

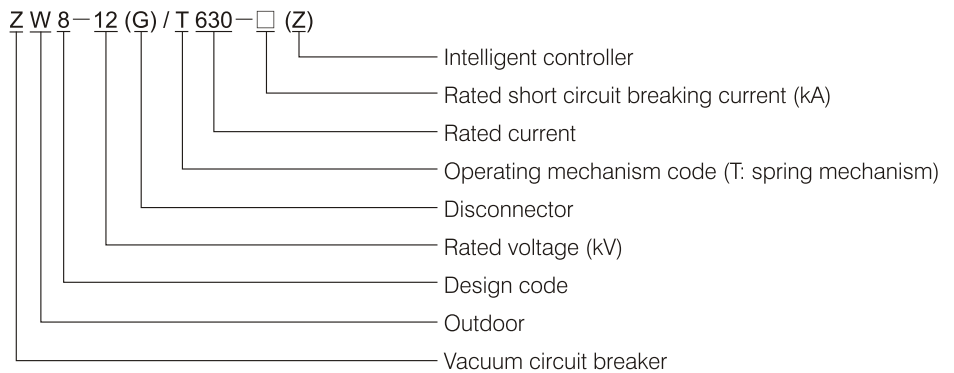


ZW8-12(Z) Vacuum Circuit Breaker, Outdoor Type

1. General

- 1.1 Ratings: voltage 12KV, current up to 1000A, AC50Hz
- 1.2 Application: for the control and protection of substation and equipments. Making and breaking load current, overload current and short-circuit current under various operating status of electric network.
- 1.3 Standard: IEC62271-100

2. Type and Interpretation



3. Working Condition

- 3.1 Ambient air temperature: -40°C ~ +40°C
 - 3.2 Altitude: ≤ 2000m
 - 3.3 Service condition with dust, corrosive gas, water vapor or salty fog pollution are acceptable.
 - 3.4 Wind speed: ≤ 34m/s (Equal to 700Pa over cylindrical surface)
 - 3.5 The external shocking and earthquake could be neglected.
 - 3.6 The amplitude of electromagnetic interference in the secondary system ≤ 1.6kV.
 - 3.7 Pollution level: II
- ※ Note: Customized products for other special working conditions are available on your requirements.

4. Main Technical Parameter

4.1 Technical parameters of circuit breaker

Item	Unit	Parameter
Rated voltage	kV	12
Rated current	A	630、1000
Rated frequency	Hz	50
Rated insulation level	1 min power frequency withstand voltage (dry)	kV 42
	Lightening impulse withstand voltage	kV 75
Rated short-circuit breaking current	kA	12.5, 16, 20
Rated short-circuit making current (peak)	kA	31.5, 40, 50
Rated withstand current (peak)	kA	31.5, 40, 50
Rated short-time withstand current	kA	12.5, 16, 20
Rated duration of short-circuit	s	4
Rated breaking times of short-circuit breaking current	times	30
Rated operating sequence		O-0.3s-CO-180s-CO
Mechanical life	times	10000
Rated current of over-current tripper	A	5
Rated operating voltage and rated auxiliary circuit voltage	V	AC220V, DC220V, DC24V
Permissible wearing thickness for contacts	mm	3

4.2 Technical parameters of intelligent terminal controller

4.2.1 Power

Rated working voltage: AC220V
Nominal Voltage tolerance: -20% ~ +20%
Backup power: 7Ah lead acid battery * 2
Power consumption: $\leq 10\text{W}$
Rated frequency: 50Hz
Waveform distortion: $\leq 5\%$

4.2.2 Rated value

Current transformer: 5A, power consumption < 1.0VA
Voltage transformer: 220V, power consumption < 0.5VA
Frequency: 50Hz

4.2.3 Measuring range and accuracy

Current: $(10\% \sim 2000\%) \times I_n \leq \pm 3.0\%$
Voltage: $(10\% \sim 150\%) \times U_n \leq \pm 0.5\%$
Frequency: 45Hz~65Hz $\leq \pm 0.1\%$

4.2.4 Protection performance parameters

Event resolution: 2ms
Time of quick breaking lockout: $\leq 40\text{ms}(1.2I_n)$
Time error of protection lockout: $\leq 1\%$

4.2.5 Lockout relay

Contact load: 16A/250VAC, 16A/30VDC
Electrical life: 100,000 times

4.2.6 Input of switch number

Rated voltage: DC24V
Resolution: 2ms

4.2.7 EMC characteristics

Insulation resistance: $\geq 10\text{M}\Omega$
Insulation strength: 2.5kV, 1min
Voltage sags and voltage interruption: 100%, 0.5s
High-frequency interference: Series-mode: 1.5kVP, 1min
Common-mode: 2.5kVP, 1min
Transient: 4.0kVP, 1min
Surge interference: 4.0kVP, 1.2/50 μs
Contact discharge: 8kV
Frequency magnetic field: 100A/m
Magnetic damping shock: 100A/m
Impulse voltage: 5kV, 1.2/50 μs

4.2.8 Communication interface

Main communication interface: RS481 (9600bps)

4.2.9 Working environment

Working temperature: $-40^\circ\text{C} \sim +70^\circ\text{C}$;
Storage temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$;
Humidity: 5%~100%
Ambient temperature change rate: <25oC/h
Atmospheric pressure: 70~106KPa
No obvious dust, smoke, corrosive and flammable gas, stream or salt mist.

4.2.10 Other technical parameters

Total weight: $\leq 25\text{kg}$
Protection class of shell: $\geq \text{IP54}$
MTBF: $\geq 50,000\text{h}$

4.3 Configuration of current transformer: 2~6 bushing current transformers, variable ratio 50/5~1000/5. (Contact us if you have other requirements)

4.4 Configuration of voltage transformer: 1~2 external voltage transformer, 1 cut-out fuse.

5.Overall and Installation Dimension

Fig.1 Overall and installation dimension of ZW8-12

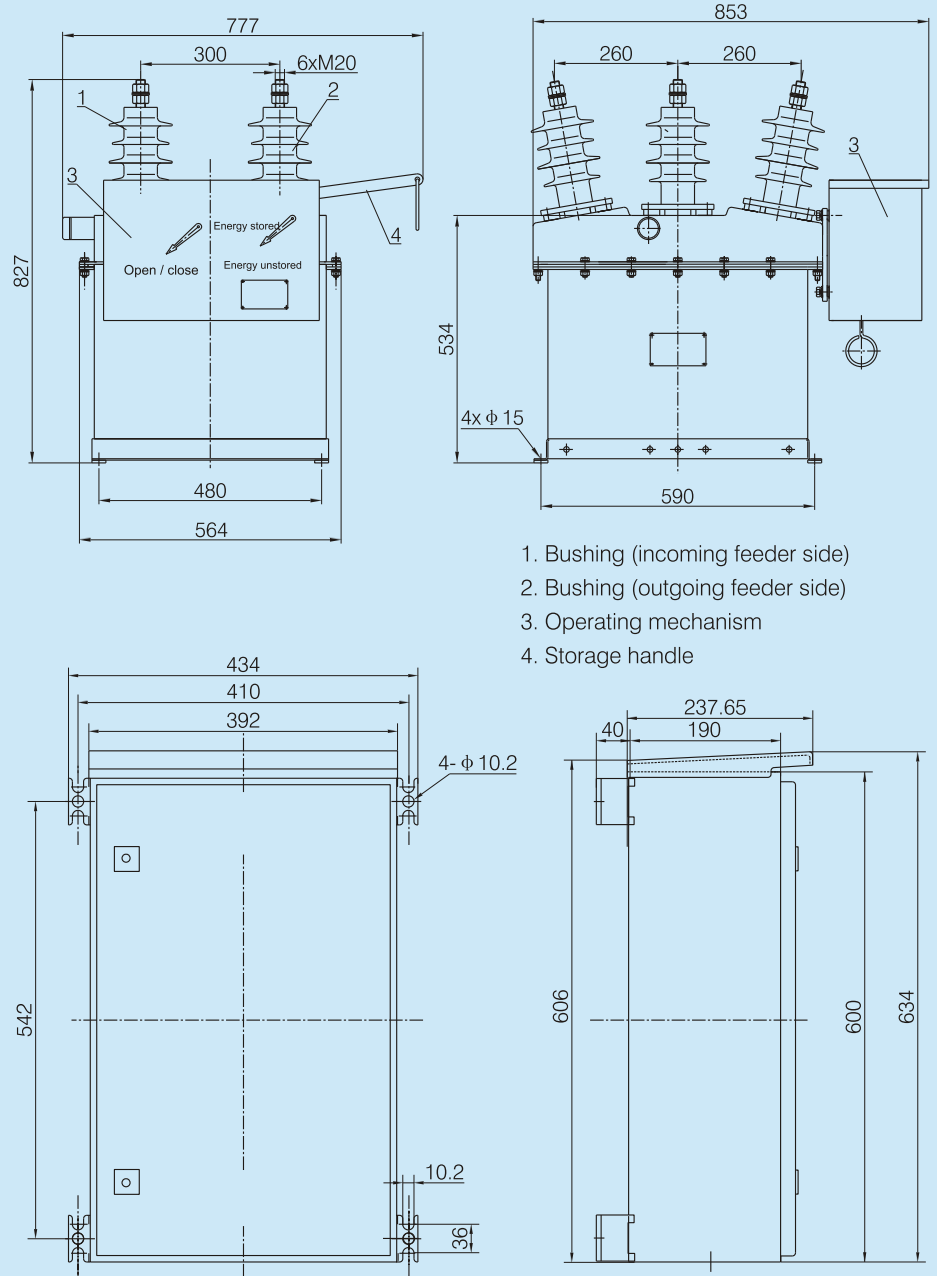
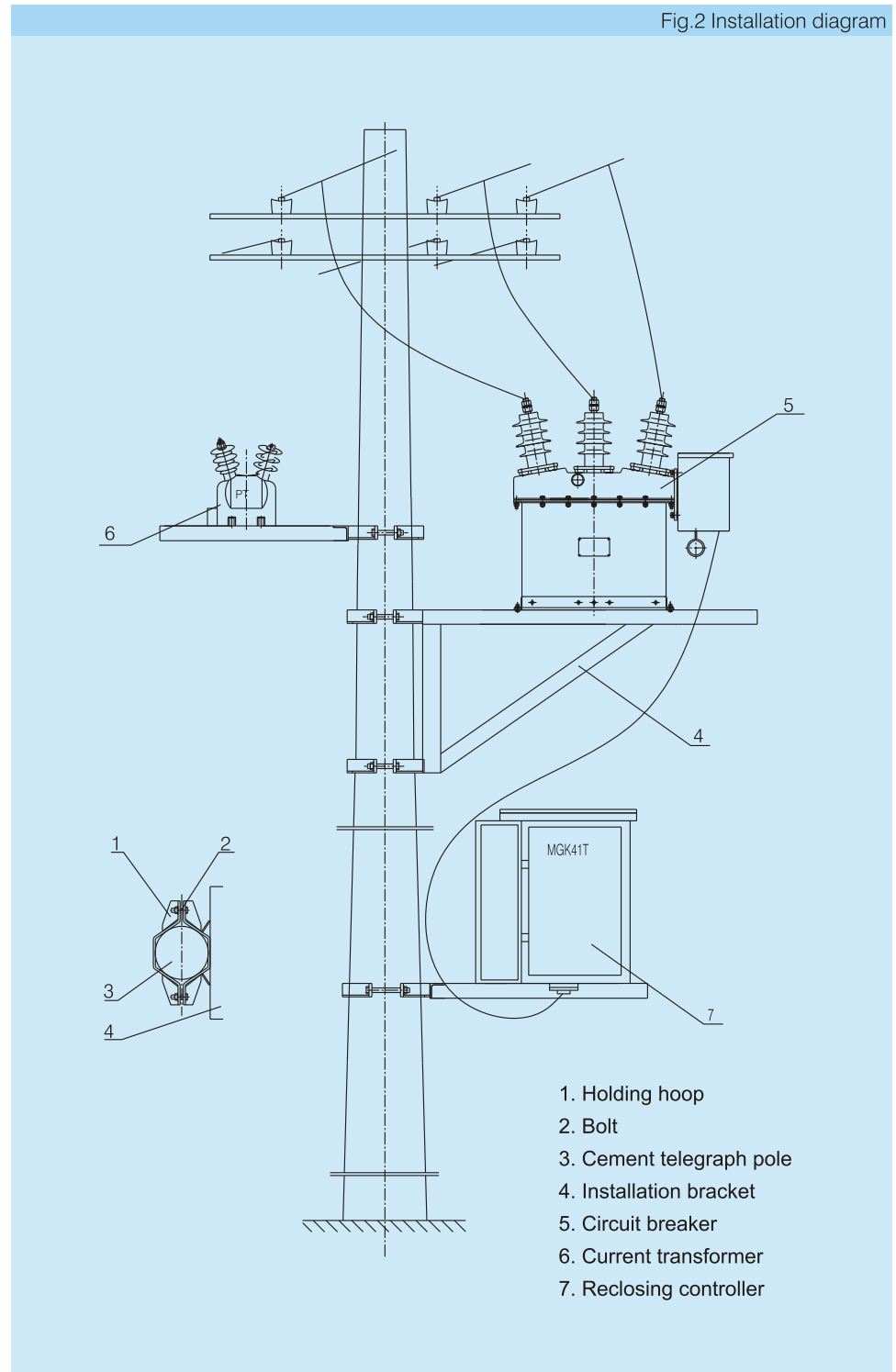


Fig.2 Installation diagram



6. Ordering Information

Please indicate the following items when order:

- 6.1 Type, name, parameters and quantity.
- 6.2 Variable ratio and quantity of the current transformer.
- 6.3 Disconnector is needed or not.
- 6.4 Rated operating voltage.
- 6.5 Name and quantity of spare parts.
- ※ Customized products are available per your requirements.