

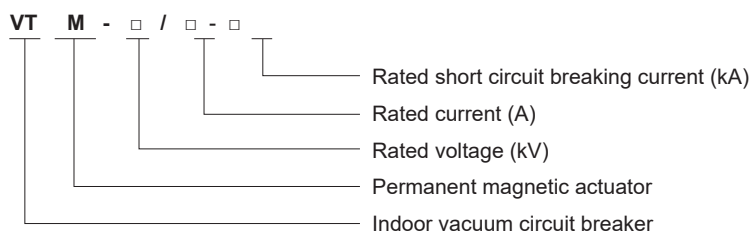
VTM-12 Indoor Medium-voltage AC Permanent Magnet Vacuum Circuit Breaker



1 Overview

- 1.1 Voltage level: AC10kV, frequency 50Hz, max. rated current up to 4000A.
1.2 Purpose: 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 is allowed).
3.2 Relative humidity: The mean daily relative humidity is ≤95%, and the monthly mean relative humidity is ≤90%.
3.3 The daily mean vapor pressure is $\leq 2.2 \times 10^{-3}$ MPa, and the monthly mean vapor pressure is $\leq 1.8 \times 10^{-3}$ MPa.
3.4 The altitude does not exceed 1000m.
3.5 The seismic intensity does not exceed 8 degrees.

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 time	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
10	Three-phase closing simultaneity	ms	≤2
11	Three-phase opening simultaneity	ms	≤2
12	Average opening speed (contact just opened by 6mm)	m/s	0.9~1.3

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No.	Item	Unit	Value
13	Average closing speed	m/s	0.4~0.8
14	Circuit breaker grade		E2, C2, M2

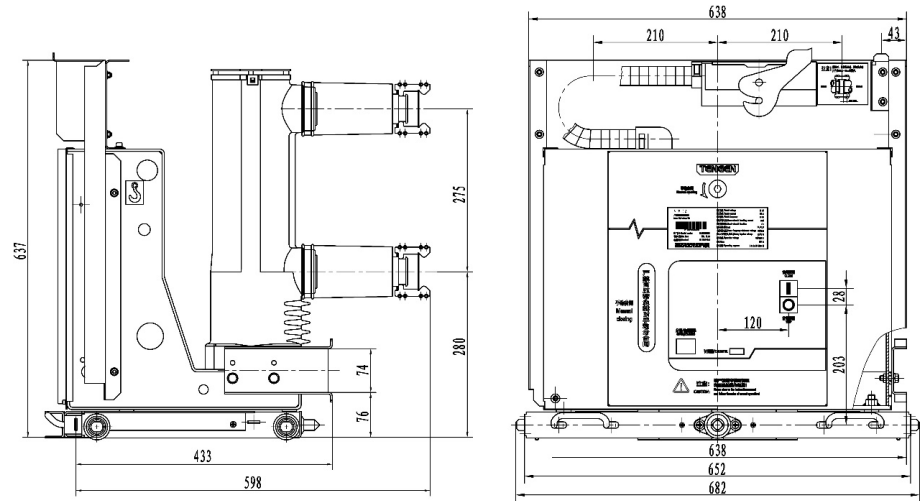
5 Scope of Supply

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)
VTM-12/630-20	12	630	20	50	20	50	210	275
VTM-12/630-25	12	630	25	63	25	63	210	275
VTM-12/630-31.5	12	630	31.5	80	31.5	80	210	275
VTM-12/1250-25	12	1250	25	63	25	63	210	275
VTM-12/1250-31.5	12	1250	31.5	80	31.5	80	210	275
VTM-12/1600-31.5	12	1600	31.5	80	31.5	80	210	275
VTM-12/1600-40	12	1600	40	100	40	100	210	275
VTM-12/2000-31.5	12	2000	31.5	80	31.5	80	275	310
VTM-12/2000-40	12	2000	40	100	40	100	275	310
VTM-12/2500-31.5	12	2500	31.5	80	31.5	80	275	310
VTM-12/2500-40	12	2500	40	100	40	100	275	310
VTM-12/3150-31.5	12	3150	31.5	80	31.5	80	275	310
VTM-12/3150-40	12	3150	40	100	40	100	275	310
VTM-12/4000-31.5	12	4000	31.5	80	31.5	80	275	310
VTM-12/4000-40	12	4000	40	100	40	100	275	310

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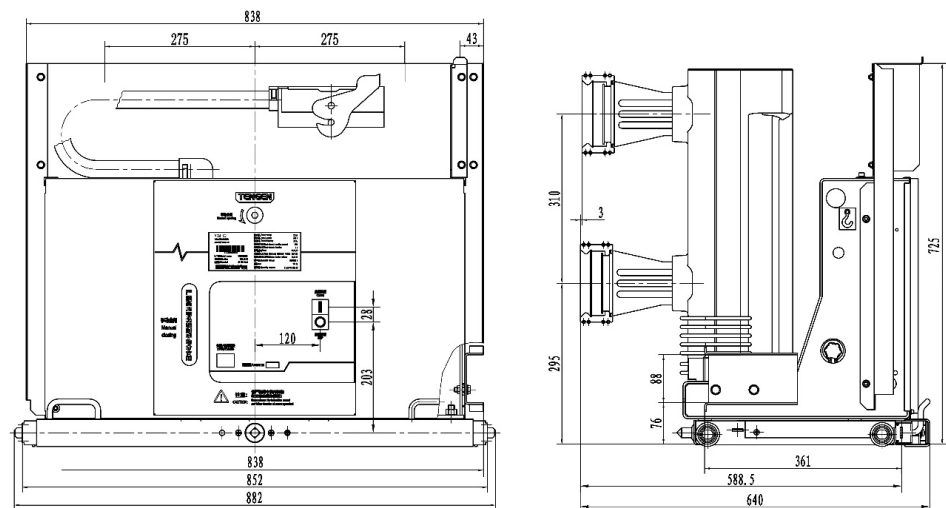
6 Outline and Installation Dimensions (The structural dimensions of the insulating cylinder are consistent with those of the sealed polar post)

6.1 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

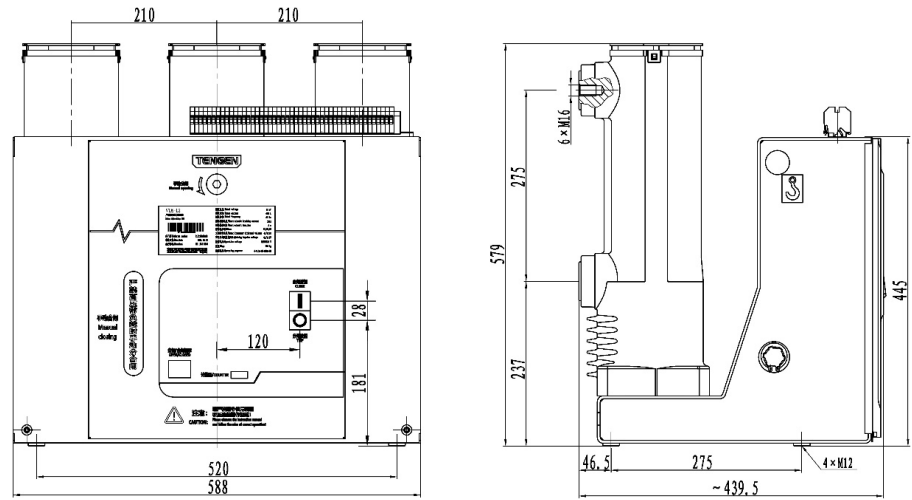
6.2 Handcart type circuit breaker (phase distance 275 mm) outline drawings:



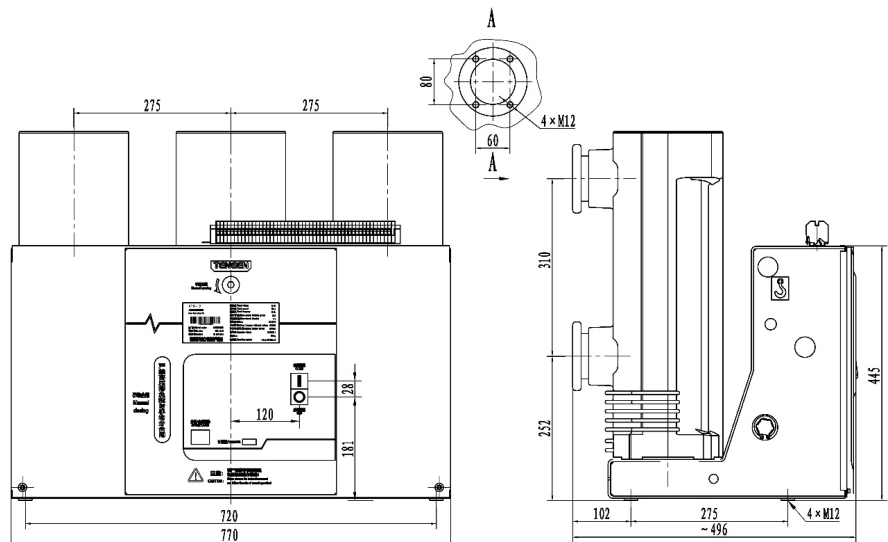
Rated current (A)	2000	2500	3150	4000
With the size of the static contact (mm)	Φ79	Φ109	Φ109	Φ109

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

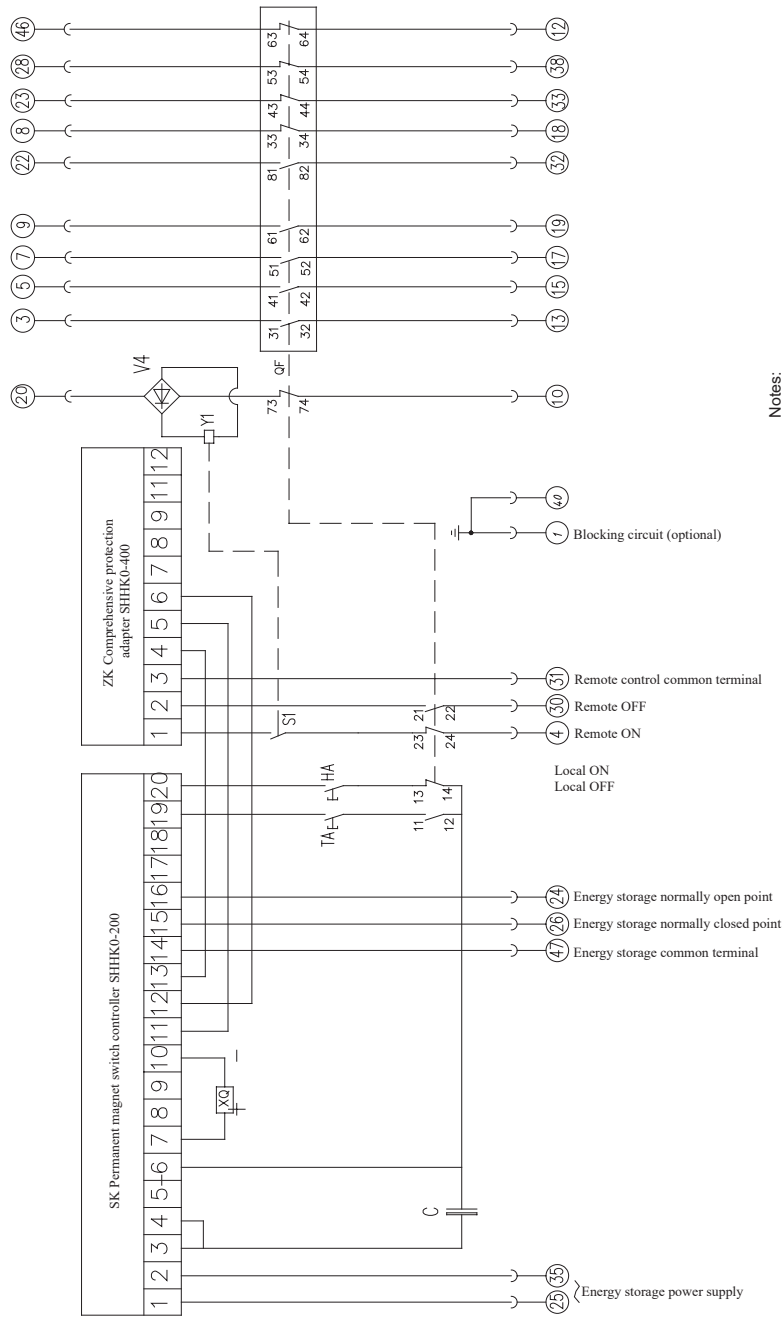


6.4 Fixed type circuit breaker (phase distance 275 mm) outline drawings:



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7.2 Fixed type schematic diagram



Notes:

1. In this schematic diagram, the circuit breaker is in the OFF state in the handcart test position, and the mechanism is in the energy non-storage state;

2. The power supply of control circuit is available for both AC and DC.

SK: Permanent magnet switch controller	SK: Comprehensive protector
QF: Aux. switch	C: Capacitor

VTM-12 Fixed type secondary wiring diagram

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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.