GIANT ELECTRIC



Outdoor Prefabricated Substation

YBM22-12/0.4

Zhejiang Zhegui Electric Co.,Ltd



General

1.Rating:

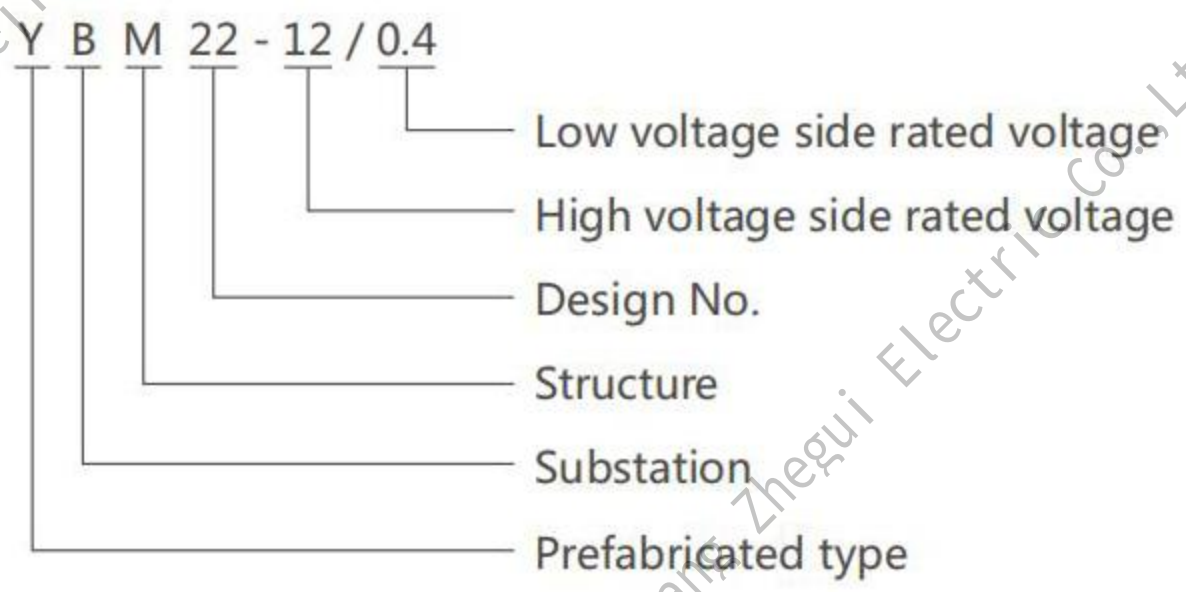
Rated voltage: HV equipment 7.2KV and 12KV, LV equipment 0.4 KV. Rated current: HV equipment 630A, LV equipment 100-2000A.

2.Application: YBM22 series substation is a kind of compact power distribution device that integrates high voltage electrical equipment, transformer and low voltage electrical equipment. It can be used in high-rise buildings, building in urban and rural areas, residential communities, high-tech development areas, small and medium size factories, mining areas , oil fields, temporary construction sites, and other premises. It also can be used for acceptance and distribution of power in power distribution system of 6-15KV, 50HZ (60HZ), ring main power distribution system and double power supply or radiate terminal power distribution system.

3.Feature: High integrity, small size, compact structure, safe and reliable operation, convenient maintenance, portable, etc. Compared with conventional civilengineering substation, in the same capacity, the prefabricated combined substation need only 1/10~1/15 floor area. So that the construction expense is reduced.

4.Standard:IEC1330

Type designation



Working Conditions

1.Ambient air temperature: -10℃~+40℃

2.Altitude: ≤1000m

3.Solar radiation: ≤1000W/m^2

4.Ice cover: ≤20mm

5.Wind speed: ≤35m/s

6.Relative humidity: Daily average relative humidity≤95%.Monthly average relative humidity≤90%.

Daily average relative water vapour pressure ≤ 2.2kPa. Monthly average relativewater vapour pressure ≤1.8kPa.

7.Earthquake intensity: ≤magnitude 8.

8.Applicable in the places without corrosive and flammable gas.

Note: Customized products are available.

Construction

1.The product is connected together by high voltage power distribution equipment,transformer and low voltage power distribution device. And divided into threefunctional compartments, that is High voltage compartment, Power transformercompartment and Low voltage compartment, have completely HV, LV function.High voltage side of a power supply system, can be arranged in a ring network power supply, end user power supply, dual power supply and other power supply,also can be provided with the high-voltage metering device to meet high voltage measurement. Transformer room can choose S9, SC and other series of low loss of oil immersed transformer or dry type transformer; low voltage chamber can bepanel or cabinet mounted structure based on user requirement to form the power supply scheme required by user. These are power distribution, lighting distribution, Static Var Compensator, energy metering and energy measurement and other function, to meet different requirement of user. This make Power management convenient for users and improve the quality of power supply.

2.The high voltage chamber with compact and reasonable structure, has a comprehensive anti mis-operation interlock function. It can be equipped with a rail for power transformer when it is required bycustomer, it can make transformer in and out conveniently in power transformer compartment. Each room has the automatic lighting device, Meanwhile, all elements in highvoltage and low voltage cabinet are reliable performance, c onvenient operation.

3.Adopt natural ventilation and the forced ventilation in two ways.There is ventilation channel for power transformer compartment and High, Low voltage compartment.The exhaust fan is provided with a temperature control device, it can automatic startup and shutdown according to the setting temperature.This ensure the normal operation of transformer.

4.The enclosure structure can prevent rain and dirt. The material adopt color steel plate and have anti-corrosion insulation function.

Dimension

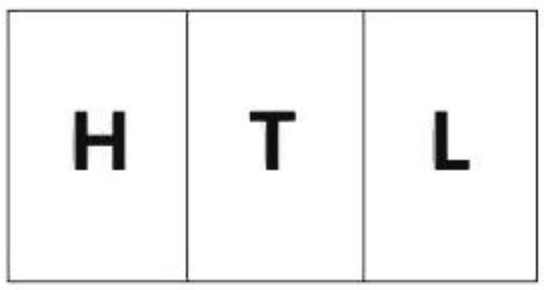
Sheet 1

Item	Unit	H.V electrical equipment	Transformer	L.V electrical equipment
Rated voltage	kV	10	10/0.4	0.4
Rated current	A	630		100-2500
Rated frequency	Hz	50	50	50
Rated capacity	kVA		100-1250	
Rated thermal stability current	kA	20/4S		30/1S
Rated dynamic stability current (peak)	kA	50		63
Rated closing short-circuit current (peak)	kA	50		15-30
Rated breaking short circuit current	kA	31.5 (Fuse)		
Rated breaking load current	A	630		
1 min power frequency withstand voltage	kV	Between phases, to earth 42, to open contacts 48	35/28(5min)	20/2.5
Lightning impulse withstand voltage	kV	Between phases, to earth 75, to open contacts 85	75	
Shell protection class		IP23	IP23	IP23
Noise level	dB	630	Oil transfo rmer<55 Dry transformer<65	
Loops No.			2	4~30
Low voltage side max static var compe nsator	kvar			300

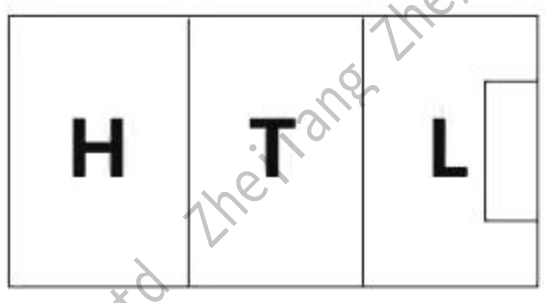
Plane layout and dimensions

YBM series of prefabricated substation have type 1 (refer pic1-1, 1-2) and type 2 (refer to 1-3, 1-4), the dimensions refer to pic 2, pic 3.

YBM series of prefabricated substation plane layout Picture 1



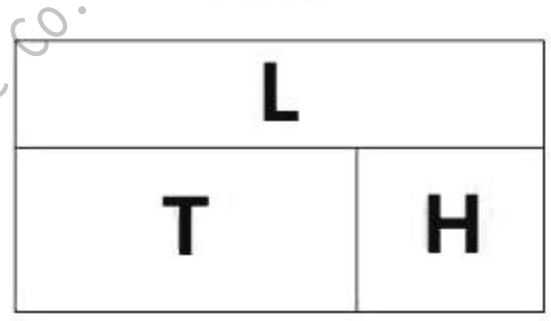
Pic 1-1



Pic 1-2



Pic 1-3

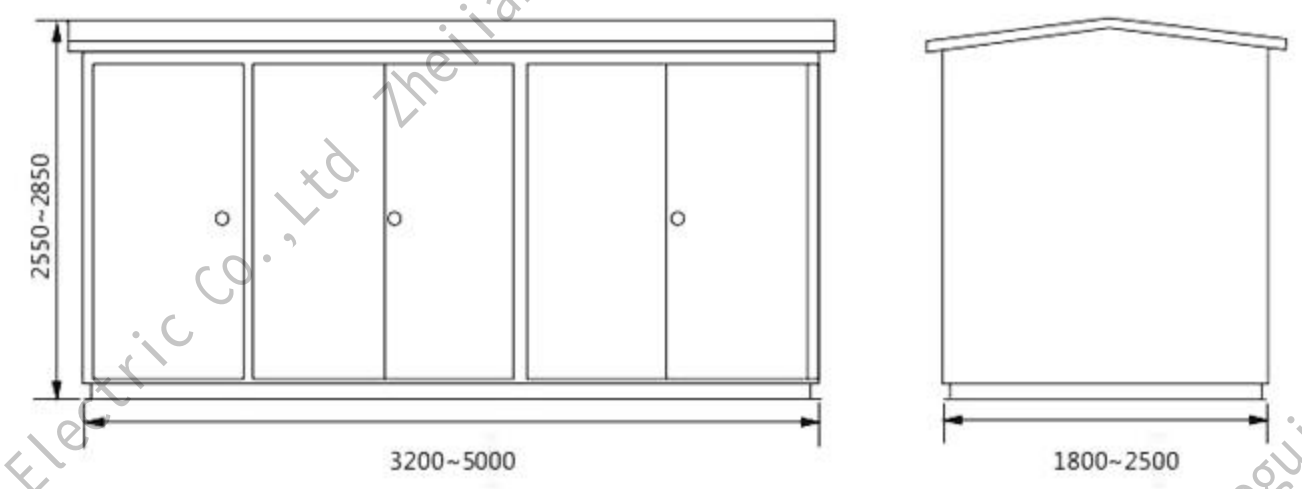


Pic 1-4

H-H.V chamber; T-Power transformer chamber; L-L.V chamber

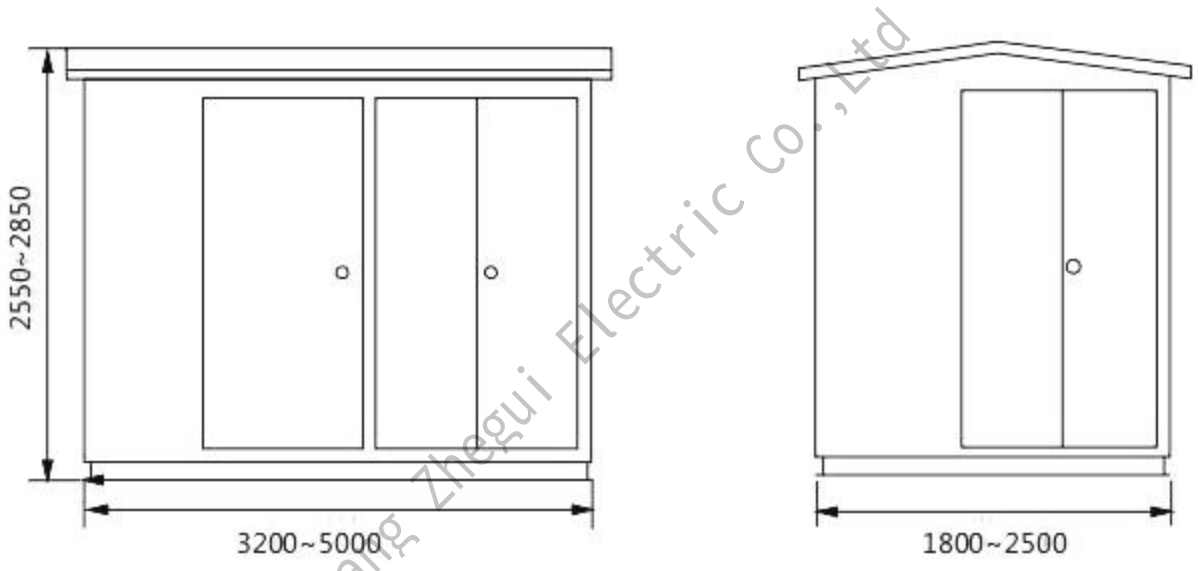
Type 1 layout

Picture 2

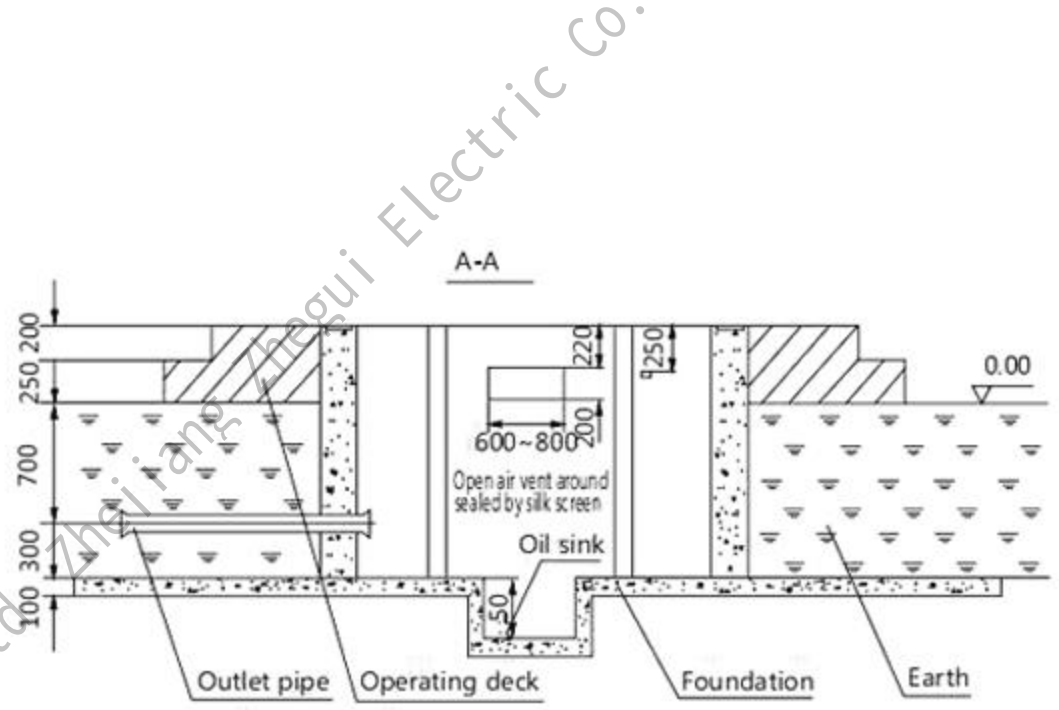


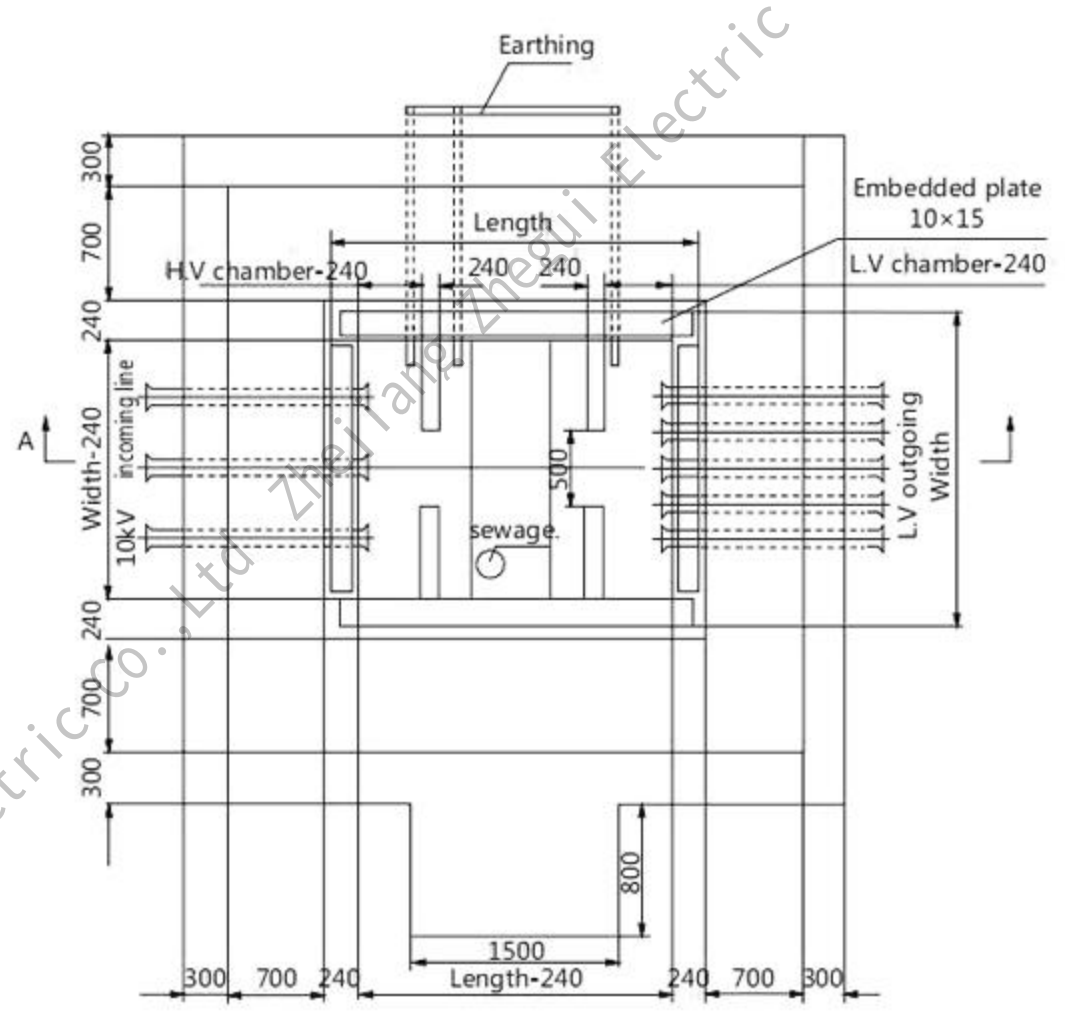
Type 2 layout

Picture 3



Foundation drawing

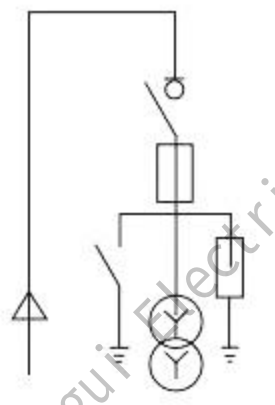
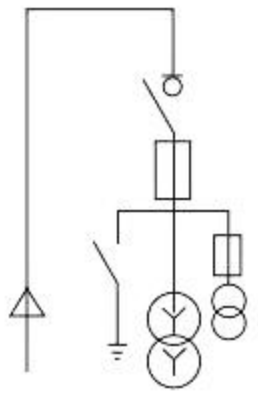
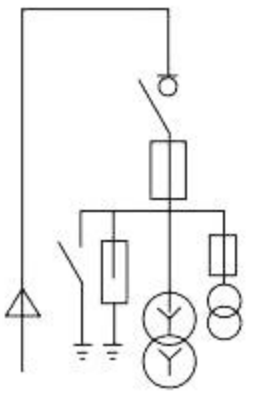
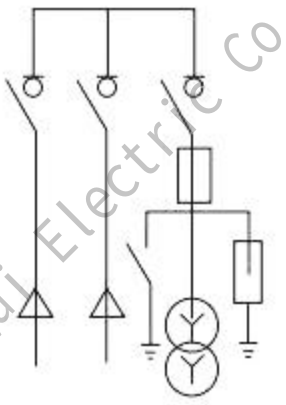
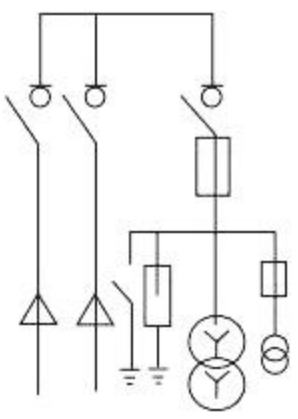
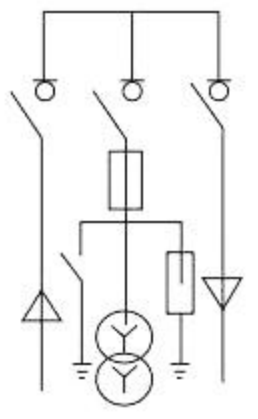
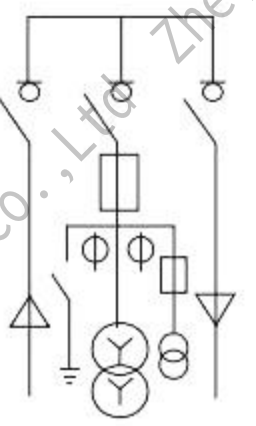
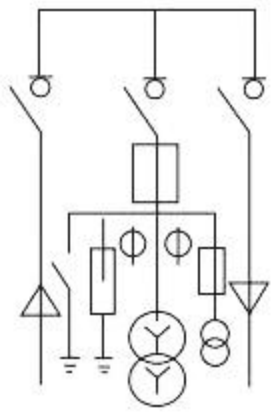




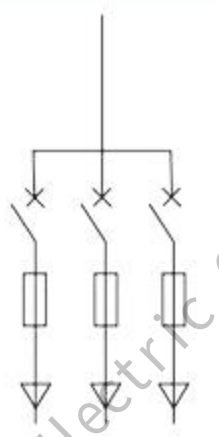
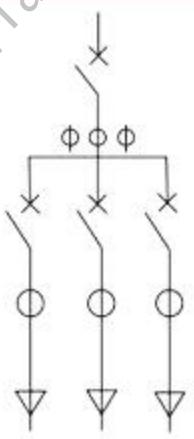
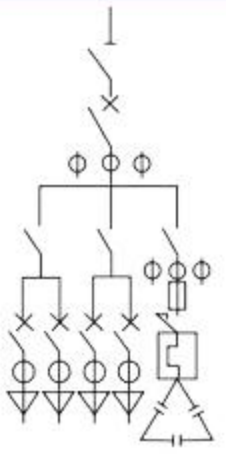
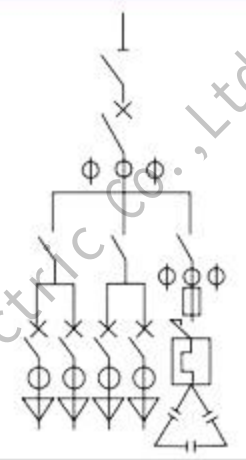
Main single line diagram

High voltage loop scheme

Sheet 1

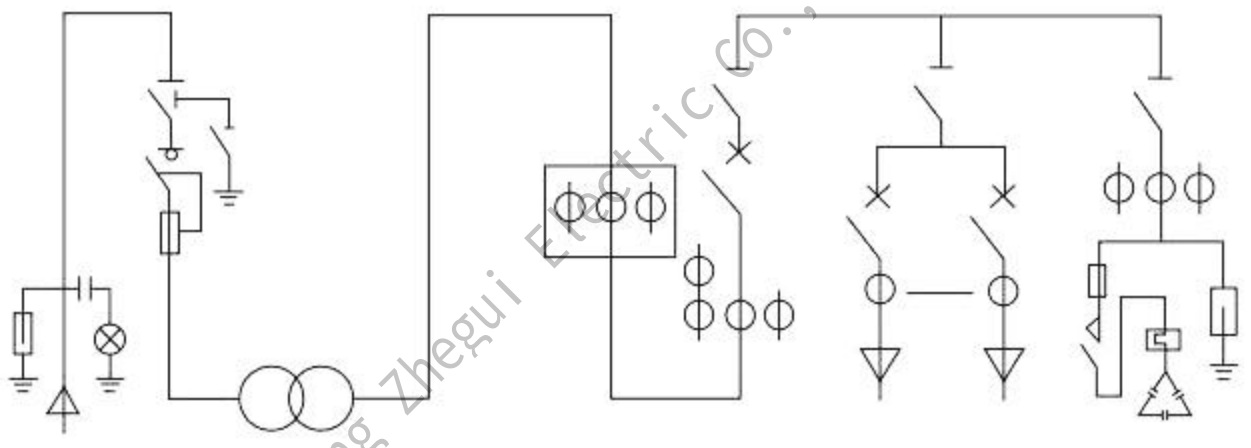
No	01	02	03	04
Single line drawing				
No	05	06	07	08
Single line drawing				

Low voltage loop scheme

No	01	02	03	04
Single line drawing				

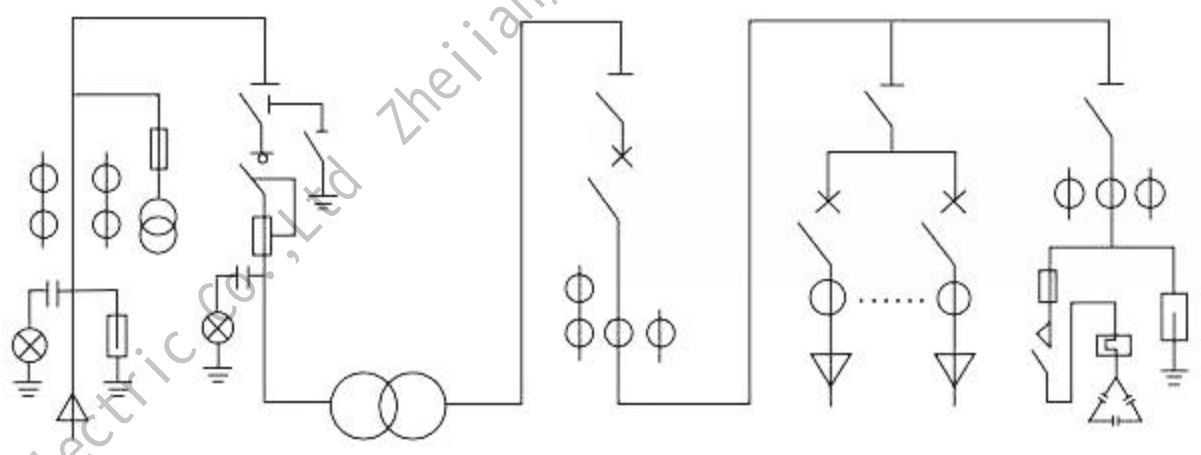
Main single line diagram

Terminal low measurement

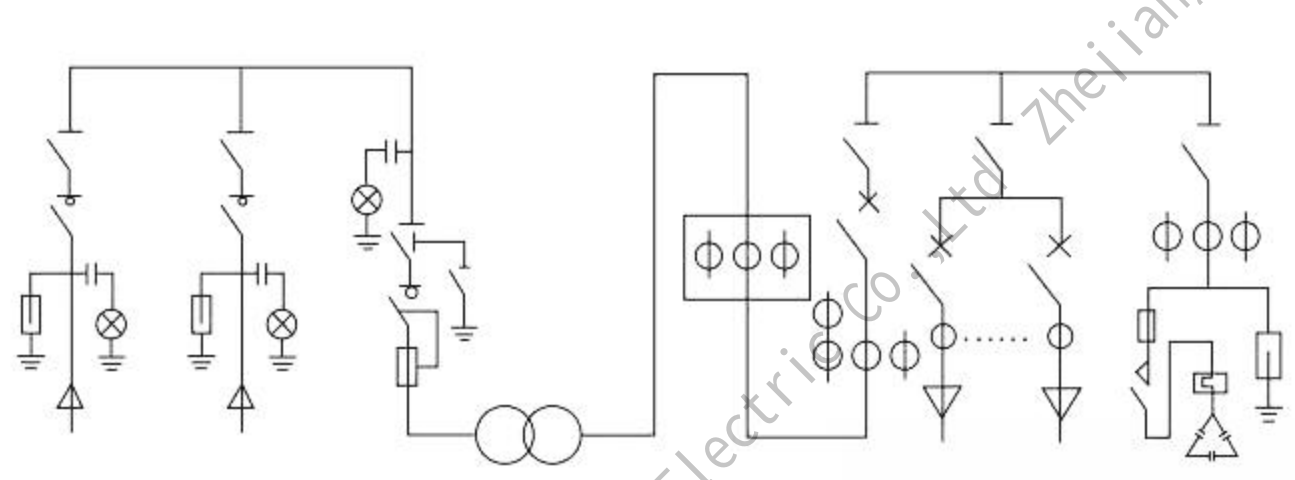


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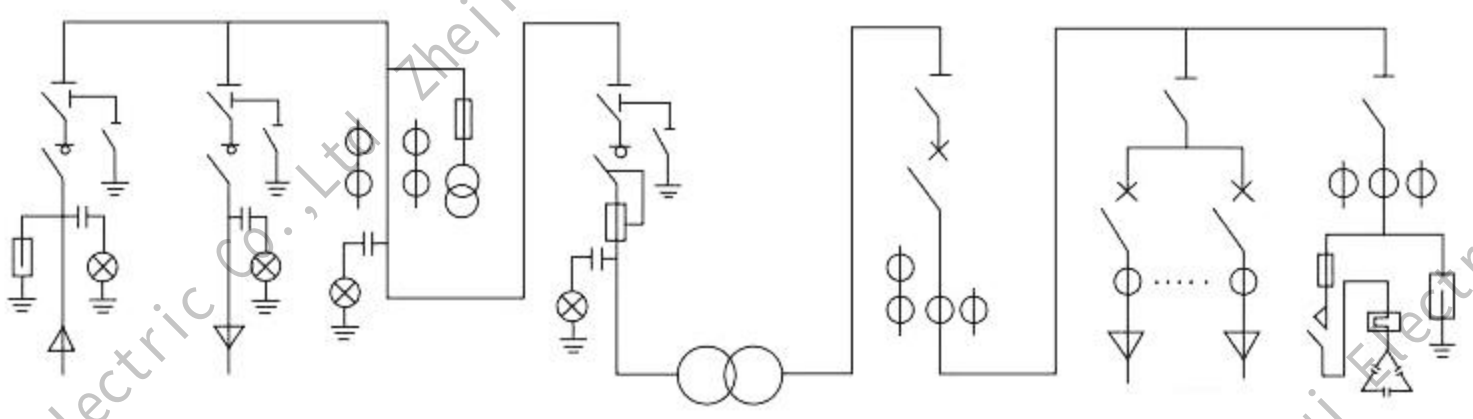
Terminal high measurement



Looped network Low measurement



Looped network high measurement



Please provide the following information when ordering

1.The type of prefabricated substation

2.The type and capacity of power transformer

3.High voltage and low voltage single line scheme

4.Electrical component models and parameters if have special requirement

5.Shell color

6.The spare parts, name, quantity and other requirements

Zhejiang Zhegui Electric Co.,Ltd



WechatWhatsApp: +86 13353325100

Qiligang Industrial Zone, Liushi Town,
Yueqing City, Wenzhou City, Zhejiang Province

Mobile: +86 13353325100

Email: emmali@giantele.com

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