



MEDIUM VOLTAGE VACUUM CONTACTORS



Vacuum Contactor

Medium Voltage Vacuum Contactor

GVC20 1.5 KV AC Medium Voltage Vacuum Contactors 250A to 1000A

The GVC20 series vacuum contactors are suitable for AC 50-60Hz power network systems with main circuit rated currents of 250A, 400A, 630A, 800A, and 1000A. They are designed for remote switching, frequent starting, and control of AC motors, transformers, and capacitor banks. This series of vacuum contactor features a **fully enclosed design**, a elegant appearance, stable and reliable performance, maintenance-free operation, and a long service life. They are the ideal replacement for old-fashioned vacuum contactor.

- The ambient air temperature for the installation of the contactors ranges from -25°C to +40°C. The altitude of the contactor's installation location should not exceed 2000m.
- The control power supply voltage can be **AC/DC**, with options of **36V, 110V, 220V and 380V**. Customization is also available according to user requirements.
- The control circuit can be operated using either a DC electromagnetic system or a DC permanent magnet system. In the case of an AC control power supply, it is supplied to the coil through a rectifier bridge.
- The standard types of auxiliary circuit contacts include electric holding type (two normally open and one normally closed) and permanent magnet type (one normally open and one normally closed). Customization is also possible based on customer requirements.
- The maximum specified heating current for the auxiliary switch contacts is 5A.



Vacuum Contactor

Medium Voltage Vacuum Contactor

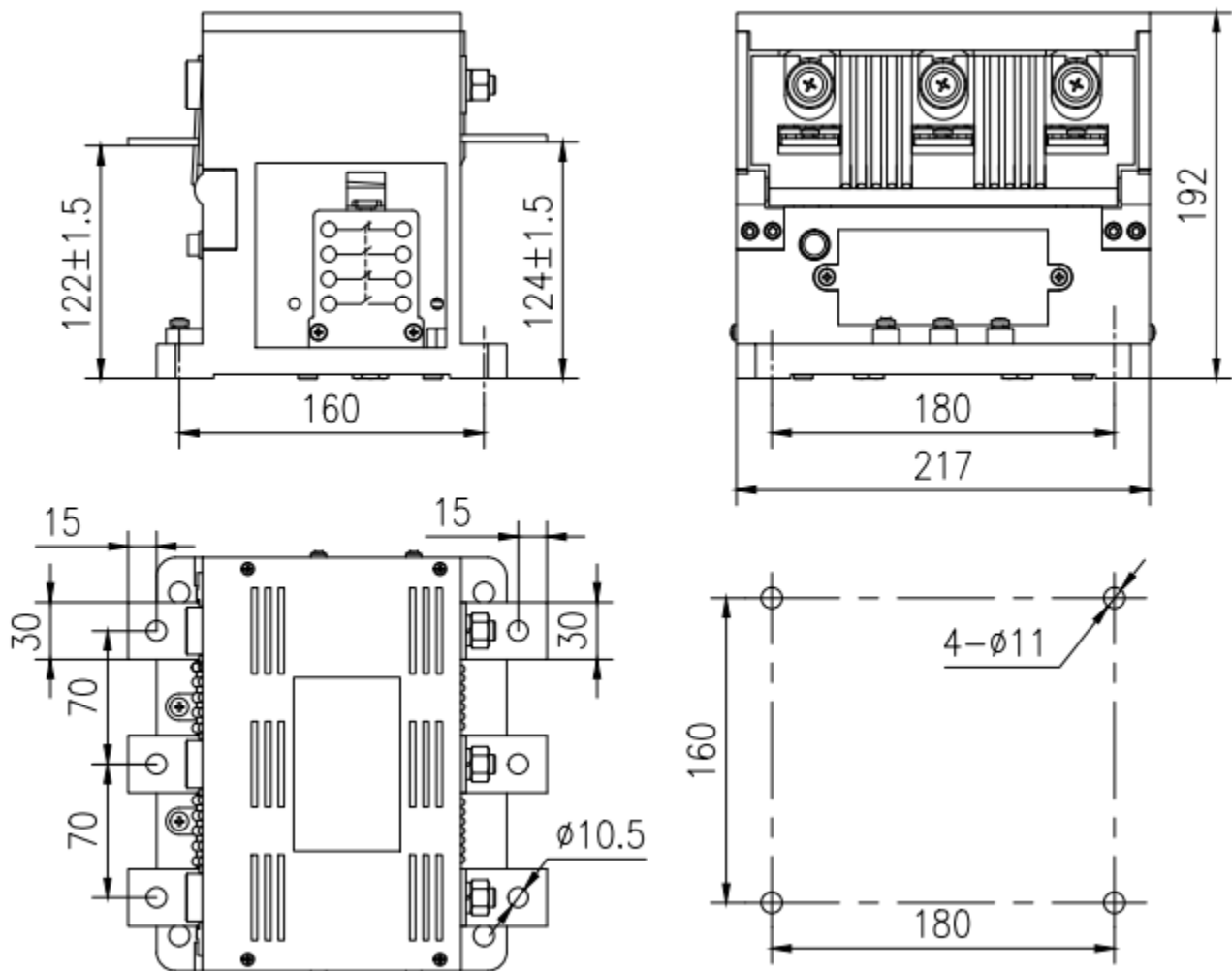
Main Electrical Parameters

Model	GVC20- 250A/1.5KV	GVC20- 400A/1.5KV	GVC20- 630A/1.5KV	GVC20- 800A/1.5KV	GVC20- 1000A/1.5KV
Rated voltage of the main circuit (KV)	1.14-1.6	1.14-1.6	1.14-1.6	1.14-1.6	1.14-1.6
Rated current of the main circuit (A)	250	400	630	800	1000
Contact making capacity of the main circuit (A/100 times)	2500	4000	6300	8000	10000
Contact breaking capacity of the main circuit (A/100 times)	2000	3200	5000	6300	8000
Breaking capacity under ultimate conditions (A/3 times)	2500	4000	6300	8000	10000
Mechanical life (ten thousand times)	100	100	100	100	100
Electrical life (AC3) (ten thousand times)	25	25	20	20	20
Electrical life (AC4) (ten thousand times)	10	10	10	10	10
Power frequency withstand voltage of the main circuit (open gap) (KV)	12	12	10	10	10
Power frequency withstand voltage of the control circuit (KV)	2	2	2.5	2.5	2.5
Rated operating frequency AC3 (times/h)	300	300	300	300	300
Rated operating frequency AC4 (times/h)	120	120	120	120	120
Contact opening distance (mm)	2±0.2	2±0.2	3+0.5/3-0.2	3+0.5/3-0.2	4+0.5/4-0.2
Overtravel (mm)	1.0±0.2	1.0±0.2	1.5±0.5	1.5±0.5	1.5±0.5
Weight (kg)	10	10.4	18	18	20

Vacuum Contactor

Medium Voltage Vacuum Contactor

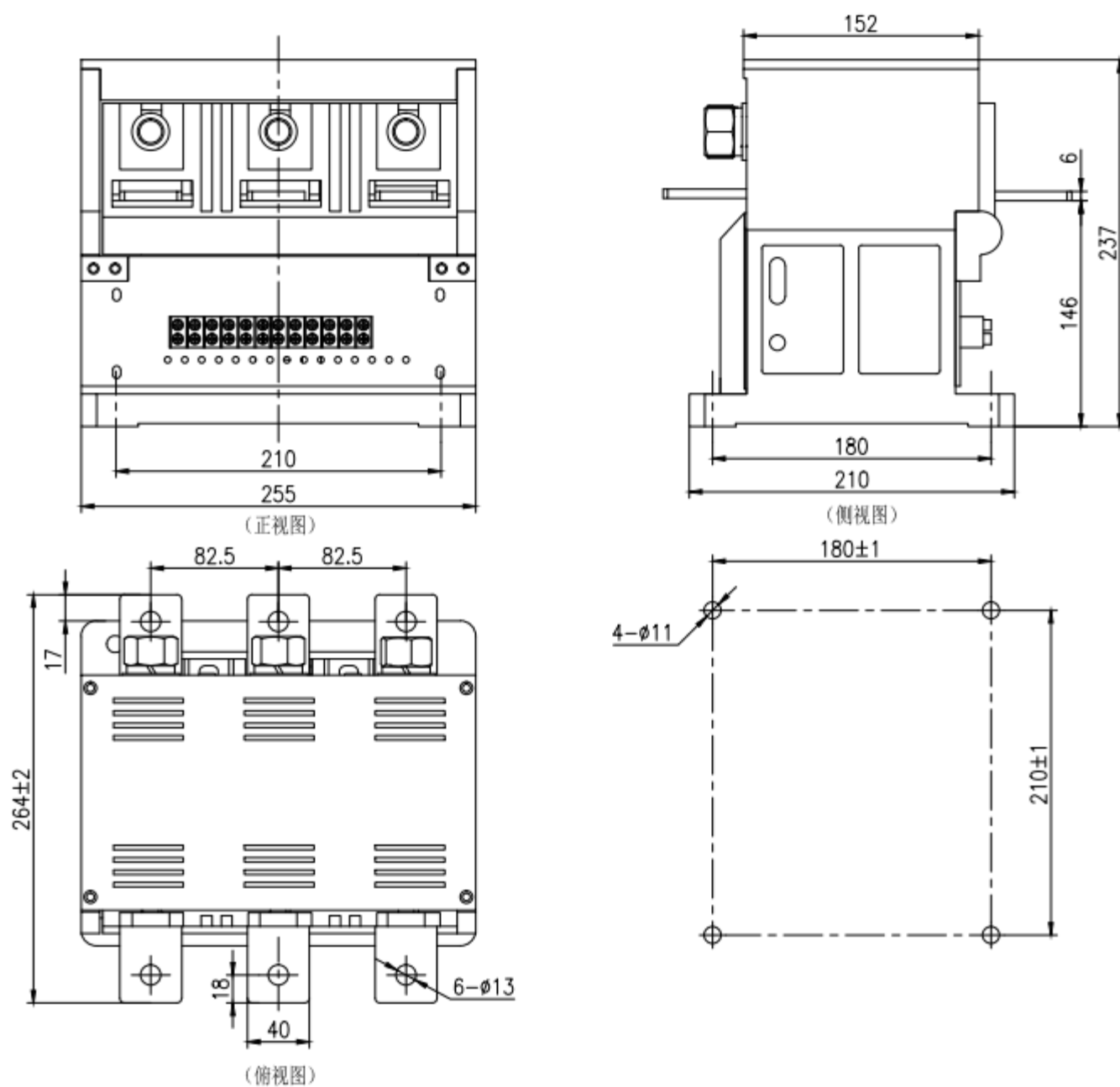
250A/400A outline and installation dimension



Vacuum Contactor

Medium Voltage Vacuum Contactor

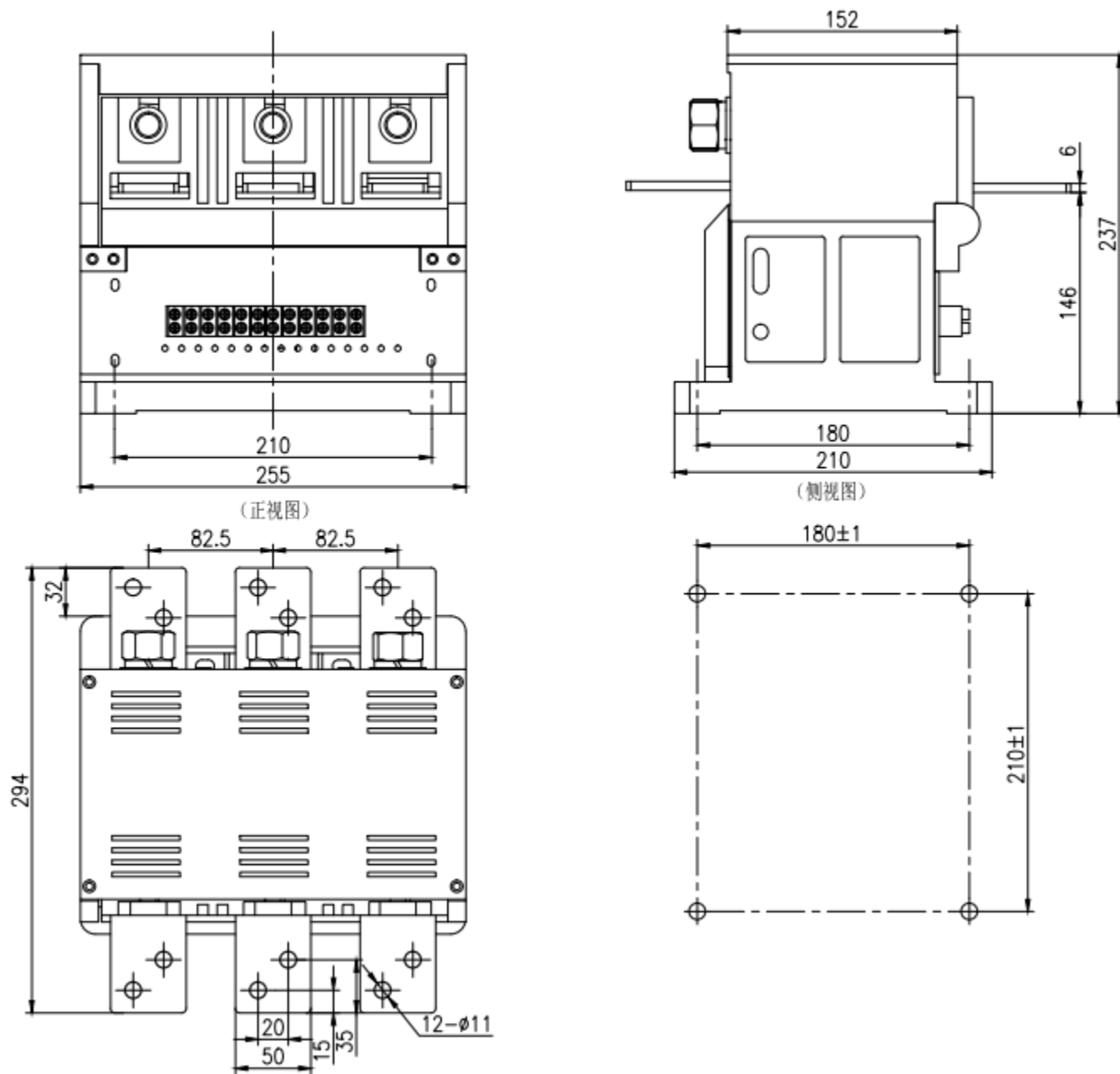
630A outline and installation dimension



Vacuum Contactor

Medium Voltage Vacuum Contactor

800A/1000A Outline and installation dimension



Vacuum Contactor

Medium Voltage Vacuum Contactor

GVC6 3.6 KV AC Medium Voltage Vacuum Contactor 400A/630A

GVC6 series **AC medium-voltage vacuum contactors** are suitable for remote connection and disconnection, as well as frequent starting and control of AC motors, transformers, capacitor banks, and other devices in power networks with rated voltages of 3.6 kV, and rated currents ranging from 400A and 630A.

Environmental Conditions:

- 1) Ambient temperature: -25°C to +40°C.
- 2) Installation location altitude: Not exceeding 2000m.
- 3) Relative humidity of the air: The maximum average relative humidity of the wettest month is 90%, with a minimum average temperature of 25°C, considering condensation occurring on the product surface due to temperature changes.
- 4) Environment: Suitable for use in locations without water ingress, corrosive or flammable gases, and severe vibrations.

Usage Requirements:

- 1) Correctly select the technical parameters of the contactor, including ensuring that auxiliary switch contacts are not overloaded.
- 2) Sufficient insulation space should be maintained around and above the contactor to ensure safe operation.
- 3) If there is no response when the control power supply is turned on, immediately disconnect the control power supply and check the cause to avoid burning out the electromagnetic coil.
- 4) When the contactor is used to control inductive loads, it is recommended to use overvoltage protection devices such as R-C filters or varistors to protect the load.
- 5) The electromagnetic system generates strong magnetic attraction during operation, so care should be taken to prevent ferromagnetic materials from being drawn into the contactor.
- 6) Contactors are not suitable for series and parallel operation.
- 7) The connection principle of the main circuit is as follows: The upper end (static end) is the incoming line, and the lower end (dynamic end) is the outgoing line.

Product Specifications:

Rated voltages: 3.6 kV

Rated currents: 400A and 630A

Technical Parameters:

- 1) Number of poles in the main circuit: Three.
- 2) Control power supply voltage: AC or DC, customizable to 110V, 220V, or 380V according to user requirements.
- 3) The rated heating current of the auxiliary switch contacts is specified as 5A.
- 4) Rated duty cycle: Intermittent long-term duty cycle, repetitive short-time duty cycle (rated on-time ratio is 40%).
- 5) The contactor requires a minimum closing holding power of $\geq 800\text{VA}$ and a holding power of $\geq 50\text{VA}$.

Vacuum Contactor

Medium Voltage Vacuum Contactor

Main Electrical Parameters

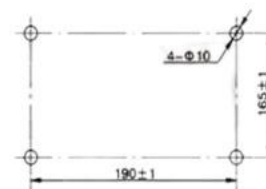
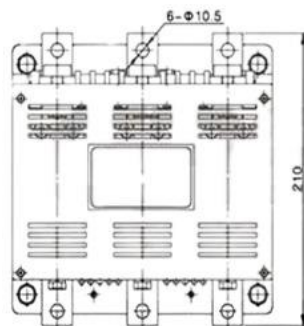
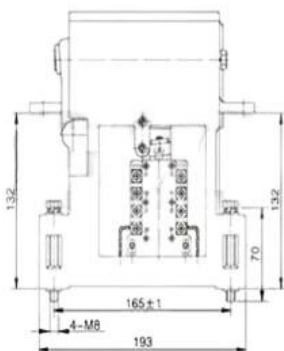
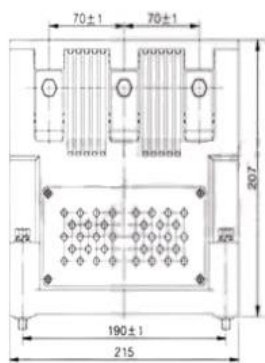
Model	Unit	GVC6-400A/3.6KV	GVC6-630A/3.6KV
Main circuit rated voltage	kV	3.6	3.6
Main circuit rated current	A	400	630
Rated frequency	Hz	50	50
Power-frequency withstand voltage	kV	18	18
Rated make current	100Ops.	4000A	6300A
Rated break current	25Ops.	3200A	5000A
Maximum break current	3Ops.	4000A	6000A
Opening time	ms	≤ 80	≤ 80
Closing time	ms	≤ 100	≤ 100
Clearance between open contacts	mm	3±0.5	3±0.5
Over travel	mm	≥1	≥1
Mechanical life	Ops.	1,000,000	1,000,000
Electricity life	Ops.	600,000	600,000
Contact Block:		4NO+3NC	4NO+3NC

Note: Parameters in parentheses are for 3.6 kV

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EVC8C 3.6KV series outline and installation dimension

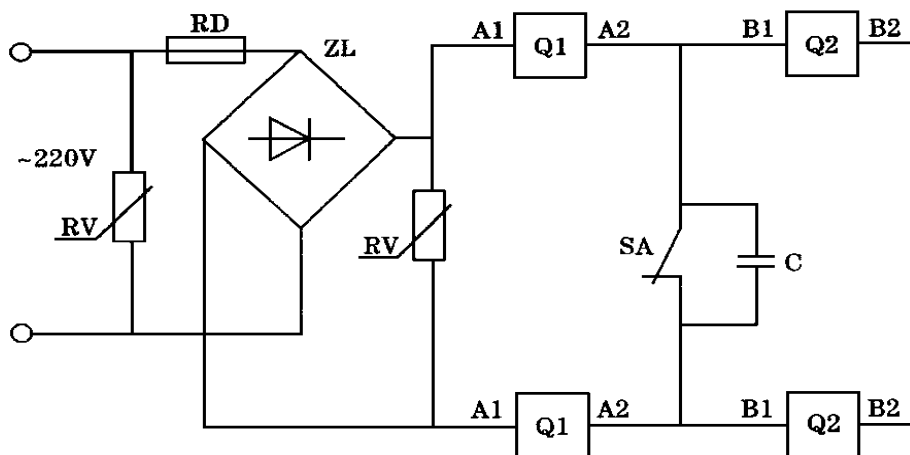
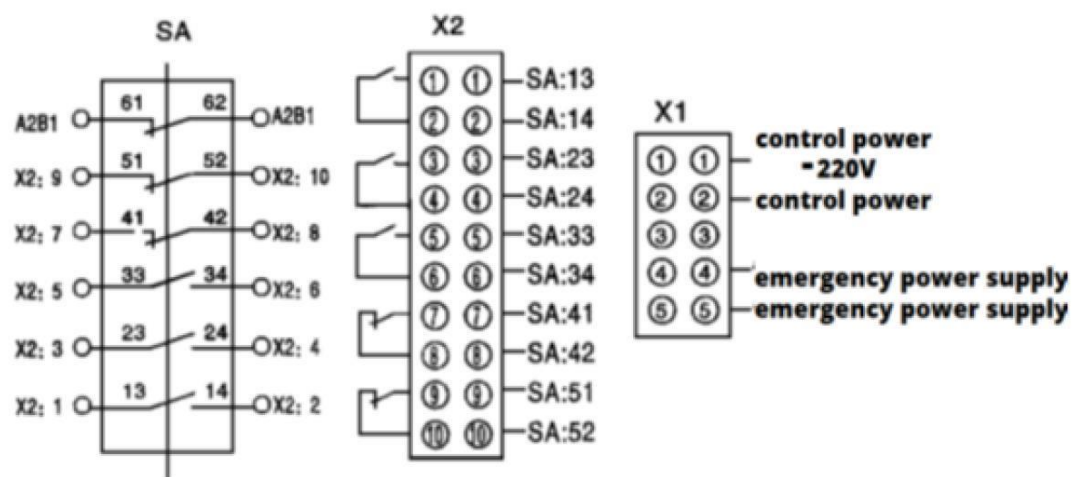


Vacuum Contactor

Medium Voltage Vacuum Contactor

GVC6 series Electrical mechanism secondary circuit working principle

Electrical mechanism secondary circuit wiring diagram



UI Closing power

SA auxiliary switch

Q1 close coil

X1 X2 block terminal

U2 Points brake power

C1C2 absorption capacitor

Q2 opening coil

ZL rectifier

RD Fuses

Vacuum Contactor

Medium Voltage Vacuum Contactor

EVC8C 7.2 KV AC Medium Voltage Vacuum Contactor

EVC8C series **AC medium-voltage vacuum contactors** are suitable for remote connection and disconnection, as well as frequent starting and control of AC motors, transformers, capacitor banks, and other devices in power networks with rated voltages of 7.2 kV and rated currents ranging from 160A to 1250A.

Environmental Conditions:

- 1) Ambient temperature: -25°C to +40°C.
- 2) Installation location altitude: Not exceeding 2000m.
- 3) Relative humidity of the air: The maximum average relative humidity of the wettest month is 90%, with a minimum average temperature of 25°C, considering condensation occurring on the product surface due to temperature changes.
- 4) Environment: Suitable for use in locations without water ingress, corrosive or flammable gases, and severe vibrations.

Usage Requirements:

- 1) Correctly select the technical parameters of the contactor, including ensuring that auxiliary switch contacts are not overloaded.
- 2) Sufficient insulation space should be maintained around and above the contactor to ensure safe operation.
- 3) If there is no response when the control power supply is turned on, immediately disconnect the control power supply and check the cause to avoid burning out the electromagnetic coil.
- 4) When the contactor is used to control inductive loads, it is recommended to use overvoltage protection devices such as R-C filters or varistors to protect the load.
- 5) The electromagnetic system generates strong magnetic attraction during operation, so care should be taken to prevent ferromagnetic materials from being drawn into the contactor.
- 6) Contactors are not suitable for series and parallel operation.
- 7) The connection principle of the main circuit is as follows: The upper end (static end) is the incoming line, and the lower end (dynamic end) is the outgoing line.

Product Specifications:

Rated voltages: 7.2 kV (6 kV)

Rated currents: 160A, 250A, 400A, 630A, 800A, 1000A, 1250A.

Technical Parameters:

- 1) Number of poles in the main circuit: Three.
- 2) Control power supply voltage: AC or DC, customizable to 110V, 220V, or 380V according to user requirements.
- 3) The rated heating current of the auxiliary switch contacts is specified as 5A.
- 4) Rated duty cycle: Intermittent long-term duty cycle, repetitive short-time duty cycle (rated on-time ratio is 40%).
- 5) The contactor requires a minimum closing holding power of $\geq 800\text{VA}$ and a holding power of $\geq 50\text{VA}$.

Vacuum Contactor

Medium Voltage Vacuum Contactor

Main Electrical Parameters

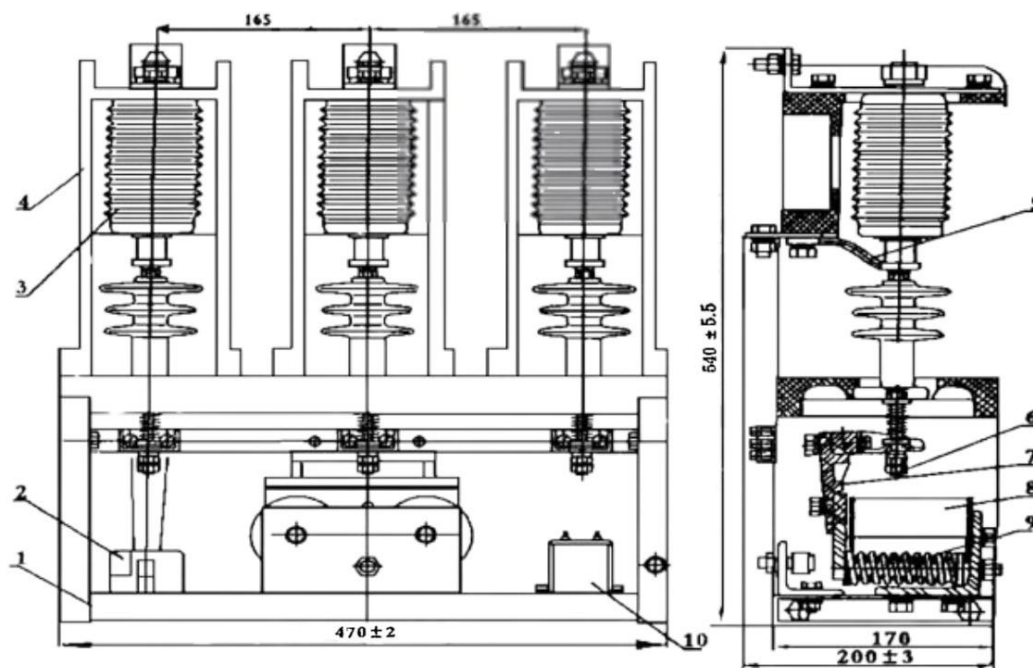
Model	EVC8C-250A/7.2KV	EVC8C-400A/7.2KV	EVC8C-630A/7.2KV	EVC8C-800A/7.2KV	EVC8C-1000A/7.2KV	EVC8C-1250A/7.2KV
Rated voltage of the main circuit (kV)	7.2	7.2	7.2	7.2	7.2	7.2
Rated current of the main circuit (A)	250	400	630	800	1000	1250
Closing capacity of the main circuit (A/100 times)	2500	4000	6300	8000	8000	10000
Switching capacity of the main circuit (A/25 times)	2000	3200	5000	6300	630	8000
Breaking capacity limit (A/3 times)	4000	4500	6300	6300	8000	10000
Mechanical life (ten thousand times)	100	100	100	100	100	100
Mechanical lock life (ten thousand times)	10	10	10	10	10	10
Electrical life (AC3) (ten thousand times)	25	25	25	25	25	25
Electrical life (AC4) (ten thousand times)	10	10	10	10	10	10
Power frequency withstand voltage of the main circuit (interrupted) (kV)	32	32	32	32	32	32
Phase-phase, phase-ground power frequency withstand voltage (kV)	32	32	32	32	32	32
Lightning impulse withstand voltage (kV)	32	32	32	32	32	32
Power frequency withstand voltage of the control circuit (kV)	2.5	2.5	2.5	2.5	2.5	2.5
Rated operating frequency (times/hour)	300	300	300	300	300	300
Mechanical lock operation frequency (times/hour)	120	120	120	120	120	120
Terminal pressure (N)	>100	>150	>150	>150	>180	>200
Contact opening distance (mm)	6(5)±0.5	6(5)±0.5	6(5)±0.5	6(5)±0.5	6(5)±0.5	6(5)±0.5
Overtravel (mm)	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5
Contact resistance of the main circuit (μΩ)	200	200	150	150	100	100
Total weight (kg)	25.5	25.5	25.5	25.5	27	27

Note: Parameters in parentheses are for 7.2 kV

Vacuum Contactor

Medium Voltage Vacuum Contactor

EVC8C 7.2KV series outline and installation dimension



Note: In the parenthesis is the EVC8C series outline and installation dimensions of 7.2KV :

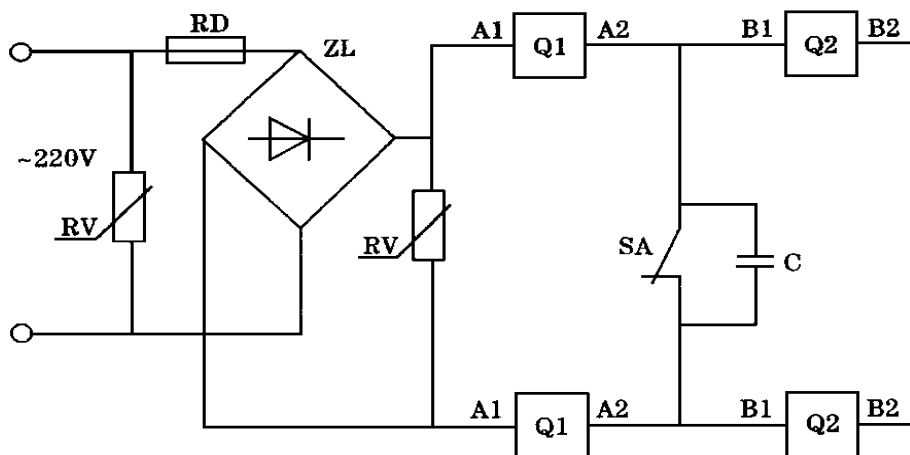
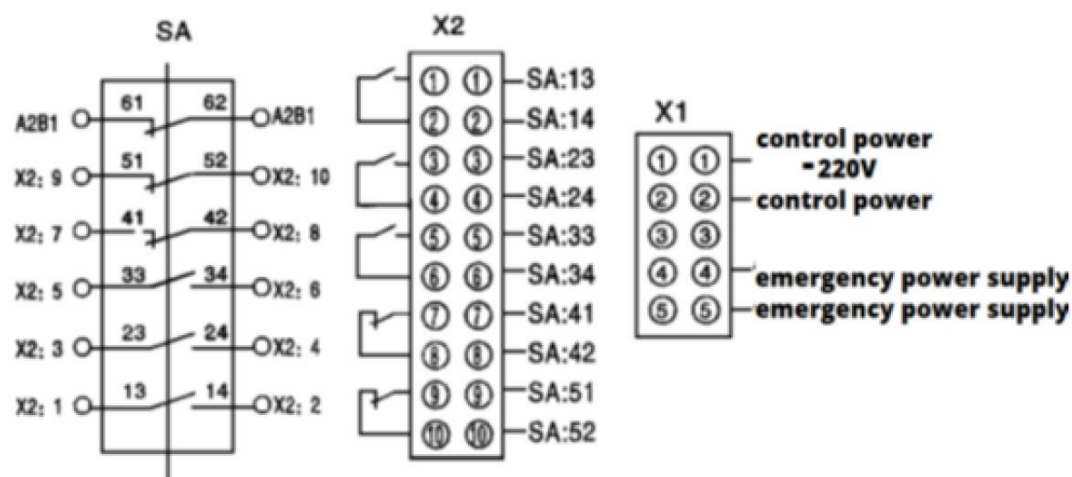
- 1、Metal Base 2、auxiliary switch 3、vacuum switch tube 4、frame insulation 5、Soft connection
- 6、Open distance adjusting nut 7、driving crank arm, 8、electromagnetic system 9、opening spring
- 10、Arcing capacitance

Vacuum Contactor

Medium Voltage Vacuum Contactor

8.EVC8C series Electrical mechanism secondary circuit working principle

Electrical mechanism secondary circuit wiring diagram



UI Closing power

SA auxiliary switch

Q1 close coil

X1 X2 block terminal

U2 Points brake power

C1C2 absorption capacitor

Q2 opening coil

ZL rectifier

RD Fuses

Vacuum Contactor

Medium Voltage Vacuum Contactor

EVC8C 12 KV AC Medium Voltage Vacuum Contactor

EVC8C series **AC high-voltage vacuum contactor** are suitable for remote connection and disconnection, as well as frequent starting and control of AC motors, transformers, capacitor banks, and other devices in power networks with rated voltages of 12 kV and rated currents ranging from 160A to 1250A.

Environmental Conditions:

- 1) Ambient temperature: -25°C to +40°C.
- 2) Installation location altitude: Not exceeding 2000m.
- 3) Relative humidity of the air: The maximum average relative humidity of the wettest month is 90%, with a minimum average temperature of 25°C, considering condensation occurring on the product surface due to temperature changes.
- 4) Environment: Suitable for use in locations without water ingress, corrosive or flammable gases, and severe vibrations.

Usage Requirements:

- 1) Correctly select the technical parameters of the contactor, including ensuring that auxiliary switch contacts are not overloaded.
- 2) Sufficient insulation space should be maintained around and above the contactor to ensure safe operation.
- 3) If there is no response when the control power supply is turned on, immediately disconnect the control power supply and check the cause to avoid burning out the electromagnetic coil.
- 4) When the contactor is used to control inductive loads, it is recommended to use overvoltage protection devices such as R-C filters or varistors to protect the load.
- 5) The electromagnetic system generates strong magnetic attraction during operation, so care should be taken to prevent ferromagnetic materials from being drawn into the contactor.
- 6) Contactors are not suitable for series and parallel operation.
- 7) The connection principle of the main circuit is as follows: The upper end (static end) is the incoming line, and the lower end (dynamic end) is the outgoing line.

Product Specifications:

Rated voltages: 12 kV (10 kV)

Rated currents: 160A, 250A, 400A, 630A, 800A, 1000A, 1250A.

Technical Parameters:

- 1) Number of poles in the main circuit: Three.
- 2) Control power supply voltage: AC or DC, customizable to 110V, 220V, or 380V according to user requirements.
- 3) The rated heating current of the auxiliary switch contacts is specified as 5A.
- 4) Rated duty cycle: Intermittent long-term duty cycle, repetitive short-time duty cycle (rated on-time ratio is 40%).
- 5) The contactor requires a minimum closing holding power of $\geq 800\text{VA}$ and a holding power of $\geq 50\text{VA}$.

Vacuum Contactor

Medium Voltage Vacuum Contactor

Main Electrical Parameters

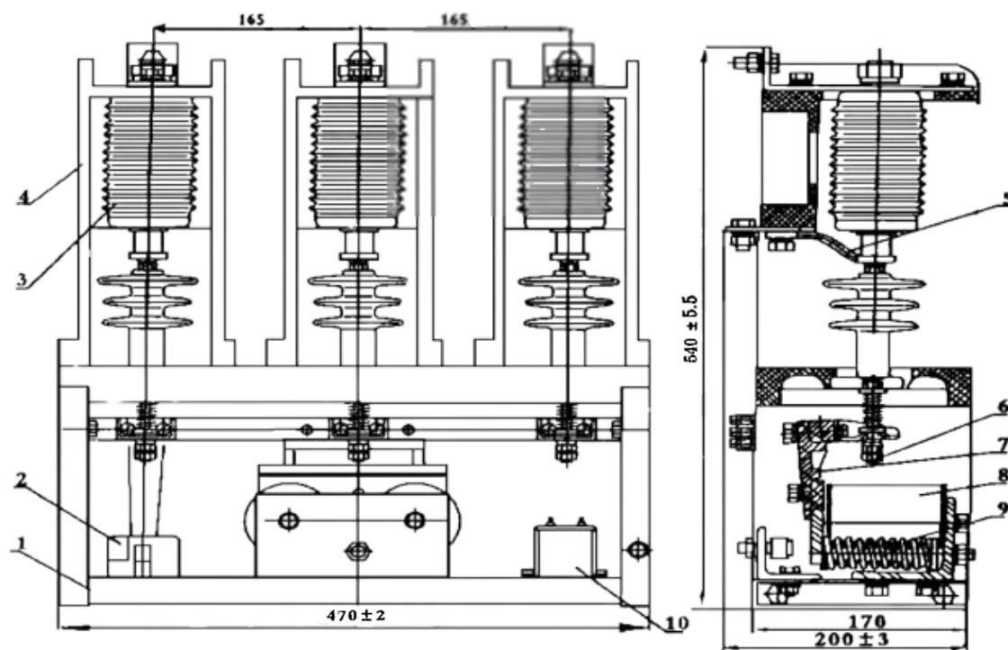
Model	EVC8C-250A/12KV	EVC8C-400A/12KV	EVC8C-630A/12KV	EVC8C-800A/12KV	EVC8C-1000A/12KV	EVC8C-1250A/12KV
Rated voltage of the main circuit (kV)	12	12	12	12	12	12
Rated current of the main circuit (A)	250	400	630	800	1000	1250
Closing capacity of the main circuit (A/100 times)	2500	4000	6300	8000	8000	10000
Switching capacity of the main circuit (A/25 times)	2000	3200	5000	6300	630	8000
Breaking capacity limit (A/3 times)	4000	4500	6300	6300	8000	10000
Mechanical life (ten thousand times)	100	100	100	100	100	100
Mechanical lock life (ten thousand times)	10	10	10	10	10	10
Electrical life (AC3) (ten thousand times)	25	25	25	25	25	25
Electrical life (AC4) (ten thousand times)	10	10	10	10	10	10
Power frequency withstand voltage of the main circuit (interrupted) (kV)	42	42	42	42	42	42
Phase-phase, phase-ground power frequency withstand voltage (kV)	42	42	42	42	42	42
Lightning impulse withstand voltage (kV)	75	75	75	75	75	75
Power frequency withstand voltage of the control circuit (kV)	2.5	2.5	2.5	2.5	2.5	2.5
Rated operating frequency (times/hour)	300	300	300	300	300	300
Mechanical lock operation frequency (times/hour)	120	120	120	120	120	120
Terminal pressure (N)	>100	>150	>150	>150	>180	>200
Contact opening distance (mm)	6(5)±0.5	6(5)±0.5	6(5)±0.5	6(5)±0.5	6(5)±0.5	6(5)±0.5
Overtravel (mm)	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5
Contact resistance of the main circuit (μΩ)	200	200	150	150	100	100
Total weight (kg)	30	30	30	30	32	32

Note: Parameters in parentheses are for 12 kV

Vacuum Contactor

Medium Voltage Vacuum Contactor

EVC8C 12KV series outline and installation dimension



Note: In the parenthesis is the EVC8C series outline and installation dimensions of 12KV :

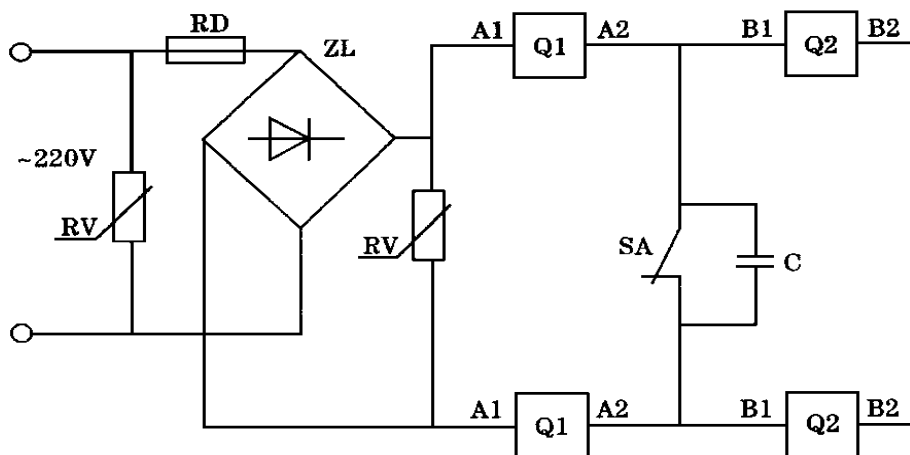
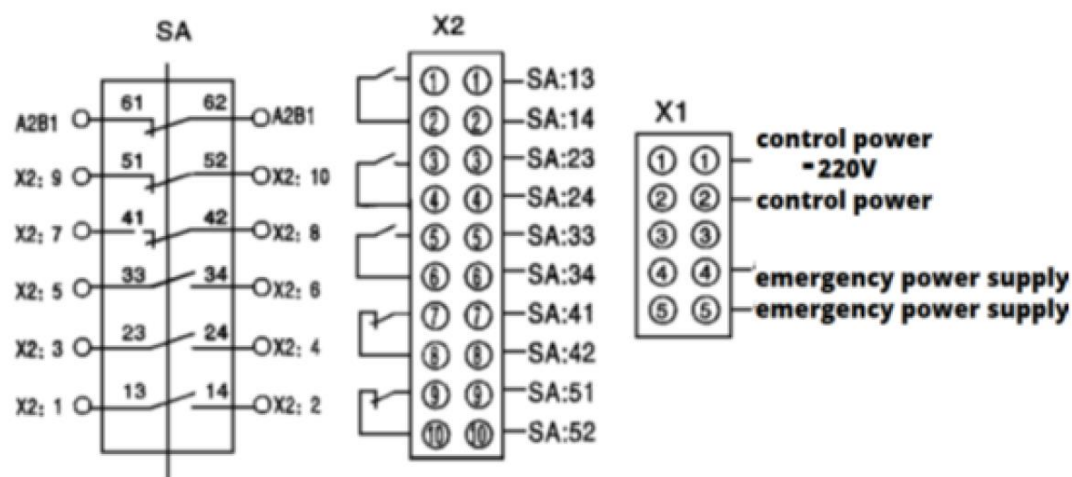
- 1、Metal Base 2、auxiliary switch 3、vacuum switch tube 4、frame insulation 5、Soft connection
- 6、Open distance adjusting nut 7、driving crank arm, 8、electromagnetic system 9、opening spring
- 10、Arcing capacitance

Vacuum Contactor

Medium Voltage Vacuum Contactor

8.EVC8C series Electrical mechanism secondary circuit working principle

Electrical mechanism secondary circuit wiring diagram



UI Closing power

SA auxiliary switch

Q1 close coil

X1 X2 block terminal

U2 Points brake power

C1C2 absorption capacitor

Q2 opening coil

ZL rectifier

RD Fuses

Vacuum Contactor

Medium Voltage Vacuum Contactor

EVC8C 24KV AC Medium Voltage Vacuum Contactor 160A to 1250A

EVC8C series **24KV vacuum contactor** are suitable for remote connection and disconnection, as well as frequent starting and control of AC motors, transformers, capacitor banks, and other devices in power networks with rated voltages of 24kV, and rated currents ranging from 160A to 1250A.

Environmental Conditions:

- 1) Ambient temperature: -25°C to +40°C.
- 2) Installation location altitude: Not exceeding 2000m. Also can be used in 12kV at altitude not exceeding 5000m.
- 3) Relative humidity of the air: The maximum average relative humidity of the wettest month is 90%, with a minimum average temperature of 25°C, considering condensation occurring on the product surface due to temperature changes.
- 4) Environment: Suitable for use in locations without water ingress, corrosive or flammable gases, and severe vibrations.

Usage Requirements:

- 1) Correctly select the technical parameters of the contactor, including ensuring that auxiliary switch contacts are not overloaded.
- 2) Sufficient insulation space should be maintained around and above the contactor to ensure safe operation.
- 3) If there is no response when the control power supply is turned on, immediately disconnect the control power supply and check the cause to avoid burning out the electromagnetic coil.
- 4) When the contactor is used to control inductive loads, it is recommended to use overvoltage protection devices such as R-C filters or varistors to protect the load.
- 5) The electromagnetic system generates strong magnetic attraction during operation, so care should be taken to prevent ferromagnetic materials from being drawn into the contactor.
- 6) Contactors are not suitable for series and parallel operation.
- 7) The connection principle of the main circuit is as follows: The upper end (static end) is the incoming line, and the lower end (dynamic end) is the outgoing line.

Product Specifications:

Rated voltages: 24KV

Rated currents: 160A, 250A, 400A, 630A, 800A, 1000A, 1250A.

Technical Parameters:

- 1) Number of poles in the main circuit: Single pole and three pole.
- 2) Control power supply voltage: AC/DC 220V or 380V or according to user requirements.
- 3) The rated heating current of the auxiliary switch contacts is specified as 5A.
- 4) Rated duty cycle: Intermittent long-term duty cycle, repetitive short-time duty cycle (rated on-time ratio is 40%).
- 5) The contactor requires a minimum closing holding power of $\geq 1000\text{VA}$ and a holding power of $\geq 50\text{VA}$.

Vacuum Contactor

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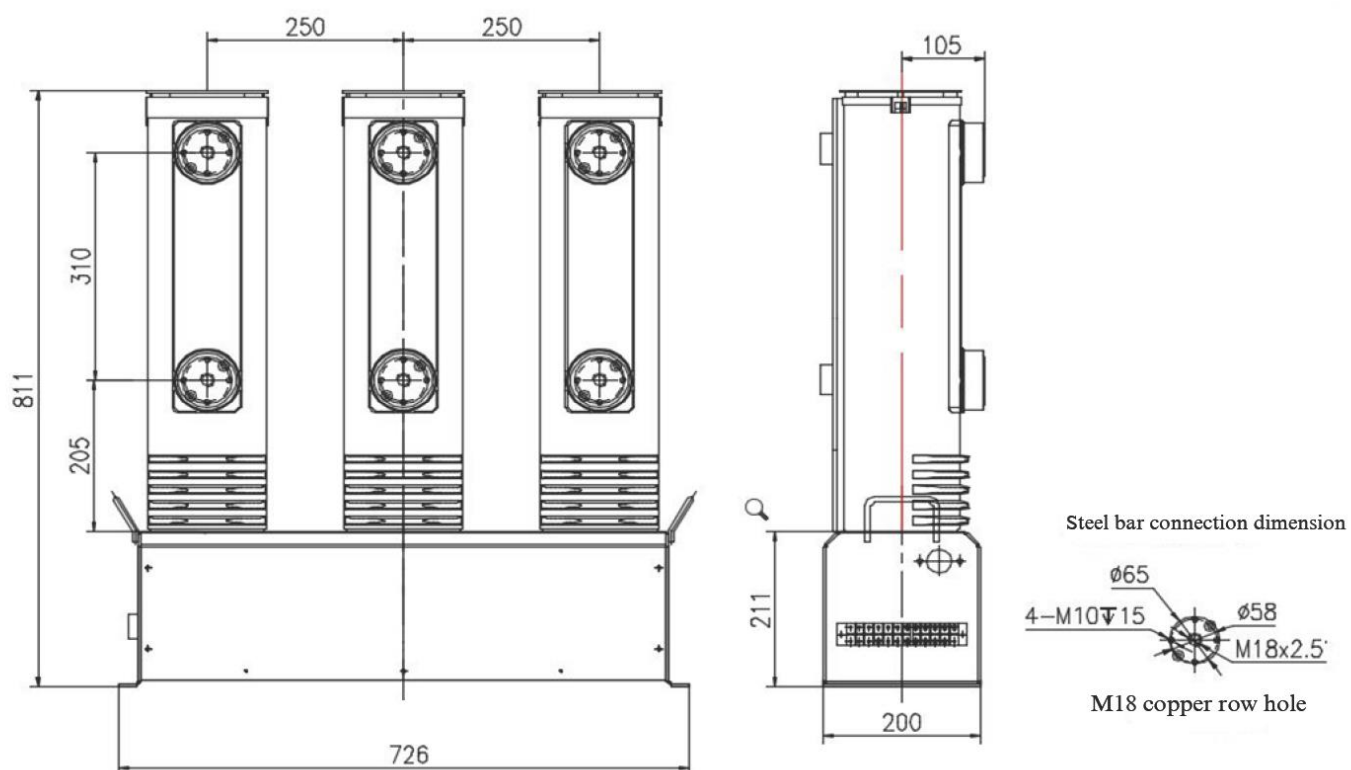
Main Electrical Parameters:

Model	EVC8C-160A/24KV	EVC8C-250A/24KV	EVC8C-400A/24KV	EVC8C-630A/24KV	EVC8C-800A/24KV	EVC8C-1000A/24KV	EVC8C-1250A/24KV
Rated voltage of the main circuit (kV)	24	24	24	24	24	24	24
Rated current of the main circuit (A)	160	250	400	630	800	1000	1250
Closing capacity of the main circuit (A/100 times)	1600	2500	4000	6300	8000	8000	10000
Switching capacity of the main circuit (A/25 times)	1280	2000	3200	5000	6300	6300	8000
Breaking capacity limit (A/3 times)	3200	4000	4500	6300	6300	8000	10000
Mechanical life (ten thousand times)	100	100	100	100	100	100	100
Mechanical lock life (ten thousand times)	10	10	10	10	10	10	10
Electrical life (AC3) (ten thousand times)	25	25	25	25	25	25	25
Electrical life (AC4) (ten thousand times)	10	10	10	10	10	10	10
Power frequency withstand voltage of the main circuit (interrupted) (kV)	65	65	65	65	65	65	65
Phase-phase, phase-ground power frequency withstand voltage (kV)	60	60	60	60	60	60	60
Power frequency withstand voltage of the control circuit (kV)	2.5	2.5	2.5	2.5	2.5	300	300
Rated operating frequency (times/hour)	300	300	300	300	300	120	120
Mechanical lock operation frequency (times/hour)	120	120	120	120	120	>180	>200
Terminal pressure (N)	>100	>100	>150	>150	>150	10±1	10±1
Contact opening distance (mm)	10±1	10±1	10±1	10±1	10±1	1.5±0.5	1.5±0.5
Overtravel (mm)	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5	1.5±0.5	100	100
Contact resistance of the main circuit (μΩ)	200	200	150	100	100	100	100

Vacuum Contactor

Medium Voltage Vacuum Contactor

EVC8C 24KV series outline and installation dimension

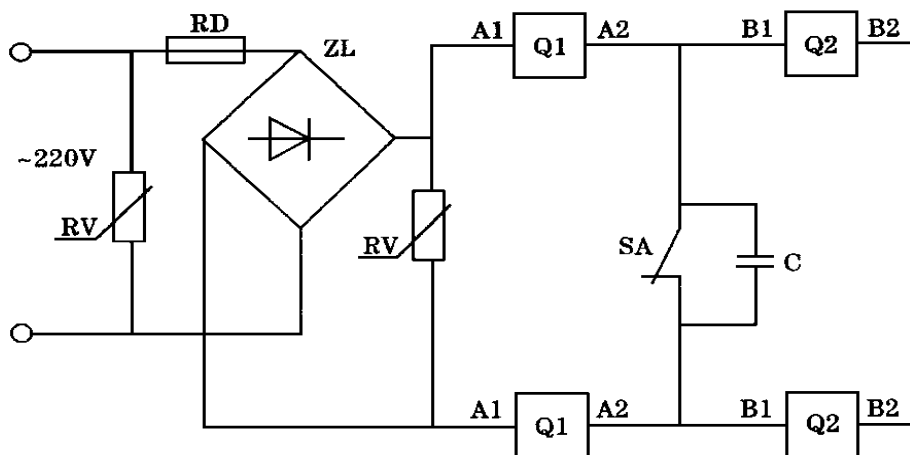
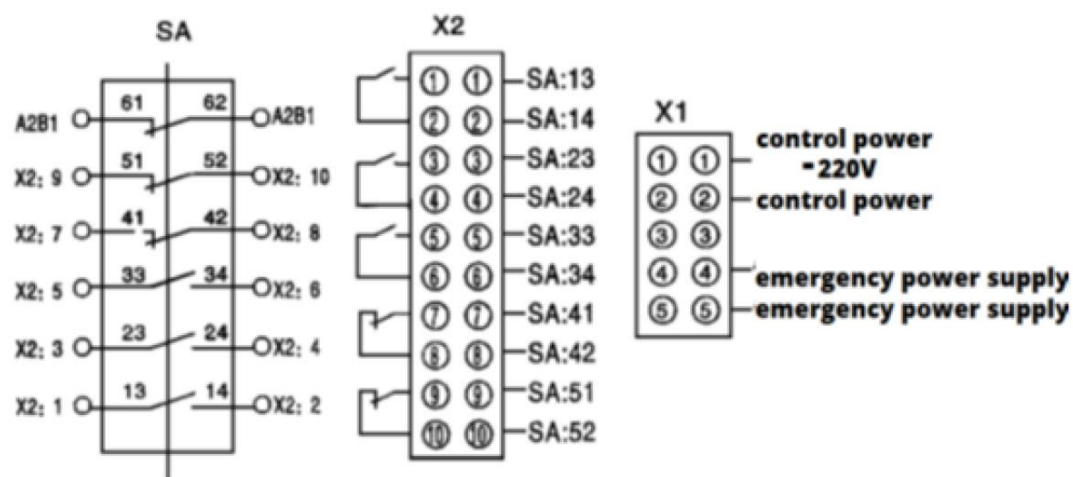


Vacuum Contactor

Medium Voltage Vacuum Contactor

8.EVC8C series Electrical mechanism secondary circuit working principle

Electrical mechanism secondary circuit wiring diagram



UI Closing power

SA auxiliary switch

Q1 close coil

X1 X2 block terminal

U2 Points brake power

C1C2 absorption capacitor

Q2 opening coil

ZL rectifier

RD Fuses



GENERAL ELECTRICAL COMPONENTS

