

Product Overview and Features

YBW-12/0.4

YBW-12/0.4 high-pressure/low-voltage pre-assembled substation products are standardized design and customized standard solutions, in accordance with the company's "1135" distribution network operation and service management requirements, to improve equipment selection standards, improve quality control system, enhance the durability of the distribution network equipment, highlighting the core of the equipment is good, based on the safe and reliable, The design is based on the principles of safety, reliability, durability, standardization and universal interchangeability. It is designed and launched based on the principles of safety, reliability, robustness, standardization and universal interchangeability of equipment from different manufacturers in a certain range and for a certain period of time, thus enhancing the convenience of operation and maintenance of the box-type substation. The product is equipped with an emergency power plug that can be connected to a power generator, and has the function of preventing the back-feeding of power, as well as the space reserved for the configuration of DTU automation terminals. The product design is suitable for the area with sufficient permitted floor space and important power supply load, and is a new type of complete set of equipment for the construction and renovation of urban and rural substations.

Model Meaning

Y B W - 12/0.4 - □

- □ — Transformer rated capacity(kVA)
- 12/0.4 — Rated voltage(kV)
- W — Outdoor
- B — Standard type
- Y — Preassembled

Areas of application and environments of use

Widely used in coal mines, steel mills, hydroelectric power stations, solar photovoltaic projects and other outdoor places。

1. The surrounding air temperature: the highest temperature +40 ℃, the lowest degree -25 ℃;
2. Relative humidity:

Daily average relative humidity: ≤95%; daily average water vapor pressure does not exceed 2.2kPa;

Monthly average relative humidity: ≤90%; monthly average water vapor pressure does not exceed 1.8kPa;

3. Altitude: below 1000m;
4. Earthquake intensity: no more than 8;
5. The surrounding air should not be corrosive or combustible gases, water vapor and other obvious pollution sites;
6. No violent vibration places;
7. Beyond the GB17467-2010 《High-voltage / low-voltage pre-assembled substation》 stipulated in the normal conditions of use, by the user and the company to negotiate.

Main technical parameters

Name		Unit	Standard parameter values
12kV Ring network cabinet			
High-voltage side wiring method			Terminal type, ring type
Rated voltage		kV	12
Rated frequency		Hz	50
Rated current		A	630（Load switches, circuit breakers)
Control mechanism			Motorized and manually operated
Temperature rise test current		A	1.1Ir
Rated industrial frequency 1min withstand voltage (relative to earth)		kV	42
Rated lightning impulse withstand voltage peak (1.2/50μs, relative to earth)		kV	75
Rated short-circuit breaking current		kA	31.5（Fuse)
Rated short-circuit closing current		kA	50
Rated short-time withstand current and duration		kA/s	20/3
Rated peak withstand current		kA	50
Short-time frequency withstand voltage for auxiliary and control circuits		kV	2
Power supply	Control loop	V	DC 48/110/220,AC110/220
	Auxiliary circuit	V	AC 380/AC 220
Annual gas leakage rate		V/V	≤0.1%
Transformers			
Rated capacity		kVA	400、500、630
Core Material			Silicon steel sheet
Rated voltage of high voltage winding		kV	10/10.5，Determined with the project unit prior to delivery
Rated voltage of low voltage winding		kV	0.4
Tap range			±2×2.5%
Linkage group			Dyn11
Frame Circuit Breakers（0.4kV)			
Rated current		A	800、1000、1250
Rated Working Voltage		V	400
Rated insulation voltage		V	690
The number of poles			3P
Rated operating short-circuit breaking capacity		kA	65
Rated peak withstand current		kA	80
Molded Case Circuit Breakers （0.4kV)			
Rated current		A	250、400、630
Rated Working Voltage		V	400
Rated insulation voltage		V	690
The number of poles			3P
Rated operating short-circuit breaking capacity		kA	50
Case Requirements			
Overall dimensions (L×W×H)		mm	3600×2200×（≤2500)
Shell material			Stainless steel or GRC
Protection class			IP33D
Enclosure level			10