

SSG-12 Series

RMU

-12kV Solid Insulated



- Metal-enclosed switchgear
- High-quality stainless steel shell

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1. Company Profile

Quanzhou Tianchi Electric Import and Export Trade Co., Ltd. is a subsidiary of Quanzhou Seven Star Electric Co., Ltd. to develop overseas markets and serve overseas customers more professionally. The company is located in Seven Stars Industrial Park, Jiangan High-tech Development Zone, Licheng District, Quanzhou, FUJIAN. The company adheres to the business philosophy of "innovation, pragmatism, and win-win" and the service concept of "people-oriented" provide comprehensive and high-quality products for domestic and foreign enterprises.

Seven Stars Electric was established in 1995. It is a national high-tech enterprise dedicated to the research and development and production of power insulation products and high-voltage power transmission and distribution products. In 2012, it was restructured from a state-owned enterprise to a joint-stock enterprise. Jointly invested in the establishment of a subsidiary Quanzhou Seven Stars Electric Co., Ltd. The company's main products include Ring Main Units, smart grid software and hardware production and development (primary and secondary fusion column switches, intelligent station buildings, electric power clairvoyance, etc.), cable branch boxes, low-voltage complete sets of equipment, cable connectors, cold shrinkable cable accessories, insulators, lightning arresters, etc. The company's registered capital is 130 million yuan, fixed assets are 200 million yuan, and the company has more than 600 employees. In 2021, it will achieve a turnover of 810 million yuan and a tax revenue of nearly 30 million yuan. The annual output value in 2022 is expected to exceed 1 billion yuan. The company's products have Sold to Vietnam, Philippines, Brazil, South Africa, Singapore, Malaysia and other countries.

The company has three production bases

with a total of more than 60,000 square meters of production plants, including high-voltage insulation workshops, sheet metal processing workshops, power distribution switch workshops, and power electronics workshops; Fully equipped laboratories for low temperature and electromagnetic compatibility; a complete R&D, production and testing system for power insulation and high-voltage transmission and distribution products with a voltage level of 500kV and below has been formed. Among them, the German CNC punching machine, laser cutting machine, CNC bending machine, shearing machine and other sheet metal processing equipment imported from the power distribution product line, as well as Panasonic robot welding, helium (nitrogen) leak detection, pressure testing and other equipment. In addition to producing core components such as switches and operating mechanisms, it also assembles indoor and outdoor Ring Main Units, high and low voltage complete sets of equipment and other products; has the ability to assemble Ring Main Units, branch boxes, integrated distribution boxes, low-voltage branch boxes, and low-voltage reactive power compensation boxes. 100,000 The production capacity of the unit; the insulation product production line is 10-35kV cable accessories production line, which can produce 100,000 sets per year.



2.Product Overview

SSG series solid insulated ring main unit is a smart cloud device with environmentally friendly materials, economical price and convenient operation. All conductive parts of the switch are sealed or encapsulated in solid insulating material. The main switch adopts vacuum arc extinguishing, the disconnecting switch adopts a three-position structure, and the adjacent units are connected to each other by solid insulated busbars, with epoxy resin solid sealing as the insulation of the charged body to ground and between phases. SSG series solid insulated ring main unit comply with the national requirements for the reduction of waste gas pollution from electrical products, and suitable for use in small secondary distribution stations, sub-section post, industrial and mining enterprises, airports, railways, commercial areas, high-rise buildings, highways, subways, tunnels and other areas. Especially for plateau, wet, cold and low-lying special environment.



3. Technical Parameters

• **Normal environmental conditions**

The SSG series is generally operated/served under normal environmental conditions, complying with IEC standard.

• **Environmental temperature**

- Max. temperature +50°C
- Max. temperature (24-hour average) +35°C
- Min. temperature -40°C **Note 2)**

• **Humidity**

- Max. average relative humidity
- 24 hours measurement ≤95%
- 1 month measurement ≤90%

• **Installation altitude**

Generally ≤ 2500 meters Special > 2500 meters **Note 1)**

• **Arcing test**

20 kA 0.5s

• **Color**

- Switchgear front panel (can be customized according to customers)

• **Special conditions**

Note 1): Please consult when the electrical equipment is installed at an altitude of 2500m or more.

Note 2): When it is lower than -25 degrees, you need to info

Main technical parameters

Item	Explanation	Unit	Module K	Module V	
			Load Switch	Circuit Breaker	
Rated Voltage		Ur	KV	12	12
Rated Current		Ir	A	630	630
Rated Frequency		Fr	Hz	50/60	50/60
Temperature rise test				1.1Ir	1.1Ir
Insulation Level					
Industrial Frequency 50Hz/Min	Phase-to-phase	Ud	KV rms	42	42
	phase-to-earth				
	Across the interrupter	Ud	KV rms	48	48
	Across isolating distance				
Lightning Impulse Withstand	Phase-to-phase	Up	KV peak	75	75
	Phase-to-earth				
	Across the interrupter	Up	KV peak	85	85
	Across isolating distance				
Cubicle Internal Arc Withstand	IAC level			AFLR	AFLR
	Burning arc/time		KA/s	20/0.5	20/0.5
Breaking capacity					
Rated Short-Circuit Breaking Current		Isc	KA	-	20
Rated Short-Circuit Closing Current		Isc	KA peak	50	50
Short-Time Withstand Current		Ik	KA rms	20/4s	20/4s
Peak Withstand Current		Ip	KA	50	50
Protection level	Shell			IP3X	
Mechanical Endurance	Circuit Breaker/Load switch		Freq	5000	10000
	Isolating switch		Freq	3000	5000
	Earth switch		Freq	3000	2000

4.Product structure

Main functional unit structure

– Circuit Breaker / Load Switch

(1) Secondary control box

(2) Operation panel

(3) Main switch mechanism

(4) Isolation mechanism

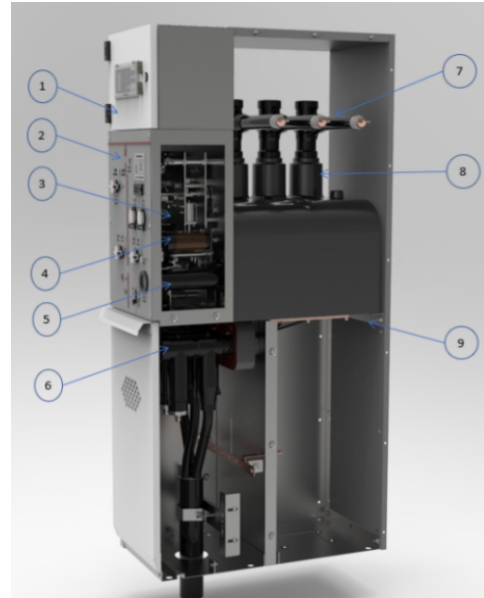
(5) Wide angle lens

(6) Cable compartment

(7) Busbar

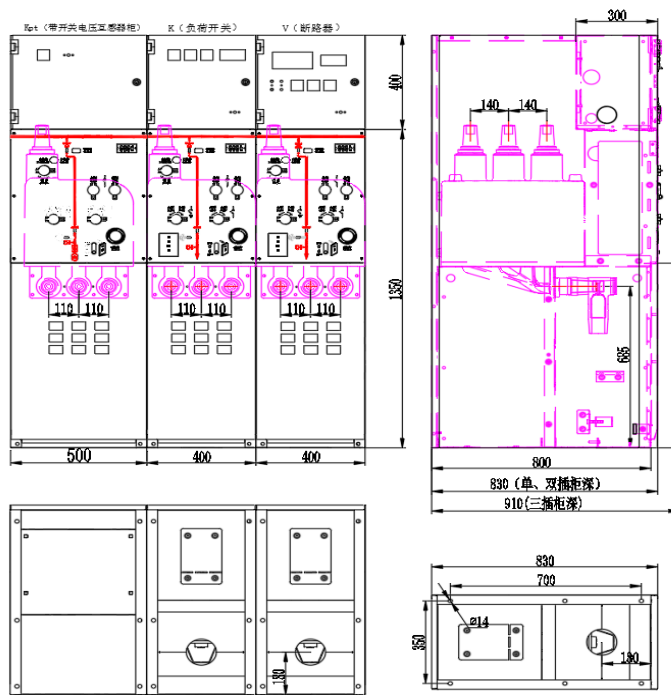
(8) Arc extinguishing device

(9) Pressure relief device



Note: For electric operation of the switch, a low voltage box is required (400mm high)

Product three views



5.Function & configuration

main functional units

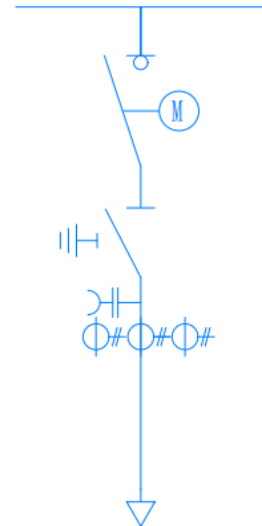
– Load switch unit

Standard configuration:

- 630A load switch
- 630A busbar
- Isolating switch
- Powered monitor
- Operating handle
- Cable bracket
- Five-proof interlock
- Cable viewing window

Optional configuration:

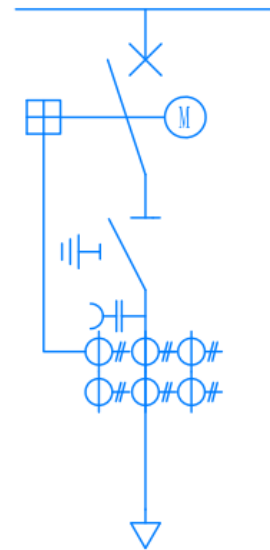
- Top outgoing lines
- Three cable outlet (deepen cabinet door)
- Electric operating mechanism
- Short circuit and earth fault indicators
- Top expansion busbar connector



– Circuit breaker unit

Standard configuration:

- 630A circuit breaker
- 630A busbar
- Isolating switch
- Powered monitor
- Operating handle
- Five-proof interlock
- Closing and opening coil
- Current Transformer



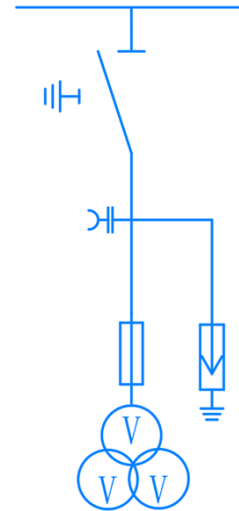
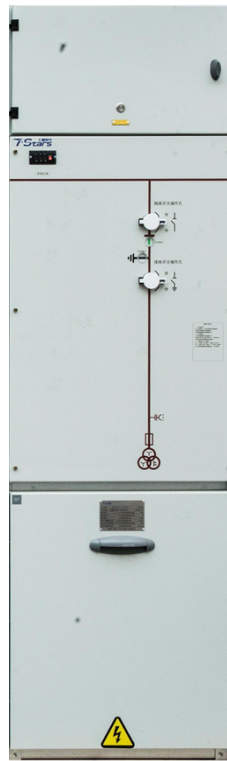
Optional configuration:

- Top outgoing lines
- Three cable outlet (deepen cabinet door)
- Electric operating mechanism
- Short circuit and earth fault indicators
- Microcomputer protection device
- Top expansion busbar connector

– Voltage transformer unit

Standard configuration:

- 630A isolating switch
- 630A busbar
- Earthing switch
- Powered monitor
- Operating handle
- Voltage Transformer
- Five-proof interlock
- Voltmeter



Optional configuration:

- Top outgoing lines
- Electric operating mechanism
- Top expansion busbar connector
- UPS power supply

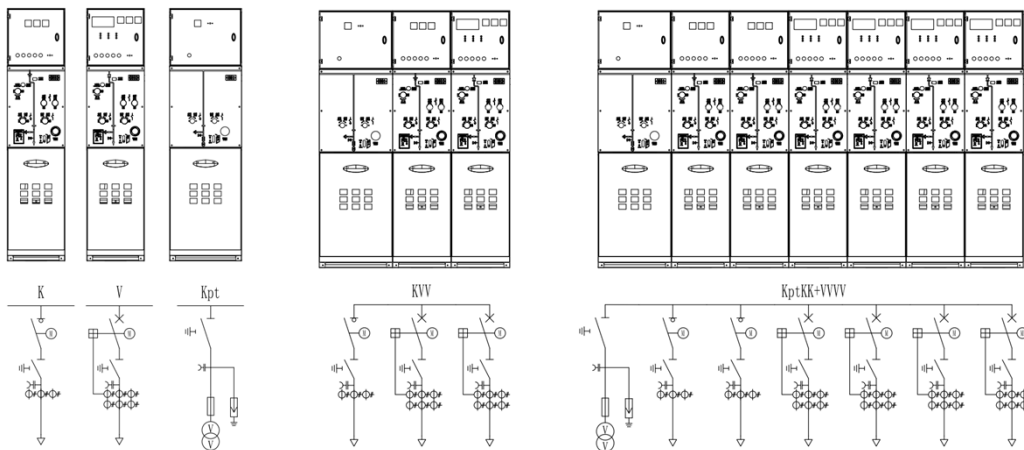
model specifications size

- Conventional Solid Insulated Ring Main Unit

SSU-K	Load switch unit	(Size: 400*803*1350)
SSU-V	Circuit breaker unit	(Size: 400*803*1350)
SSU-B	Cable connection unit	(Size: 400*803*1350)
SSU-Kpt	PT unit with switch	(Size: 500*803*1350)

Note: The above dimensions do not include the low pressure box dimensions.

Reference plan



6.Transport & Storage

Transport and Handling

Weight of a single standard SSG series unit approx. 230 kg.

The SSG series RMUs are shipped on wooden pallets and can be moved by inserting shovels using fork lifts.

Unpacking and Inspection

(1) Upon receipt of the goods, please check if the equipment has been damaged during transport. If damage has occurred, this must be declared to the carrier immediately.

(2) After opening the box, you must check that the random items match the shipping label on the side of the package.

(3) For functional tests of the mechanical parts, please declare any defects or omissions to our company immediately.



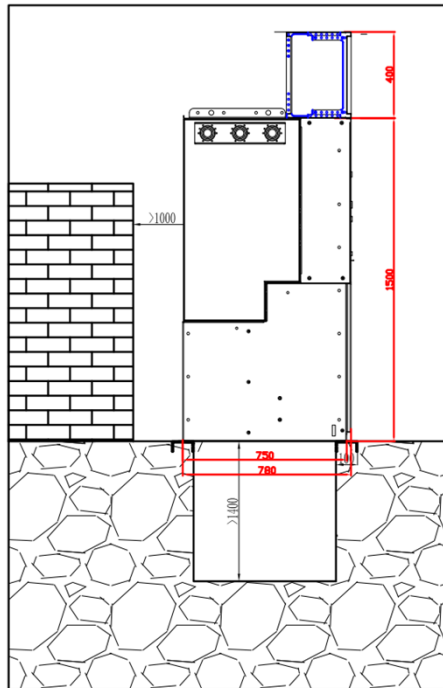
Storage Instructions

If the SSG series ring network cabinet is not used in time and needs to be stored, the following points need to be noted: a. Store in a dry and cool place:

- a. Store in a dry and cool place.
- b. Prevent the switch from being exposed to dust and water vapour from corroding the switch.
- c. Prohibit water immersion and pay attention to fire prevention.

7. Equipment Installation

Indoor Installation Basics



Outdoor Installation Basics

