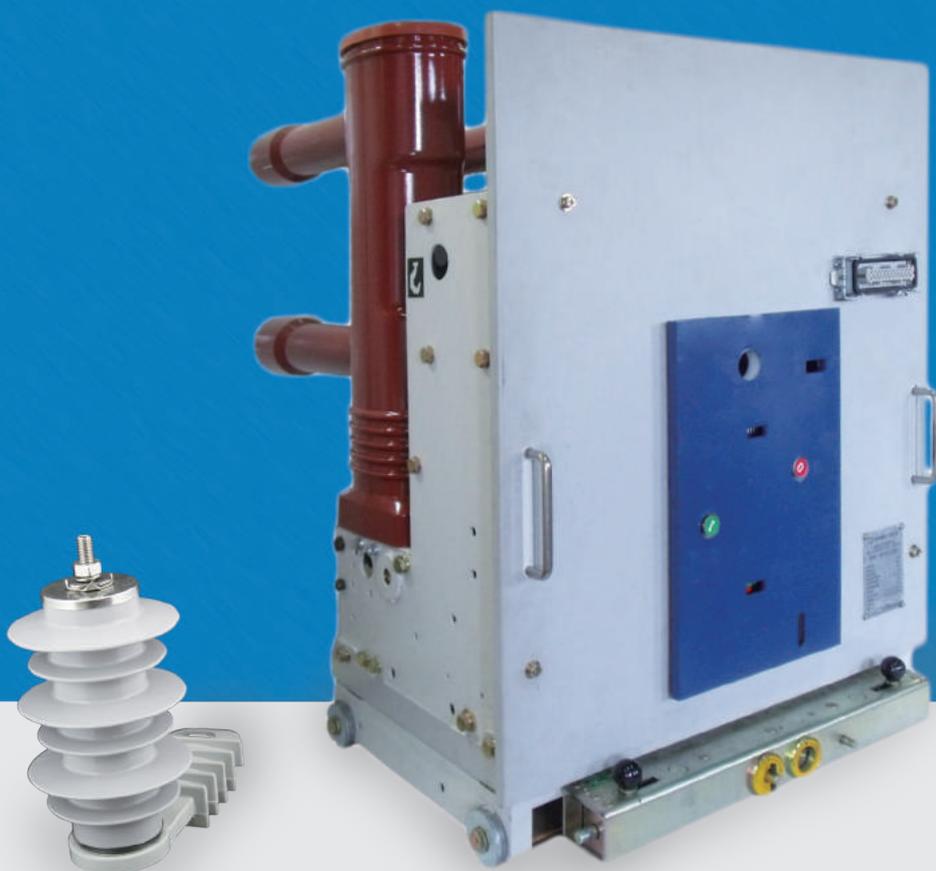


PRODUCT CATALOGUE

Distribution

For Cubicle



Information

Tel : 03-4777547

Fax : 03-4777570

E-mail : overseas@jaker.com.tw

Web : www.jaker.com.tw

Add : No.787, Xinwen Rd. Xinwu Dist., Taoyuan City 327, Taiwan

Contents

About Us	02
Vacuum Circuit Breaker	03
High-Voltage Disconnecting Switch	05
Load Break Switch	06
Power Fuse Mounting	07
Polymer Arrester	08
Capacitor Trip Device For VCB	10

About Us

Established in 1983, Jaker Electric Co., Ltd., has over 30 years of experience in this industry and continues to develop and invest in electrical power solutions. The company is engaged mainly in the development, manufacturing, and sales of power-equipment products. Its wide range of products includes circuit breakers, disconnecting switches, load break switches, line switches, arresters, and transformer components. It is worth emphasizing that we have a firm commitment to maintaining competitive prices and providing the highest quality, safest, and most practical products.



24kV/ 27.5kV Vacuum Circuit Breaker

The KB-101, KB-301 series of vacuum circuit breakers (VCB) designs are combined with the latest vacuum technology. The main circuit and the vacuum interrupters are embedded in resin insulation housing to prevent mechanical impact, dust, and humidity influence. We greatly simplified the complexity of the mechanism and promoted its reliability.

For KB series vacuum circuit breaker is conveniently assembled into a switchgear cubicle; we offer a few types of draw-out seat that comprising fixed type, standard type and standard cubicle type, and screw-bar draw-out type. With the draw-out seat there are insulation shuttle board and grounding metal shuttle board, two types of shield plate for selection. These shuttle boards prevent the operator from accessing the energized conductors. The connection contactors between the circuit breaker and the draw-out seat are horizontally designed. To maintain high quality, the circuit breaker and the draw-out seat are fabricated at Jaker's factory.



Mechanism

The mechanism of the KB series circuit breaker is motor-drive spring charging. The open and close functions can be operated manually through remote solenoid control, after the main spring charging. The front plate of the circuit breaker provides buttons for manual operation locally, during charging. If there is a control circuit outage or a motor abnormality, a manual handle is available for charging the main spring.

This mechanism has fewer parts and is, therefore, simplified, more reliable and more durable. Thus, maintenance is reduced. The function “trip free” is provided; when the “open” button is pressed immediately after a closing operation, the circuit breaker will return to the open position, even if the close button is still pressed down.

Note: The control, the output interface status, and the manual/electrical operation mode are set in accordance with the needs of the customer. For further details, please contact our sales department.

Draw-out seat

The draw-out seat for this series circuit breaker is offered in a standard type and a screw-bar-type. There is a fixed portion of the seat with a rail to guide the movement of the breaker smoothly and shuttle boards to isolate the main circuit. There are two types of shuttle-boards available, insulated boards and grounded-metal boards. The draw-out seat appears in the standard type and in the metal-cubicle type; these types provide all kinds of options for the customer. Shuttle boards can be shuttled automatically with the movement of the circuit breaker to prevent an electric shock.

To ensure operational safety, the draw-out seat is equipped with a mechanical interlock protection device to ensure that the circuit breaker is ready before movement.

Specifications

Type		KB-101	KB-301	KB-201
Rated voltage (kV)		24	24	27.5
Rated normal current (A)		1250	630	1250
Rated frequency (Hz)		60	60	60
Rated short-circuit breaking current (kA)		25	16	20
Rated short-circuit breaking capacity (MVA)		1040	665	550
Rated short-circuit withstand current (kA/3sec)		25	16	20
Rated short-circuit making current (kAp)		63.0	41.6	52
Rated breaking time (Cycle)		3		
Rated opening time (sec)		≤0.04	≤0.03	≤0.06
No-load closing time (sec)		≤0.06	≤0.05	≤0.08
Withstand voltage	Power frequency (kV/1min)	50		95
	Impulse (kV/1.2x50μs)	125		250
Rated operating sequence		O-0.3sec-CO-3 min-CO		CO-15S-CO
Operating voltage *1		AC110V/DC110V		
Class of CB	Mechanical endurance class *2	M1	M2	M1
	Electrical endurance class	E1	E1	E1
	Capacitive current switching	-	C1	-
Auxiliary switch		6a6b	6a6b	4a4b
Duty		100%		
Altitude		<1000m (indoor use)		
Ambient temperature		0~45°C (indoor use)		
Relative humidity		≤95% (no condense)		
Vibration coefficient		≥0.35g		
Weight	Fixed type	-	135	-
	Standard	-	212	-
	Standard cubicle type	-	256	425
	Standard cubicle type with earthing switch	-	315	-
	Screw bar type	-	282	-
	Screw bar type with earthing switch	384	320	-
Applied standard		IEC 62771-100		

Note 1: The operating voltage according to customer options, please refer to the driving motor as well as inputs / trip coil specifications.
 2: M1 is 2000 operating cycles; M2 is 10000 operating cycles.

Certification license

The certification license of the Bureau of Energy (Ministry of Economic Affairs), Taiwan



KB-101 VCB

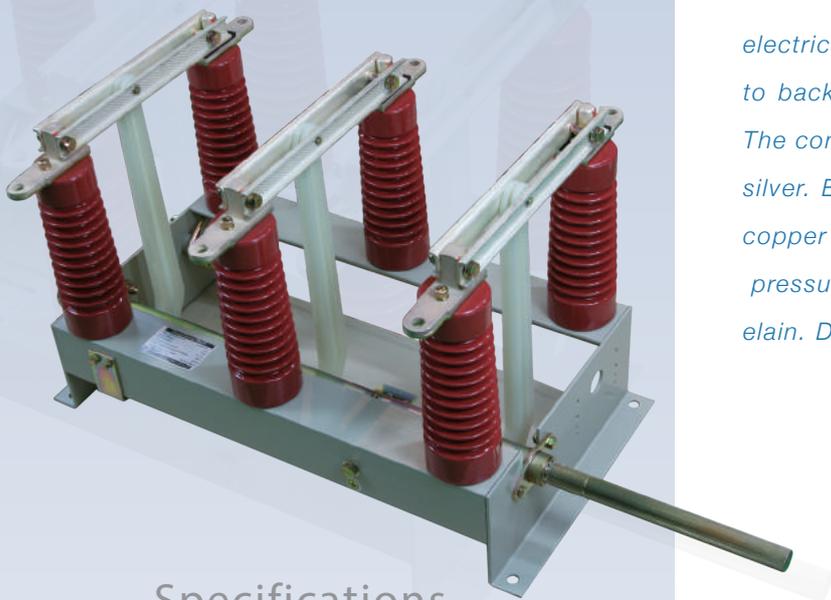
KB-201 VCB

KB-301 VCB

High-Voltage Disconnecting Switch

Disconnecting switch (DS) is comply with IEC62271-102 standards for high-voltage disconnecting switches, DS is suitable for indoor use with voltage ranging 7.2~24 kV, current 630~3000 A. It can have a single phase or three synchronized phases. Triple-phased DS can be operated from the right or the left of the cubicle.

There are some options for customers: trip coil; electrical driving mechanism; ES toggle interlock, or back to back interlock, or back to back interlock mechanism. The contactors on the DS copper surface are coated with silver. Each phase moving contactor is made of double-copper blades to ensure the switch with sufficient contact pressure. DS has two types of insulators, resin and porcelain. DS is operated only at the no-load condition

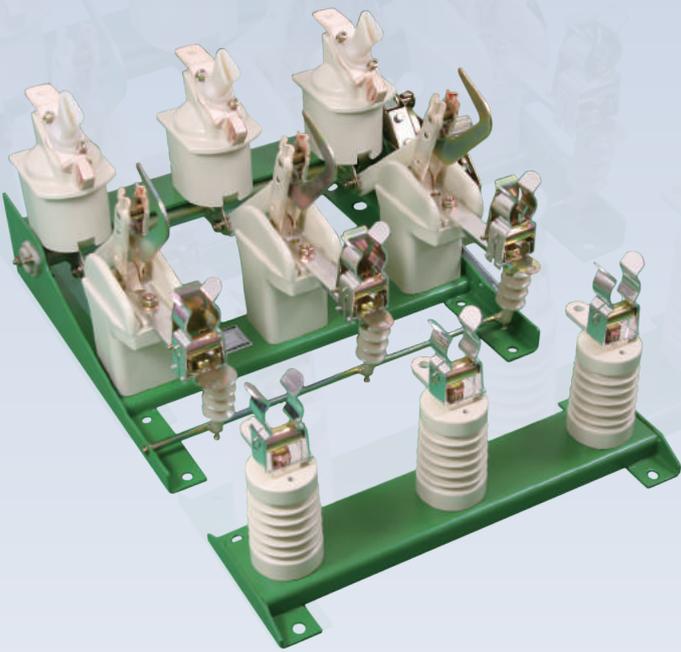


Specifications

Type		JDR 12 1P/3P	JDR 24 1P/3P
Rated voltage (kV)		12	24
Rated normal current (A)		630	
		1250	
		1600	
		2000	
		2500	
		3000	
Rated frequency (Hz)		60	
Rated short-time withstand current (kA/3sec)		20	
Rated short-circuit making current (kAp)		31.5	
Withstand voltage	Power frequency (kV/1min)	42	65
	Impulse (kV/1.2x50μs)	75	125
Duty		100%	
Elevation		<1000 m (indoor use)	
Operating temperature		0~45°C (indoor use)	
Humidity		≤95%	
Vibration coefficient		≥0.35g	
Applied standard		IEC 62771-102	

Load Break Switch

This load break switch applies to a 7.2–24 kV electric power system, indoors, for breaking the rated load current, the transformer magnetizing current, and the cable charging current. It provides a full range of protection. It also includes a power fuse to protect from fault current.



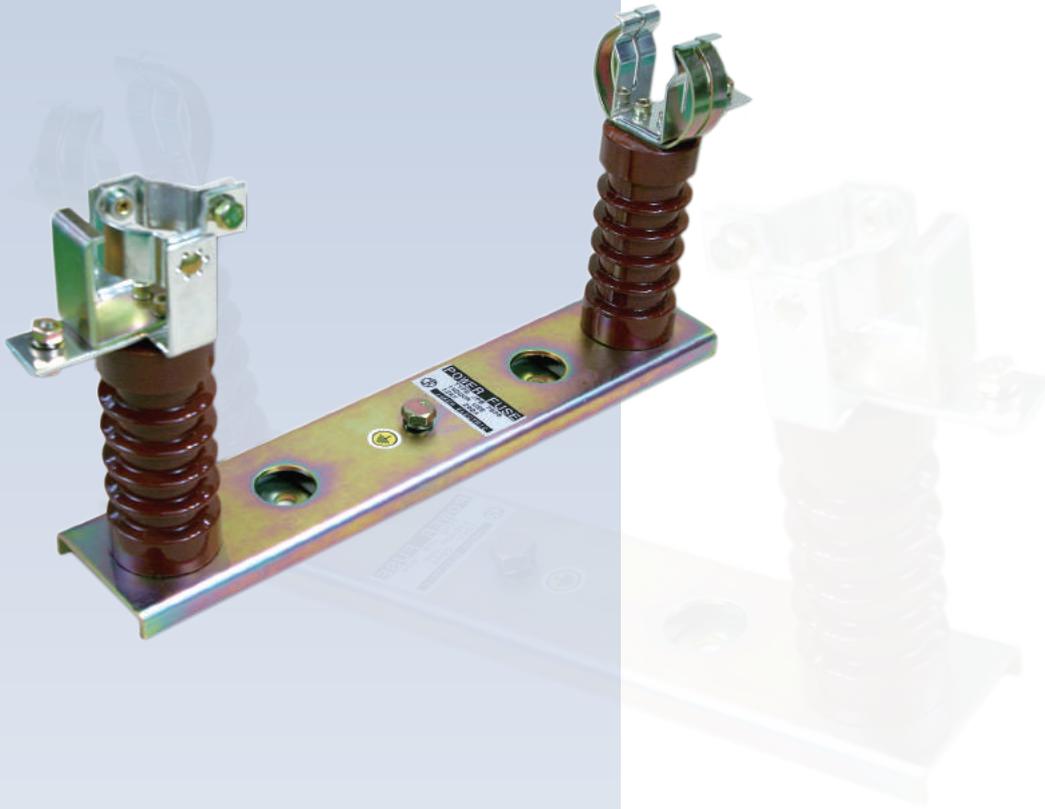
Specifications

Type		JW12-630		JW24-630
Rated voltage (kV)		12		24
Max. operate voltage (kV)		13.8		25.8
Rated current (A)		630		400/ 630
Short circuit-making current (peak) (kA)		31.5	50	31.5
Peak withstand current (kA)		31.5	50	31.5
Short time current 1 sec (kA)		12.5	20	12.5
Power frequency withstand voltage (kV/1min)	To earth and between poles	28	42	50
	Across isolating distance	35	48	60
Impulse withstand voltage (kV/1.2x50µs)	To earth and between poles	75		125
	Across isolating distance	80	85	145
Operating angle on the shaft		120°		
Pole distance (mm)		150	210	275

Characteristics

- Hard-drawn copper blade, featuring silver clad contact surfaces on both sides, is utilized for continuous current carrying.
- Arc compressor provides blowing wind from nozzle when the LBS tripping.
- Close open mechanism requires no adjustments. It closes or opens swiftly, positively, independently of handle operation speed or motor rotary speed, and locks. Its positive action contributes to LBS ability to achieve fast interruption and two-time duty-cycle fault-closing ratings.
- Epoxy insulators provide sufficient clearance distances from the base.
- Arc conducting blade, it makes earlier and open latter than copper blade to protect the melting of copper blade.
- Fuse tripping paddle, after power fuse element is melted, the striker of power fuse trip the paddle to open the LBS immediately. It makes sure the circuit should not operate in a single phase and there is no energy in any phase after one line fault or two line short circuit faults. This not only protects your power equipment, but it also provides the operator a safe working environment.
- Fuse base is separated from LBS base. The fix position can be adjusted

Power Fuse Mounting



Specifications

Type	7678	7688	7698	7708
Rated voltage (kV)	7.2	12	24	36
Rated normal current (A)	200			
Rated frequency (Hz)	60			
AC withstand voltage (kV/1min)	20	28	50	70
Impulse voltage (kV/1.2x50μs)	60	75	125	170
Duty	100%			
Altitude	<1000 m (indoor)			
Operating temperature	0~45°C (indoor)			
Relative humidity	≤95% (no condense)			
Vibration coefficient	≥0.35g			

Polymer Arrester

JK-11,23 series arrester is gapless designed, main resistance valve is used good quality zinc oxide element. The electrical characteristics and quality compliance with IEEE C62.11 Std and Taiwan Power Company C045 material standards. It possesses superior transient over-voltage (TOV) characteristic, duty cycle current up to 10 kA, suitable for heavy duty service, the arrester external housing is silicone rubber, excellent lightweight and water resistance, salt dust pollution, UV light and aging excellent physical properties, and installation with disconnecter. It provides very good fault coordination and protection for distribution system.

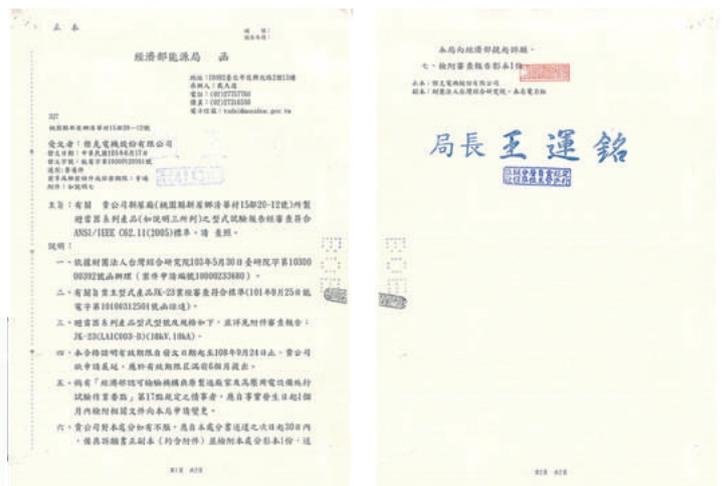


Certification license

The certification license of the Bureau of Energy (Ministry of Economic Affairs), Taiwan

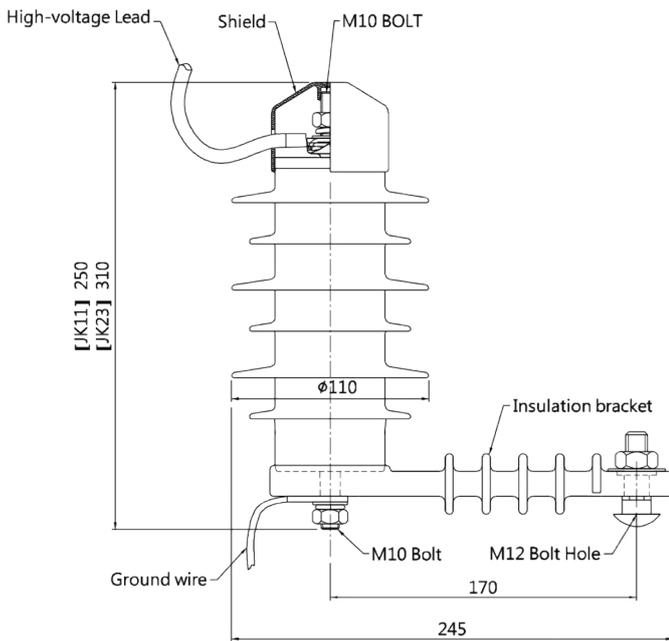


JK-11 Arrester



JK-23 Arrester

Installation drawing



Maintenance recommendation

- It is recommended to do inspections at least once a year to ensure that the arrester and wire maintain good connections, no loose, rust and other undesirable status, and clean silicone insulation surface; installed in heavy salty, sulfur region or outside switch-cubicle, shorten the maintenance cycle.
- It is recommended every three years to measure the insulation resistance and leakage current time, the insulation resistance should be maintained at more than 1000 MΩ (1000 Vdc); the leakage current should be maintained at less than 1 mA.

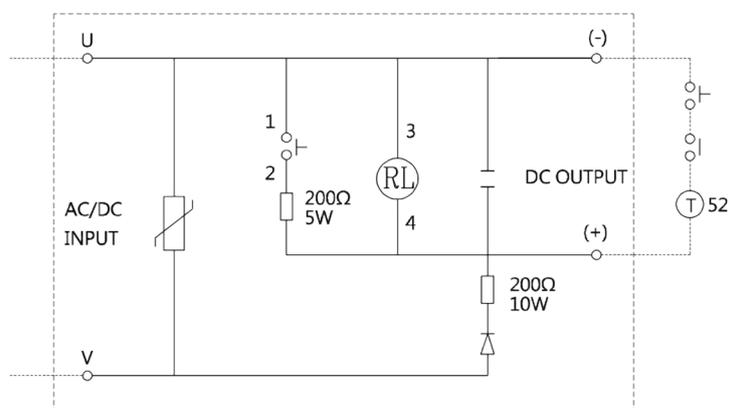
Specifications

Type		JK11	JK23
Rated voltage		9 kV	18 kV
MCOV.		7.65 kV	15.3 kV
System voltage		3Φ4W 11.4 kV	3Φ4W 22.8 kV
Max. discharge voltage of 8X20 μs impulse current	5 kA	30 kV	60 kV
	10 kA	35 kV	68 kV
	20 kA	40 kV	76 kV
Max. discharge current 4X10μs		100 kA	
Impulse voltage 1.2X50μs		75 kV	125 kV
AC dielectric voltage (1 min) dry		27 kV	42 kV
AC dielectric voltage (10 sec) wet		24 kV	36 kV

Capacitor Trip Device For VCB



Control circuit diagram



Specifications

Type	KK-11	KK-11A
Rated voltage	110 Vac	220Vac
Voltage operate range	90-150 Vac	90-270 Vac
Rated out-put voltage	155 Vdc	310 Vdc
Rated charge energy	12 joule	38 joule
Operation frequency	50~400 Hz	
Ambient temperature	-20°C~85°C	

Precautions :

1. Please specially pay attention to the polarity of the DC output. Misconnection or short-circuiting may cause damage.
2. Please do not hesitate to contact us if you have any questions or special requests.