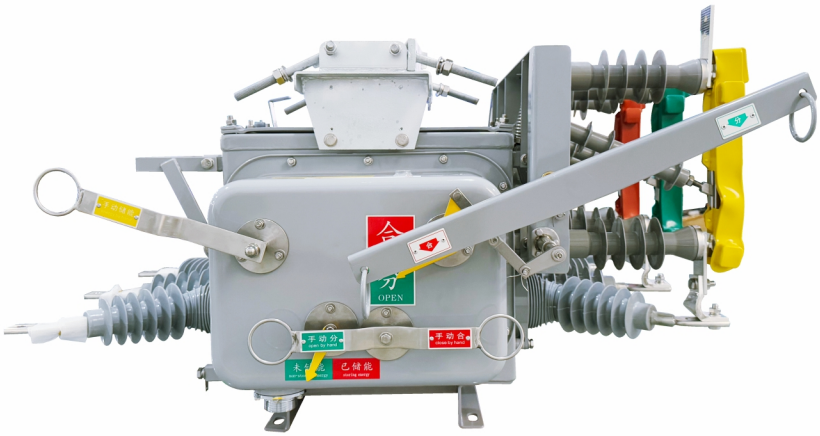
CIRCUIT BREAKER

ZW20-12kV SERIES OUTDOOR HV VACUUM CIRCUIT BREAKER

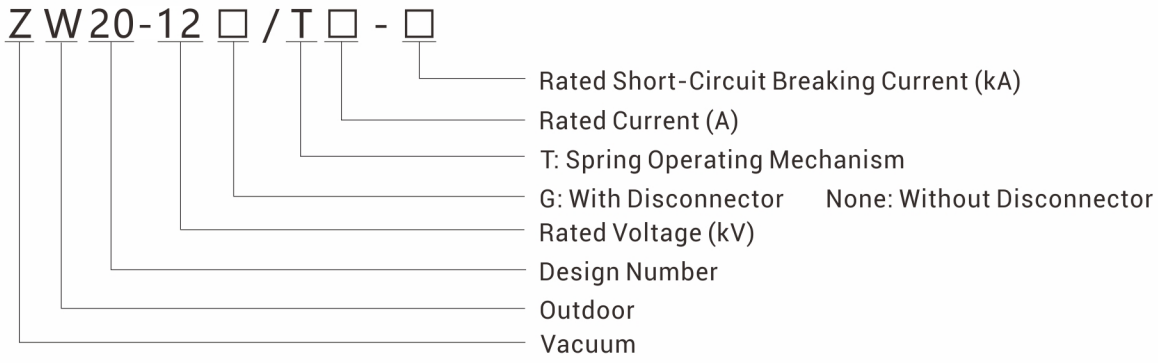


INSULATING MATERIALS | STABLE OPERATION | USER-FRIENDLY OPERATION | EXCELLENT INSULATION | BUILT-IN TRANSFORMER | STAINLESS STEEL ENCLOSURE | TIN-PLATED CONTACTS | REINFORCED ISOLATION BLADE

REFERENCE STANDARD:

GB 311.1	Insulation Coordination for High-Voltage Transmission and Transformation Equipment
GB 1984	High-Voltage Alternating-Current Circuit-Breakers
GB/T 11022	Common Technical Requirements for High-Voltage Switchgear and Controlgear Standards
GB 50150	Acceptance Test Specifications for Electrical Equipment Installation in Domestic Projects
DL/T 403	Technical Ordering Conditions for 12kV-40.5kV High-Voltage Vacuum Circuit-Breakers
DL/T 615	Guidelines for Parameter Selection of AC High-Voltage Circuit-Breakers
DL/T 593	Common Technical Requirements for High-Voltage Switchgear and Controlgear Standards
DL/T 884	General Technical Conditions for 12kV Low-Maintenance Outdoor Distribution Switchgear
Q/GDWXXX	Technical Specifications for High-Altitude External Insulation Configuration
IEC62271-100	High-Voltage Switchgear and Controlgear – Part 100: Alternating-Current Circuit-Breakers

MODEL AND NOMENCLATURE



USE CONDITIONS:

Ambient Air Temper.	-25°C ~ +70°C，daily temperature variation≤25°C
Altitude	≤ 2000m(> 2000m，correction factors for high altitude conditions apply. Specified when ordering
IP Rating	IP55
Wind Pressure	≤ 700Pa (Equivalent to wind speed of 35m/s)
Sunlight Intensity	0.1W/cm²(At wind speed of 0.5m/s)
Pollution Degree	≤ Class IV
Seismic Intensity	≤Level 8
Ice Thickness	≤10mm
Earthing Method	Neutral point grounding system: Ungrounded, grounded via arc suppression coil, or low-resistance grounded
Installation Site	Free from flammable/explosive hazards, chemical corrosion, and severe vibration

REFERENCE CONFIGURATION FOR CUSTOMER SELECTIONS:

ZW20-12kV Series	User Boundary (Sectionalizer)	Smart Reclosing	Auto Integrated
Stainless Cold-Rolled Steel Enclosure	●	●	●
Motorized Spring Operating Mechanism	●	●	●
AC Two-Phase Protective CT 50~600/5	●	●	
ABC Three-Phase Protective CT 50~600/5	●	●	●
Zero-Sequence CT 20/1	●	●	●
Voltage Transformer (10kV/0.22kV)	●	●	●
Zero-Sequence Voltage Sensor			●
Stainless Steel Cabinet-Type Reclosing Controller		●	
Stainless Steel Cabinet-Type P&S Integration Controller			●
Sectionalizer Controller	●		
Mounting Bracket with Circuit Breaker & Controller (Single-Pole)	●	●	●
Yellow-Green-Red Incoming/Outgoing Line Protective Sleeves	●	●	●

TECHNICAL DATE SHEET

Item	Unit	Without Disconnector	With Disconnector
Rated Voltage	kV	12	
Rated Current	A	630	630
Rated Frequancy	Hz	50	
Rated Insulation Level	kV	42/48	42/48
Rated Short-Circuit Breaking Current	kA	20	25
Rated Short-Circuit Making Current (Peak)	kA	50	63
Rated Short-Circuit Withstand Current	kA	20	25
Rated Short-circuit Operations at Short-Circuit Current	Time	30	30
Rated Short-Circuit Duration	s	4	
Rated Operating Voltage & Auxiliary Circuit Rated Voltage	V	Dc220 Ac220 AC/DC220	
Rated Operating Sequence		Open -0.3s- Close/open -180s- Close/open	
Rated Overcurrent of Release Current	A	5	
Mechanical Life	Time	10000	
Permissible Cumulative Wear Thickness of Contacts	mm	3	
Overcurrent Release Setting	A	5	
Current Transformer Ratio		200/5 400/5 600/5	
Contact Gap	mm	9±1	
Contact Overtravel	mm	3±1	
Average Opening Speed	m/s	1.2±0.3	
Average Closing Speed	m/s	0.6±0.2	
Opening Time	ms	20~40	
Closing Time	ms	30~60	
Contact Bounce Time (Closing)	ms	≤2	
Closing/Opening Asynchronism (Three Poles)	ms	≤2	
DC Resistance per Pole	μ Ω	≤80	≤150

MAIN CONFIGURATION



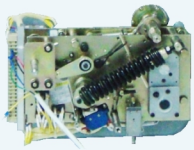
Vacuum Interrupter



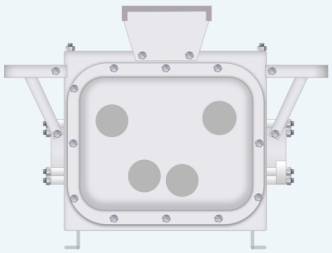
Current Transfomer



Incoming/Outgoing Line Bushing

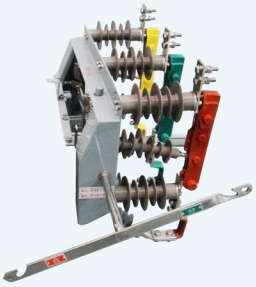


Manual Spring Operating Mechanism

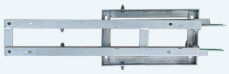


Stainless Steel Enclosure

AUXILIARY CONFIGURATION



Disconnector

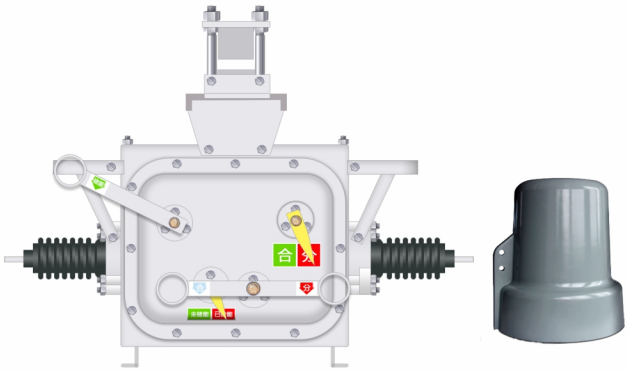


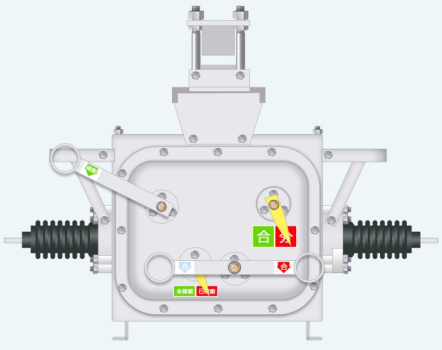
Mounting Bracket

ZW20-12KV SERIES OUTDOOR HIGH-VOLTAGE VACUUM CIRCUIT BREAKER PRODUCT PARAMETERS

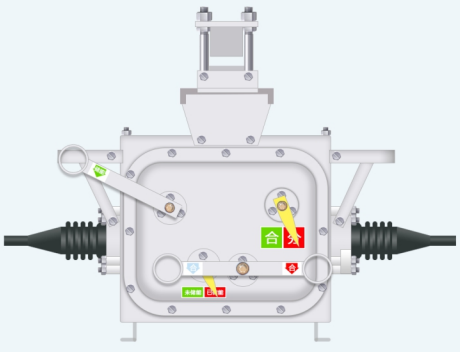
SMART BOUNDARY TYPE

Designed for 12kV, three-phase AC 50Hz power transmission and distribution systems, this switch utilizes a proven sealed tank structure filled with SF6 gas, ensuring exceptional sealing performance that provides immunity to environmental conditions, maintenance-free operation, and suitability for harsh environments. As a sectionalizing switch (commonly known as a "Sectionalizer"), it is deployed at the user branch line demarcation point to automatically clear single-phase ground faults, isolate phase-to-phase short-circuit faults, enable rapid fault location, monitor user load, and support real-time monitoring and open/close operations via SMS or backend systems.





BUSHING TYPE

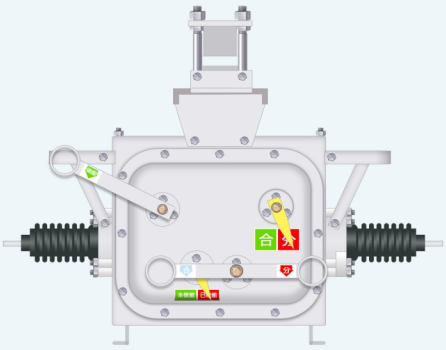


CABLE TYPE

ZW20-12KV SERIES OUTDOOR HV VACUUM CIRCUIT BREAKER

SMART RECLOSING TYPE

Designed for 12kV three-phase AC 50Hz power transmission and distribution systems, this system is equipped with a stainless steel cabinet-type reclosing controller and backup battery, ensuring up to 48 hours of switch operability during line outage maintenance. Suitable for control and protection applications in industrial plants, power plants, substations, agricultural networks, and urban electrical facilities, it excels in frequently operated scenarios with fault interruption and rapid reclosing capabilities. Compatible with GSM/GPRS communication, backend monitoring systems, and administrator mobile monitoring platforms, it enables comprehensive automation, integration, and intelligence in distribution networks.





ZW20-12KV SERIES OUTDOOR HIGH-VOLTAGE VACUUM CIRCUIT BREAKER

AUTO INTEGRATED TYPE

Designed for 12kV three-phase AC 50Hz power transmission systems, this system features a stainless steel enclosure-type primary & secondary integration controller with backup battery. It utilizes electromagnetic current transformers and electronic zero-sequence voltage sensors, delivering high-precision fault localization with minimal error, immunity to environmental and device-specific interference, enhanced safety, and eliminated explosion risks. The solution enables seamless interoperability between primary and secondary equipment through plug-and-play communication compatibility, meeting the requirements of next-generation distribution automation. By allowing selective activation/deactivation of functions based on specific needs, it truly achieves automated, intelligent, and integrated distribution networks, fully aligning with current domestic power grid automation development goals.

