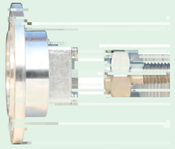
Part III Other Accessories

Circuit breaker mechanical characteristic monitoring module

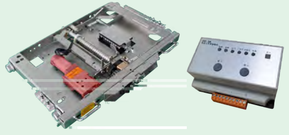
With high-precision sensors and data collection technology, the module monitors the operation of switchgear in real time and sends alerts when abnormal situations occur.



Mechanical characteristic component

Electric switch cart control module

The controller uses a high-performance 32-bit processor, which can quickly detect abnormal conditions, brake the motor and sends alarm signals. With soft start, the module allows easy switch between manual and electric operation. The control module can operate on both strong and weak current inputs to achieve electrical interlocking/control.



Electric chassis cart accessories

Circuit breaker online temperature module

With the latest-generation of passive RFID wireless technology, the module is highly reliable and accurate. It is also small in size, easy to install, adaptable to various applications.



Temperature monitoring module

Part I Indoor High Voltage Vacuum Circuit Breaker

I. Product description

The VS1 series is the latest indoor high-voltage vacuum circuit breaker, suitable for substations, power plants, petrochemical plants and other engineering projects that require frequent operation.The VS1 series is suitable for the electrical facilities in three-phase AC current system with rated voltage of 3.6~24kV and frequency of 50Hz for controlling and protecting equipment.

With the latest-generation of modular spring operating mechanism, the product has passed M2/C2/E2 class tests. Both air insulated (with epoxy resin) and solid sealing pole (with automatic pressure gelation technology) types are available.

We offer 12kV/24kV circuit breakers with different rated current:

12kV	Rated current of 12kV	630A 1250A 3150A 4000A 5000A
	Rated short-circuit breaking current	25kA 31.5kA 40kA 50kA
24kV	Rated current of 12kV	1250A 3150A
	Rated short-circuit breaking current	31.5kA

Technical specification:
GB/T 1987-2014, JB/T 8738-2008 and IEC 62271-100:2017.

2.Working environment

Altitude	≤ 2000m
Ambient temperature	Indoor: -15℃ to 40 ℃； daily average ≤35℃
Ambient humidity	Daily average ≤ 95%, monthly average ≤ 90% (relative to +25℃)
Pollution conditions	No more than secondary degree





3.Technical features

Flexible and highly compatible
- Spring operating mechanism or permanent magnetic operating mechanism for selection
- Secondary plug: 58pins or 64pins for selection
- Fully compatible with main stream interrupter brands

Low maintenance
Embedded pole design with high resistance to contamination

High insulation
Embedded pole design with high insulation capability

Small footprint

4. Technical parameter

Electrical parameter			
Rated voltage	kV	12	24
Rated frequency	Hz	50	
Rated power frequency withstand voltage (1min)	kV	42(fracture 48)	65（fracture 79）
Rated lightning impulse withstand voltage	kV	75（fracture 85）	125（fracture 145）
Control circuits frequency withstand voltage(1min)	V	2000	
Supply voltages of control circuits	V	DC110/220, AC110/220	
Rated current	A	630 1250 3150 4000 5000	1250 3150
Rated short circuit breaking current	kA	25 31.5 40 50	31.5
Rated short-time withstand current (4s)	kA	25 31.5 40 50	31.5
Rated short-circuit closing current	kA	63 80 100 125	80
Rated peak withstand current	kA	63 80 100 125	80
Rated breaking current of single/back-to-back capacitor bank	A	630/400 800/400	630/400
Rated operation sequence		O-0s-CO-180s-CO	

Mechanical parameter			
Mechanical life	Times	10000	
Rated short circuit current breaking times	Times	30	
Contact erosion limit	mm	3	
Opening time	ms	≤50	30±10
Closing time	ms	≤70	45±10
Contact closing bounce time	ms	≤2	
Simultaneity of poles during closing and opening	ms	≤2	

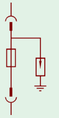
Marks: ① 4000A and 5000A are under wind cooling conditions;
② θ for circuit breakers with reclosing function, θ is 0.3 s; For circuit breakers without reclosing function, θ is 180 s;

Part II Handcart Accessories

① Isolation handcart
Used in PT cabinets (fxed installation of PT and other components) bus-tie cabinets

② Fuse handcart
Used in substation transformer cabinet or PT cabinet (PT and lightning arrester are installed in switch cabinet)

③ Fuse & lighting arrester handcart
Used in PT cabinet (PT fxed installation)



④ Grounding handcart
Used during switchgear testing and maintenance when busbars connect to the ground wire



⑤ Undermount lighting arrester handcart
Applied in the front lower section of the PT cabinet and can be used together with a PT handcart



⑥ Valve inspection handcart

Technical parameter

Parameter	Unit	Data	
Rated voltage	kV	12	24
Rated frequency	Hz	50	
Rated power frequency withstand voltage (1min)	kV	phase to phase/ phase to earth 42	phase to phase/ phase to earth 65
Rated lightning impulse withstand voltage	kV	phase to phase/ phase to earth 75	phase to phase/ phase to earth 12
Interphase center distance	mm	210±2	275±2
Weight	Kg	100	200
Dimensions	mm	640*504*596	838*770*747