

XGN118-12 Green Gas-insulated RMU



Shenyang Huade High Technology Electric Co., Ltd

Product Overview

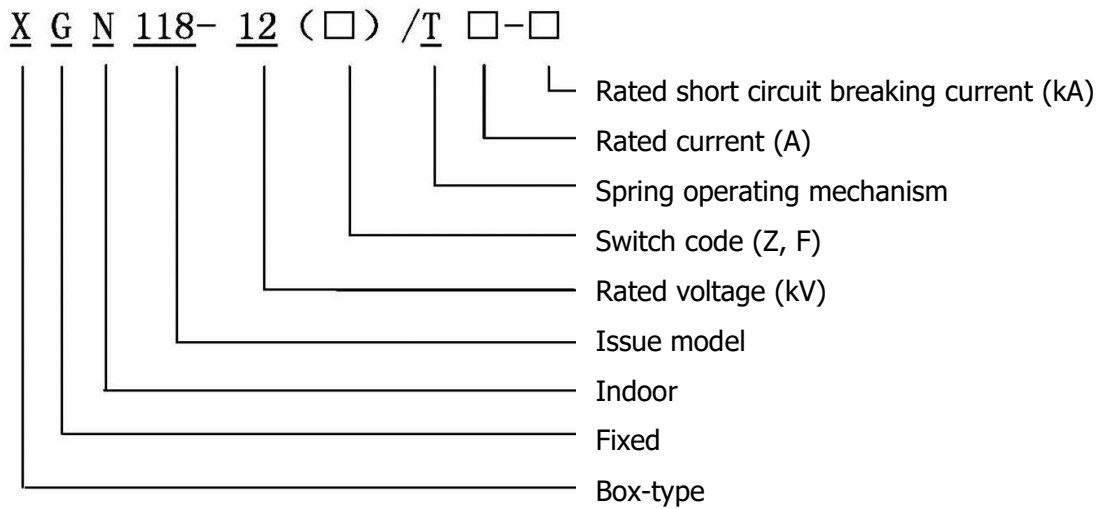
XGN118-12 green gas-insulated RMU is an environment-friendly product independently developed by Huade High-tech. It is applicable to the power system with rated voltage of 12kV and three-phase AC of 50Hz. It can receive and distribute network power, and implement measurement, monitoring, communication, control and protection for normal operation of the system. The product is a new generation of medium voltage switchgear integrating vacuum interrupter technology, APG solid sealing technology and gas insulation technology, complying with standards like IEC62271, GB11022, GB3906 and DL/T404. Passing all type test and national new product technical appraisal, the product is widely applied to secondary distribution stations, urban power supply networks, large-scale industrial and mining enterprises, petrochemical, metallurgy, commercial areas and other places.

Key Features:

- ✧ **Eco-Friendly Design:** Adopts dry air as an insulating medium, eliminating the reliance on SF6 gas and reducing toxic emissions, ensuring minimal environmental impact.
- ✧ **Compact and Modular:** Features a miniaturized design with a compact structure, small size, and a minimal footprint, maximizing space efficiency.
- ✧ **Versatile Modular Design:** Incorporates a modular design enabling the random combination of different modules such as load switch unit, circuit breaker unit, metering unit, and bus PT unit.
- ✧ **Flexible Configuration:** Various standard unit modules combine to form a three-phase common tank fixed type ring network switch equipment. Different modules can be combined to design extensible units, offering diversified power distribution schemes.
- ✧ **Robust Construction:** High voltage components are securely sealed within a stainless steel tank, ensuring waterproof and dustproof performance unaffected by environmental factors or altitude. Guarantees safety and maintenance-free operation.
- ✧ **Reliable Operation:** Features reliable mechanical and electrical interlocking mechanisms, effectively preventing mis-operation and ensuring convenient and dependable operation.



Product model Description



Note: Z: Circuit breaker (CB), F: Load switch

Normal service conditions

Ambient Temperature:

- Maximum: +55°C
- Minimum: -25°C

Environmental Conditions:

- Suitable for locations without fire, explosion hazard, chemical corrosion, severe pollution, or excessive vibration.

Relative Humidity:

- Daily Average: $\leq 95\%$
- Monthly Average: $\leq 90\%$

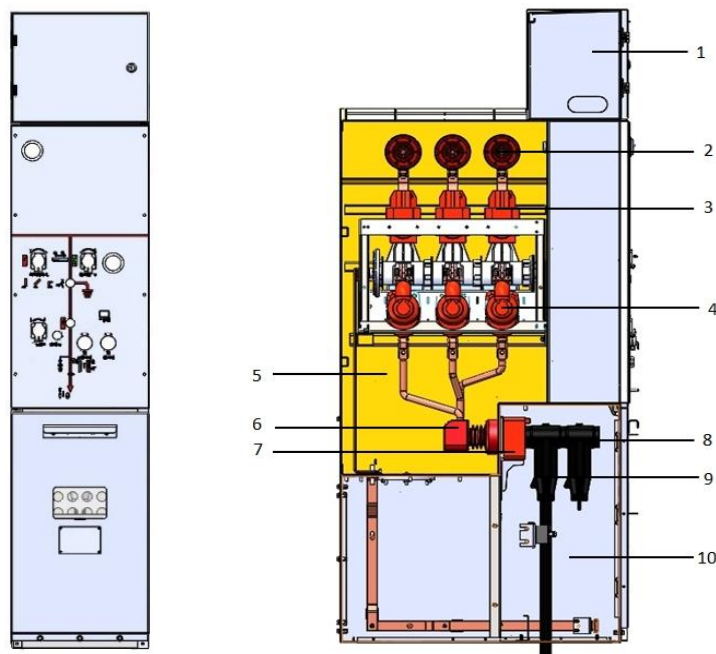
Altitude:

- Operating Altitude: $\leq 3000\text{m}$

Note: If the operating conditions exceed the specified normal conditions mentioned above, users are advised to consult with the manufacturer.

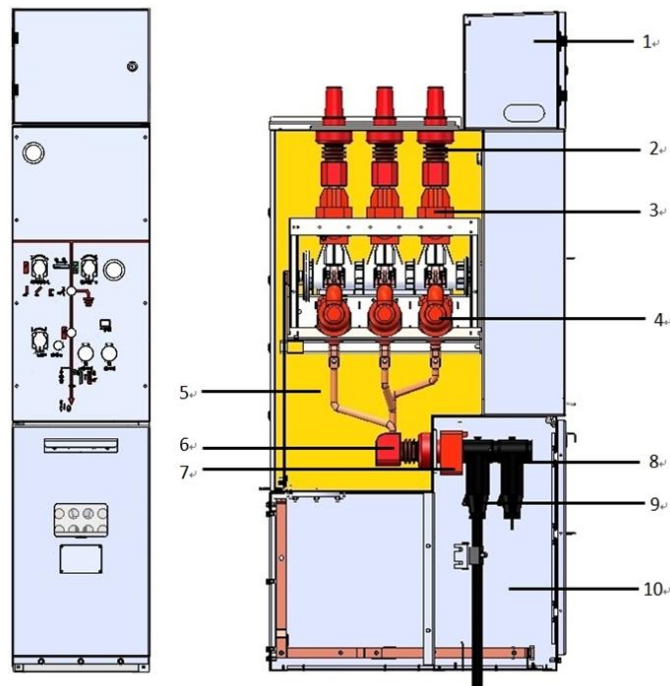
Product structure

- ✧ The product adopts three-phase common tank structure design, which is composed of core gas tank unit, low-voltage compartment, operating mechanism compartment, cable compartment, etc.
- ✧ The gas tank is made of non-magnetic stainless steel plate through laser cutting and laser welding, and the non-welding sealing connection surface is sealed by O- ring. The gas tank has the advantages of high mechanical strength, strong deformation resistance, neat and beautiful appearance and high dimensional precision, ensuring extremely high air tightness.
- ✧ The circuit breaker (load switch), bus and EDS (Earthing disconnect switch) are located in the same gas tank. The disconnecting switch and the earthing switch are combined into a EDS which shares one moving contact and is arranged on the bus side, and the operating mechanism is arranged outside the gas tank.
- ✧ The gas tank is equipped with a pressure relief device and a gas pressure gauge with temperature compensation function. When the internal pressure exceeds a certain limit value, the pressure relief device will automatically open to release gas to ensure the safety of operators and other equipment.



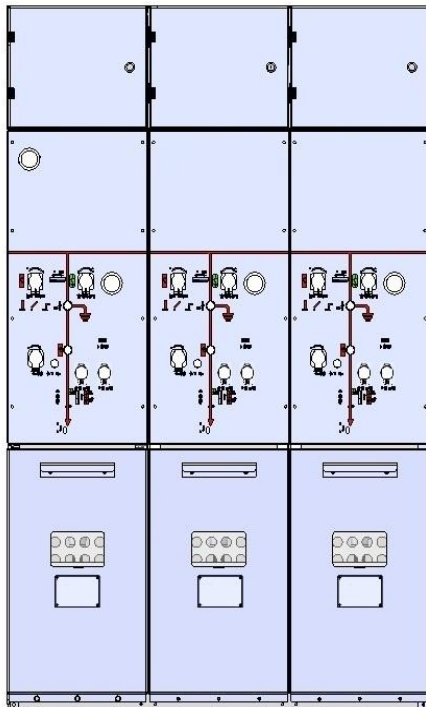
- 1- Low voltage compartment, 2-Main bus, 3-EDS, 4-Vacuum circuit breaker / load switch
 5- gas compartment, 6- cable bushing, 7- current transformer, 8- lightning arrester,
 9- cable, 10- enclosure

Indoor Side Extensible RMU

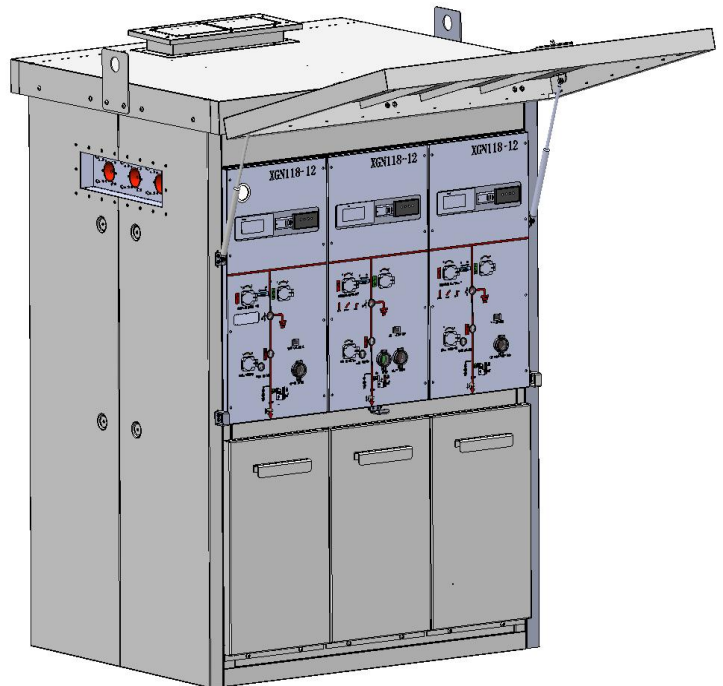


- 1- Low voltage compartment, 2- Main bus bushing, 3- EDS,
 4- Vacuum circuit breaker / load switch 5- Gas compartment, 6- cable bushing,
 7- current transformer, 8- lightning arrester, 9- cable, 10-enclosure

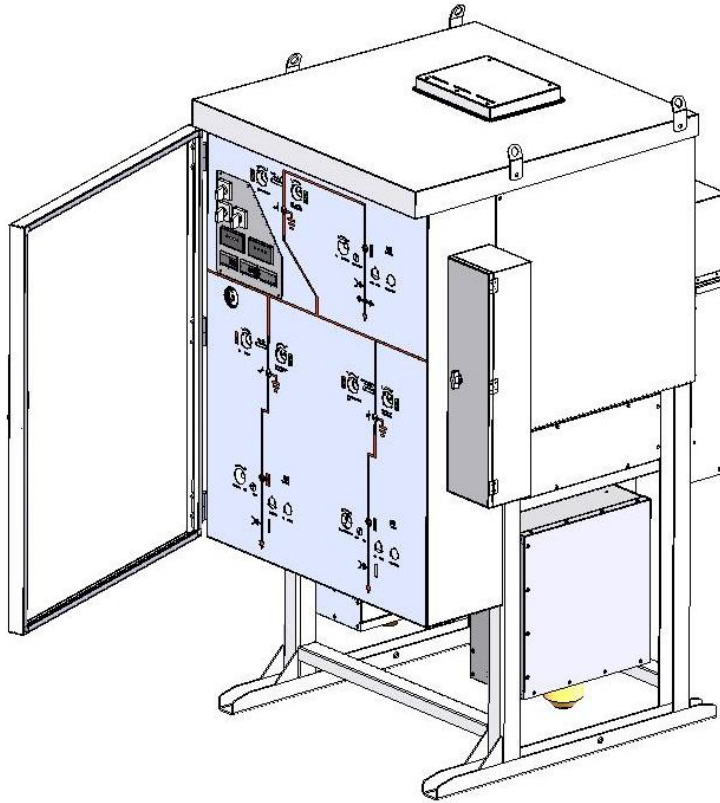
Indoor Top Extensible RMU



Indoor Common Tank RMU (CVC)



Outdoor Common Tank RMU (CVC)



Outdoor Common Tank RMU (CVC)

Typical Primary Scheme

Model: XGN118-12kV SLD													
Equipment Name		C Panel		V Panel		PT Panel		CVC Panel					
No.	Components Name	Type	Qty.	Type	Qty.	Type	Qty.	Type	Qty.	Type	Qty.	Type	Qty.
1	Rated Current of Main Busbar	630A	1	630A	1	630A	1	630A	1	630A	1	630A	1
2	Rated Current of Branch Busbar	630A	1	630A	1	630A	1	630A	1	630A	1	630A	1
3	Vacuum Circuit Breaker			630A	1					630A	1		
4	Earthing disconnector switch	630A	1	630A	1	630A	1	630A	1	630A	1	630A	1
5	Load Break Switch	630A						630A				630A	
Dimension(W*D*H)		420*850*2000		420*850*2000		600*850*2000		1260*850*2000(indoor)/1380*1220*1950(outdoor)					

Note: If other dimensions enquired, please consult with the manufacturer.

Technical parameter

No.	Item	Unit	Technical Parameters	
			LBS Panel	CB Panel
1	Rated voltage	kV	12	
2	Rated current	A	630	630
3	Rated frequency	Hz	50, 60	
4	Rated short-circuit breaking current	kA	/	20,25
5	Rated short circuit making current		52,65	
6	Rated short-time withstand current (effective value)	kA	20, 25	
7	Rated short-circuit duration	s	4	
8	Rated peak withstand current	kA	52,65	
9	Closed-loop breaking current	A	630	-
10	Circuit breaker /Load switch Level		E3 level	E2
11	Annual leakage rate	%	≤0.1	
12	Rated short-time power-frequency withstand voltage (effective value)	Phase to phase, phase to ground	kV	42
		Across the isolating distance	kV	48
	Rated lightning impulse withstand voltage (peak value)	Phase to phase, phase to ground	kV	75
		Across the isolating distance	kV	85
13	Partial discharge	PC	≤20	
14	Insulation gas		Clean air	
15	Rated gas-filling pressure (20°C, rel.)	Mpa	0.02	
16	Operating mechanism		Manual and electric (spring)	
17	Circuit breaker /load switch mechanism life	Time	10000	
18	Disconnecter / Earthing switch mechanism life	Time	3000	
19	Protection level		Enclosure:IP4X/IP54	
20	Loss of service continuity category		LSC2	
21	Internal arc fault IAC	AFLR	25kA/1s	

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