

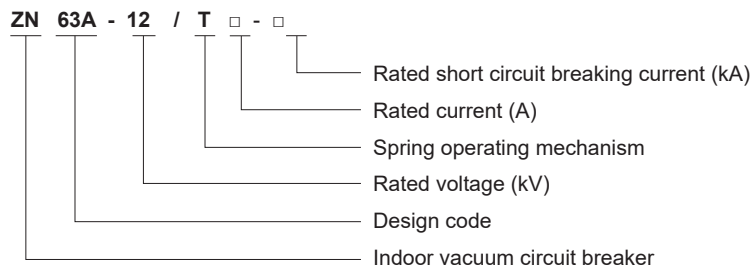
ZN63A-12 Indoor Medium-voltage AC Vacuum Circuit Breaker



1 Overview

- 1.1 Voltage level: AC 10kV, frequency 50 Hz, max. rated current up to 4000 A.
- 1.2 Used in KYN28A-12(GZS1) mid-mounted handcart switchgear and XGN fixed switchgear.

2 Type Designation



3 Working Environment Conditions

- 3.1 Ambient temperature: The upper limit is +40°C, and the lower limit is -15°C (storage and transportation at -30°C are allowed).
- 3.2 Relative humidity: The daily mean relative humidity is ≤95%, and the monthly mean relative humidity is ≤90%.
- 3.3 The daily mean vapor pressure is ≤ 2.2×10⁻³ MPa, and the monthly mean vapor pressure is ≤ 1.8×10⁻³ MPa.
- 3.4 The altitude does not exceed 1000 m.
- 3.5 The earthquake intensity does not exceed 8 degrees.
- 3.6 Mounted in a place where there is no fire, explosion hazards, serious pollution, chemical corrosion and severe vibration.

4 Technical Parameters

No.	Item	Unit	Value
1	Rated voltage	kV	12
2	Rated power frequency withstand voltage (1min)	kV	42
3	Rated lightning impulse withstand voltage (peak)	kV	75
4	Rated freq.	Hz	50
5	Rated short circuit duration	s	4
6	Rated closing and opening operating voltage	V	AC/DC220 AC/DC110
7	Closing time	ms	30~70
8	Opening time	ms	20~50
9	Contact closing bounce time	ms	≤3

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No.	Item	Unit	Value
10	Three-phase closing simultaneity	ms	≤2
11	Three-phase opening simultaneity	ms	≤2
12	Average opening speed (contact just open by 6mm)	m/s	0.9~1.3
13	Average closing speed	m/s	0.4~0.8
14	Circuit breaker grade		E2, C2, M2

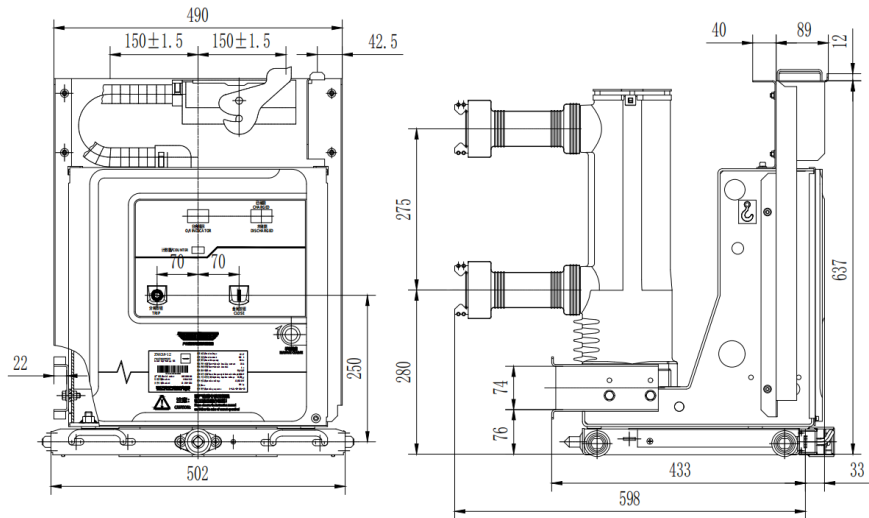
5 Selection Information

Model	Rated voltage (kV)	Rated current (A)	Rated short circuit breaking current (kA)	Rated short circuit making current (kA)	Rated short time withstand current (kA)	Rated peak withstand current (kA)	Phase distance (mm)	Interpole gap (mm)
ZN63A-12/T630-20	12	630	20	50	20	50	150	275
ZN63A-12/T630-20	12	630	20	50	20	50	210	275
ZN63A-12/T630-25	12	630	25	63	25	63	150	275
ZN63A-12/T630-25	12	630	25	63	25	63	210	275
ZN63A-12/T630-31.5	12	630	31.5	80	31.5	80	150	275
ZN63A-12/T630-31.5	12	630	31.5	80	31.5	80	210	275
ZN63A-12/T1250-25	12	1250	25	63	25	63	150	275
ZN63A-12/T1250-25	12	1250	25	63	25	63	210	275
ZN63A-12/T1250-31.5	12	1250	31.5	80	31.5	80	150	275
ZN63A-12/T1250-31.5	12	1250	31.5	80	31.5	80	210	275
ZN63A-12/T1600-31.5	12	1600	31.5	80	31.5	80	210	275
ZN63A-12/T1600-40	12	1600	40	100	40	100	210	275
ZN63A-12/T2000-31.5	12	2000	31.5	80	31.5	80	275	310
ZN63A-12/T2000-40	12	2000	40	100	40	100	275	310
ZN63A-12/T2500-31.5	12	2500	31.5	80	31.5	80	275	310
ZN63A-12/T2500-40	12	2500	40	100	40	100	275	310
ZN63A-12/T3150-31.5	12	3150	31.5	80	31.5	80	275	310
ZN63A-12/T3150-40	12	3150	40	100	40	100	275	310
ZN63A-12/T4000-31.5	12	4000	31.5	80	31.5	80	275	310
ZN63A-12/T4000-40	12	4000	40	100	40	100	275	310

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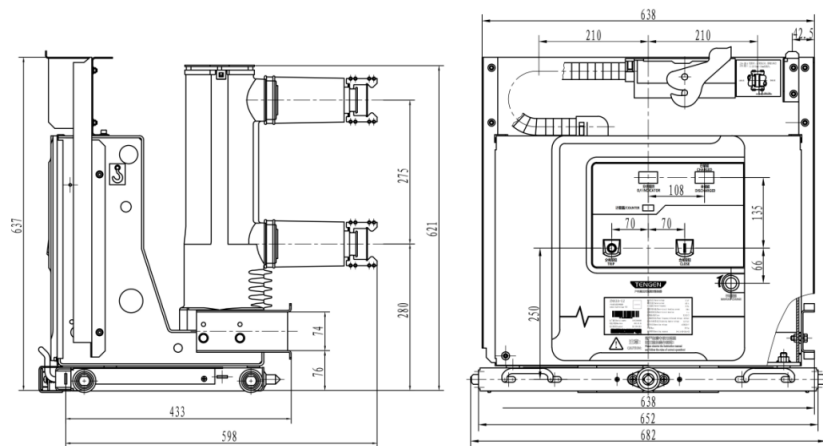
6 Outline and Installation Dimensions

6.1 Handcart type circuit breaker (phase distance 150 mm) outline drawings:



Rated current (A)	630	1250
With the size of the static contact(mm)	Φ35	Φ49

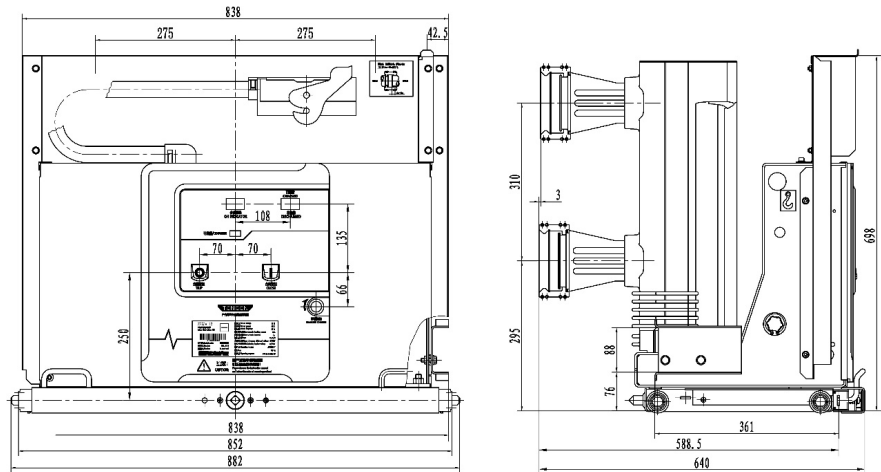
6.2 Handcart type circuit breaker (phase distance 210 mm) outline drawings:



Rated current (A)	630	1250	1600
With the size of the static contact(mm)	Φ35	Φ49	Φ55

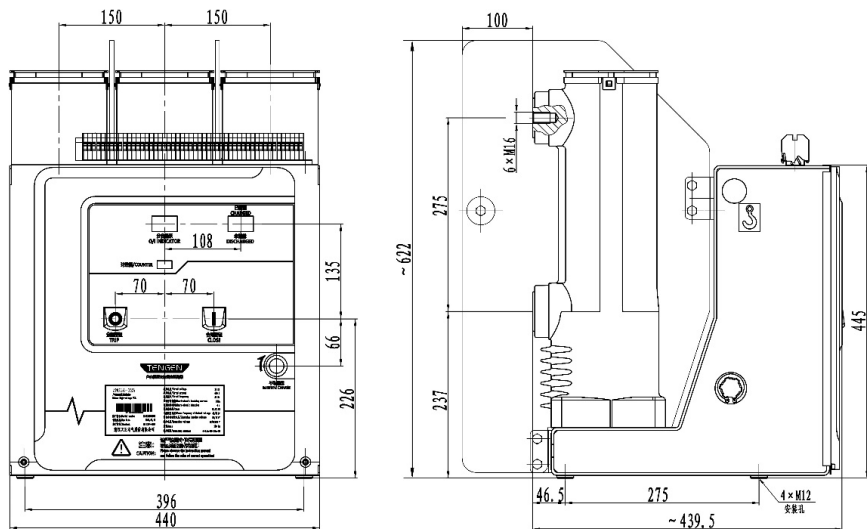
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6.3 Handcart type circuit breaker (phase distance 275 mm) outline drawings:



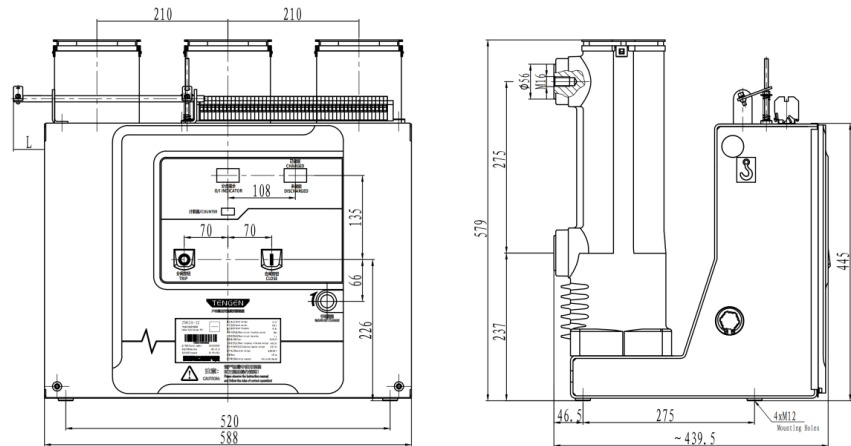
Rated current (A)	2000	2500	3150	4000
With the size of the static contact(mm)	Φ79	Φ109	Φ109	Φ109

6.4 Fixed type circuit breaker (phase distance 150 mm) outline drawings:



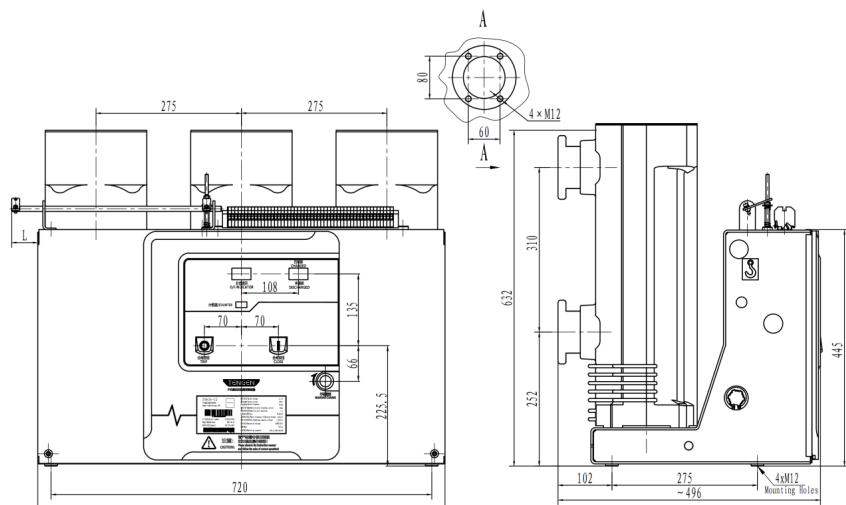
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6.5 Fixed type circuit breaker (phase distance 210 mm) outline drawings:



Note: Mechanism top interlock L=50mm (there are left or right extended interlock; the length can be customized according to the customer requirements)

6.6 Fixed type circuit breaker (phase distance 275 mm) outline drawings:

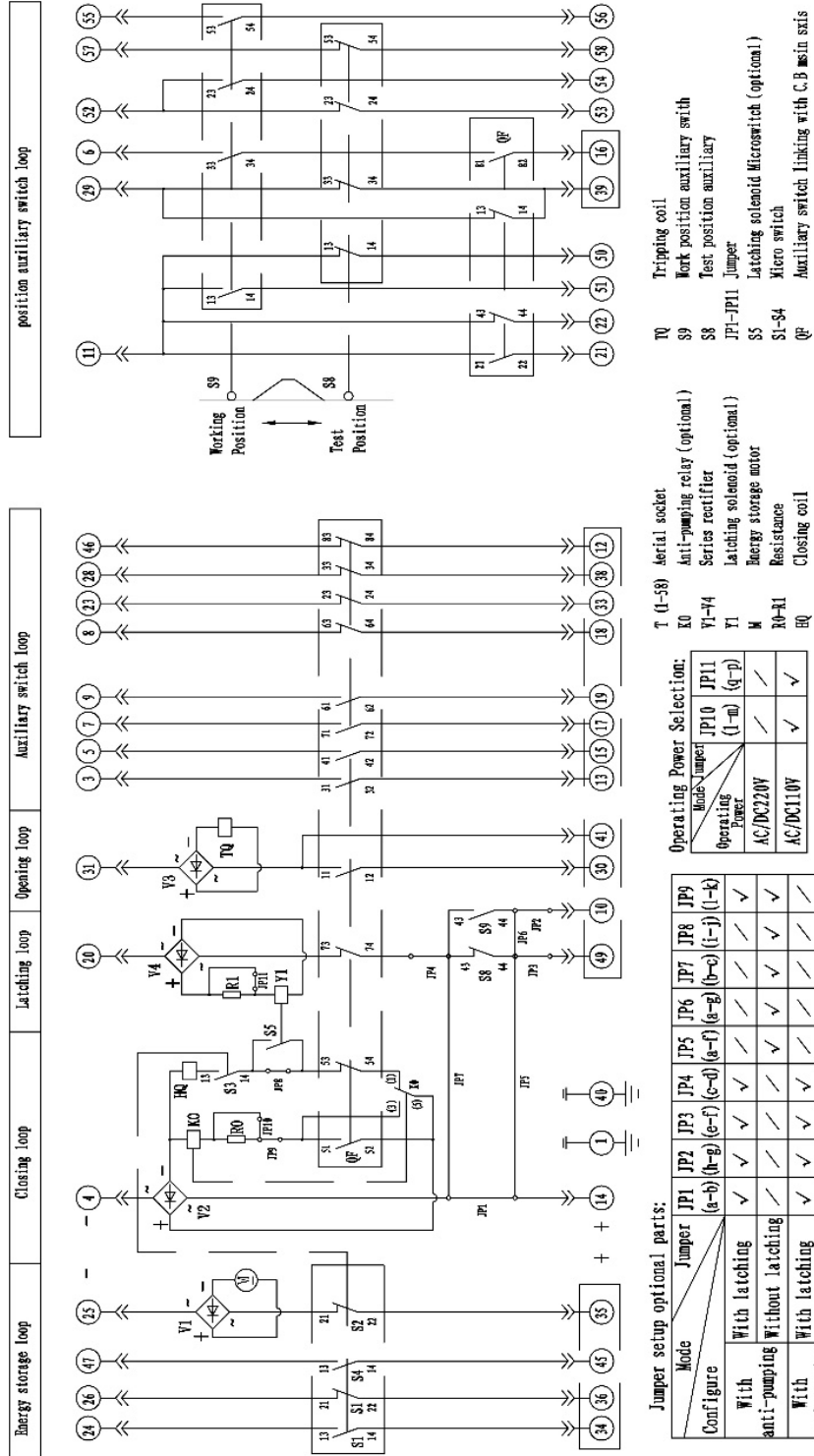


Note: Mechanism top interlock L=50mm (there are left or right extended interlock; the length can be customized according to the customer requirements)

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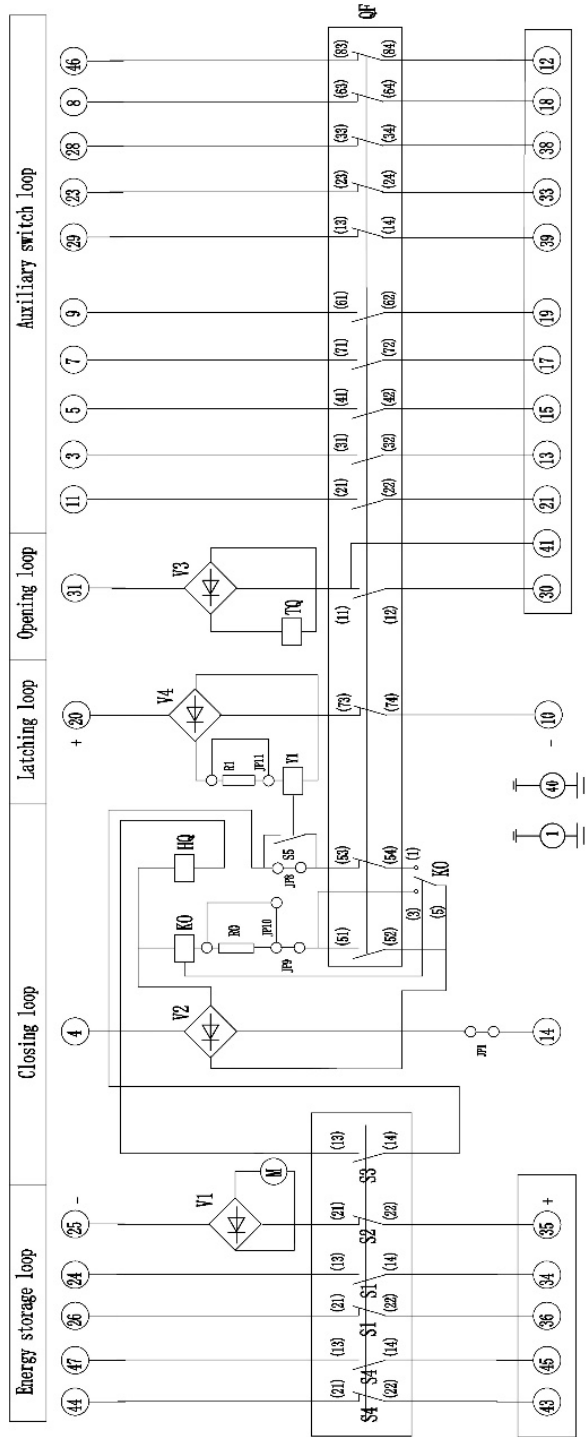
7 Electrical Diagram

7.1 Handcart type schematic diagram



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7.2 Fixed type schematic diagram



HQ: Closing coil
 TQ: Tripping coil
 M: Energy storage motor
 R0-R1: Resistance
 V1-V4: Series rectifier
 JP8-JP11: Jumper

S1 ~ 4: Micro switch
 SS: Latching solenoid Microswitch (optional)
 QP: Auxiliary switch linking with C.B main axis
 Y1: Latching solenoid (optional)
 KO: Anti-pumping relay (optional)

Operating Mode	Power Selection	
	JP10 (1-m)	JP11 (q-p)
AC/DC220V	✓	✓
AC/DC110V	✓	✓

Jumper setup optional parts: Configure	Jumper										
	JP1 (a-b)	JP2 (h-g)	JP3 (e-f)	JP4 (c-d)	JP5 (a-f)	JP6 (a-g)	JP7 (b-c)	JP8 (i-j)	JP9 (1-k)	JP10 (1-m)	JP11 (q-p)
With latching	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Without latching	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
With latching	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Without latching	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: 1. Using DC power operation, the dashed box should be the same polarity.
 2. This schematic diagram is based on opening & energy non-stored state.

Notes: ✓ indicates disconnection, ✗ indicates connection.

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8 Ordering Notice

Please specify the following items when ordering:

- 8.1 Name, model, specification and order quantity of circuit breaker;
- 8.2 Rated voltage, rated current and rated short circuit breaking current of circuit breaker;
- 8.3 Name and type of the operating mechanism;
- 8.4 Name and quantity of spare parts and replacement parts;

Note: If the customer has other special requirements, they shall be specified when ordering.