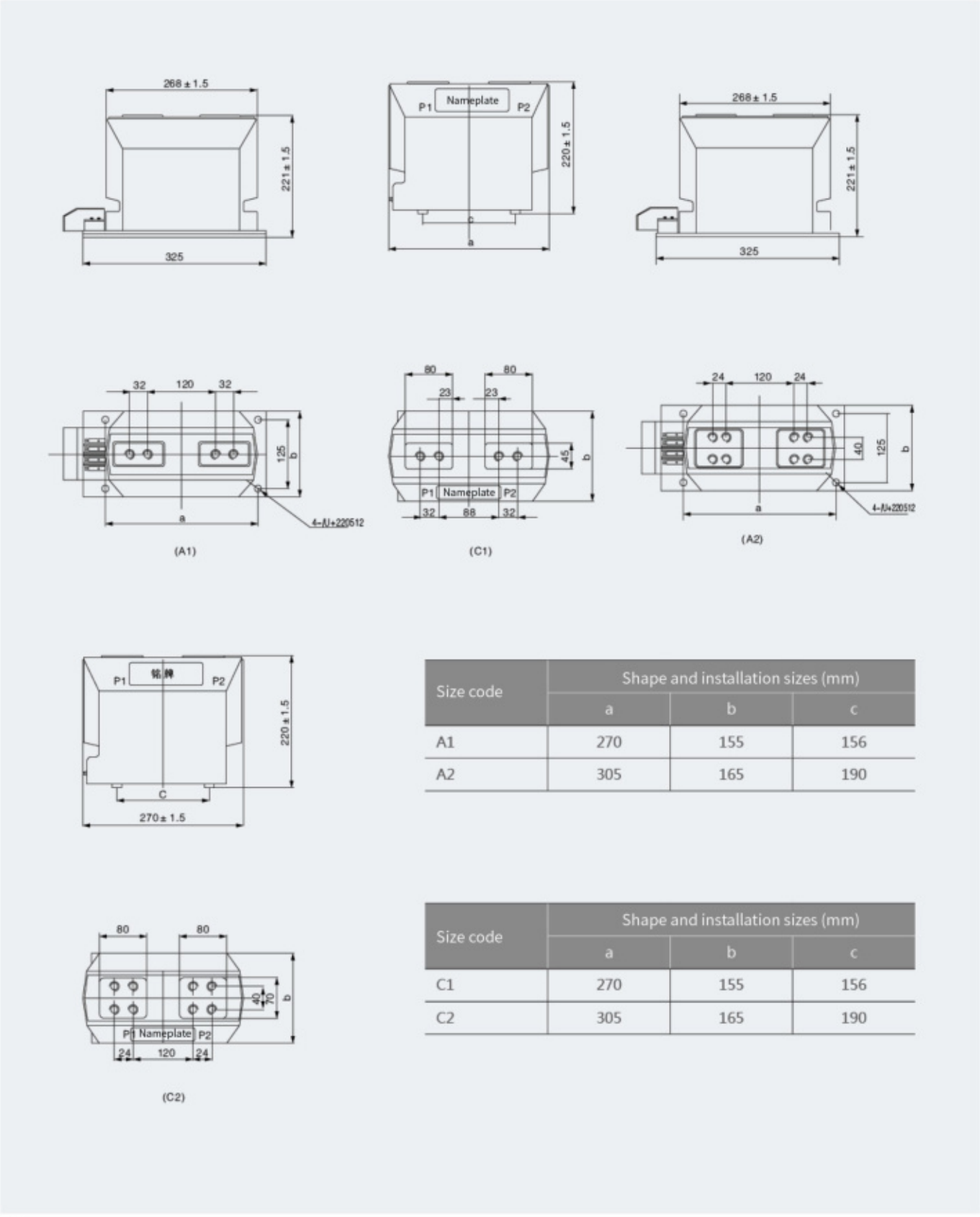
Note: Users can consult with our company if they have special requirements, and dynamic thermal stability can be determined according to user requirements.

Shape and installation sizes (mm)



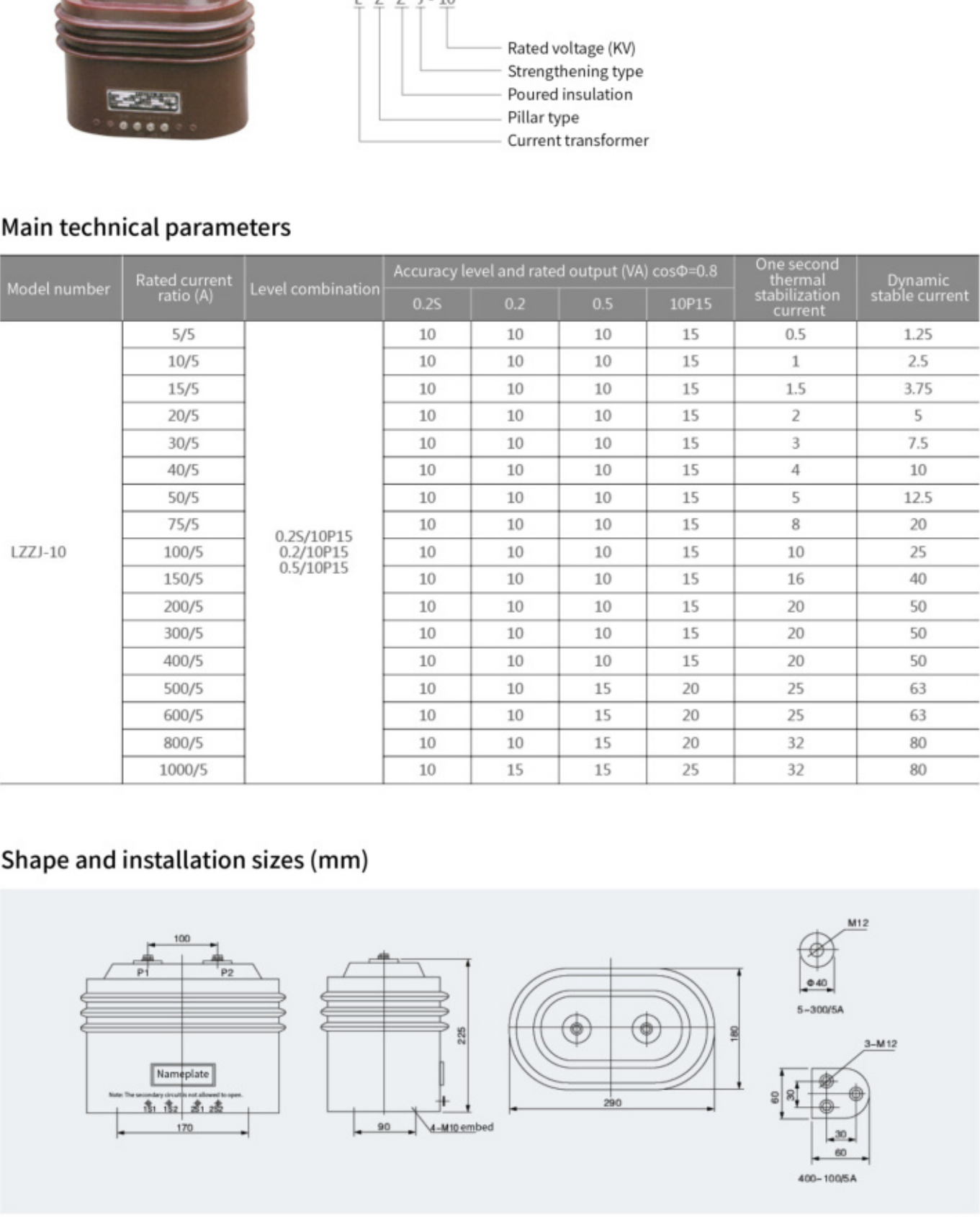
LZZBJ9-10
Current Transformer

Shape and installation sizes (mm)

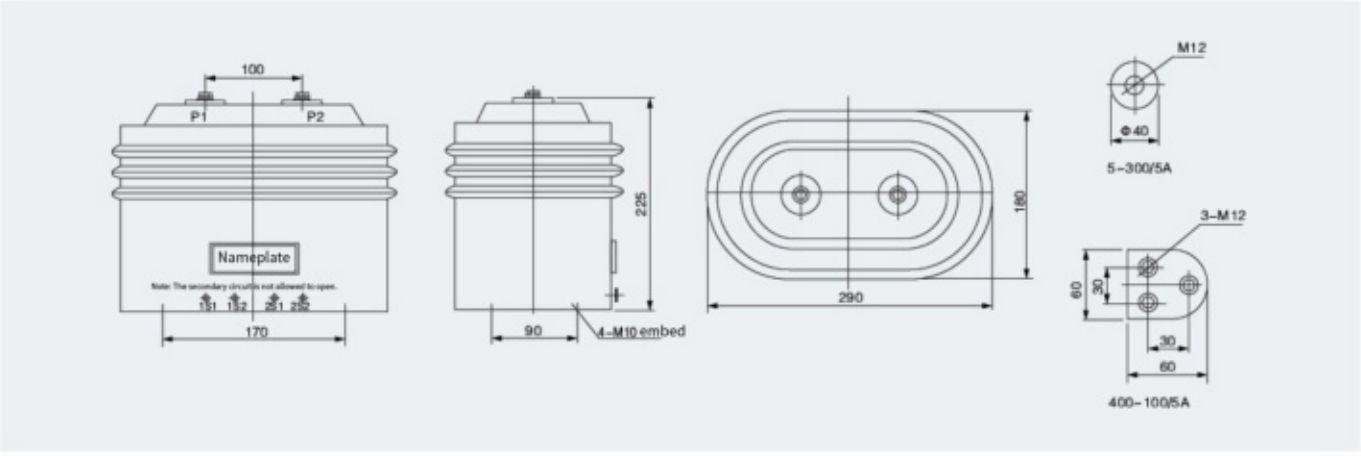


LZZJ-10
Current Transformer

Shape and installation sizes (mm)

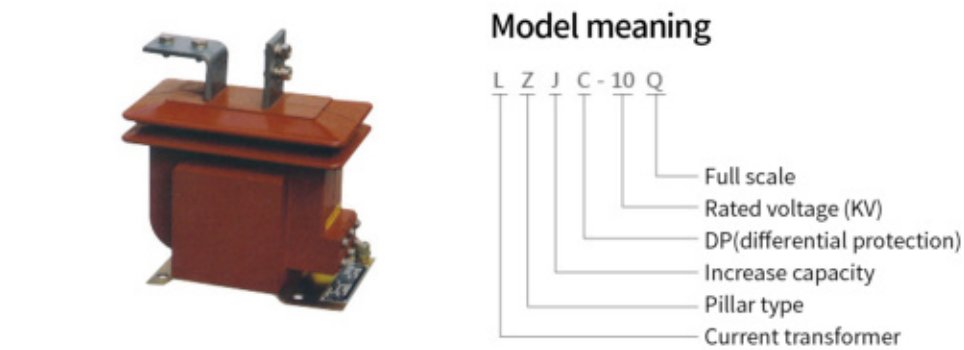


Shape and installation sizes (mm)



LZJC-10Q

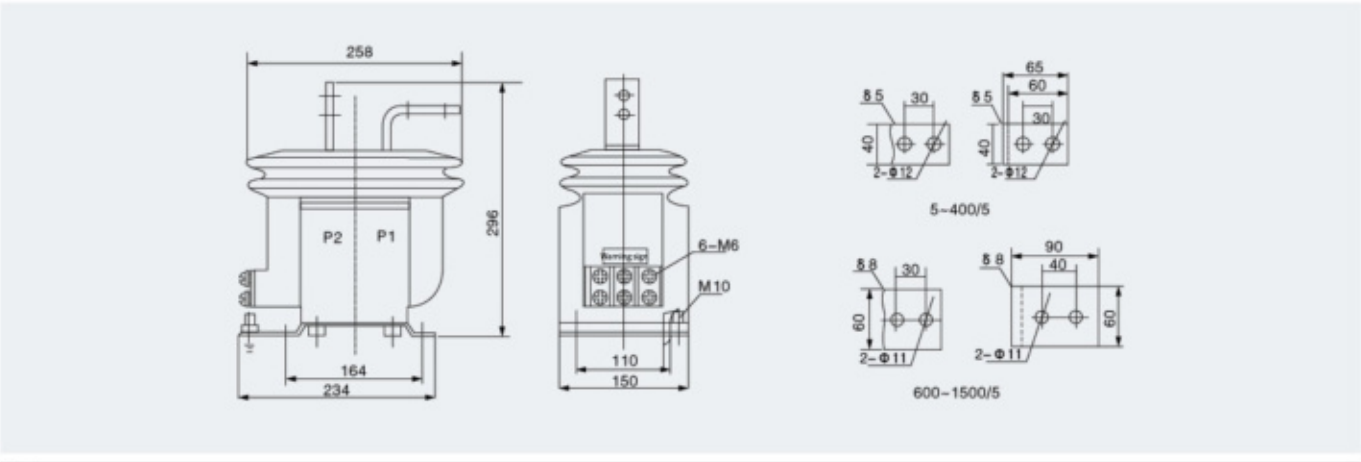
Current Transformer (LZJ-10 fully enclosed type)



Main technical parameters

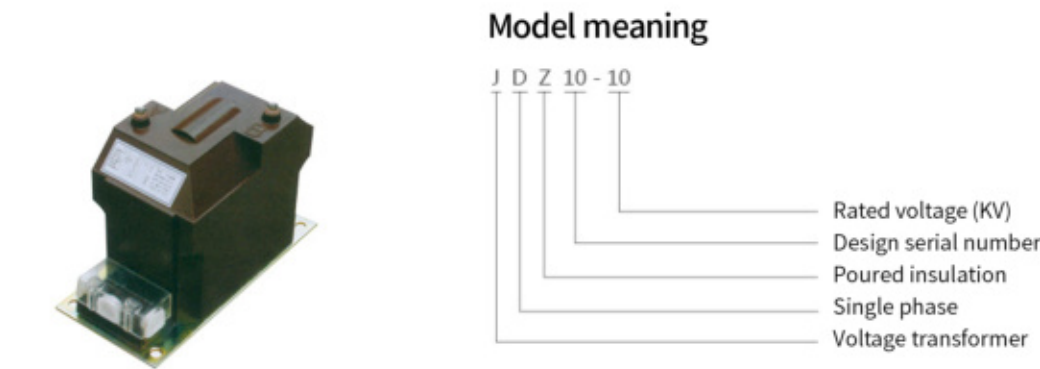
Model number	Rated current ratio (A)	Level combination	Accuracy level and rated output (VA) cosΦ=0.8				One second thermal stabilization current	Dynamic stable current
			0.2S	0.2	0.5	10P15		
LZJC-10Q	5/5	0.2S/10P15 0.2/10P15 0.5/10P15	10	10	10	15	0.4	0.8
	10/5		10	10	10	15	0.8	1.5
	15/5		10	10	10	15	1.1	2.3
	20/5		10	10	10	15	1.5	3
	30/5		10	10	10	15	2.3	4.5
	40/5		10	10	10	15	3	6
	50/5		10	10	10	15	3.8	7.5
	75/5		10	10	10	15	5.6	11.3
	100/5		10	10	10	15	7.5	15
	150/5		10	10	10	15	11.3	23
	200/5		10	10	10	15	15	30
	300/5		10	10	10	15	22.5	45
	400/5		10	10	10	15	30	60
	600/5		10	10	10	15	30	60
	800/5		10	10	10	15	40	80
	1000/5		10	10	10	15	45	90
	1500/5		10	10	10	15	45	90

Shape and installation sizes (mm)



JDZ10-10

Voltage Transformer

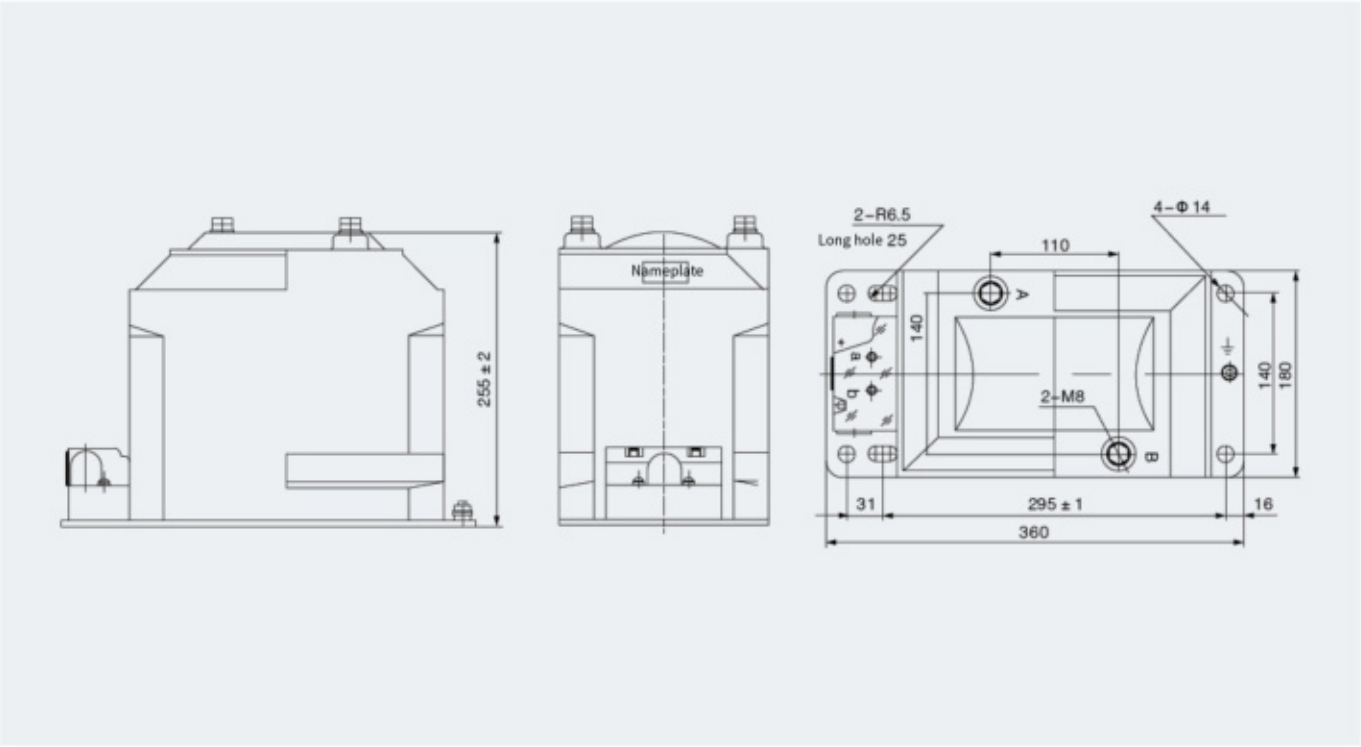


Main technical parameters

Model number	Rated voltage ratio (A)	Accuracy level and rated output (VA) cosΦ=0.8					Ultimate output	Rated insulation level
		0.2	0.5	1	3P	3P 6P		
JDZ10-10 (RZL10)	6000/100	15	30	60	50	50	200	7.2/32/60
	10000/10	15	30	60	50	50	200	12/42/75

Note: IF the user has special requirements, you can negotiate with our company to determine, dynamic and thermal stability can be according to the user's requirements.

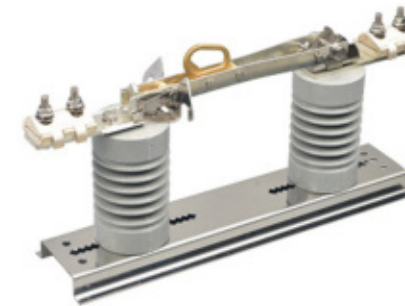
Shape and installation sizes (mm)





GCD-12kV

Outdoor High Voltage Isolating Switch



Product description and structure

The GCD isolating switch is an outdoor single-phase isolating switch on the column, which provides a visible fracture for maintenance personnel and can also be used as a break point. The structure is a double-column isolating switch, and the insulators and bolts are locked on a hot-dip galvanized base, and the isolating switch can be operated by pulling the ring. After the isolation knife is opened, the limit is 160 degrees by default (it can be changed to 90 degrees in the field or removed to unlimited position). When installing the GCD isolating switch, you can choose to install the backplane, which can be clamped on the cross arm to fix the switch.

Technical parameters

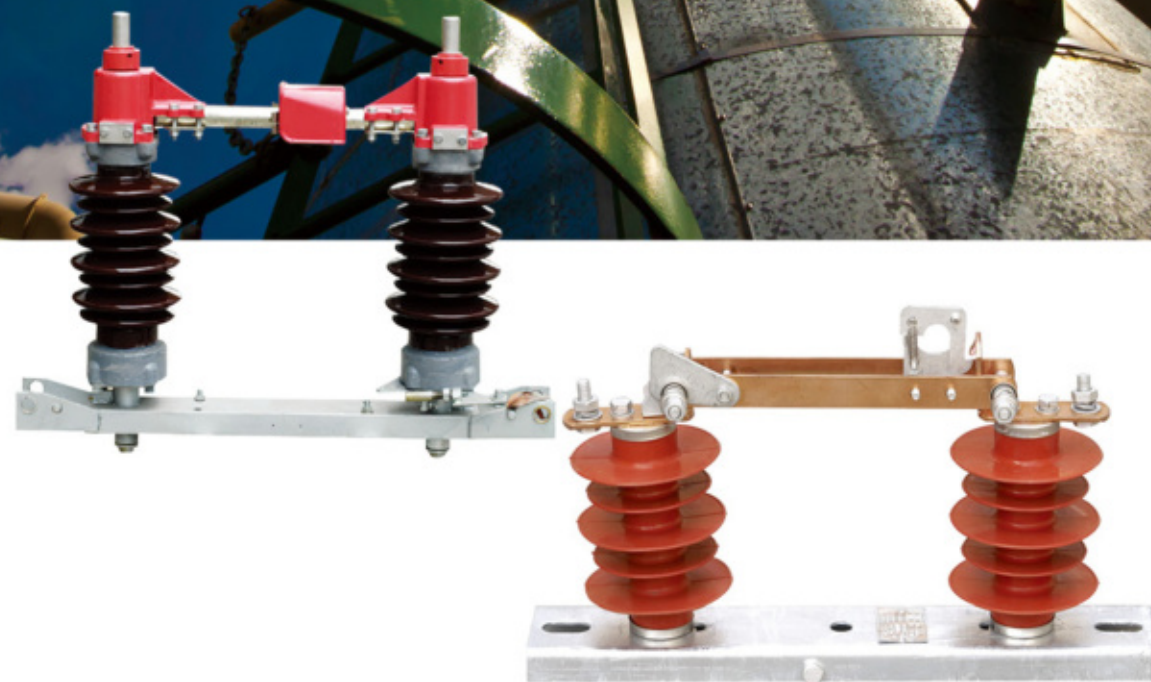
GCD isolating switch is used in 12KV distribution network with rated current of 630A, short-term withstand current 20KA/4S, peak withstand current 50KA, power frequency and lightning impulse withstand voltage can reach the level of 2000 meters above sea level.

Security matters

- ◆The person responsible for the installation, maintenance and operation of the isolating switch shall hold the operating instructions.
- ◆Follow your company's safety procedures.
- ◆Please read the operating instructions carefully before preparing to install, maintain and operate the isolating switch, so as not to misoperate the switch and cause unnecessary casualties.
- ◆The switch must be operated and maintained by professionals who are familiar with safety procedures. The manual is only used as a reference for operation and maintenance personnel, and can not be used as a substitute for safety training and internship of this kind of equipment.

Operation

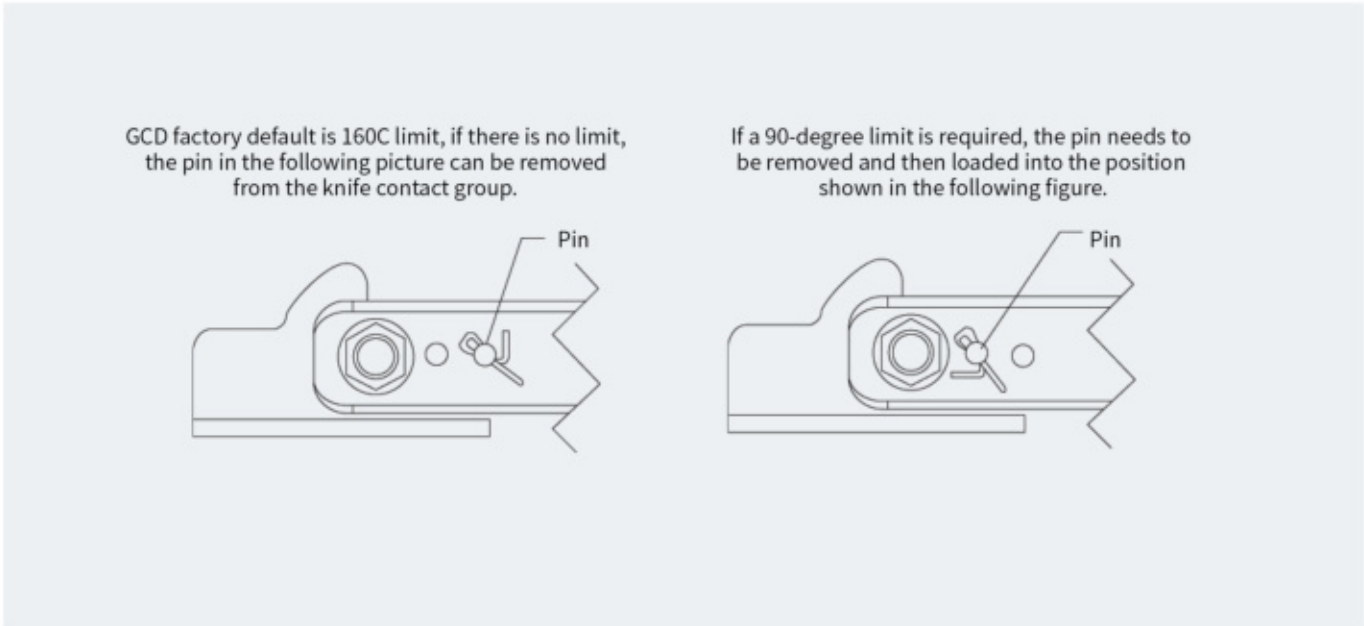
- ◆GCD isolating switch is a kind of high voltage equipment, which is usually operated by standard power insulation tools and operated correctly and safely.
- ◆The operator should use the insulated pull rod to pull the ring on the GCD, and the opening and closing operation of the GCD isolating switch should be carried out under no load.
- ◆The double-column isolating switch, insulators and bolts are locked on a hot-dipped low seat, and the isolating switch can be operated by pulling the ring.
- ◆After the isolation knife is opened, the limit is 160 degrees by default (it can be changed to 90 degrees or removed to unlimited position).
- ◆When installing the GCD isolating switch, you can choose to install the backplane, which can be clamped on the cross arm to fix the switch.



Outdoor High-Voltage Isolation Switch Series

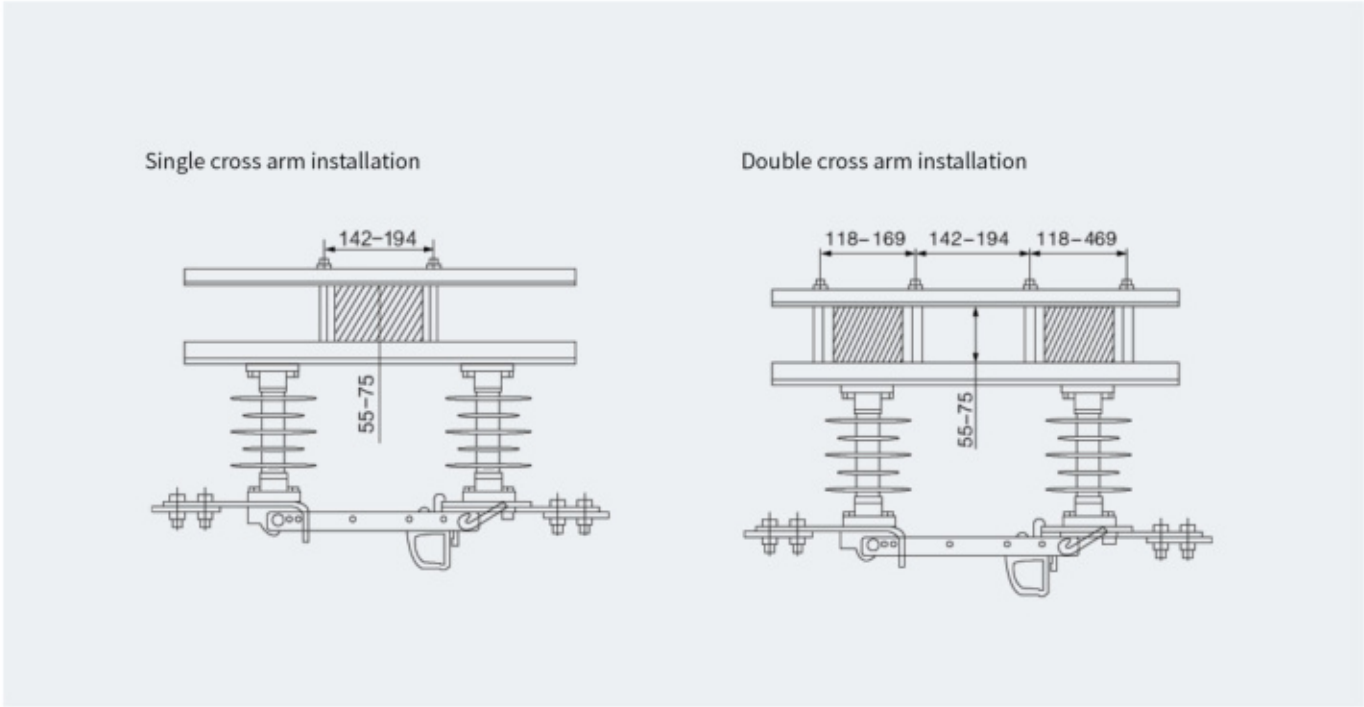
GCD-12kV
Outdoor High Voltage Isolating Switch

Limit mode



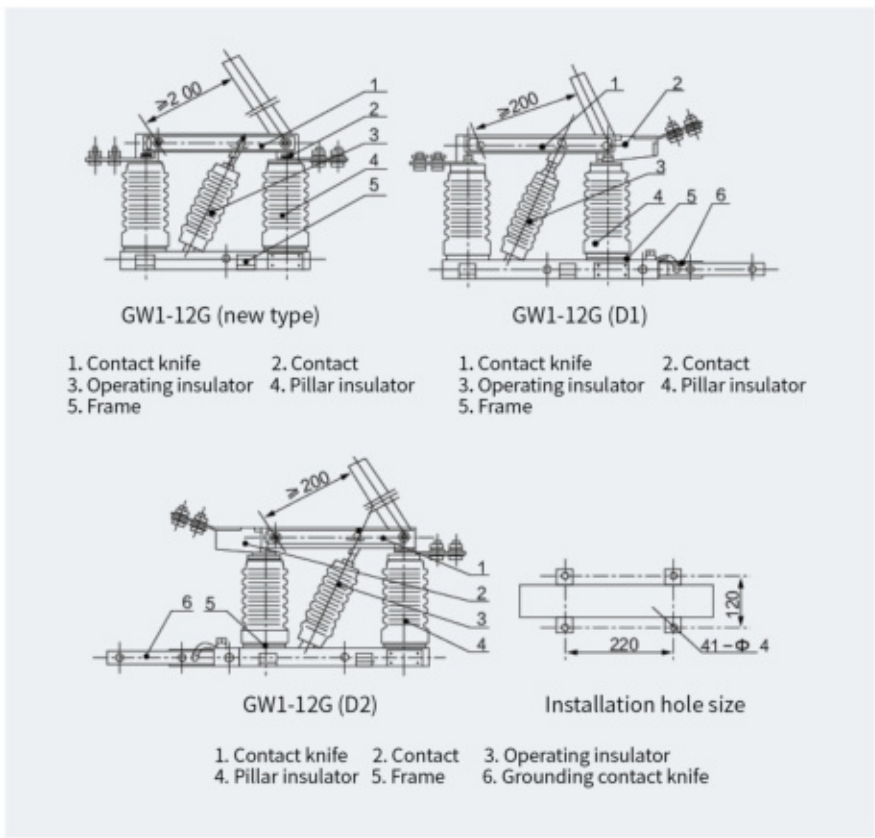
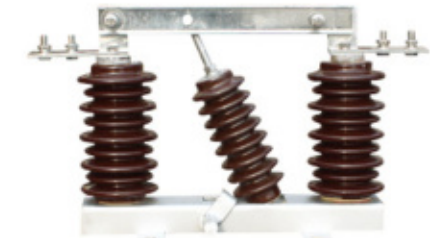
Installation mode

- ◆GCD isolating switch can be installed with single column or double column; the installation form can be divided into suspension installation or vertical installation; single cross arm clamp or double cross arm can be used for installation.
- ◆The M12 bolt on the wiring terminal should be locked with a torque of approximately 80 N. m by the installer.
- ◆The specific installation method is shown in the following figure, pay attention to the direction of the bolt.

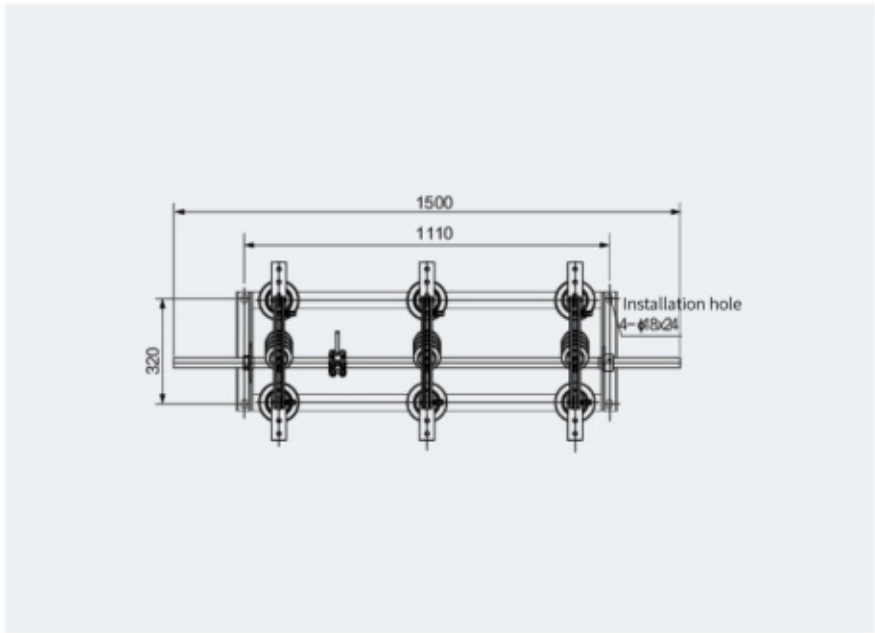


GW1
Outdoor High Voltage Isolating Switch

GW1-12 Outdoor High Voltage Isolating Switch Series



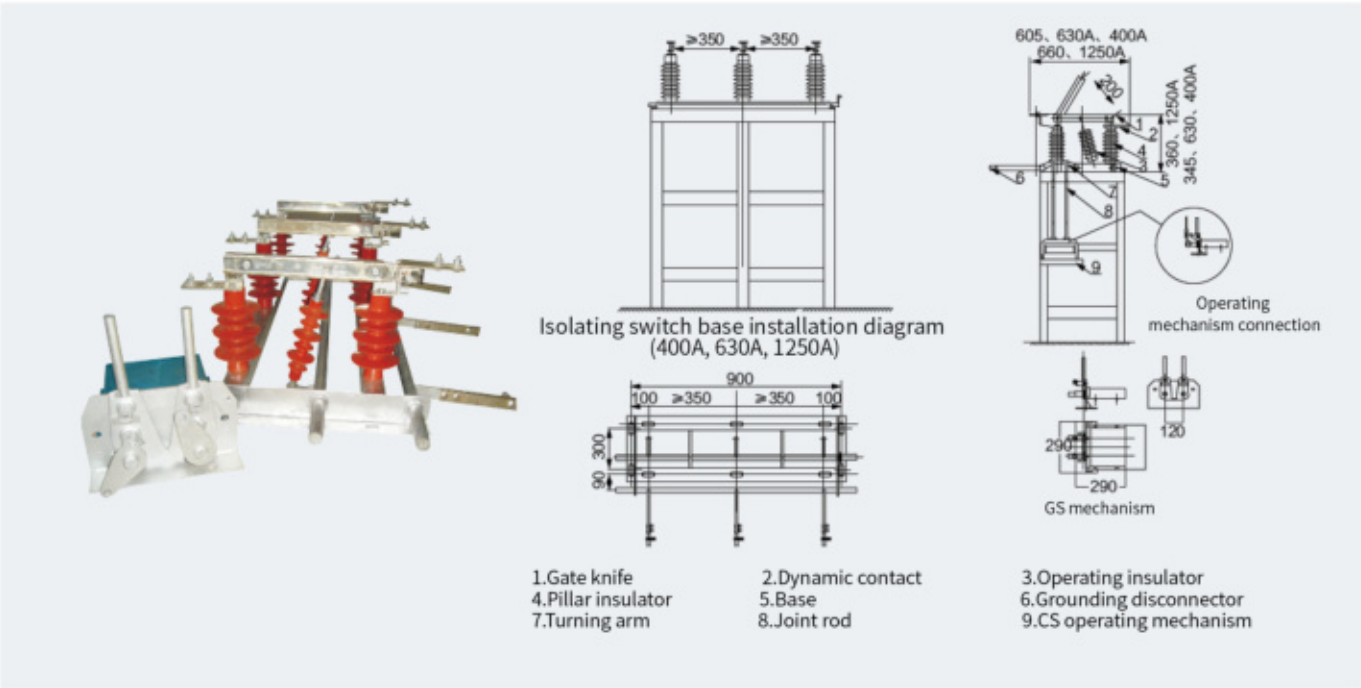
GW-15 Outdoor High Voltage Isolating Switch Series



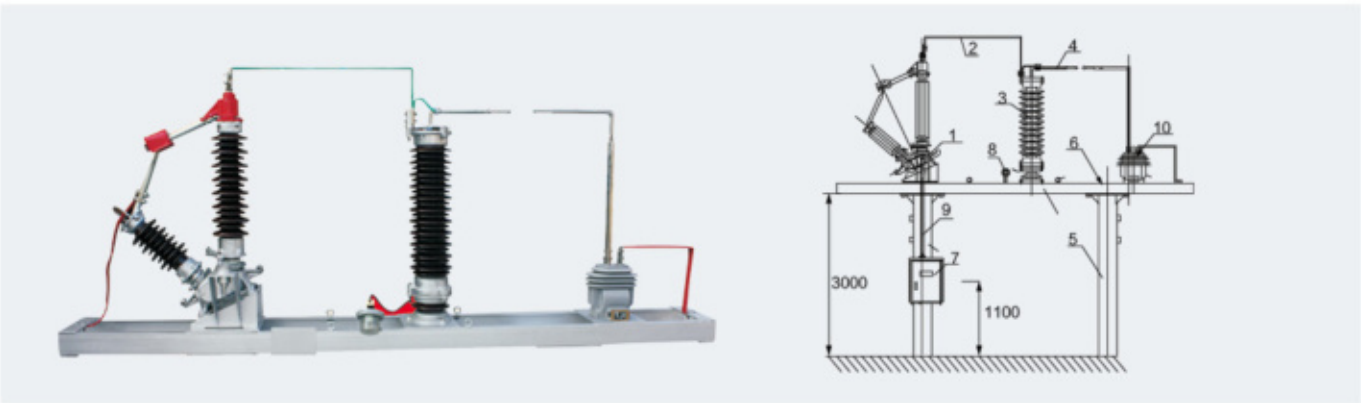
GW1

Outdoor High Voltage Isolating Switch

GW-15D Outdoor High Voltage Isolating Switch Series



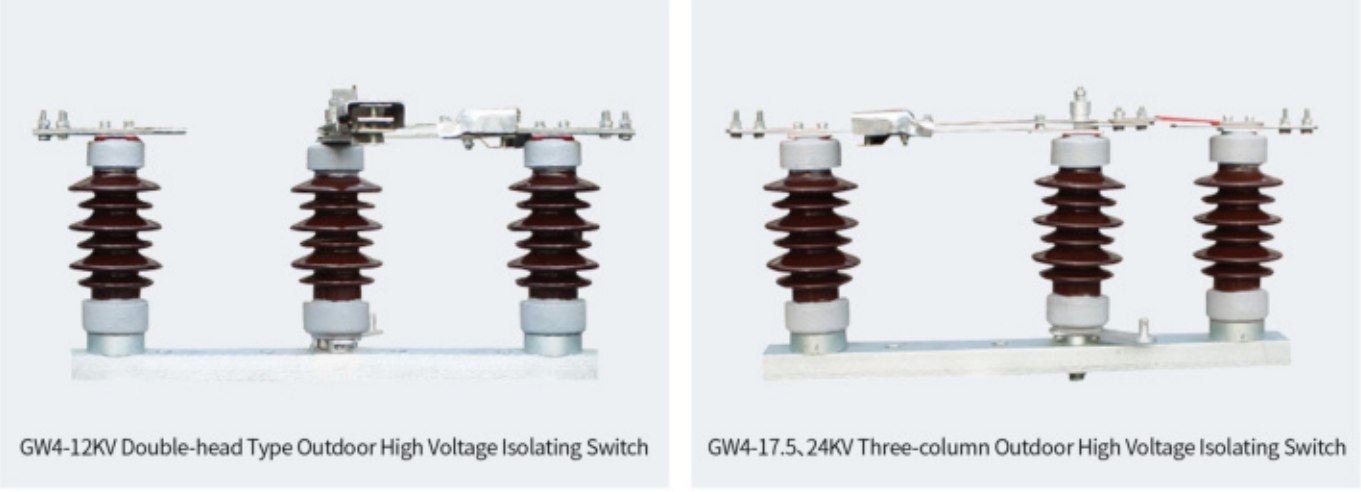
CK-BZJ-110/220 Transformer Neutral Point Complete Equipment Series



Serial number	Project	Unit	Quantity	Remarks
1	GW13-72.5KV isolating switch	piece	1	
2	Connecting copper row	piece	1	
3	72.5KV lightning arrester	piece	1	
4	Discharge gap	piece	1	
5	Mounting pillar	piece	2	Cement column or steel column
6	Body bottom frame2	piece	1	
7	Manual mechanism or electric mechanism	piece	1	User requirements
8	Detector or counter	piece	1	User requirements
9	Connecting water and gas pipes	piece	1	
10	Current transformer	piece	1	User requirements

GW4

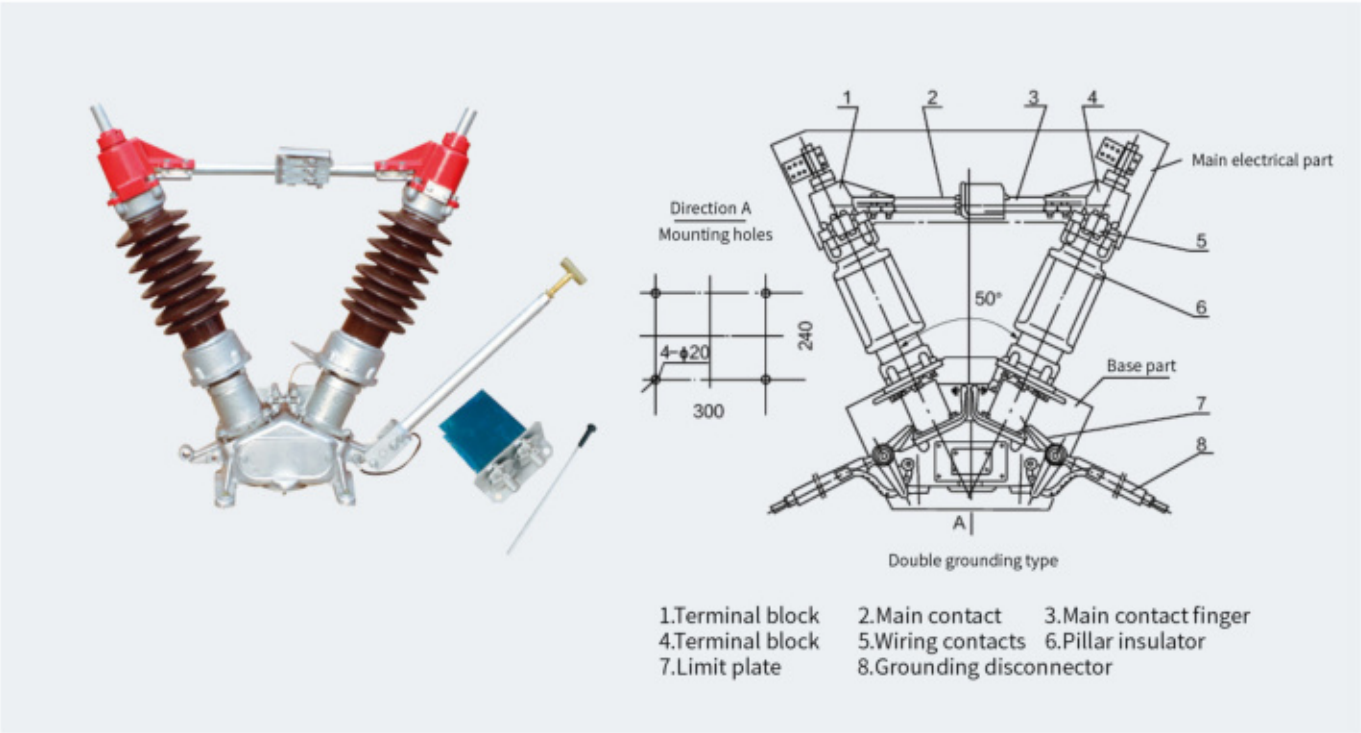
Outdoor High Voltage Isolating Switch



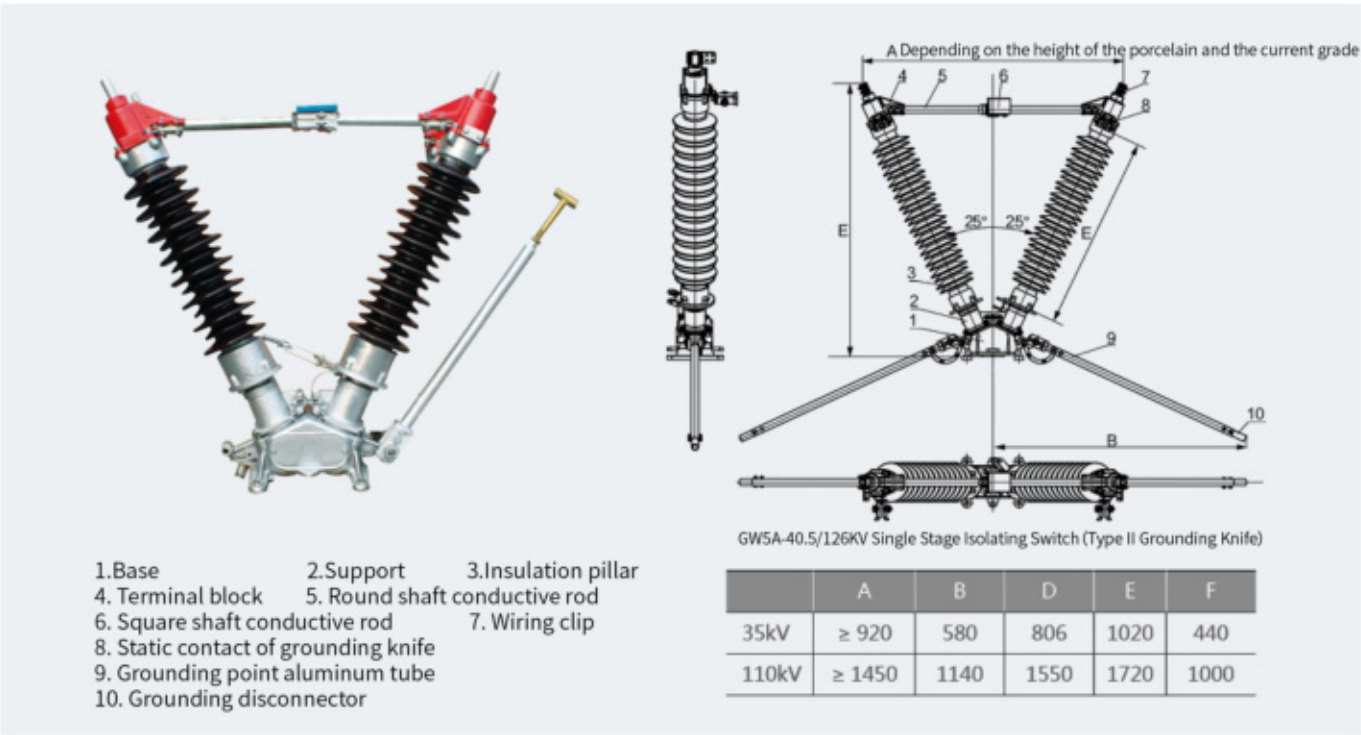
GW5

Outdoor High Voltage Isolating Switch

GW5A-40.5KV Outdoor High Voltage Isolating Switch

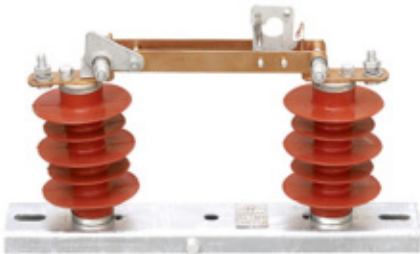


GW5A-72.5、126KV Sophisticated Outdoor High Voltage Isolating Switch



GW9-12

Outdoor High Voltage Isolating Switch



Overview

This product is for single-phase use of three-phase line system, with simple structure, economy and easy to use.

This product is a single fracture vertical open structure, and the monopolize isolating switch pillar insulators are installed on their respective under-frames, which are mainly composed of the base, the support insulator, the main electric circuit part, the self-locking device and so on. The gate knife type structure is adopted to cut off and close the circuit. Each phase knife is composed of two conductive blades, and compression springs are arranged on both sides of the blade. The contact pressure required by the switch knife can be obtained by adjusting the height of the spring.

When opening and closing the switch, the insulated hook rod is used to operate the mechanism part, and the knife has a self-locking device.

Action principles

The isolating switch is operated by insulated hook bar, the insulated hook bar holds the locking hook of the isolating switch, pulls the locking hook to the direction of the separation, and then unlocks the self-locking device and rotates the conductive plate connected with it to realize the separation action.

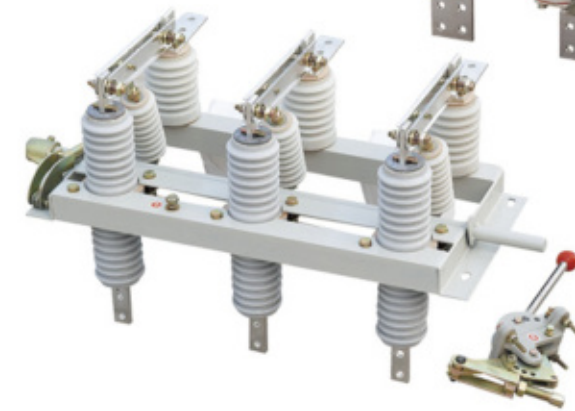
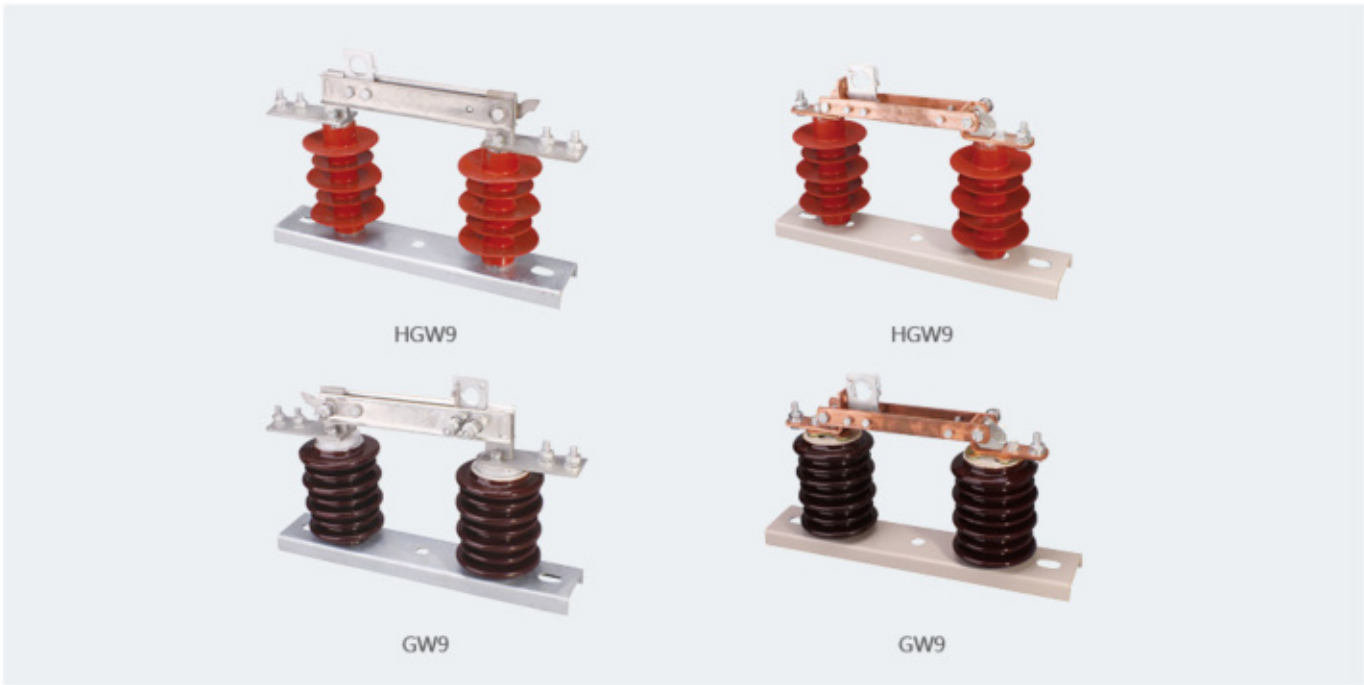
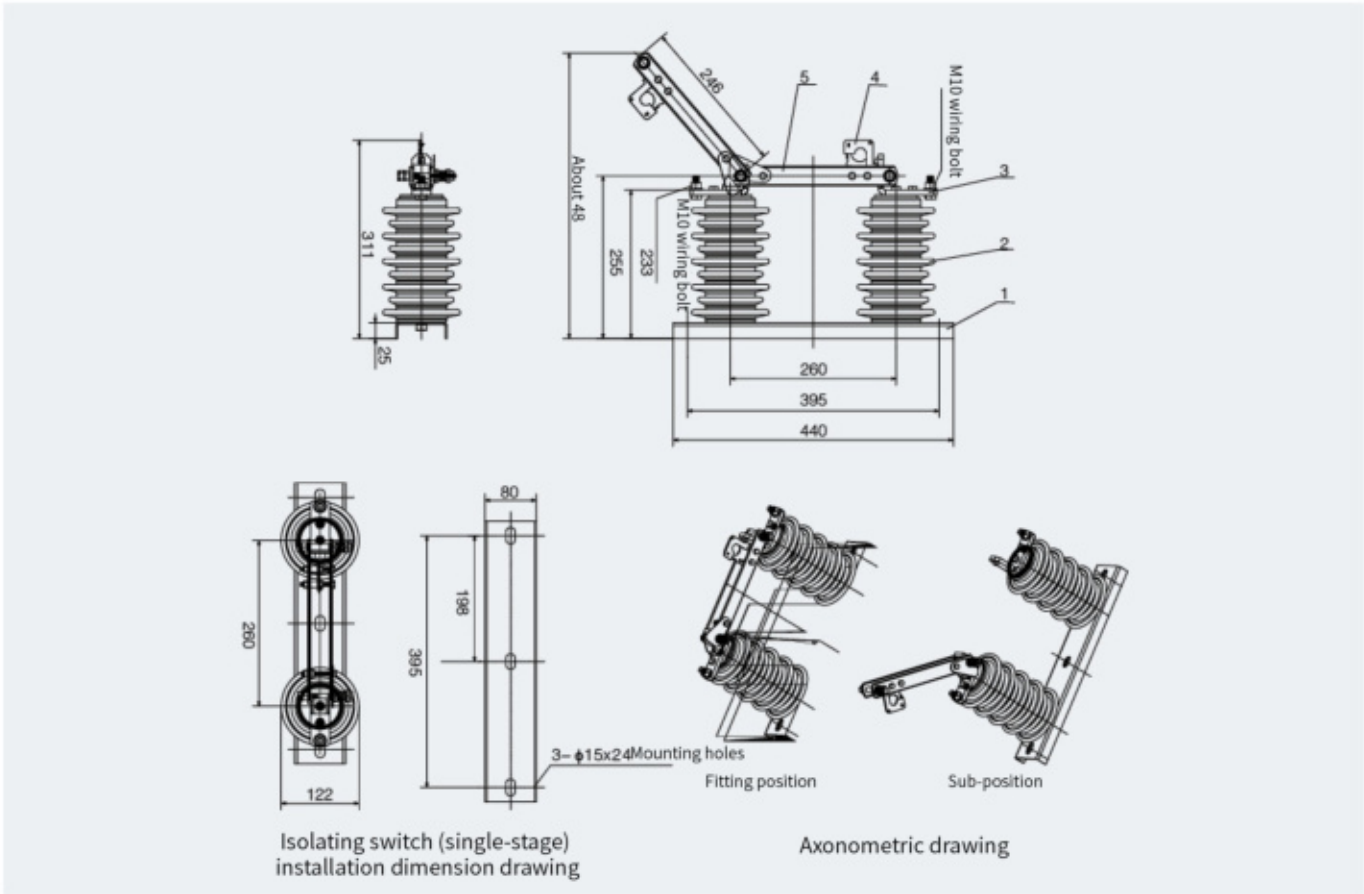
This type of isolating switch can be installed on pillar, wall, ceiling, horizontal frame or metal frame, and can also be installed vertically or diagonally, but the installation position should be such that the contact knife tends to be below when it is opened.

Technical parameters

Project			Unit	Parameter			
Rated voltage			kV	10		15	
Maximum working voltage			kV	12		17.5	
Rated insulation level	1min frequency withstand voltage (RMS)	to ground	kV	42		55	
		Fracture	kV	48		65	
	Lightning surge withstand voltage (peak value)	to ground	kV	75		105	
		Fracture	kV	85		120	
Rated frequency			Hz	50			
Rated current			A	200	400	630	1250
4 seconds rated short-time withstand current			kA	6.3	12.5	20	31.5
Rated peak withstand current			kA	16	31.5	50	80
Creepage distance			mm	300		380	
Mechanical life			次	2000		2000	

GW9-12
Outdoor High Voltage Isolating Switch

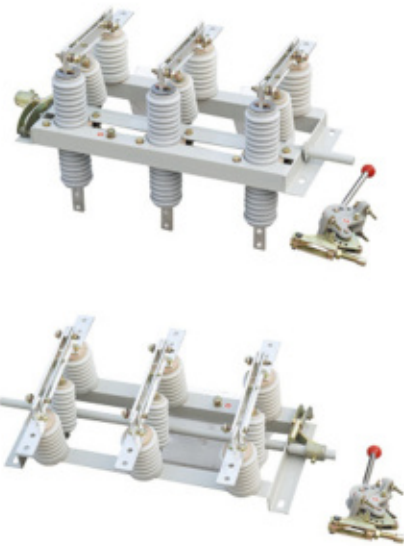
Shape and installation sizes (mm)



Indoor High-Voltage
 Isolation Switch Series

GN19-12

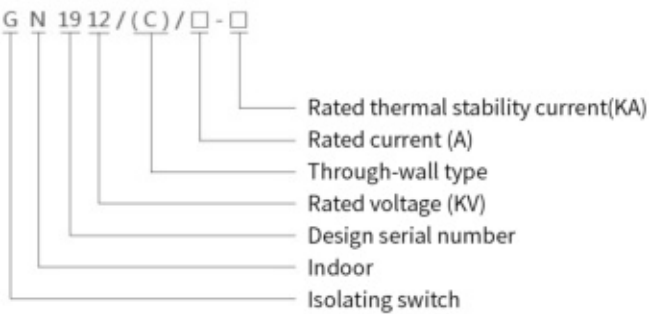
Indoor High Voltage Isolating Switch



Overview

GN19-12 indoor high-voltage isolating switch is a high-voltage switch-gear, which is used in rated voltage 12KV, AC 50Hz and below power systems, equipped with CS6-1 manual operating mechanism, which is used for dividing and closing circuits with voltage but no load, as well as derived products such as anti-fouling type, high prototype and power-equipped electric display devices.

Model meaning



Use Environment

- ◆Altitude: no more than 1000m.
- ◆Air temperature:-25 ℃ ~ + 40 ℃.
- ◆Relative humidity: daily average not more than 95%, monthly average not more than 90%.
- ◆Earthquake intensity: no more than 8 degrees.
- ◆Installation site: no fire, flammable, explosive, serious pollution, chemical corrosion and severe vibration places.

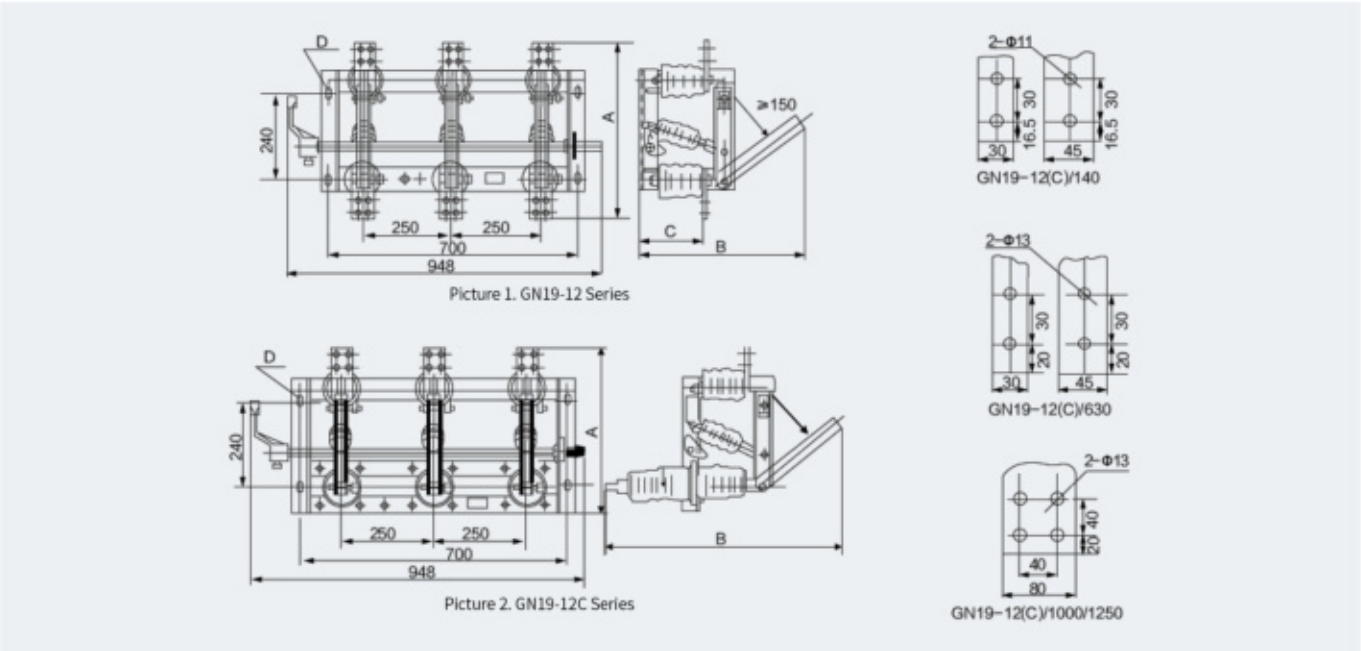
Main technical parameters

Model	Rated voltage (KV)	Rated current (A)	4 seconds thermal stabilization current (KA)	Dynamic stable current (KA)
GN19-10(C)400-12.5	12	400	12.5	31.5
GN19-10(C)630-20	12	630	20	50
GN19-10(C)1000-31.5	12	1000	31.5	80
GN19-10(C)1250-40	12	1250	40	100

GN19-12

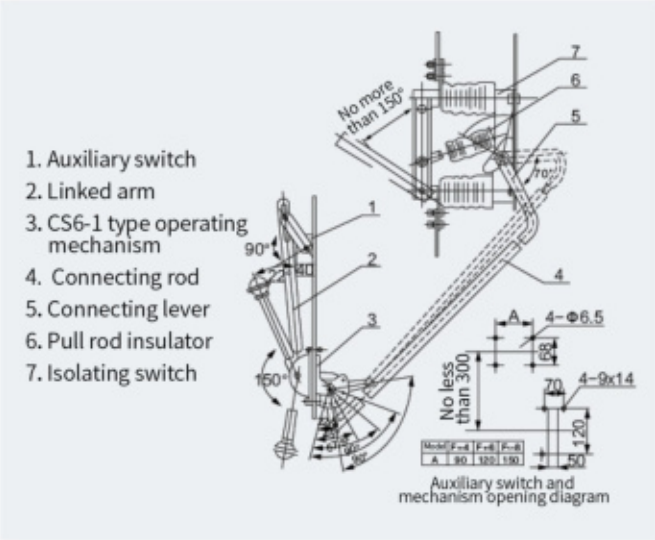
Indoor High Voltage Isolating Switch

Shape and installation sizes (mm)

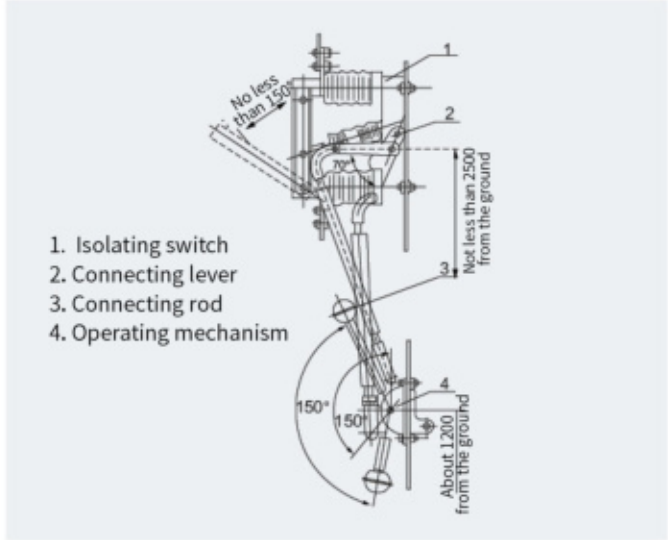


Product Model	A	B	C	D
GN19-12/400	450	446	185	4-14×24
GN19-12/630	470	446	185	4-14×24
GN19-12/1000/1250	510	500	196	4-18×28
GN19-12C/400	420	690	185	4-14×24
GN19-12C/630	430	690	185	4-14×24
GN19-12C/1000/1250	470	745	196	4-18×28

The first installation diagram of this switch and CS6-1 operating mechanism



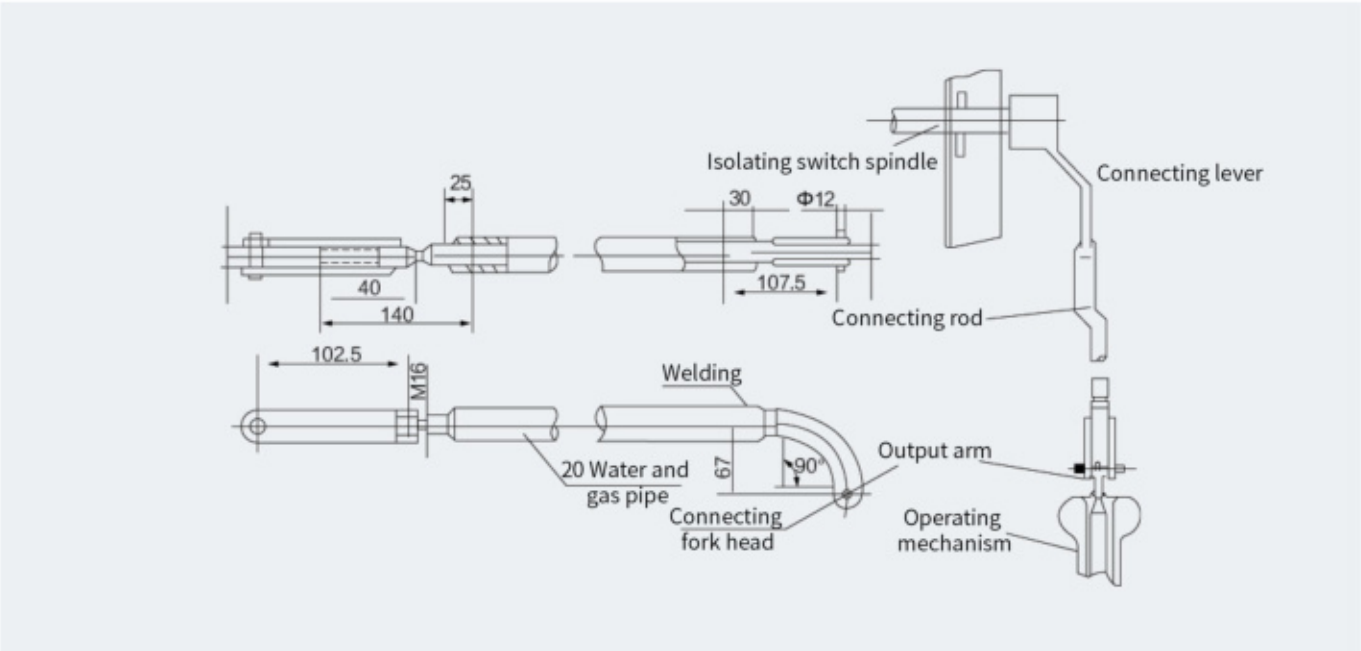
The second installation diagram of this switch and CS6-1 operating mechanism



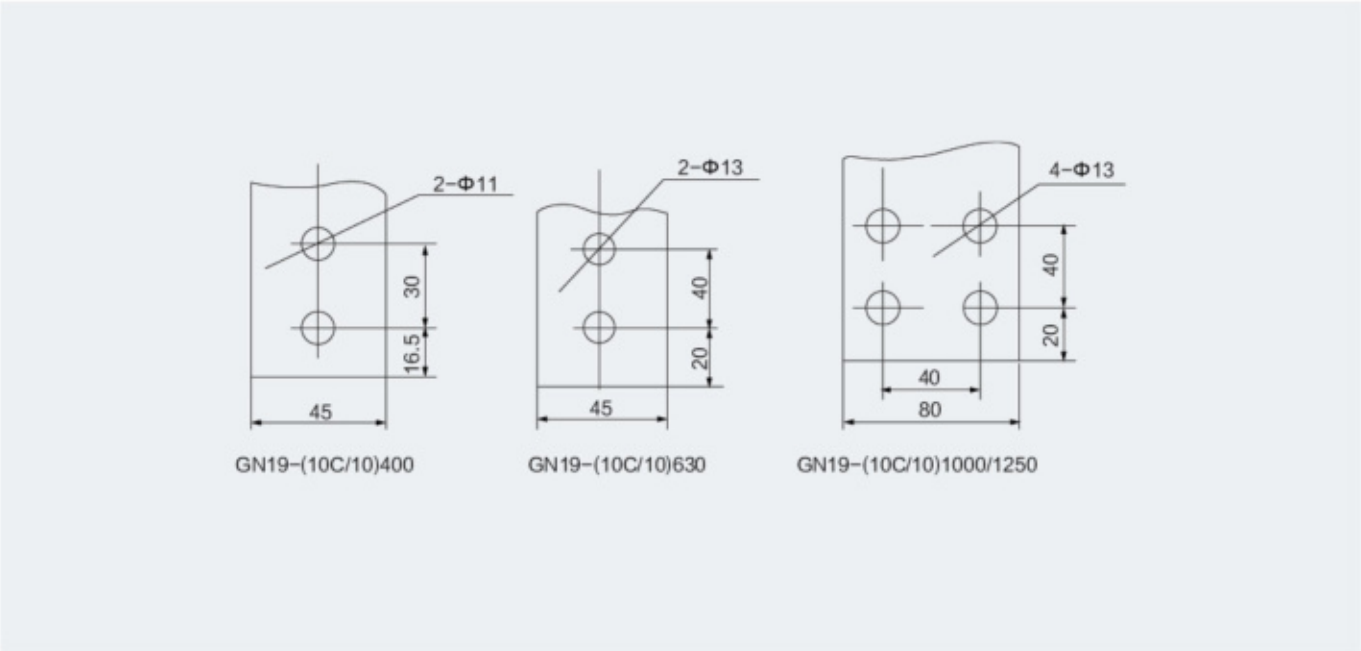
GN19-12

Indoor High Voltage Isolating Switch

Assembly diagram of connecting rod



Wiring hole size



GN30-12

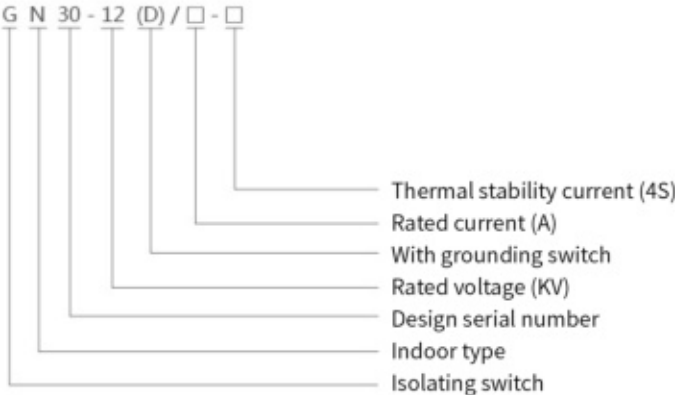
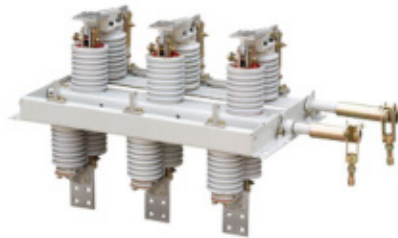
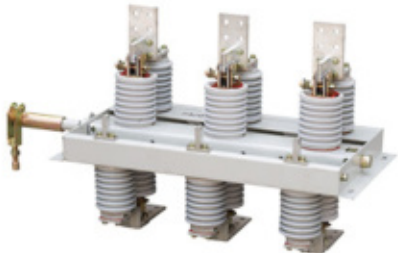
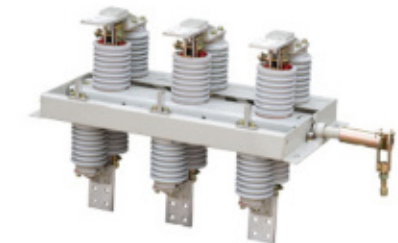
Indoor Rotary High Voltage Isolating Switch

Overview

GN30-12 rotary indoor high voltage isolating switch is a new type of rotary contact knife type isolating switch. the main structure is that two groups of insulators and contacts are fixed on the upper and lower planes of the three-phase common under frame, and the switch is opened and closed by rotating the contact knife.

GN30-12D switch is based on GN30-12 switch to add the form of grounding knife to meet the needs of different power systems. This product has the advantages of compact design, small space occupation, strong insulation capacity, easy to install and adjust, and its performance meets the requirements of GB1985-89 "AC High Voltage isolating switch and grounding switch". It is suitable for indoor systems with rated voltage of 10 KV AC 50Hz and below, as a tap circuit with voltage and no load. It can be used with high voltage switchgear or alone.

Model meaning



Use Environment

- ◆Altitude: not more than 1000m;
- ◆Air temperature: upper limit +40°C; lower limit -10°C;
- ◆Relative humidity: daily average not more than 95%; monthly average not more than 90%;
- ◆Earthquake intensity: not more than 8 degrees;
- ◆Dirt level: places without serious dust, chemical corrosive and explosive substances;
- ◆Installation place: a place without frequent and violent vibration.

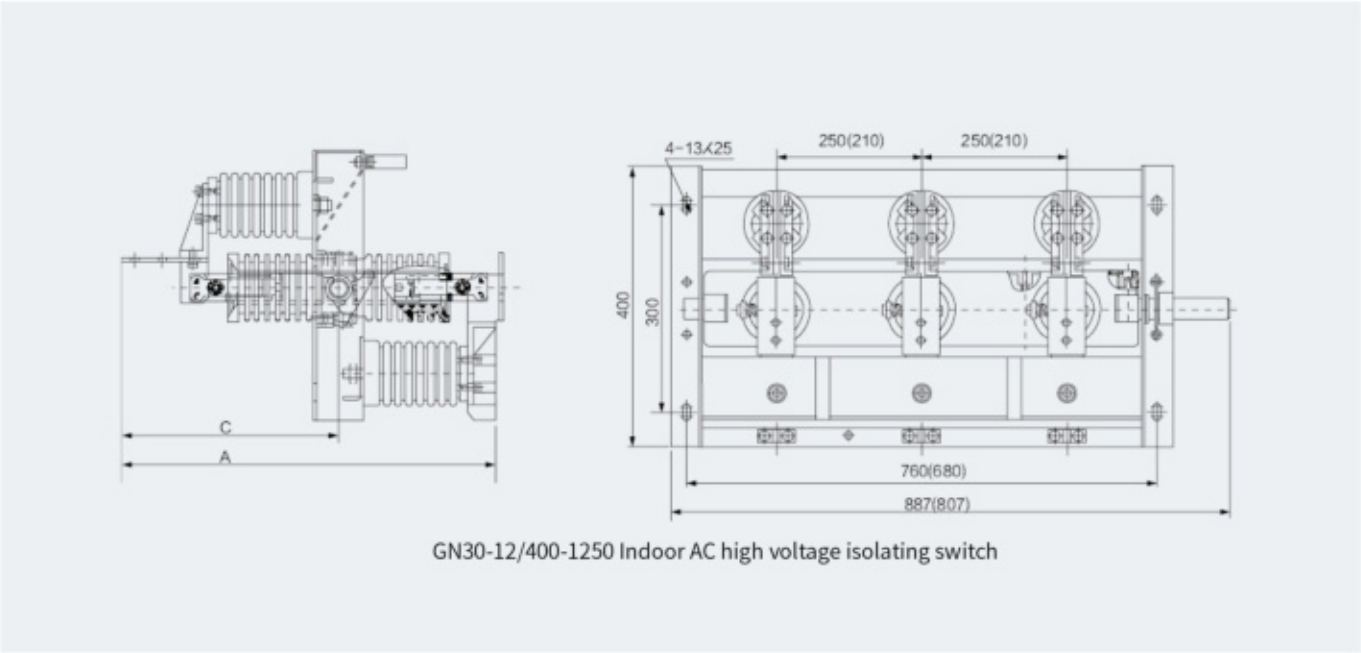
GN30-12

Indoor Rotary High Voltage Isolating Switch

Main technical parameters

Product model		GN30-12/400-12.5	GN30-12/630-20	GN30-12/1000-31.5	GN30-12/1250-31.5
		GN30-12D/400-12.5	GN30-12D/630-20	GN30-12D/1000-31.5	GN30-12D/1250-31.5
Rated voltage (KV)		2			
Rated current (A)		400	630	1000	1250
Thermal stability current (KA)		12.5	20	31.5	
Thermal stabilization time (S)		4			
Dynamic stabilization current (KA)		31.5	50	80	
Rated insulation level	Lightning surge voltage (KV)	Phase to phase, phase to ground 75, fracture 85			
Rated insulation level	1min industrial frequency withstand voltage (KV)	Phase to phase, phase to ground 42, fracture 48			

Shape and installation size (mm)

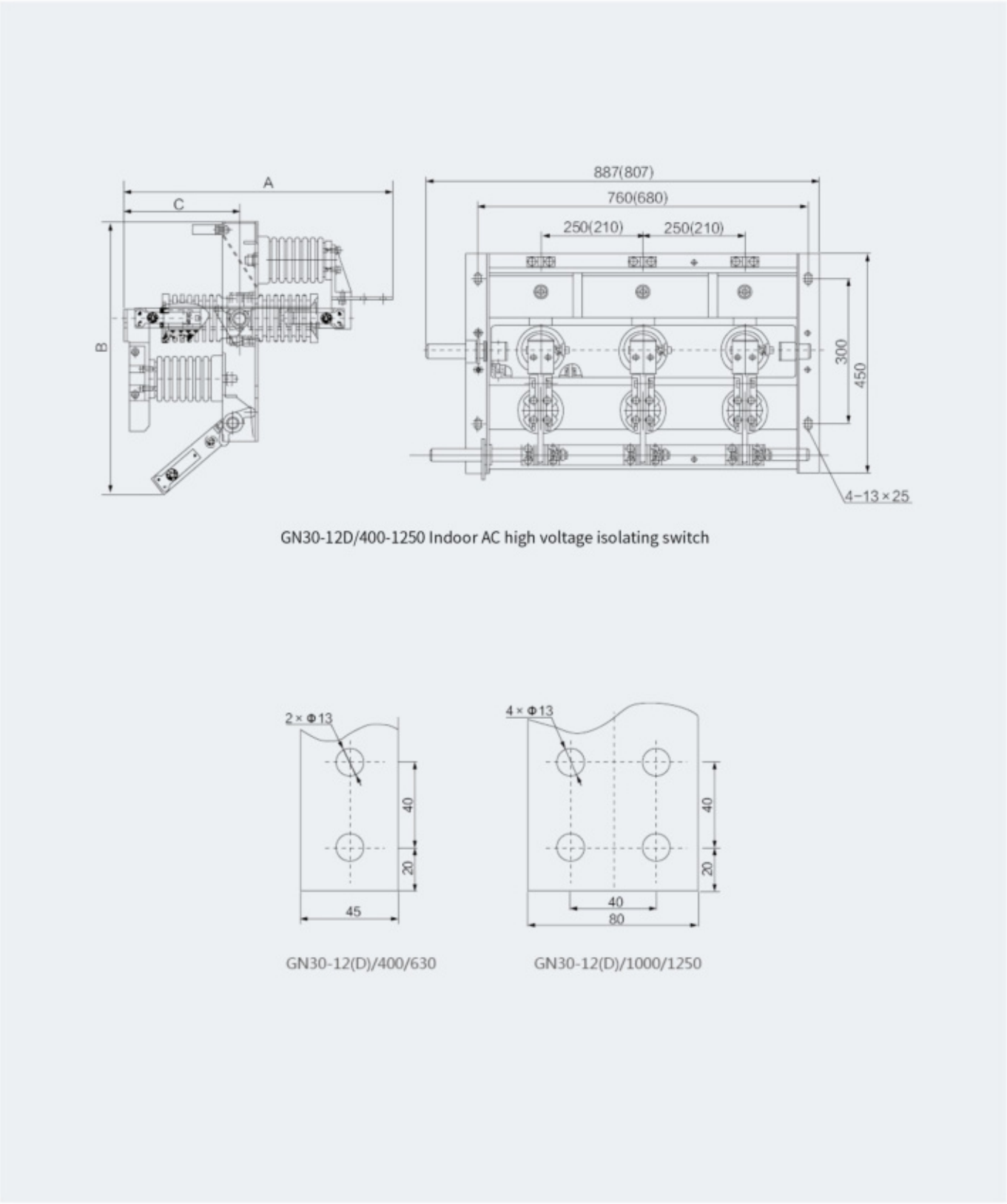


GN30-12						GN30-12D								
400/630A		1000A		1250A		400/630A			1000A			1250A		
A	C	A	C	A	C	A	B	C	A	B	C	A	B	C
560	315	580	332	580	295	550	610	240	575	615	245	580	600	295

GN30-12

Indoor Rotary High Voltage Isolating Switch

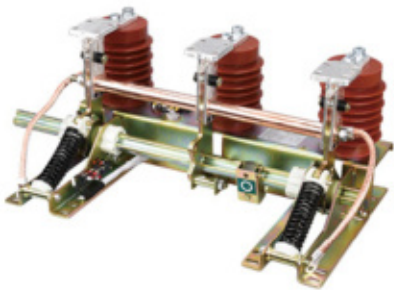
Shape and installation size (mm)





Grounding Switch Series

JN15-12/31.5 Indoor High Voltage Grounding Switch

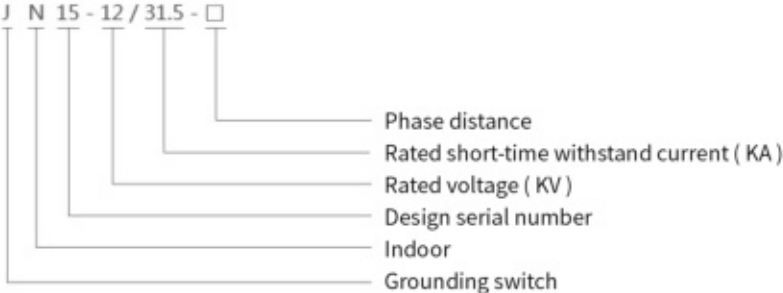


Overview

JN15-12 / 31.5 indoor high voltage grounding switch is a new type of grounding switch with international advanced level, which is designed and developed by our company according to ES1 grounding switch prototype.

The structure is assembled, and its performance meets the requirements of GB1985-2004 "AC High Voltage isolation switch and grounding switch" and IEC129. It is suitable for indoor 3-12KV three-phase AC 50 (60) Hz power system: it has a certain closing ability, can protect other electrical equipment in switchgear from damage, and can be used with all kinds of high voltage switchgear as grounding protection during maintenance of high voltage electrical equipment.

Model meaning



Use Environment

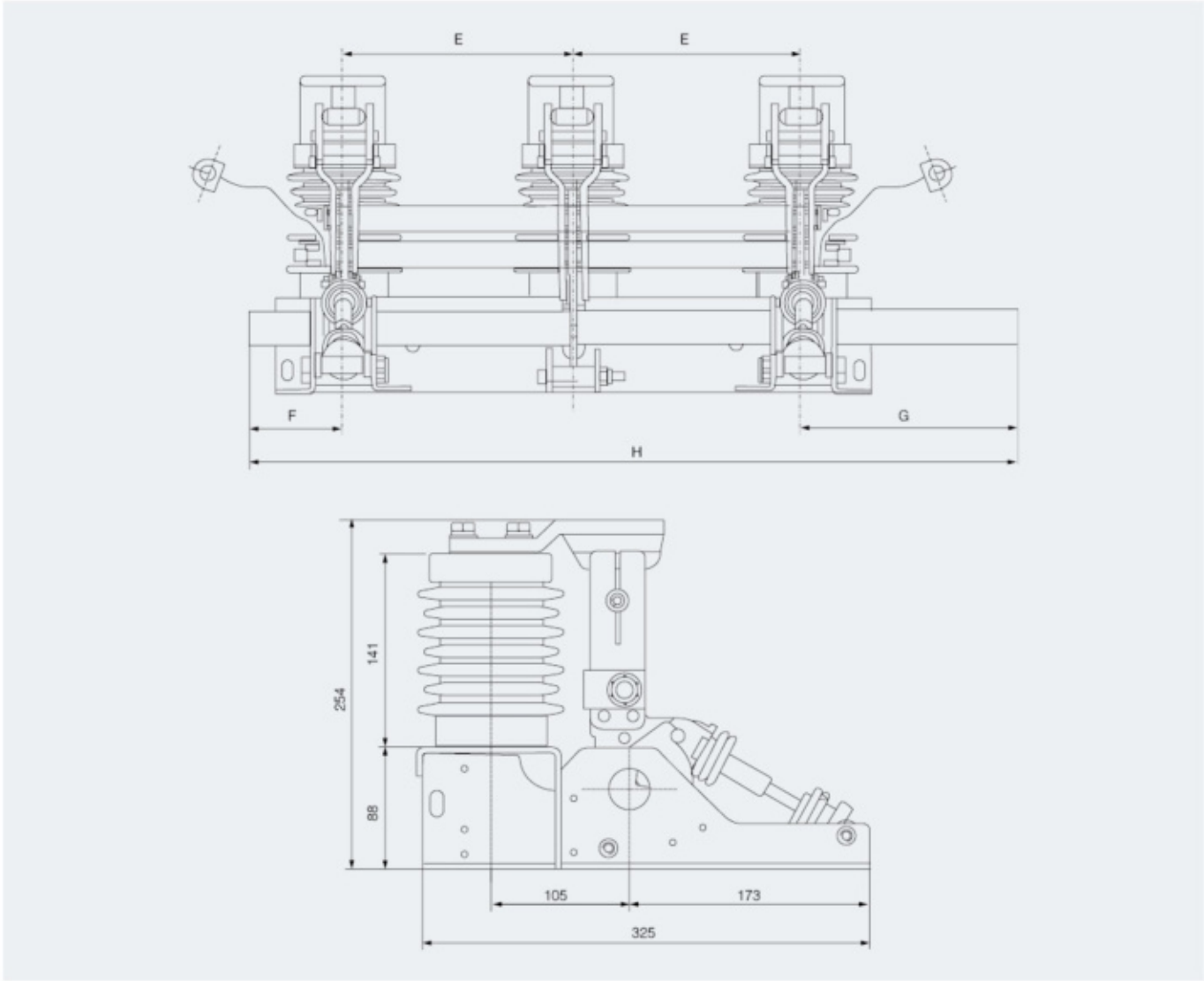
- ◆ Ambient air temperature: upper limit +40°C, lower limit -10°C;
- ◆ Altitude of sea level: not more than 1000 meters;
- ◆ Humidity condition: the average daily relative humidity does not exceed 95%, and the average monthly relative humidity does not exceed 90%;
- ◆ Seismic column degree: not more than 8 degrees;
- ◆ Fouling grade: Grade II.

Main technical parameters

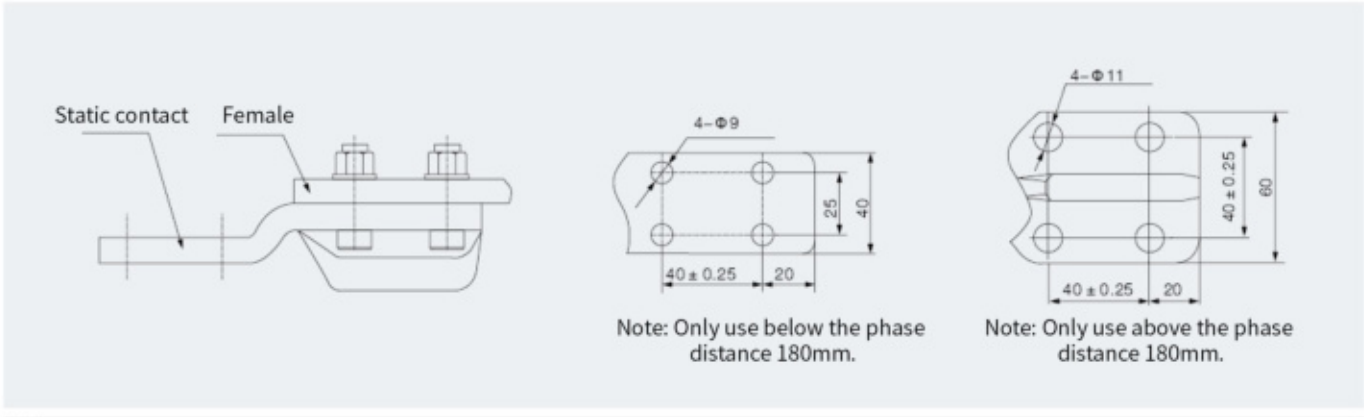
Project		Unit	Parameter	
Rated voltage		Kv	12	
Rated short time withstand current (thermal stability)		KA	31.5	
Rated short-circuit duration		S	4	
Rated short-circuit closing current		KA	80	
Rated peak withstand current (dynamic stability)		KA	80	
Rated insulation level	Rated short-time frequency withstand voltage	kV	Phase to ground and phase to phase	42
Rated insulation level	Rated lightning surge withstand voltage	kV	Phase to ground and phase to phase	75
Mechanical life		次	2000	

JN15-12/31.5
Indoor High Voltage Grounding Switch

JN15-12/31.5 combined grounding switch shape and installation size (mm) (ES-10/31.5)

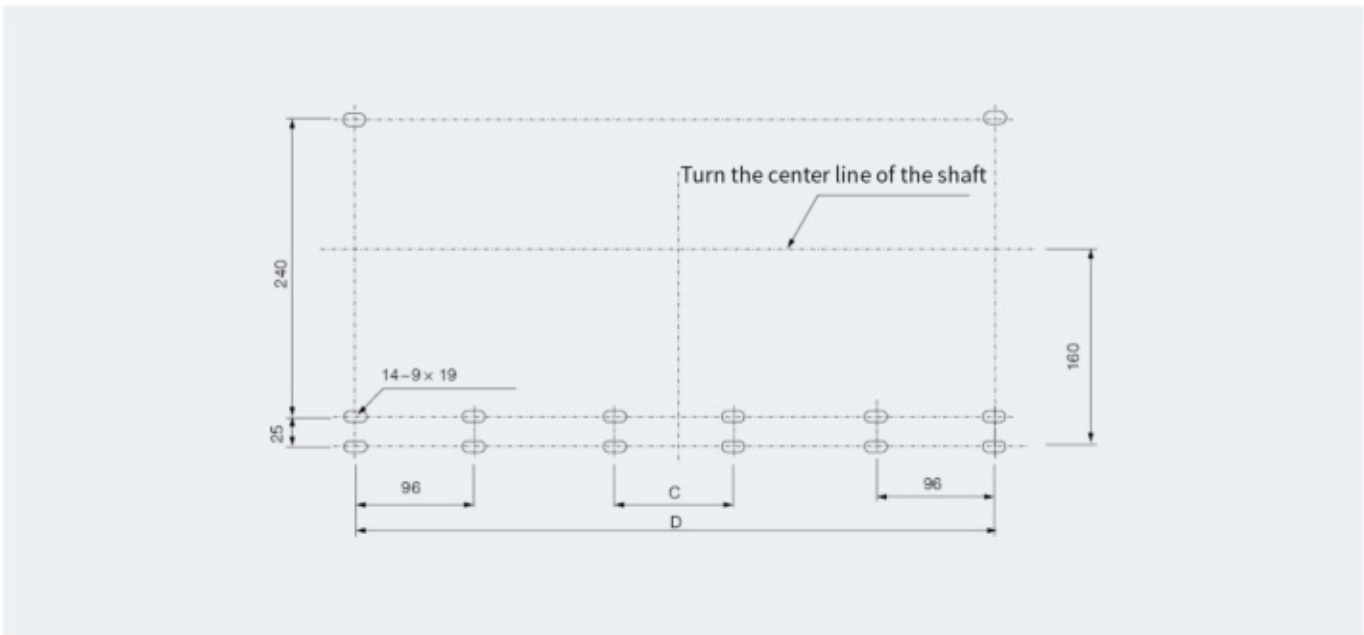


Copper bar terminal

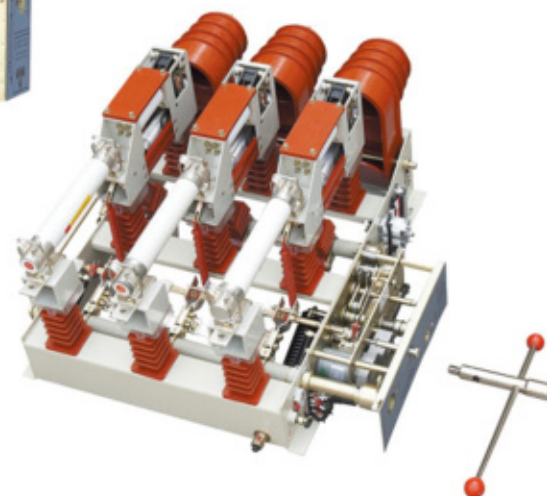


JN15-12/31.5
Indoor High Voltage Grounding Switch

Installation opening diagram (mm)



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	496	
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	96
JN15-12/31.5-250	250	75	160	735	596	96
JN15-12/31.5-275	275	75	185	810	646	96



Indoor High Voltage Load Switch Series

FKN12A-12/FKRN12A-12

Pneumatic Load Switch



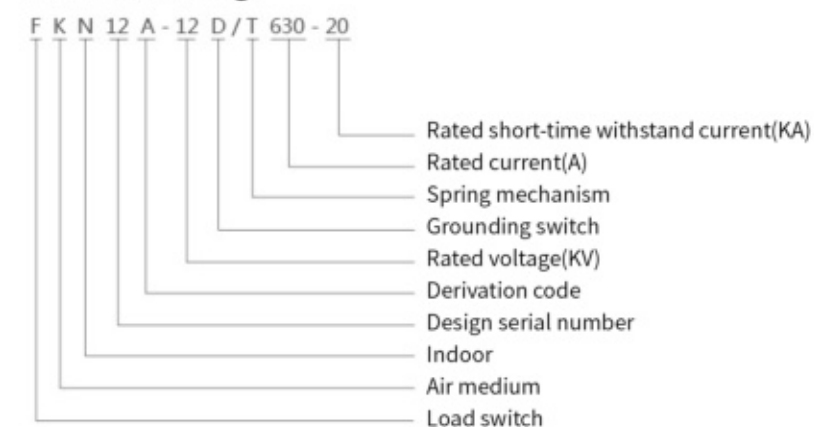
Overview

FKN12A-12D/T630-20 indoor AC high voltage load switch (hereinafter referred to as FKN12-12D load switch) is a three-phase high voltage switchgear with rated voltage of 12KV and rated frequency of 50HZ. It is used for split load current, closed-loop current, no-load transformer and cable electrical charging current and close short-circuit current. The load switch equipped with grounding switch can withstand short-circuit current.

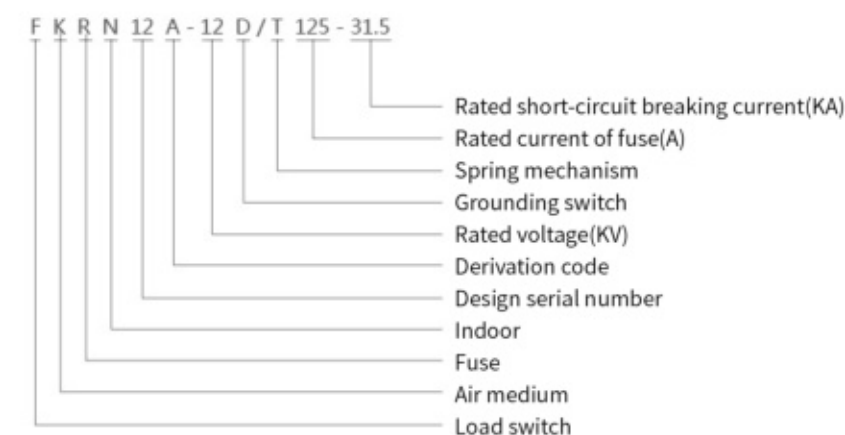
FKRN12A-12D/T125-31.5 AC high voltage load switch-fuse combination is an indoor high voltage switchgear composed of FN12-12D load switch and S LAJ-12 (XRNT-10) high voltage current limiting fuse.

It can reliably break any current up to the short-circuit current, the load switch interrupt working current, the fuse interrupt short-circuit current, and jointly break any over-current between the working current and the full short-circuit current. At the same time, the fuse opens the load switch through its impactor.

Model meaning



Description: The spring mechanism is divided into manual operation spring mechanism and electric operation spring mechanism.



FKN12A-12/FKRN12A-12

Pneumatic Load Switch

Main application

FKN12A-12D Pneumatic load switch, FKRN12A-12D series Pneumatic load switch-fuse combination electrical apparatus, suitable for 12KV and below three-phase power distribution system, as the control and protection of transformers, cables, overhead lines and other power equipment; especially suitable for terminal substations and box-type substations of city network and agricultural network. It is also suitable for the control and protection of ring network and double-spoke power supply units.

FKN12A-12D series pneumatic load switch can divide and close the load current and overload current.
FKRN12A-12D series pneumatic load switch-fuse combination apparatus can divide and close load current, overload current and open short-circuit current.

Use Environment

- ◆Air temperature: -25°C- +40°C;
- ◆Altitude: no more than 1000m;
- ◆Relative humidity: daily average not more than 95%, monthly average not more than 90%;
- ◆Earthquake intensity: no more than 8 levels;
- ◆Installation place: place without fire, explosion hazard, chemical corrosion and violent vibration;
- ◆Filtration grade: II .

Structure features

- ◆Load switch, grounding switch, fuse and mechanism on a frame, can be flexibly combined, compact structure, small volume, easy and convenient to install.
- ◆The fractures are arranged in direct-action dynamic type, with high dynamic and thermal stability current parameters, and the operation is completed at one time.
- ◆With static contact insulation cover, so that the ring network cabinet is structurally isolated, eliminating the inter-phase insulation partition, and the breakout insulation insert, which can prevent arc short circuit accidents in the cabinet.
- ◆With unique live door structure, after the load switch is divided, the live door automatically isolates the fracture, with good protection performance.
- ◆There is a reliable mechanical interlocking device between load switch and grounding switch and fuse to meet the requirements of "five prevention".
- ◆It has two forms of manual operation and electric operation with AC and DC dual-use operation power supply, which is convenient to realize the requirements of power system: "three remote".

Structure features

Project			Unit	FKN12A-12D	FKRN12A-12D
Rated voltage			kV	12	12
Rated frequency			Hz	50	50
Rated current			A	630	125
Rated insulation level	1 min working frequency withstand voltage	To ground, phase to phase	kV	42	42
Rated insulation level	1 min working frequency withstand voltage	Isolation break	kV	48	48
Rated insulation level	Lightning withstand voltage (peak)	To ground, phase to phase	kV	75	75
Rated insulation level	Lightning withstand voltage (peak)	Isolation break	kV	85	85

FKN12A-12/FKRN12A-12

Pneumatic Load Switch

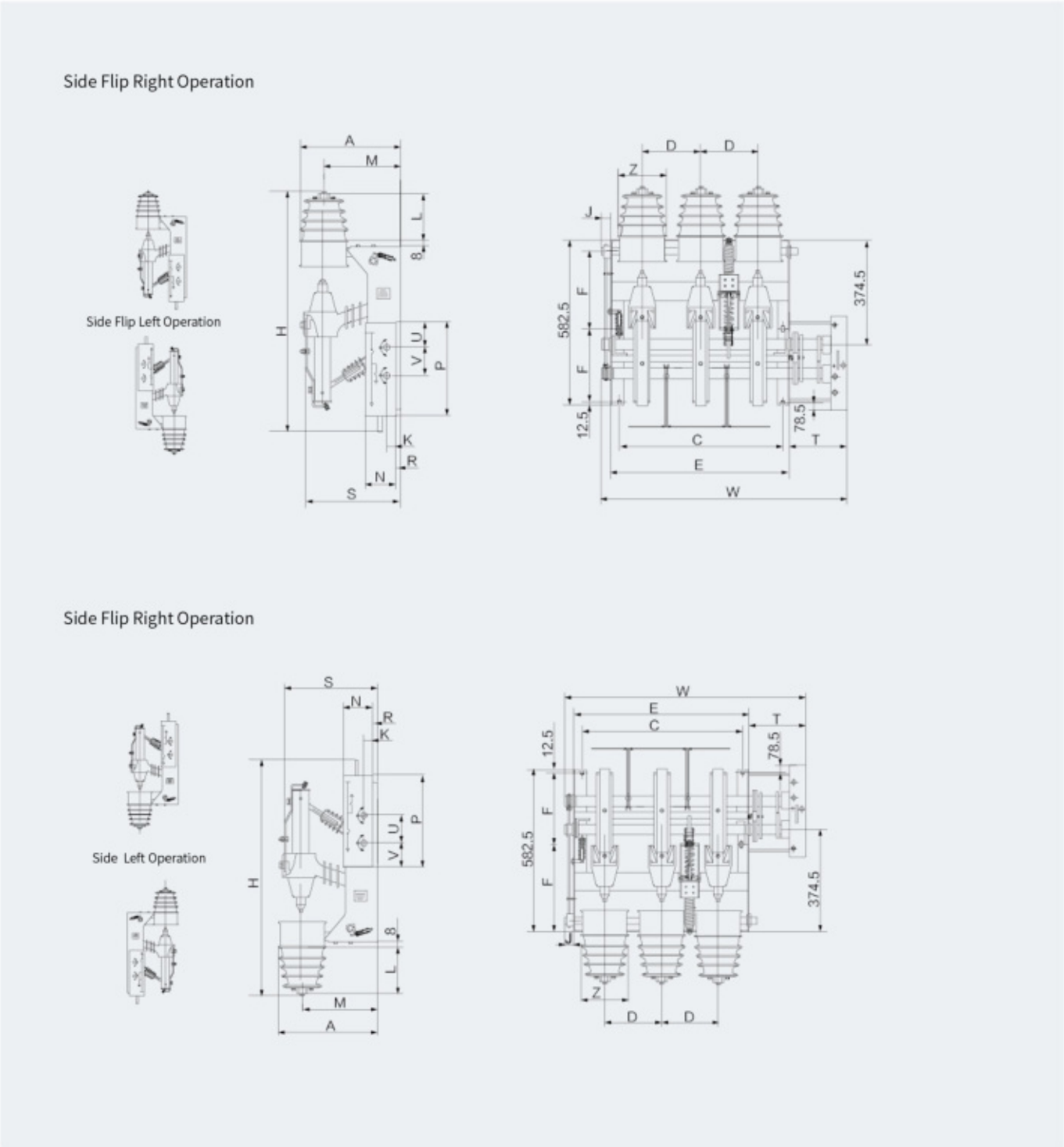
Connect to the table above

Project		Unit	FKN12A-12D	FKRN12A-12D
Load switch		KA	20	-
Grounding switch		KA	20	20
Load switch		S	4	-
Grounding switch		S	2	2
Rated short-circuit closing current (peak)		KA	50	-
Rated opening current	Active load breaking current	A	630	-
Rated breaking current	Closed loop breaking current	A	630	-
Rated breaking current	5% active load opening current	A	31.5	-
Rated breaking current	Cable charging current	A	10	-
Rated breaking current	Open no-load transformer capacity	kVA	1250	1250
Rated short-circuit breaking current (current-limiting fuse)		KA	-	31.5
Rated transfer current		A	-	1200
Mechanical life		次	2000	2000
Impactor output energy		J	-	1+0.5

Project	Unit	Parameter
Break open distance	mm	≥ 175
Center distance between phases	mm	210±2
Inter-phase air gap	mm	≥ 125
Stroke	mm	210±4
Over travel	mm	≥ 40
Three-phase closing non-simultaneous	ms	≤ 10
Three-phase switching non-simultaneous	ms	≤ 5
Intrinsic breaking time of shunt striker	ms	40~65
Main circuit resistance	μΩ	≤ 130

FKN12A-12/FKRN12A-12
 Pneumatic Load Switch

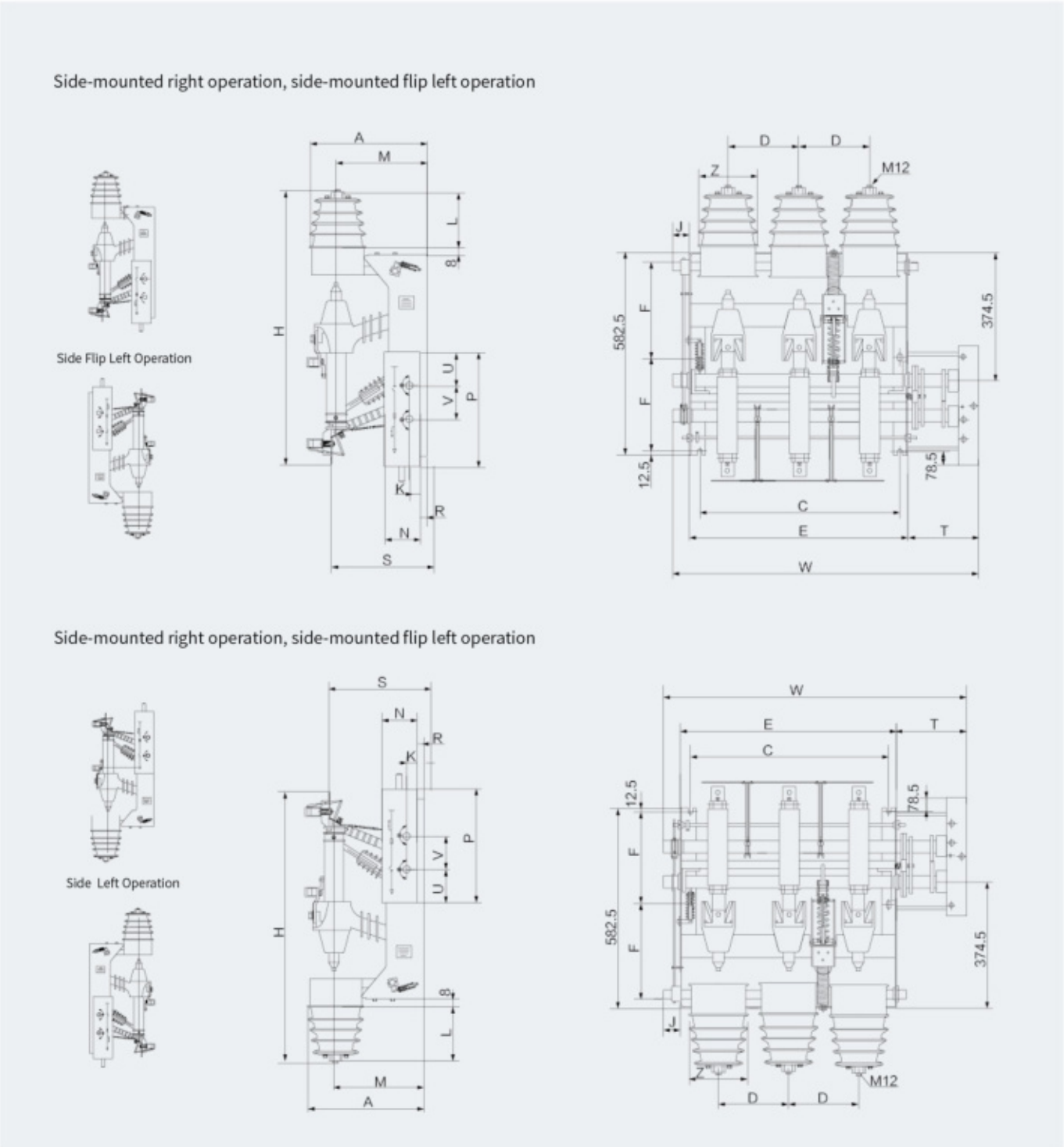
FKN12A-12D Side Flip Right Operation



Model Size (mm)	A	H	C	D	E	F	K	J	L	M	N	P	R	S	T	U	V	W	Z	Weight
FKN12A-12D	390	940	600	210	648	270	67	50	155	287	171	368	11	337	170	94	105	868	180	70kg

FKN12A-12/FKRN12A-12
 Pneumatic Load Switch

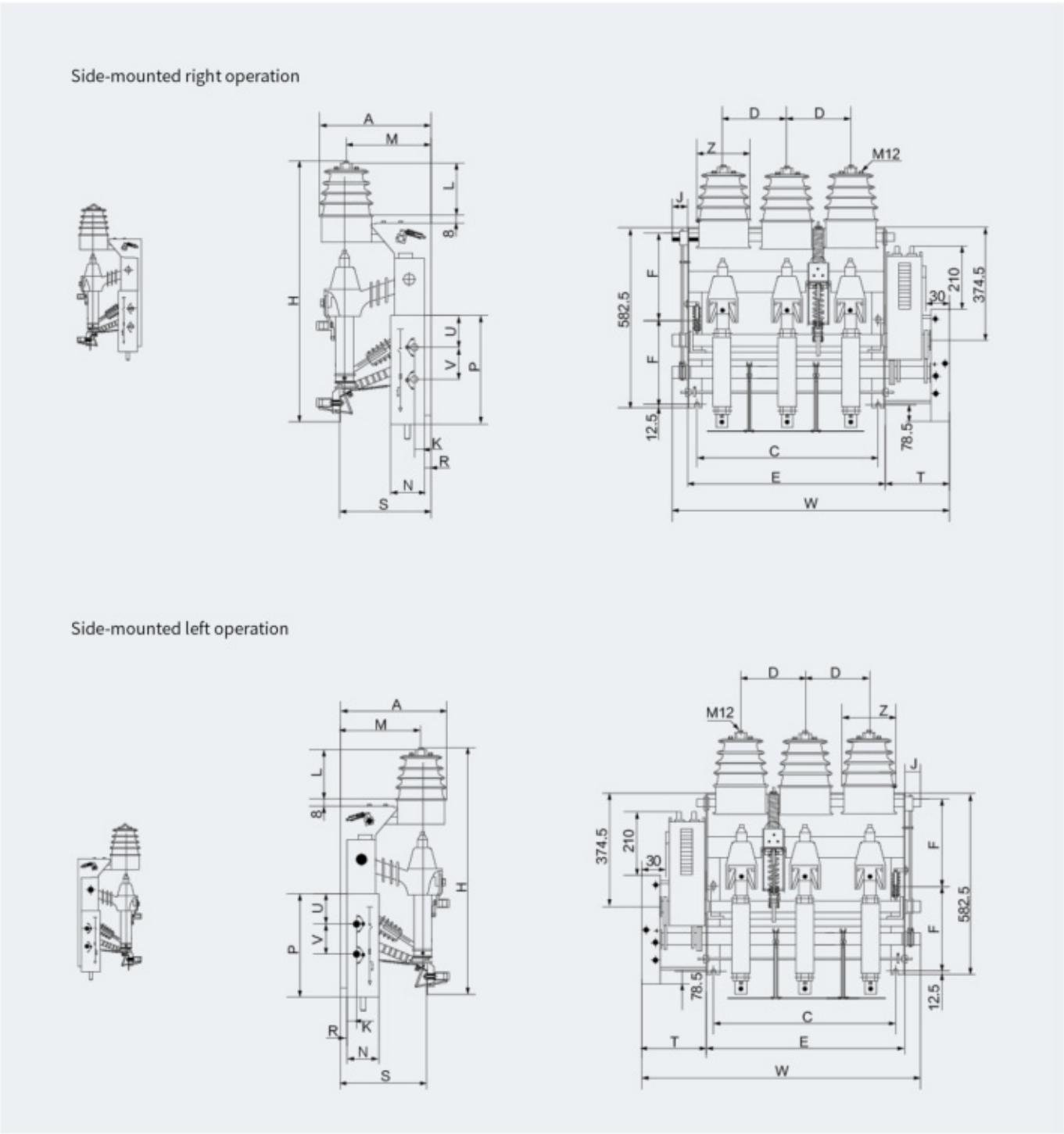
FKRN12A-12D installation method side-mounted right operation, side-mounted flip left operation



Model Size (mm)	A	H	C	D	E	F	K	J	L	M	N	P	R	S	T	U	V	W	Z	Weight
FKRN12A-12D	390	940	600	210	648	270	67	50	155	287	171	368	11	313	170	94	105	868	180	70kg

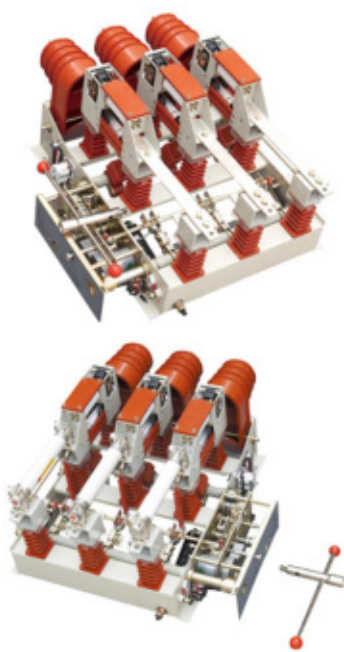
FKN12A-12/FKRN12A-12
Pneumatic Load Switch

FKN12A-12D,FKRN12A-12D Motorized mechanism side-mounted right operation



Model Size (mm)	A	H	C	D	E	F	K	J	L	M	N	P	R	S	T	U	V	W	Z	Wei- ght
FKN12A-12D FKRN12A-12D	390	940	600	210	648	270	67	50	155	287	171	368	11	313	170	94	105	868	180	70kg

FZN25-12/FZRN25-12
Vacuum Load Switch



Overview

FZN25 and FZRN25 vacuum load switches and combination appliances are suitable for load control and short-circuit protection in three-phase AC 50Hz ring network or terminal power supply and industrial power equipment. The combination appliance can open and close any current up to the rated short-circuit current. It adopts direct-acting isolation break and vacuum arc chamber linkage, with manual and electric functions.

FZN25, FZRN25 unique drive structure design, the interrupter chamber only withstand the high voltage in the moment of closing and opening , so it has small size and light weight. FZN25, FZRN25 can achieve isolation break and fire arc chamber break operation.

FZN25, FZRN25 has a grounding valve which is interlinked with the grounding switch between the static contact and the conductive cylinder of the dynamic contact, which not only ensures the safety but also facilitates the maintenance.

Model meaning

FZN 25 - 12 / T630 - 20

- Rated short-time withstand current(KA)
- Rated current(A)
- Rated voltage(KV)
- Design number
- Indoor vacuum load switch

FZRN 25 - 12 / T125 - 31.5

- Rated short-circuit breaking current(KA)
- Maximum rated current of fuse(A)
- Rated voltage(KV)
- Design number
- Vacuum load switch - fuse combination electrical appliances

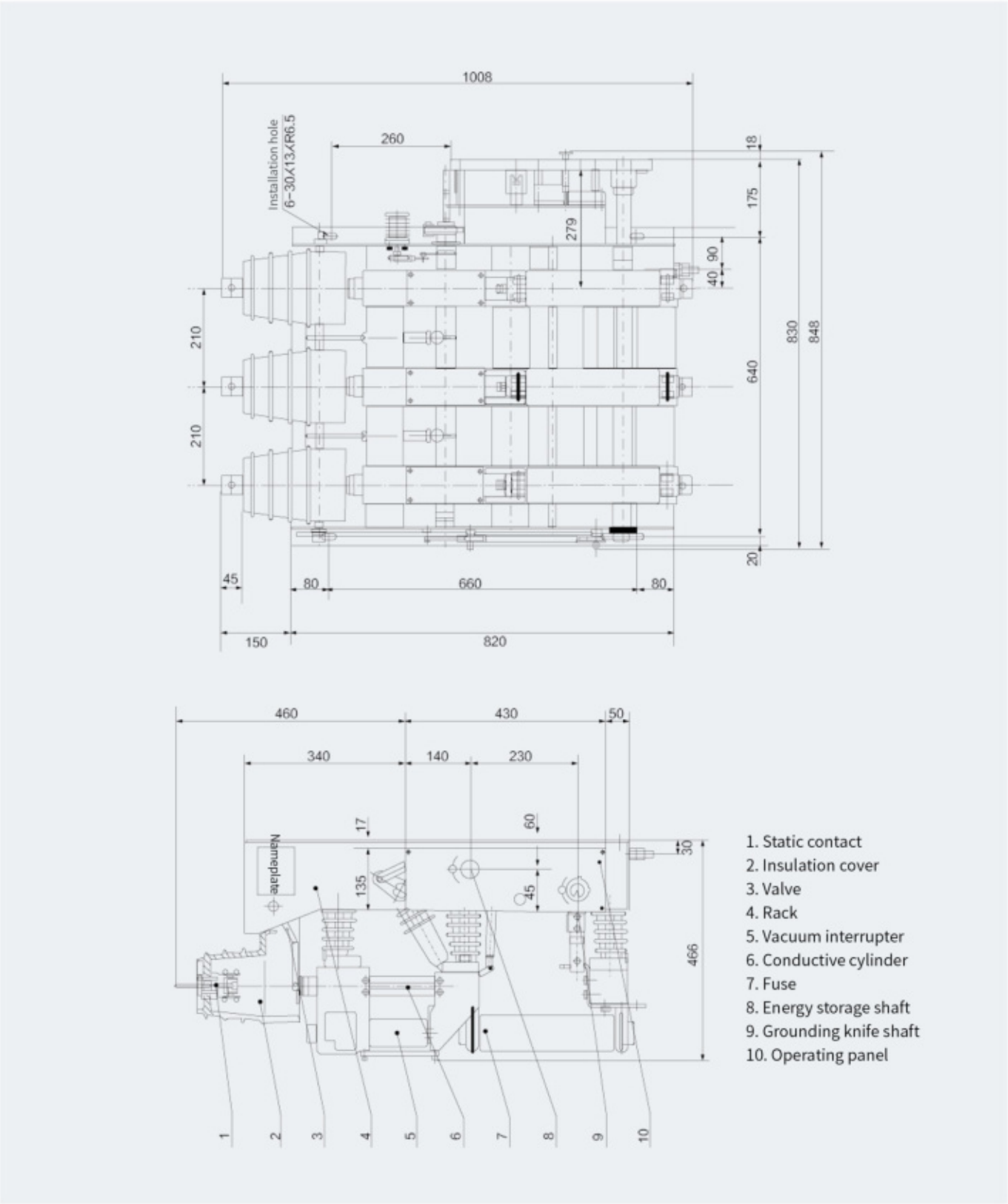
FZN25-12/FZRN25-12
Vacuum Load Switch

Main technical parameters

Project		Unit	Parameter	
			FZN25-12D/T630-20	FZRN25-12D/T125-31.5
Rated voltage		kV	12	
Rated frequency		HZ	50	
Rated current		A	630	125
Rated insulation level	1min frequency withstand voltage	kV	Interrupter chamber fracture 30; to ground, phase to phase 42; isolation fracture 48	
	Lightning surge withstand voltage	kV	To ground, phase to phase 75; isolation fracture 85	
Rated dynamic stabilization current (peak)		KA	50	-
4S thermal stability current		KA	20	-
Rated active load opening current		A	630	125
Rated closed loop opening and closing current		A	630	125
Rated cable charging opening and closing current		A	10	10
Open no load transformer capacity		kVA	1250	1250
Rated short-circuit breaking current		KA	-	31.5
Rated transfer current, rated crossover current		A	-	2000
Fuse type			-	SDLAJ-12 SFLAJ-12
Impactor output energy		J	-	2-5 (medium)
Rated short-circuit closing current		KA	50	
Grounding switch rated dynamic stabilization current		KA	50	
Grounding switch 2S thermal stability current		KA	20	
Rated voltage of auxiliary circuit		V	AC/CD : 220/110	
Mechanical life		Times	10000	

FZN25-12/FZRN25-12
Vacuum Load Switch

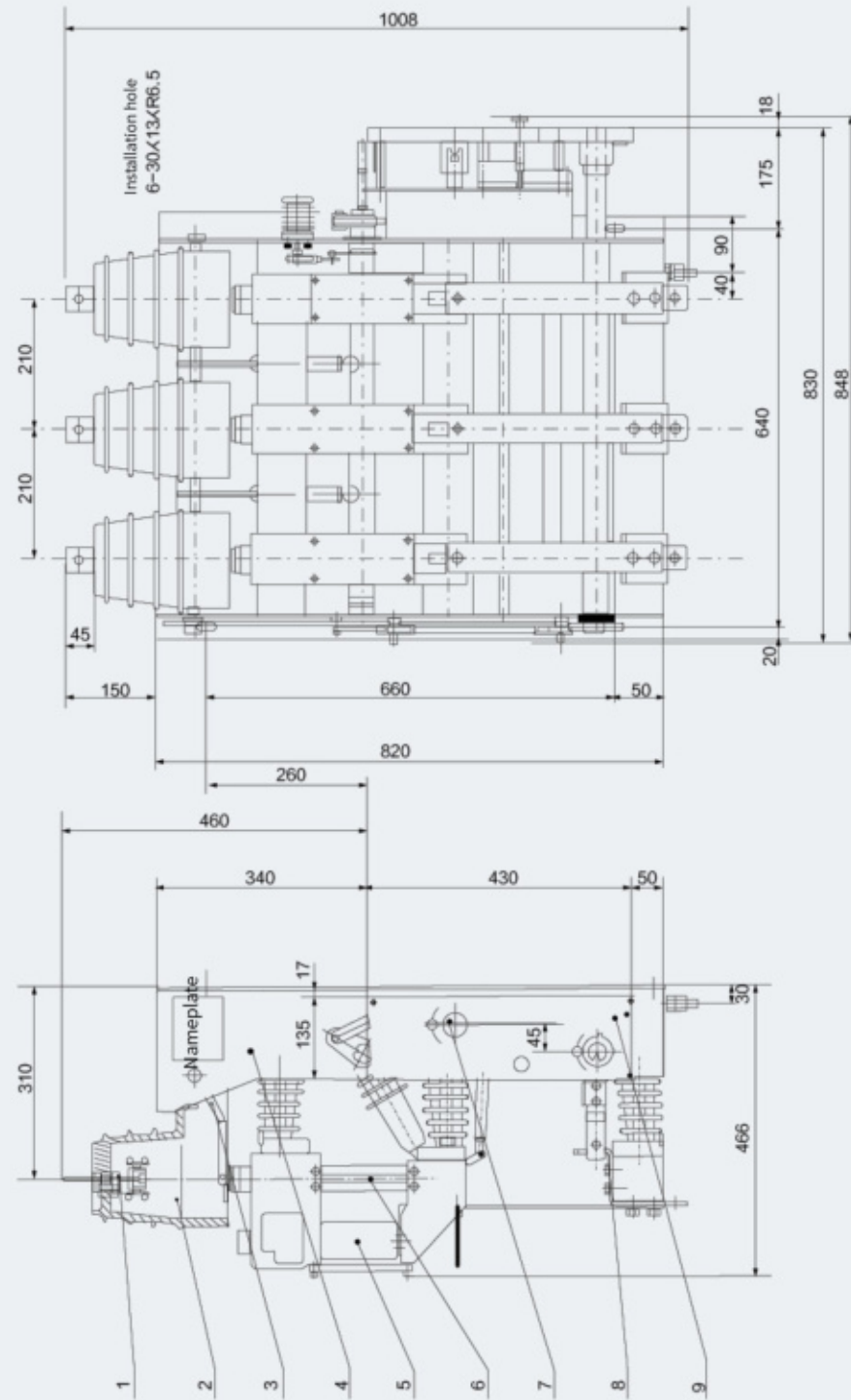
**FZRN25-12D/125-31.5 Vacuum load switch-fuse combination electrical
shape and installation sizes (mm)**



FZN25-12/FZRN25-12

Vacuum Load Switch

FZN25-12D/T630-20 Vacuum load switch shape and installation sizes



Composite Insulator Series

Composite Cross Arm Insulator

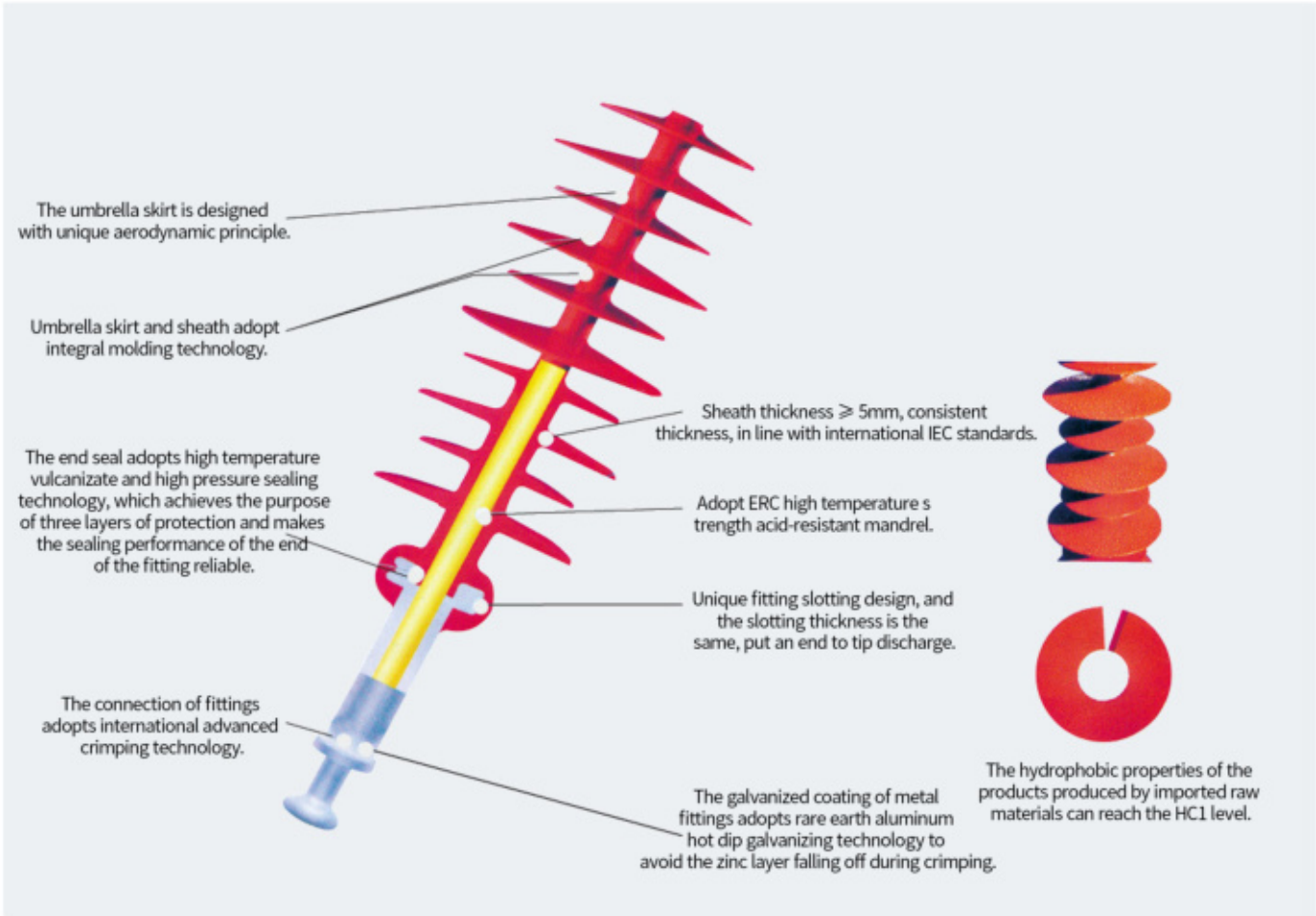


Overview

This product is suitable for the technical transformation of urban network, which can effectively use the narrow corridor area of the city to boost voltage and transmit power, and can reduce the height of the tower, saving a lot of financial and material resources. Because of its high bending strength, it can prevent the porcelain cross-arms from breaking easily, and it is a product that cannot be replaced by porcelain cross-arms because of its good fouling resistance.

Main technical parameters

Product Model	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulation distance (mm)	Minimum nominal creepage distance (mm)	Umbrella diameter (mm)	Lightning surge withstand voltage peak(KV)	Frequency wet withstand voltage RMS(KV)
FS-10/5	10	5	250	180	380	90	75	40
FS-35/5	35	5	620	470	1168	142	265	95
FS-110/10	110	10	1260	1100	2760	170	550	230



Composite Dry Bushing/Composite Pin Insulator



Overview

This product uses new insulating material for inner insulation and high performance high temperature vulcanized silicone rubber for outer insulation, which has excellent dirt resistance and explosion-proof performance, and meets the development trend of oil-free and miniaturization in the electric power sector.

Main technical parameters

Product Model	Rated voltage(KV)	Rated current(A)	Frequency withstand voltage(KV)	Lightning surge withstand voltage(KV)	Bending damage load(N)	Allowable bending load(N)
FCGW-10/200~600	10	200~600	30	75	1250	625
FCGW-35/630~1600	35	630~1600	95	200	1250	625
FCGW-66/630~1600	66	630~1600	147	325	1250	625

Overview

This product is suitable for high voltage line facilities. It has good hydrophobic properties, aging resistance, leakage resistance and corrosion resistance, high tensile strength and bending strength, high mechanical strength, good impact resistance, anti-shock and anti-brittle breakage performance, light weight, easy installation, its top and bottom installation size and the corresponding porcelain pin installation size is the same, can be used interchangeably.

Main technical parameters

Product Model	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulation distance (mm)	Minimum nominal creepage distance(mm)	Umbrella diameter (mm)	Lightning surge withstand voltage peak(KV)	Frequency wet withstand voltage RMS(KV)
FPQ-10/4T20	10	4	215	120	280	148/118	75	42
FPQ4-10/4T20	10	4	250	165	460	148/118	105	42

Composite Cross Arm Insulator



Overview

This product is suitable for high voltage line facilities. It has good hydrophobic properties, aging resistance, leakage resistance and corrosion resistance, high tensile strength and bending strength, high mechanical strength, good impact resistance, anti-shock and anti-brittle breakage performance, light weight, easy installation, its top and bottom installation size and the corresponding porcelain pin installation size is the same, can be used interchangeably.

Main technical parameters

Product Model	Rated voltage (KV)	Rated mechanical load(KN)	Structure height (mm)	Insulation distance (mm)	Minimum nominal creepage distance(mm)	Umbrella diameter (mm)	Lightning surge withstand voltage peak(KV)	Frequency wet withstand voltage RMS(KV)
FZS-10/4	10	4	215	125	270	90	75	42
FZS-35/6	35	6	400	320	750	142	185	80
FZS-110/10	110	10	1200	1080	2750	190	500	230

Overview

This product is suitable for use in electrified railroad tunnels with complex operating conditions, and can effectively prevent pollution accidents and reduce cleaning and maintenance workload. Due to its small size, it is an irreplaceable product for porcelain and glass insulators when the tunnel headroom is small.

Main technical parameters

Product Model	Rated voltage (KV)	Rated mechanical load(KN)	Lightning full wave impulse withstand voltage(KV)	Lightning full wave impulse withstand voltage(KV)	Minimum nominal creepage distance (mm)	Structure height(mm)
FQX1-25	25	60	270	130	1400	650
FQX2-25	25	60	270	130	1400	840
FQX3-25	25	60	270	130	1400	930
FQX4-25	25	60	270	130	1400	645
FQE1-25	25	60	270	130	1400	760
FQE2-25	25	60	270	130	1400	806
FQE3-25	25	60	270	130	1400	836
FQE4-25	25	60	270	130	1400	695



Cable
Branch Series

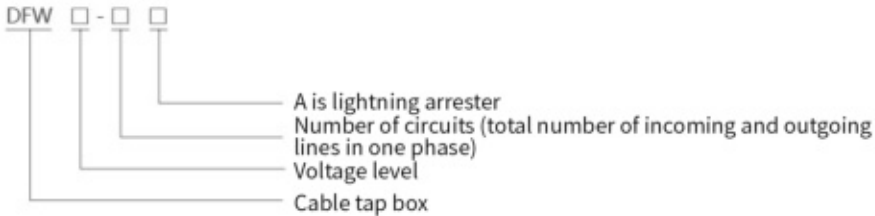
DFW-12kV
European Cable Tap Box



Overview

European cable tap box is a cabling engineering equipment widely used in power distribution system in recent years. Its main features are two-way door opening and wall bushing as connection busbar. It has the advantages of small length, clear cable arrangement and no need for large span crossover of three-core cable. The cable connectors are in accordance with the DIN47636 standard. The rated current 630A bolt fixed connection type cable joint is generally used.

Model meaning



Use Environment

- ◆Ambient temperature: maximum temperature: +40°C, minimum temperature -30°C;
 - ◆Wind speed: about 34m/s (not more than 700Pa);
 - ◆Humidity: the average daily relative humidity is not more than 95%, and the average monthly relative humidity is not more than 95%;
 - ◆Anti-vibration: horizontal acceleration not more than 0.4m/s², vertical acceleration not more than 0.15m/s²;
 - ◆Installation site inclination: not more than 3°;
 - ◆Installation environment: the surrounding air is not obviously polluted by corrosive, combustible gas, water vapor, etc., and the installation site is free from violent vibration.
- Note: When ordering this product beyond the above conditions, please consult with our company.

Main technical parameters

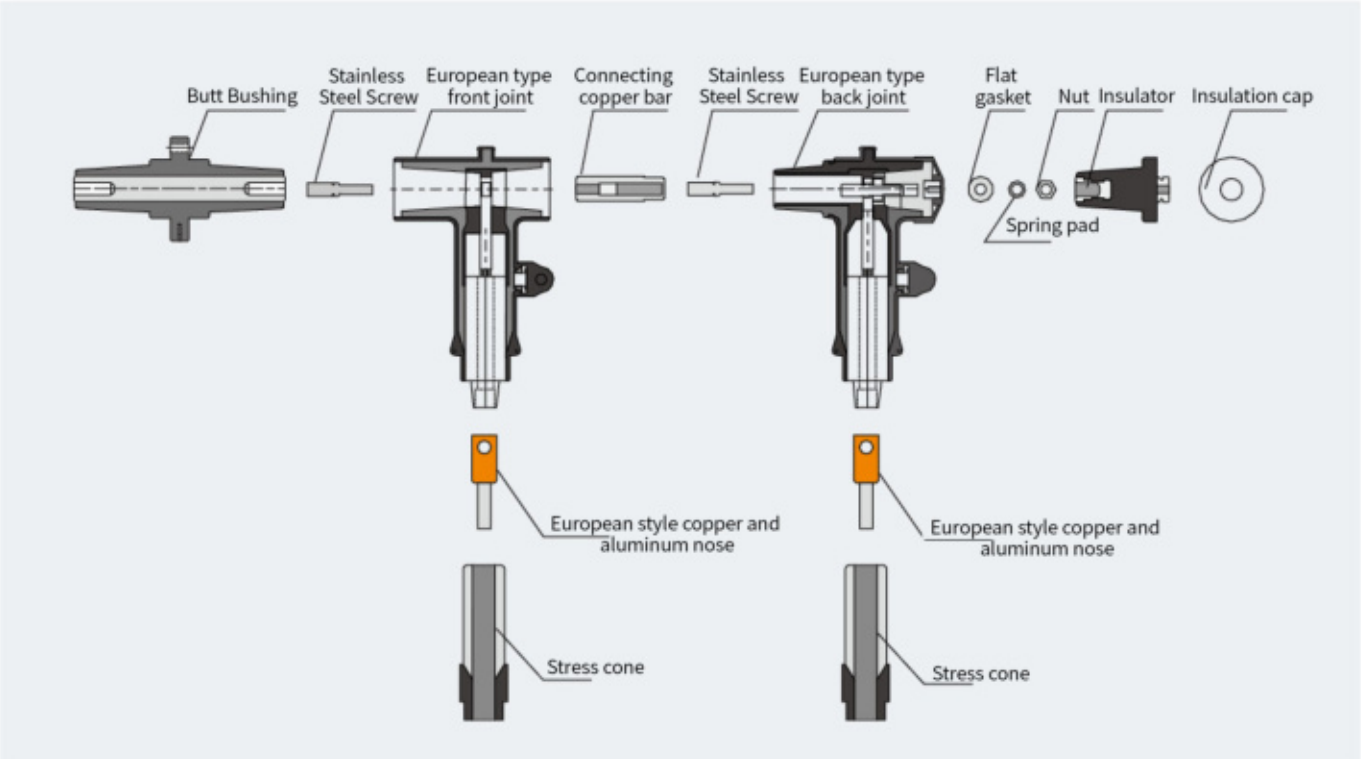
Project	Parameter
Rated voltage	12kV
Rated current	630A
Dynamic stable current	50kA/0.3s
Thermal stability current	20kA/3s
1min frequency withstand voltage	42kV
15 minutes DC withstand voltage	52kV
Lightning surge withstand voltage	105kV
Enclosure protection grade	IP33

DFW-12kV
European Cable Tap Box

Distribution diagram in European type cable tap box

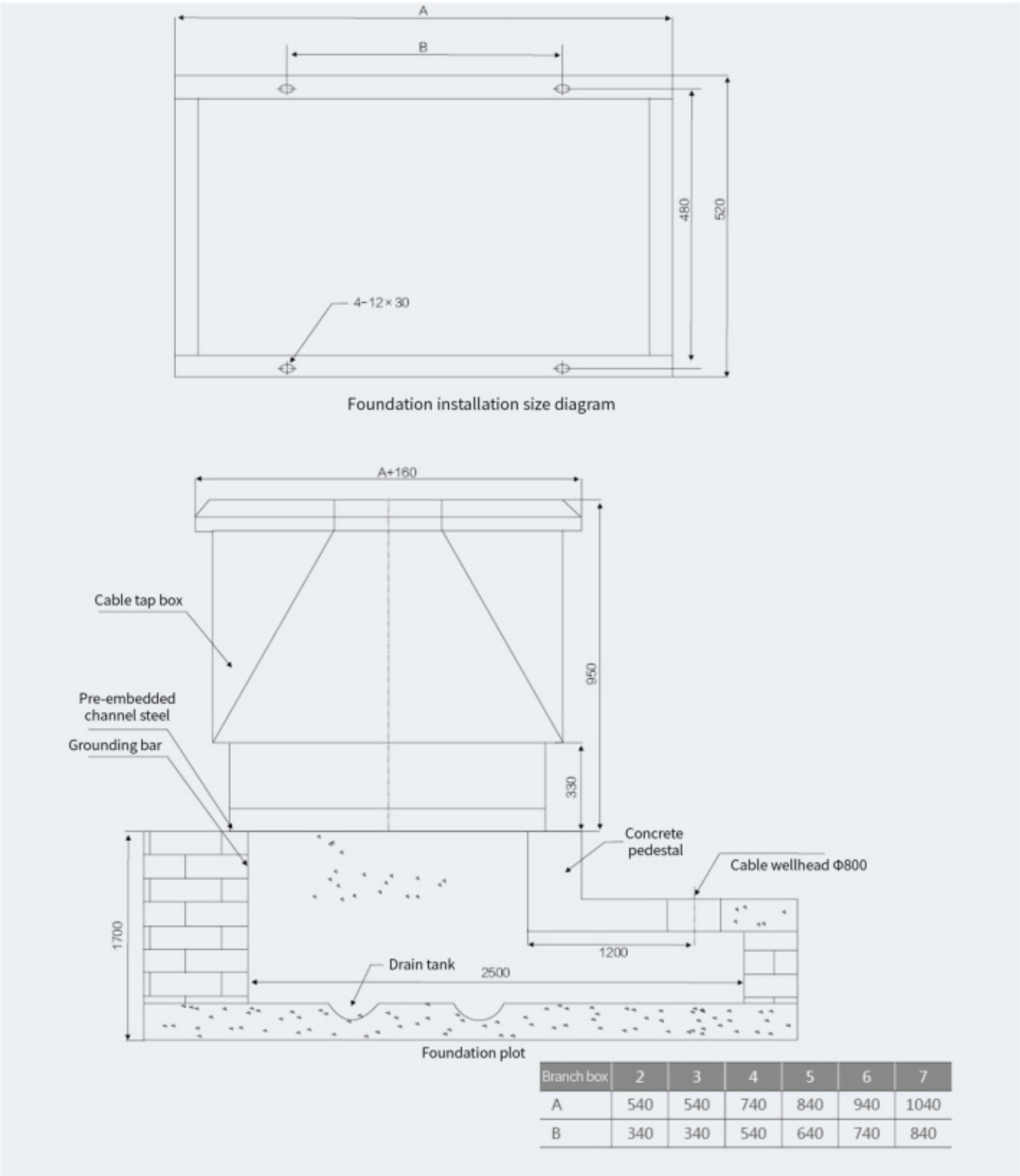


Distribution diagram in European type cable tap box



DFW-12kV
European Cable Tap Box

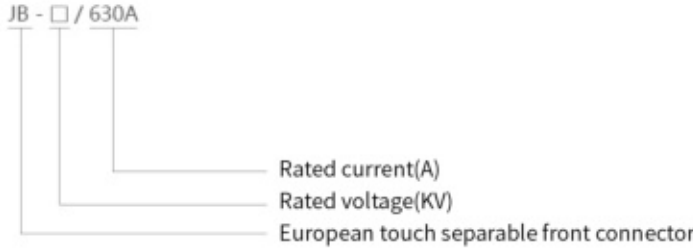
European type cable tap box foundation diagram



JB 12kV-630A
European Touch Separable Front Connector



Model meaning



Applications

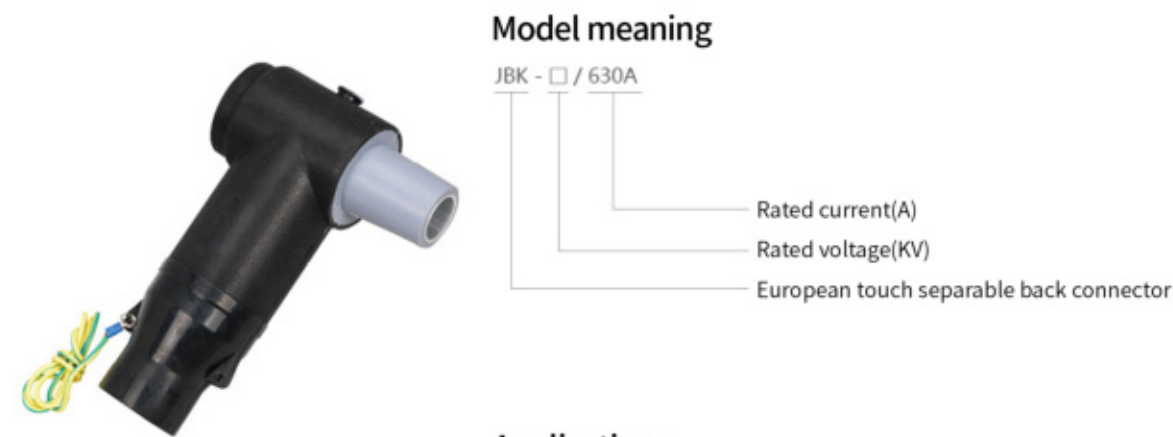
- ◆ The connection of single-phase or three-phase insulated cables and other equipment such as transformers, switchgear, branch boxes, etc. is realized by 630A prefabricated connectors;
- ◆ It is suitable for indoor and outdoor installation;
- ◆ Rated voltage: 8.7/15KV;
- ◆ Continuous rated current 630A; (900A overload can last 8 hours);
- ◆ Can be extended with (JBK) back connector or (HBLQ) series lightning arrester to realize multiple installation or provide over-voltage protection;
- ◆ Cable characteristics;
- ◆ Copper or aluminum conductor;
- ◆ Semi-conductive or metal shielding;
- ◆ Cable conductor cross section: 12KV 25-500mm².

Installation

- ◆ No need for any special tools, wrapping tape or filling;
- ◆ Electrical operation immediately after installation of cable glands to relevant components;
- ◆ Provide conventional assembly parts and installation instructions. (Please contact with us for special requirements)

JBK 12kV-630A

European Touch Separable Back Connector



Applications

- ◆630A European type back connector can be connected with European type front connector or another back connector to provide extended cable connection circuit (branching), it cannot be connected directly with casing seat or through-wall casing. Its tail can be plugged directly with insulating plugs, or it can be extended to connect another way European type back connector or back connection arrester;
- ◆It is suitable for indoor and outdoor installation;
- ◆Rated voltage: 8.7/15KV;
- ◆Continuous rated current 630A; (900A overload can last 8 hours);
- ◆Can be extended with (JBK) back connector or (HBLQ) series lightning arrester to realize multiple installation or provide over-voltage protection;
- ◆Cable characteristics;
- ◆Copper or aluminum conductor;
- ◆Semi-conductive or metal shielding;
- ◆Cable conductor cross section: 12KV 25-500mm².

Installation

- ◆No need for any special tools, wrapping tape or filling;
- ◆Electrical operation immediately after installation of cable glands to relevant components;
- ◆Provide conventional assembly parts and installation instructions. (Please contact with us for special requirements)

HBLQ 12kV-17/50

European Type Touchable Separated Back Lightning Arrester

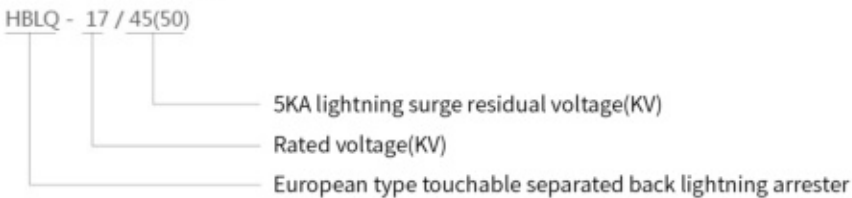


Overview

15X 45 (50) European touchable separable back arrester provides reliable over-voltage protection for electrical systems. The outer semi-conductive layer of the shielded back lightning arrester ensures the personal safety of the installers and maintenance personnel and the safe operation of the equipment, while its anti-ultraviolet, anti-aging, waterproof and moisture-proof properties ensure the safe and reliable operation of the products in harsh environments.

European back arrester cooperates with European front connector or European back connector to ensure the safe operation of the power grid.

Model meaning



Order information

Product name	Product Model
12KV European type touchable separated back lightning arrester	HBLQ-17/45
12KV European type touchable separated back lightning arrester	HBLQ-17/50

JYM 12kV-630A
Insulating Cap



Overview

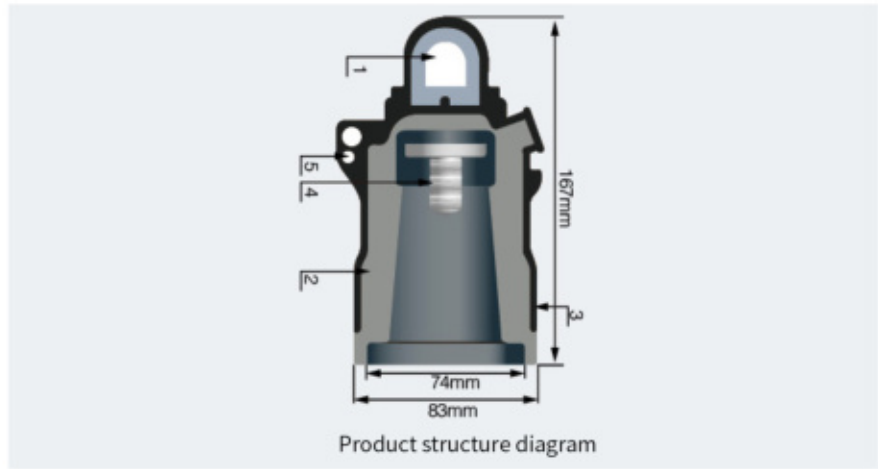
The 12KV 630A insulating cap is an accessory to the energized bushing, providing an insulation for the energized bushing and a dust and moisture resistant for the non-energized joints.
The 630A insulating cap can be installed on 630A bushing, bus bar and wall hanging etc. When the bus bar and cable joints are reserved for spare outlet, they must be sealed with 630A insulating cap.

Model meaning



Product structure

- ◆Operating ring: made of special iron metal for easy installation and operation of the product;
- ◆Insulation layer: the unique formula and mixing technology ensure the high quality of prefabricated insulating silicone rubber;
- ◆External semi-conductive layer: prefabricated conductive silicone rubber conforming to IEEE592 standard;
- ◆Inner thread: the internal thread is M16-2;
- ◆Earthing eyelet: the product can be grounded through the earthing eyelet.



Standard packaging

- ◆Insulation cap body
- ◆Cleaning paper
- ◆Installation instruction manual
- ◆Silicone grease paste
- ◆Certification

Order information

Product name	Product model
12KV insulating cap	JYM-12/630A

DJTG 12kV-630A
Butt Bushing



Overview

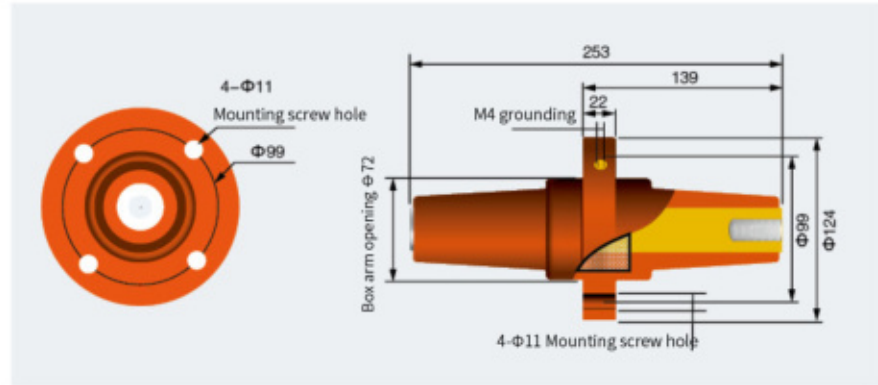
630A butt bushing, mainly used for European cable branch box, connected with European front joint, can be connected with electric indicator to show the electrical status of bus bar. It is insulated with high quality epoxy resin.

Model meaning



Product characteristics

12KV/630 butt bushing is mainly used in European cable tap box and ring network switch-gear. European 630A front / back connectors provide line interface, which can be connected to the switch point indicator to show the power status of the bus circuit.
The product body adopts high-quality epoxy resin material with good mechanical and electrical properties.



Standard packaging

- ◆Butt bushing body
- ◆Certification

Order information

Product name	Product model
12KV butt bushing	DJTG-12/630A

ZT 15kV-200A
Elbow Cable Connector



Overview

15KV 200A plug-in cable connector is a fully insulated, fully sealed plug-in terminal that can be touched by electricity, which is widely used in outdoor distribution transformers, American box transformers, ring network cabinets, cable branch boxes, buried transformers and other electrical equipment. Installed on the outlet side of the T-II cable head 200A, the 200A busbar and the one-way (or double-way) casing joint and load transfer joint of the American box transformer, etc. A live display can be installed at the test point to inquire about the live state of the equipment and to meet the phase requirements of the line.
It adopts high-quality insulated silicone rubber, and the conductive rod connector has arc-extinguishing material, so it can be operated in the live state, but can not cut off the short-circuit current; it can be used as a load switch to break the current of 200A.
Suitable for cross-linked polyethylene cables with 15KV cable cross sections of 25mm²-185mm².

Model meaning

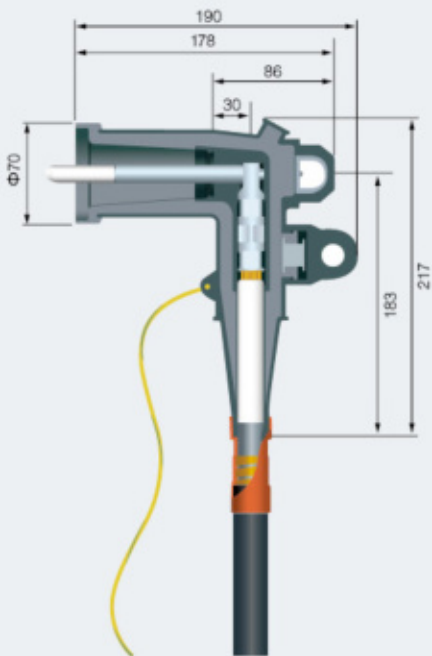
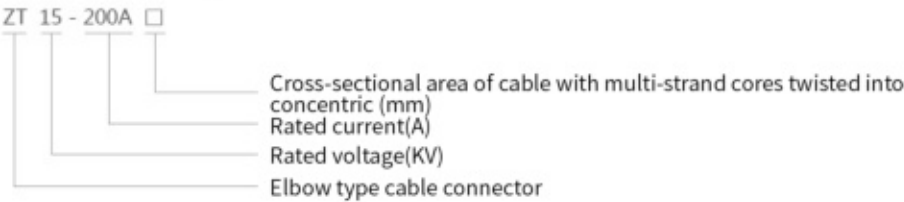
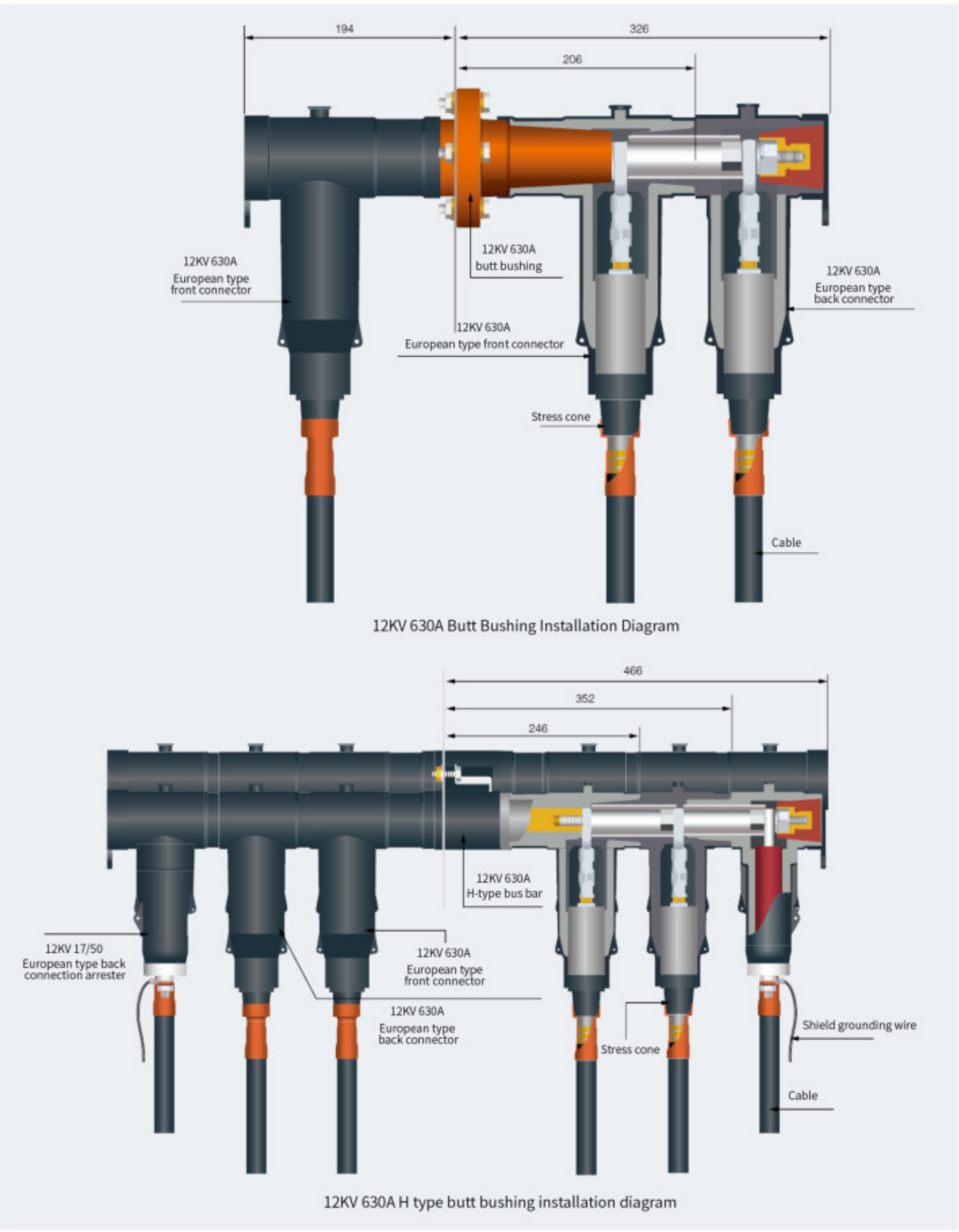


Figure 1: External dimension drawing

630A
Cable Accessories Application Examples





High And Low Voltage Switchgear Series

GGD Low Voltage Switchgear Set

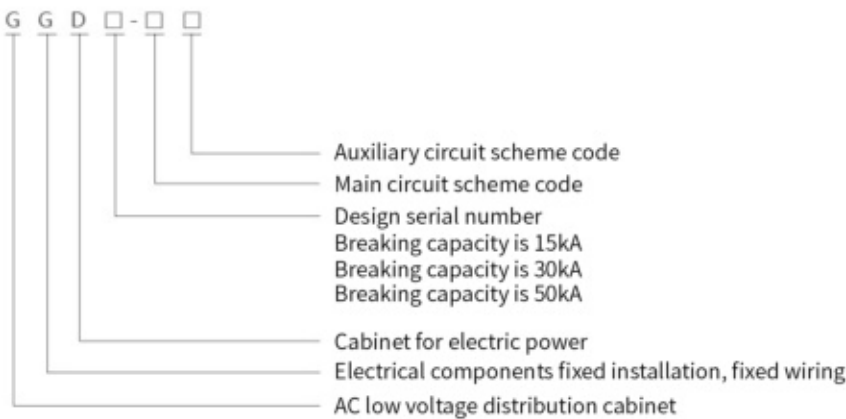


Overview

GGD AC low voltage distribution cabinet is suitable for power stations, substations and mining enterprises and other power users of AC 50Hz, rated working voltage 380V, rated working current 3150A distribution system, used for power conversion, distribution and control of power, lighting and distribution equipment.

GGD AC low-voltage distribution cabinet is a new type of low-voltage distribution cabinet designed in accordance with the requirements of the superior in charge of the Ministry of Energy and the majority of power users and design departments, and in line with the principles of safety, economy, rationality and reliability. The product has the characteristics of high breaking capacity, good dynamic and thermal stability, flexible electrical scheme, convenient combination, strong practicability, novel structure, high protection grade and so on. It can be used as a replacement product for low-voltage switchgear.

GGD AC low voltage switchgear meets the standards of IEC439 "low voltage switchgear and control equipment" and GB7251 "low voltage switchgear".



Use conditions

- ◆The surrounding air temperature should not be higher than +40°C, not lower than -5°C, and the average temperature within 24h should not be higher than +35°C;
 - ◆For indoor installation, the altitude shall not exceed 2000m;
 - ◆The relative humidity of the surrounding air shall not exceed 50% at the maximum temperature of +40°C, and a larger relative temperature shall be allowed at lower temperatures (e.g. 90% at +20°C) taking into account the influence of condensation that may be generated by chance due to temperature changes;
 - ◆The inclination of the equipment to the vertical surface when installed should not exceed 5°;
 - ◆The equipment should be installed in a place without severe vibration and shock, and a place where it is not enough to corrode the electrical components;
- Users can negotiate with the manufacturer to solve special requirements.

GGD

Low Voltage Switchgear Set

Electric performance

Basic electric parameter

Model	Rated voltage(V)	Rated current(A)		Rated short-circuit breaking current(KA)	Rated short time withstand current(1S) (A)	Rated peak withstand current(KA)
GGD1	380	A	1000	15	15	30
GGD1	380	B	600(630)	15	15	30
GGD1	380	C	400	15	15	30
GGD2	380	A	1500(1600)	30	30	63
GGD2	380	B	1000	30	30	63
GGD2	380	C	600	30	30	63
GGD3	380	A	3150	50	50	105
GGD3	380	B	2500	50	50	105
GGD3	380	C	2000	50	50	105

Main circuit scheme

The main circuit of GGD cabinet is designed with 129 schemes and 298 specifications (excluding the schemes and specifications derived from the change of function of auxiliary circuits and the change of control voltage);

Among them:

GGD1 type 49 schemes 123 specifications

GGD2 type 53 schemes 107 specifications

GGD3 type 27 schemes 68 specifications

The main circuit scheme was selected and compiled in consultation with the general design and use departments, and the scheme required for power stations was added. Rated current to 3150A, suitable for distribution transformers of 2000KVA and below to choose. In addition, GGJ1 and GGJ2 capacitor compensation cabinets are designed to meet the needs of reactive power compensation, with 4 main circuit schemes and 12 specifications in total.

Auxiliary Circuit Solution

The design of the auxiliary circuit is divided into two parts: the power supply solution and the power plant solution. There is enough space in the GGD cabinet to install secondary components, and NLS has also developed a special LMZ3D type current transformer to meet the needs of power plants and special users with relay protection.

Main busbar

Considering the price ratio and the feasibility of using aluminum instead of copper, a single aluminum busbar can be used for rated currents of 1500A and below, and a double copper busbar for rated currents more than 1500A. Of course, the factory can also replace the aluminum busbar with copper busbar with the same carrying capacity according to the requirements of users.

The lap surface of the busbar is treated with tin lining process.

Electrical components selection

The GGD cabinet should adopt the more advanced electrical components that can be mass-produced in China, and at the same time, according to the principle of economy and reasonableness, some available old products such as DZ10D, DZ20, etc. are retained under the premise of full consideration of feasibility, and the products that have been amassed are not selected.

MS13BX and HS13BX rotary operated knife switch is a special component designed according to the unique structure of GGD cabinet. It changes the operation mode of the institution and retains the advantages of the old products, which is a practical new type of electrical components.

If the design department selects new electrical components with better performance and more advanced technology according to the user's needs, the GGD cabinet has good installation flexibility and generally will not cause manufacturing and installation difficulties due to the updated electrical components.

In order to further improve the dynamic stability of the main circuit, the ZMJ type combined busbar clamps and insulated support parts are specially used for GGD cabinets. The busbar clamps are made of high strength, high flame retardant PPO alloy material with high insulation strength, good self-extinguishing performance and unique structure, which can be conveniently combined into single busbar clamps or double busbar clamps by simply adjusting the building block type inter-block. The insulation support is a sleeve type transverse pressure structure with low cost and high strength, which solves the defect of insufficient creeping distance of the old products.

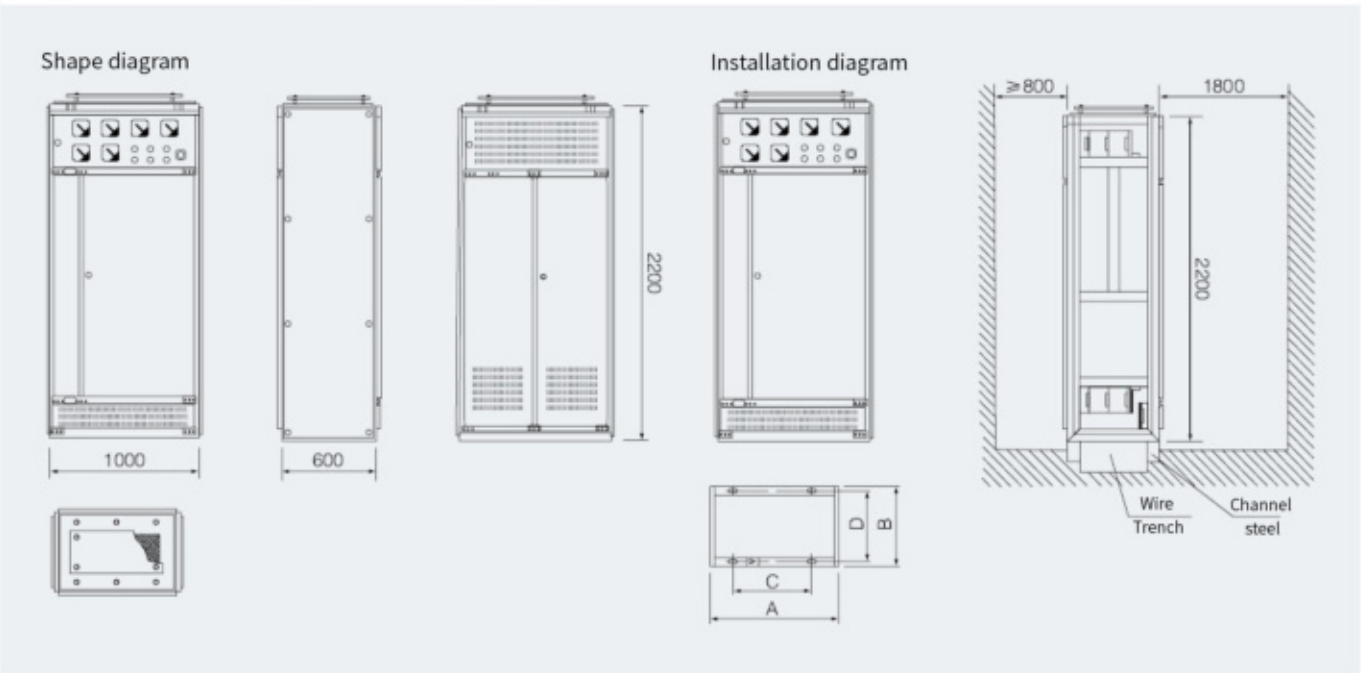
GGD

Low Voltage Switchgear Set

Use conditions

- ◆The body of CGD AC low-voltage distribution cabinet adopts the form of general-purpose cabinet, the frame is assembled with 8MF cold-formed steel by partial welding, and the frame parts and special supporting parts are supplied by the designated steel production plant to ensure the precision and quality of the cabinet body. The parts of the cabinet are designed according to the modular principle and have the installation holes of 20 modules. The high common coefficient enables the factory to realize pre-production, which not only shortens the production and manufacturing cycle, but also improves the working efficiency.
- ◆The GGD cabinet is designed with full consideration of heat dissipation in the operation . There are different numbers of heat dissipation slot holes at the upper and lower ends of the cabinet. When the electrical components inside the cabinet get hot, the hot air rises and is discharged through the slot holes at the upper end, while the cold air is constantly replenished into the cabinet by the slot holes at the lower end, so that the sealed cabinet forms a natural ventilation channel from bottom to top to achieve the purpose of heat dissipation.
- ◆GGD cabinet is designed according to the requirements of modern industrial product modeling design, using golden ratio to design the shape of the cabinet and the partition size of each part, to ensure the beauty of it.
- ◆Cabinet door with a pivot type activity more chain connected with the frame, easy to install and remove, the door folding edge are embedded with a mountain type rubber strip, closing the door and the frame between the embedded strip has a certain compression stroke, can prevent the door and the cabinet direct collision, but also to improve the door protection level.
- ◆The instrument door with electrical components is connected to the frame with multi-strand soft copper wire, and the installation parts inside the cabinet are connected to the frame with knurled screws, and the whole cabinet constitutes a complete grounding protection system.
- ◆The surface paint of the cabinet is made of polyester orange-shaped baking paint, with strong adhesion and good texture. The whole cabinet is matte tone, avoiding the glare effect and creating a more comfortable visual environment for the duty personnel.
- ◆The top cover of the cabinet can be removed when needed, which is convenient for the assembly and adjustment of the main busbar on site. The four corners of the cabinet are equipped with lifting rings for lifting and shipment.
- ◆The protection level of the cabinet is IP30, and users can also choose between IP20-IP40 according to the requirements of the use environment.

Shape and mounting dimensions(mm)



Product Model	A(mm)	B(mm)	C(mm)	D(mm)
GGD06	600	600	450	556
GGD06A	600	800	450	756
GGD08	800	600	650	556
GGD08A	800	800	650	756
GGD10A	1000	600	850	556
GGD10A	1000	800	850	756
GGD12	1200	800	1050	756

KYN28A-12

Armored Removable AC Metal Closed Switchgear

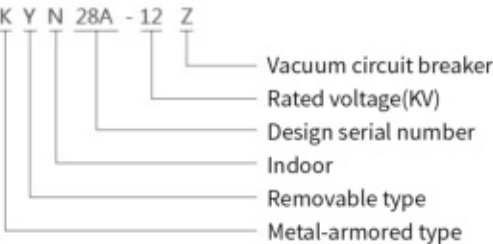


Overview

KYN28A-12(Z)-type armored removable AC metal closed switchgear (hereinafter referred to as "switchgear") is applicable to three-phase AC 50Hz power system, used for receiving and distributing electric energy and implementing control, protection and monitoring of the circuit.

This product conforms to the standards: GB3906 "3-35KV AC metal-enclosed switchgear", GB/T11022 "Standard common technical requirements for high-voltage switchgear and control gear", IEC60298 "AC metal-enclosed switchgear and control gear of rated voltage 1KV and above".

Model meaning



Use conditions

- ◆ Ambient temperature: maximum temperature +40°C, minimum temperature -15°C;
- ◆ Relative humidity: daily average relative humidity: ≤95%, daily average water vapor pressure does not exceed 2.2KPa; monthly average relative humidity 90%; monthly average water vapor pressure does not exceed 1.8KPa;
- ◆ Altitude: ≤1000m;
- ◆ Earthquake intensity: not more than 8 levels;
- ◆ Application site: the surrounding air should be free from corrosive or combustible gases, water vapor and other obvious pollution, and no violent vibration sites;
- ◆ In case of use under normal conditions beyond those stipulated in GB3906, it is negotiated between the user and our company.

Structure characteristics

- ◆ The structure of the switchgear is as follows. All-metal modular assembled structure, the cabinet is made of imported zinc-plated aluminum with strong anti-corrosion ability, without surface treatment, processed by CNC high-density equipment, with advanced multiple folding process, connected with pull rivet nuts and high-strength bolts, with high precision, light weight and good strength.
- ◆ Switchgear can be equipped with our company's VS1 series, VD4 series, ZN65 series and other vacuum circuit breakers, which are highly adaptable and interchangeable. The trolley is equipped with working position and test position, and each position is equipped with positioning and display device, which is safe and reliable.
- ◆ The cable room can be equipped with up to 9 single-core cables, and the equipment has reliable mechanical and electrical interlocking devices to fully meet the requirements of "five prevention". Each room is equipped with pressure relief channel to ensure personal safety.

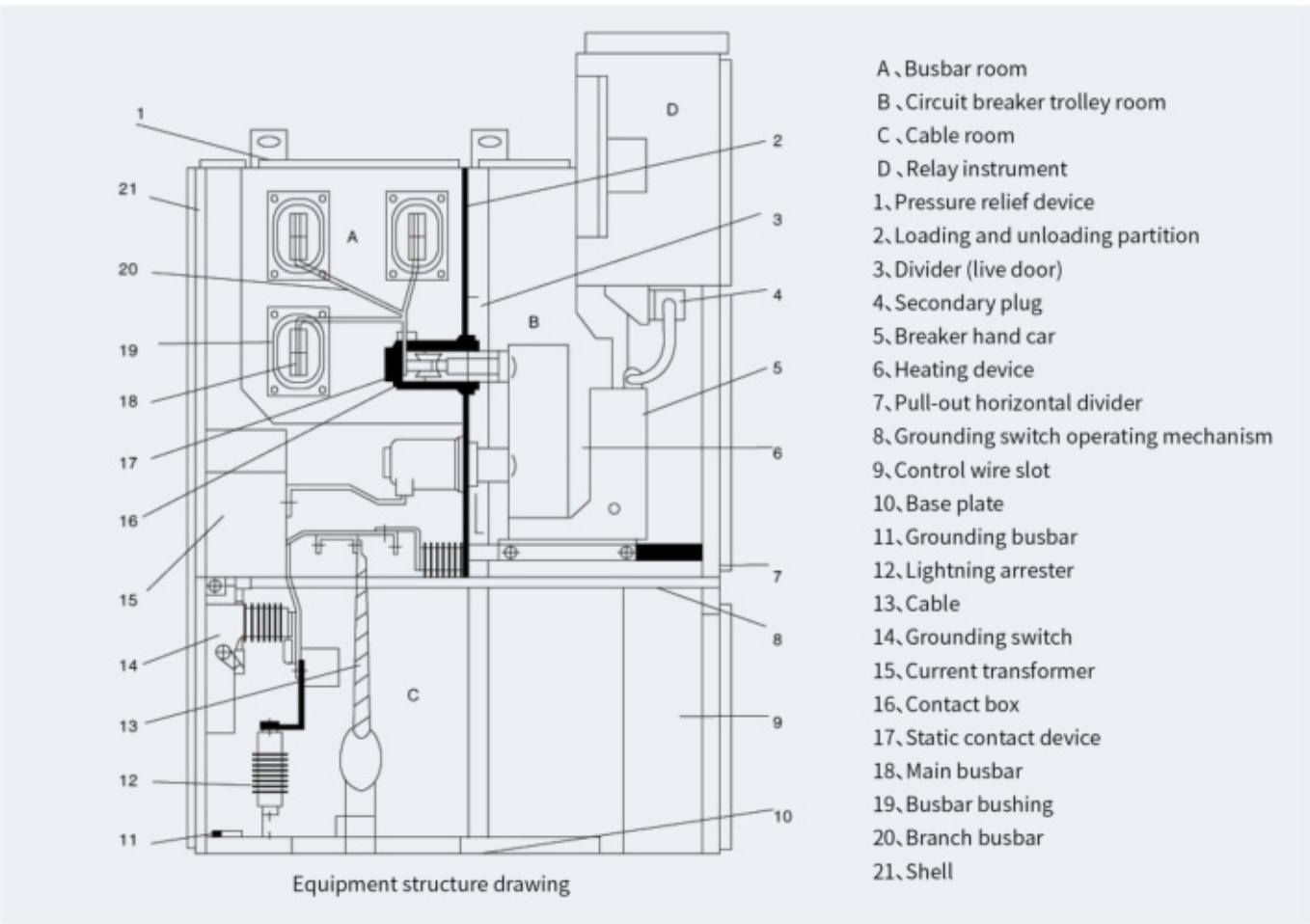
KYN28A-12

Armored Removable AC Metal Closed Switchgear

Maltemin technical parameters

Item	Unit	Parameter
Rated voltage	kV	3.6、7.2、12
Rated frequency	Hz	50
Rated current of circuit breaker	A	630、1250、1600、2000、2500、3150
Rated current of switchgear	A	630、1250、1600、2000、2500、3150
Rated short-time withstand current (4S)	kA	20、25、31.5、40
Rated peak withstand current (peak)	kA	50、63、80、100
Rated short-circuit opening current	kA	20、25、31.5、40
Rated short-circuit closing current (peak)	kA	50、63、80、100
Rated insulation level 1min frequency withstand voltage	Inter-phase to ground	kV 24、32、42
	Inter-fracture	kV 24、32、42
Lightning surge withstand voltage (peak)	Inter-phase to ground	kV 40、60、75
	Inter-fracture	kV 46、70、85
Protection level		The outer shell is IP4X, and when the door of compartment and circuit breaker is opened is IP2X .

Maltemin technical parameters



KYN28A-12

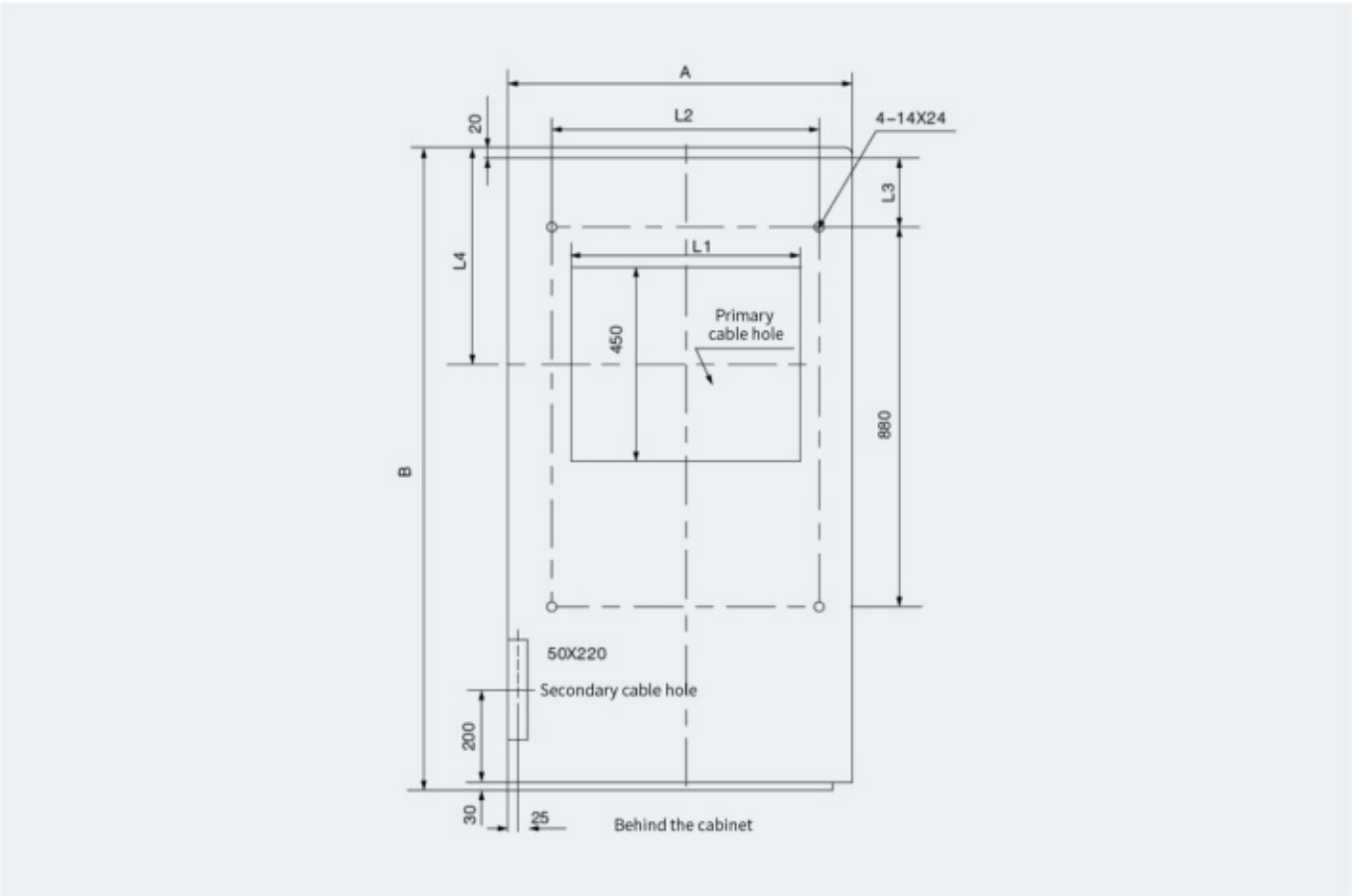
Armored Removable AC Metal Closed Switchgear

Dimension(mm)

Height		2300
Width	Rated current 1250A and below	800
Width	Rated current 1600A and above	1000
Depth	Cable in/out line	1500
Depth	Overhead in/out line	1660

Installation size(mm)

Cabinet width A	Cabinet depth B	L1	L2	L3	L4
800	1500 Cable	530	630	150	490
800	1660 Overhead	530	630	310	650
1000	1500 Cable	730	830	150	490
1000	1660 overhead	730	830	310	650



HXGN15-12

Unit AC Metal Closed Ring Network Switchgear



Overview

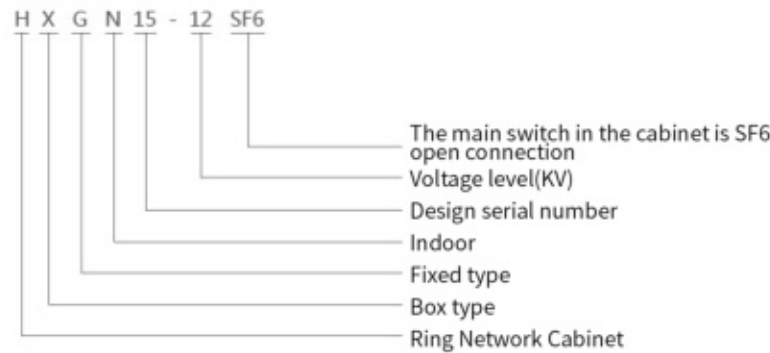
HXGN15-12(SF6) unit type AC metal closed ring network switchgear (hereinafter referred to as ring network cabinet) is a new generation of high voltage electrical products successfully designed and developed by our company after introducing advanced technology from abroad and in accordance with the requirements of domestic agricultural power and urban network transformation. Each technical performance index conforms to IEC62271-200:2003 and GB3906 standards.

The main switch, operating mechanism and components of ring network cabinet adopt original parts of ABB or SFL-12/24 type switchgear which is assembled and produced domestically with imported parts, and can also be equipped with original HAD/US type SF6 circuit breaker or VD4-S type vacuum circuit breaker of ABB according to users' needs. The operation mode is divided into two kinds: manual and electric.

The cabinet body is riveted by CNC machine tool processing, and the protection level reaches IP3X, and has reliable mechanical interlock and anti-misoperation function. This product has very significant features such as small volume, light weight, beautiful appearance, easy operation, long life, high parameters, no pollution and less maintenance.

HXGN15-12(SF6)-type unit AC metal closed ring network switchgear is suitable for use in AC 50Hz, 12KV power network for receiving and distributing electric energy. The main switch in the cabinet is SF6 switch.

Model meaning



Use conditions

- ◆ Ambient temperature: upper limit +40°C, lower limit -25°C;
- ◆ Altitude: not more than 2000m;
- ◆ Relative temperature: daily average not more than 95%; monthly average not more than 90%;
- ◆ Surrounding environment: the surrounding air is not significantly polluted by corrosive gases or combustible gases, water vapor, etc;
- ◆ No frequent and violent vibration.

HXGN15-12

Unit AC Metal Closed Ring Network Switchgear

Main technical parameters

Project	Unit	Parameter
Rated voltage	kV	12
Rated frequency	Hz	50
Rated current of main busbar/maximum rated current of fuse	A	630 , 125
Main circuit, grounding circuit rated short time withstand current	kA/S	20 , 3
Main circuit, grounding circuit rated peak withstand current	kA	50
Main circuit, grounding circuit rated short-circuit closing current	kA	50
Load switch full capacity breaking number	Times	100
Fuse breaking current	kA	31.5 , 40
Rated closed loop breaking current	A	630
Rated transfer current	A	1600
Mechanical life	Times	2000
1 min Frequency withstand voltage (peak)	kV	42 , 48
Lightning surge withstand voltage (peak)	kV	75 , 85
Secondary circuit 1min frequency withstand voltage	kV	2
Protection level		IP3X

Structure feature

Cabinet structure

◆The ring network cabinet body is made of 2mm thick aluminized zinc plate (or cold-rolled plate after spraying plastic) riveted and formed, with two pressure release holes at the back of the cabinet, one for the cable room and the other for the load switch/bus bar room. This structure can guarantee the reliability of personal installation and operation equipment to the maximum extent.

◆Each interval chambe

◇Busbar Room

The busbar room is located at the top of the cabinet and connected to the phase switchgear.

◇The load switch is an independent unit and is filled with SF6 gas inside.

◇Cable room

About 75% of the space is used for cable connection, fuse, grounding switch and CT, PT installation.

◇Mechanism compartment and interlock

The chamber contains the operating mechanism and mechanism interlock as well as the position indication, auxiliary contact, release coil, energized display and interlock.

◇Relay cabinet

The relay cabinet is on the top of the cabinet and is optional. The small chamber is used to install special devices such as meters, relays and motor units.

◇Circuit breaker chamber

A circuit breaker (SF6 or vacuum) can be placed below the load switch.

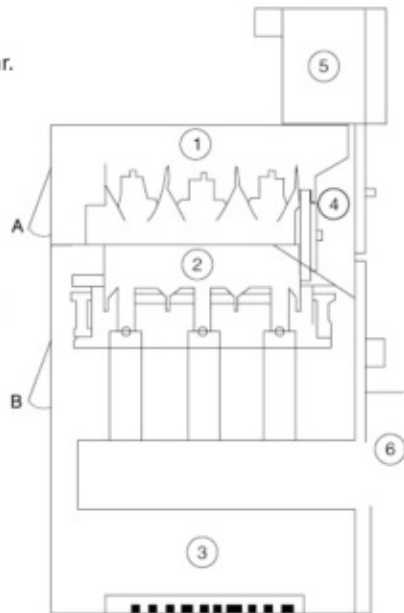
◆Pressure release

◇Above pressure release

The upper part is used to release the gas pressure generated during the arcing accident inside the busbar and load switch room.

◇Below pressure release

The below is for releasing the gas pressure generated in the event of an arcing accident inside the cable cubicle.r



HXGN15-12

Unit AC Metal Closed Ring Network Switchgear

Dimension(mm)

Project	Unit	Parameter
Circuit breaker cabinet width	mm	750
Other cabinet width	mm	375 , 500
Height	mm	1600 , 1850
Depth	mm	980 , 900
Relay box height	mm	450

Basic components

◆SFL load switch (ABB original)

The SFL load switch is a double-break point, rotary moving contact, with SF6 gas as the arc extinguishing medium, and the static and dynamic head is placed in the die-cast epoxy resin outer shell of the reinforced structure. At the lead-out end of the operating shaft is a transparent hot-pressed plastic end cover through which the state can be observed.

Each switch is permanently sealed when filled with 1.4pa SF6 gas (SFL means "forever sealed"), and a helium detector can be used to detect gas leakage.

The switch can be installed vertically or horizontally. In the unit cabinet, the typical installation mode is to place a steel partition between the cable room and the bus room and install it horizontally. This installation method seals the switch shell in a grounded steel plate and isolates the busbar from the cable connector to meet the most stringent safety requirements of operation and maintenance.

If an internal arc occurs, there is a structural weakness at the back of the shell, which will flush the arc gas out of the switch, and then the arc relief valve on the cabinet will be flushed open and the over-pressurized gas will be directed out of the cabinet.

◆Optional equipment-auxiliary contact 2 normally closed, 2 normally open, + 2 extended, 2 normally open, 2 normally closed-shunt tripping coil for SFL with A mechanism.

◆Choose K mechanism switch SFL12/17.5 IVDP575305RI
SFL24K IVDPS75304RI

◆Choose A mechanism switch SFL12/17.5 IVDP575303RI
SFL24A IVDP575302RI

◆VD4S vacuum circuit breaker (ABB original)

VD4- S vacuum circuit breaker is specially designed for unit switchgear, and its breaking capacity is sufficient to cope with various states, including normal switching equipment or branch network operation and breaking short circuit in special cases.

◇ Vacuum circuit breakers are especially suitable for networks that operate frequently within the working current range. VD4-5 vacuum circuit breaker is equipped with spring operating mechanism with re-closing function (off-0.3s-on off-180s-on off), reliable operation and long service life. The whole circuit breaker consists of three vacuum switch bubbles, the outside is a resin insulating cylinder, vertical structure.

◇ The quenching of the arc is due to the forced displacement of the arc caused by the spiral groove of the arc extinguishing contact. Because the lowest static vacuum in the switch insulation tube is 10-4 to 10-8, although there is only a relatively small gap between the switch contacts, a high insulation strength can be obtained. The arc goes out at the first zero of the short-circuit current.

◇ Because of the small gaps between the contacts, the high electrical conductivity of the metal gas plasma zone at the arc voltage drop and the short arc time, the arc energy is very low, which is beneficial to the extension of the contact and even the whole switch life.

Standard equipment - manual operation - electric operation - auxiliary contact 2 regular open, 2 regular close
- shunt trip takes position contact -shunt closing coil

Optional equipment - S5 or PR512 over-current relay - low current tripper - Interlocking coil

Circuit breaker model VD4 1206-20S VD4 1706 VD4 2406

◆ HAD/US SF6 circuit breaker (ABB original)

HAD / US SF6 circuit breaker is specially designed for ring network switchgear, and its breaking capacity is sufficient to cope with various states, including normal switching equipment or branch network operation and breaking short circuit in special cases. The new generation of HAD has the latest SF6 breaking technology, coupled with simple structure, only a small operating energy, such a simple energy storage operating mechanism has the characteristics of long mechanical life. The spring operating mechanism of the circuit breaker can realize the automatic re-closing operation.

The special structure of the breaking part of the switch can ensure the extension of the electrical life. The switch is made into a split independent column structure and placed vertically. The switch adopts the principle of self-energy arc blowing, that is, arc energy is used to extinguish the arc. When the circuit breaker is opened, an arc is produced between the dynamic and static contacts in the extinguishing chamber. The high temperature and high ionization efficiency produced by the arc should make the SF6 gas force increase rapidly in the arc extinguishing chamber. With the strength of the arc force and the gradual separation of the arc contact, the gas is forced to spray out of the arc extinguisher through the nozzle, so the arc becomes sparse, cooled, blocked, and reignited, so the switch movement part only needs very little energy. It adds to the reliability of long-term operation.

