

## ZBW SERIES COMBINATION SUBSTATION

### Scope of application



ZBW series combined substation, commonly known as European box transformer, is the combination of high-voltage electrical equipment, transformers, low-voltage electrical equipment into a compact complete set of power distribution devices, used in urban high-rise buildings, urban and rural buildings, residential communities, high-tech development zones, small and medium-sized factories, mining oil fields and temporary construction of electricity and other places, for the distribution system to accept and distribute electricity.

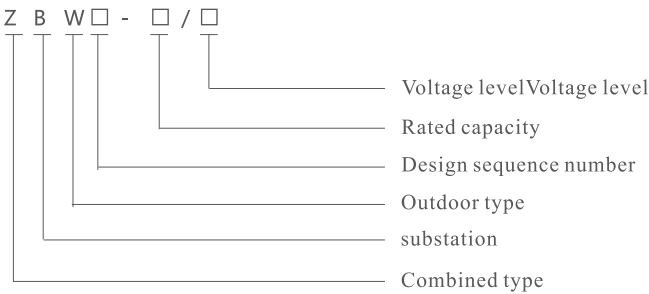
ZBW series combined substation, with a complete set of strong, small size, compact structure, safe and reliable operation, easy maintenance, as well as mobile and other special points, compared with conventional civil substations, the combined substation with the same capacity covers an area usually only 1/10 to 1/5 of conventional substations, greatly reducing the design workload and construction volume, reducing construction costs. In the distribution series, it can be used for ring network distribution system, and can also be used for dual power supply or radiation terminal distribution system, which is a new complete set of equipment for the construction and replacement of urban and rural substations.

ZBW series combined substation conforms to the standards of SD320-1992 "Box-type substation Technical conditions" and GB/T17467-1997 "high-voltage/low-voltage preassembled substation".

### Working condition

Altitude not more than 1000m;  
The maximum ambient temperature shall not exceed +40° C, the minimum shall not be lower than -25° C, and the average temperature within the 24-hour cycle shall not exceed +35° C.  
Outdoor wind speed should not exceed 35m/s;  
The air phase junction temperature shall not exceed 90%(+25°C);  
The horizontal acceleration of the earthquake is not more than 0.4m/s<sup>2</sup>, and the vertical acceleration is not more than 0.2m/s<sup>2</sup>;  
No fire, explosion danger, serious pollution, chemical corrosion and violent vibration places.  
Special conditions of use, order with our company to negotiate to solve.

### Model and meaning



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Model meaning

Serial number	Items	Units	High voltage appliances	Transformer	Low-voltage appliances
1	Rated voltage U <sub>e</sub>	kV	7.2、 12	6/0.4、 10/0.4	0.4
2	Rated capacity S <sub>e</sub>	kvA		Item type: 200~1250	
3	Rated current I <sub>e</sub>	kvA	200~630		100~3000
4	Rated breaking current	A kA	Load switch 400 to 630A Combined appliances depend on the fuse		15~63
5	Rated short-duration Withstand current	kA	20 ( 2S ) 12.5 ( 4S )	200~400kvA 400kvA	15 ( 1S ) 30 ( 1S )
6	Peak rating Withstand current	kA	31.5、 50	200~400kvA 400kvA	30 63
7	Rated closing current	kA	31.5、 50		
8	Power frequency withstand Voltage 1min	kV	Isolate breaks 48, 34 relative to and interphase 42, 30	Oil change: 35/5min Dry change: 28/5 min	2kV when ≤300V At 300,660V 2.5 kV
9	Lightning Strike	kV	Relative and interphase 75.60 isolated fracture 85.75	75	
10	Noise level	dB		Oil change: <55 Dry change: <65	
11	Level of protection		IP33	IP23	IP33
12	Overall dimension	Different dimensions are selected according to the selected transformer capacity and form.			

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1. This product is connected by a high-voltage distribution device, a transformer and a low-voltage distribution device, and is divided into three functional compartments, namely, a high-voltage room, a transformer room and a low-voltage room. High and low voltage room functions, high voltage side of the primary power supply system, can be arranged into a ring network power supply, terminal power supply, dual power supply and other power supply methods, can also be installed with high voltage metering device to meet the requirements of high voltage metering. Transformer room can choose S9, S11 series low loss oil immersed transformer and SC(B)9, SCR9, SC(B)10, SCR10 series dry type transformer; Transformer room is equipped with self-starting forced air cooling system and lighting system, low voltage room according to user requirements using panel or cabinet structure to form the user needs power supply scheme, power distribution, lighting distribution, reactive power rate compensation, power metering and power measurement and other functions to meet the different requirements of users, and to facilitate the user's power supply management and improve the quality of power supply.
- 2, the high-voltage room structure is compact and reasonable, and has a comprehensive anti-misoperation of the "five" interlocking function. When the transformer is required by the user, the rail can be set up to easily enter and exit from the two sides of the transformer room. Each room has automatic lighting device, in addition, all the components selected by the high and low pressure chamber can be relied on, easy to operate, so that the product is safe and reliable, easy to operate and maintain.
- 3, the use of natural ventilation and forced ventilation of two ways, so that the ventilation and cooling good. Transformer room and low pressure room have ventilation channels, exhaust fan temperature control device, according to the setting temperature can automatically start and close, to ensure that the transformer full load operation.
- 4, the box structure can prevent rain and dirt into the use of special steel plate or aluminum alloy plate production, anti-corrosion treatment, with long-term outdoor use of the strip. Ensure anti-corrosion, waterproof, dust-proof performance, long service life, and beautiful appearance.