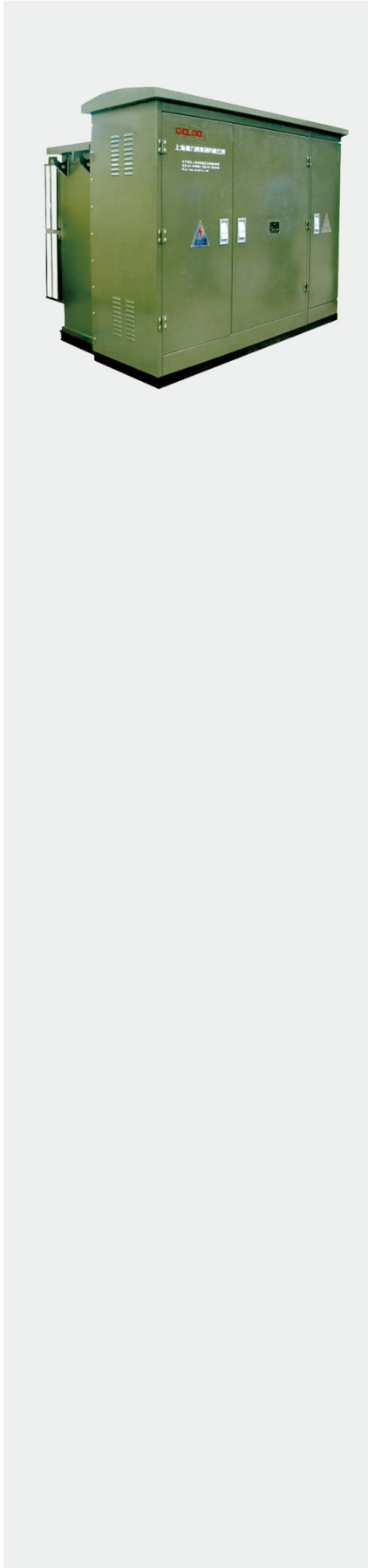




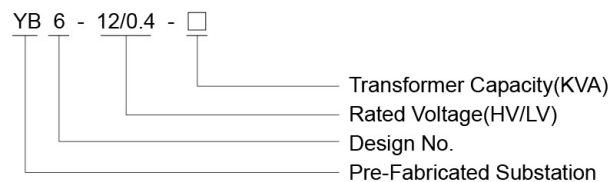
YB6 Series Pre-fabricated Substation (American Type)

General introduction

YB □ series substation are suitable for 7.2kV and 12kV ring network power supply. For the double-power supply or terminal-power supply, they are working as the HV distribution calculation, compensation control and protection device. Inside the substation, except for the transformer, for HV side there are four-polar load switch, two-polar load switch, backup protective fuse and plug-in fuse. For LV side there are control devices, distribution devices, compensation device and electric energy meter required by customers.

YB □ series substation can be used for indoor or outdoor places, which are widely used in the industrial park, residential area, commercial center and tall buildings.

Model designation



Normal service condition

- 1 Altitude: ≤ 1000m
- 2 Wind pressure: ≤ 70bar (around 35m/s)
- 3 Humidity: daily average ≤ 95%, monthly average ≤ 90%
- 4 Environment temperature: + 40 ~ - 25℃
- 5 Quakeproof: horizontal accelerated velocity 0.4m/s², vertical accelerated velocity 0.15m/s²
- 6 Earthquake: 8 grade
- 7 Installation gradient: ≤ 3°
- 8 Installation environment: the air is fresh without corrosion or flammability. No strenuous vibration

Structure

The structure is divided into two parts. The front part is HV & LV operation chambers. HV part includes HV terminal, load switch, no-load tap-changer voltage regulator, plug-in fuse, pressure relief, oil temperature gauge, oil level gauge and oil outlet valve. Besides, LV part includes LV terminal. The back part is oil tank and heat sinks, transformer windings & iron, HV load switch and protective fuse are sunk in the oil.

Performance characteristics

- 1 Small volume, compact structure, only 1/3 size of the substation with the same capacity in our country.
- 2 Fully sealed, totally- insulated, no insulating distance is required. It is reliable for human safety.
- 3 Can be not only used for ring network power supply, but also for terminal power supply. Easy for power converting, improve the power supply reliability.
- 4 Low loss, much lower than S9 series transformers in our country.
- 5 The cable connectors are able to work with 200A load current. It can be used as load switch with the function of disconnector in case of emergency.
- 6 Adopt double fuses for protection, decrease the operation cost. Plug-in fuse is double sensitive for temperature and current.

Main technical parameters

Name	Unit	HV equipment			T ransformer			LV equipment
Rated Voltage	Kv	11	24	35	10/0.4	24/0.4	35/0.4	0.4
Rated Current	A	400,630,1250	400,630,1250	400,630,1250	3/75 ~ 150/3750	1.44/75 ~ 72/3750		50 ~ 4000
Rated Frequency	Hz	50	50	50	50	50	50	50
Power Frequency Withstand Voltage(Imin)	kV	Earthing, Phase to phase 42, Port48	Earthing, Phase to phase 60, Port79	Earthing, Phase to phase 95, Port118	35/28	55/28	75/28	2.5
Lighting Impulse Withstand Voltage	Kv	75	125	185	75	125	185	
Crust Protection Grade		IP23	IP23	IP33	Oil type ≤ 55, Dry type ≤ 65			
Nosiy Grade	dB	≤ 50	≤ 50	≤ 50				
Appearance Dimentions	mm	According to primary connection scheme						

Standard American Type Substation

General introduction

The shell of the substation uses high quality cold-roll steel sheets, and the chambers are assembled structure. Surface of the substation are processed by advanced antiseptic treatment, which is pre-calculated firstly, then sprayed and coated by electrostatic powder.



The color of shell is optional by customer.



Compact American Type Substation

General introduction

The structure of substation is managed with "品" shape. The transformer and HV & LV devices are combined with each other closely. The transformer is installed to the side in the open air, which makes it good for heat dissipation. Moreover, it is convenient for installation and maintenance as the transformer separates from the HV & LV parts.

The shell of the whole has strong mechanical strength, which adopts general steel plate, color steel plate interlayer or non-metallic material. View the substation as a whole, it has good appearance while it is in harmony with the surrounding environment.



Steel sheets crust Y-1



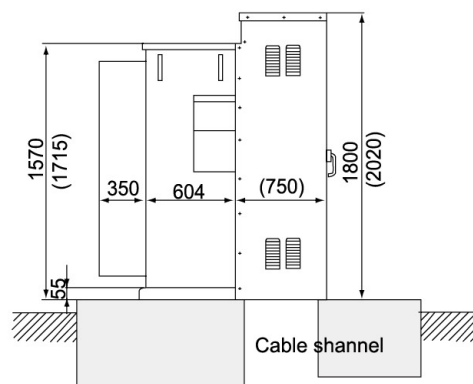
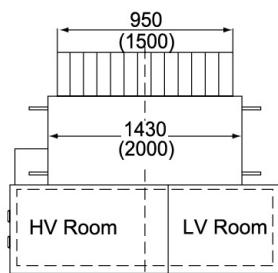
Aluminium alloy composite sheets crust Y-2

Order Information for YB □ Series Pre-Fabricated Substation

When the customers purchase the substation, they need to provide following information,

- 1 Substation model: European type or American type.
- 2 Transformer model and capacity.
- 3 Primary connection scheme for HV and LV system.
- 4 HV power supply: ring network power supply or terminal power supply/ the HV load switch model/ HV measurement method.
- 5 LV part: main switch model, measurement method, outgoing line switch model and number of loops.
- 6 Reactive compensation mode and capacity for the LV part.
- 7 Substation material, for example, steel plate, aluminum alloy + color steel plates, or non-metallic material Other requirements.

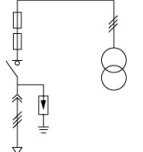
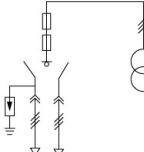
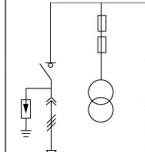
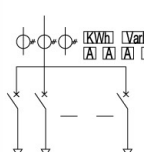
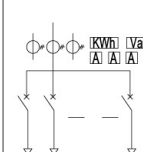
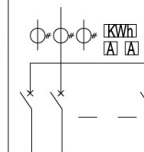
Foundation Drawing of YB6 Pre-Fabricated Substation



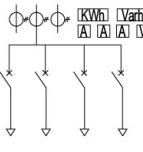
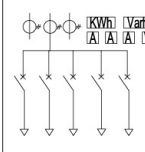
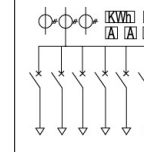
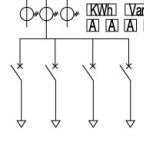
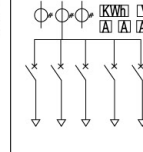
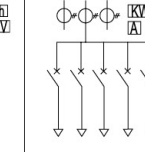
YB6 Series

Pre-fabricated Substation Disposition Scheme

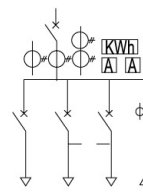
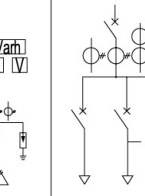
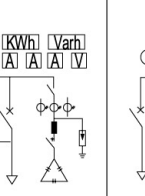
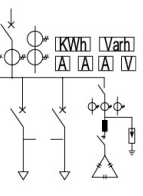
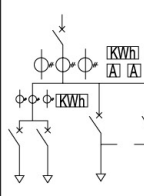
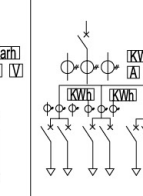
Typical primary scheme of pre-fabricated substation (standard type)

Primary scheme on HV side	1-01	02	03	Primary scheme on LV side	2-01	2-02	2-03
Scheme diagram				Scheme diagram			
Load switch	100 (A) 300 (A) 630 (A)	300 (A) 630 (A)	300 (A) 630 (A)	Circuit Current	(60 ~ 225)x12	(400 ~ 630)x6	(400 ~ 225)x1 +(60 ~ 225)x9
Funcio	Cable incoming terminal supply	Cable incoming ring supply	Cable incoming double supply	Function	Total measure +12 feeder line	total measure 6 feeder line	total measure +10 feeder line

Typical LV primary scheme of pre-fabricated substation (American type)

Primary scheme on HV side	1-01	1-021	-032	Primary scheme on LV side	-01	2-02	2-03
Scheme diagram				Scheme diagram			
Circuit current	60 ~ 225A	160 ~ 630A	60 ~ 225A	Main circuit current	630 ~ 2000A	630 ~ 2000A	630 ~ 2000A
				Dispense circuit current	60 ~ 225A	60 ~ 400A	60 ~ 225A
				Main circuit switch	S(D)K controller with default phase protection	S(D)K controller with default phase protection	S(D)K controller with default phase protection
Function	Total measure +4 feeder line	Total measure +5 feeder line	Total measure +6 feeder line	Function	Total measure +4 feeder line	Total measure +5 feeder line	Total measure +6 feeder line

Typical LV primary scheme of pre-fabricated substation (Composite American type)

	3-01	3-02	3-03	3-04	3-05	3-06
Scheme diagram						
Main circuit current	630 ~ 2000A	630 ~ 2000A	630 ~ 2000A	630 ~ 2000A	630 ~ 2000A	630 ~ 2000A
Dispense circuit current	(60 ~ 225)x12	(400 ~ 630)x6	(400 ~ 630)x1 +(60 ~ 225)x9	(400 ~ 630)x2 +(60 ~ 225)x10	(400 ~ 630)x4 +(60 ~ 225)x4	(60 ~ 225)x16
Main circuit switch	S(D)K protective control device with no phase	S(D)K protective control device with no phase	S(D)K protective control device with no phase	S(D)K protective control device with no phase	S(D)K protective control device with no phase	S(D)K protective control device with no phase
Function		Compensation transformer capacity x20%		Main switch + total measure+2 loops measure+10 loops feeder	Main switch + total measure+4 loops measure+4 loops feeder	Total measure + test+16 loops feeder