

Outdoor SF6 Load Breaker/Sectionalizer

Medium-Voltage Equipment

12-38kV

PW Series SF6 Sectionalizer

1、 Overview

PW-12/24/36, is suitable for the rated voltage 12/24/36 kV, rated current 630A 50/60Hz power grid open circuit, load current in closed Power system overload current.

This load switch can separate those broken distribution line automatically. With the latest technology, it has the newest electronic controller. The switch can be used by manual operation, electric operation and operation from a long distance. Electronic controller is installed in a stainless steel cabinet which is suitable for using under all kinds of climatic conditions. In addition, there are some wired and wireless modem installed in the cabinet through which it can realize the remote monitoring and control. Simple installation on column is convenient, fast, and also can reduce the construction cost.

2、 The standard conditions of use

operating conditions for SF6 gas load switch to adapt to:

2.1 Ambient temperature

2.1.1 Ambient air temperature: upper limit +50 ° C, lower limit of -40 ° C.

2.2 Elevation does not exceed 1000m; 2000m; 3000m;

2.3 The pressure does not exceed 700pa (equivalent to wind speed of 34m / s)

2.4 Earthquake intensity: 8 degrees

2.5 Pollution class: class III, class IV.

3 Features

3.1 SF6 gas-insulated

3.2 Drive pipe with large diversity

3.3 Visible open / closed status

3.4 Quick operation

3.4.1 operating mechanism with spring energy to ensure a quick closing and opening operation.

3.5 Can realize remote control

3.5.1 It is equipped with electronic controller, fit for in situ operation as well as FTU interface console operation.

3.6 Rugged switch

3.6.1 The switch is made of proven durable, corrosion-resistant materials (special used in warships 304L stainless steel plate) which ensures that there is a very long service life (30 years), and can be implement a series of operations. It has the ideal characteristics as a column equipment.

3.7 Standard

3.7.1 Each switch before leaving the factory has been filled with SF6 gas, sealed, and test according to IEC60265-1 (1988), GB3804-1990 standard.

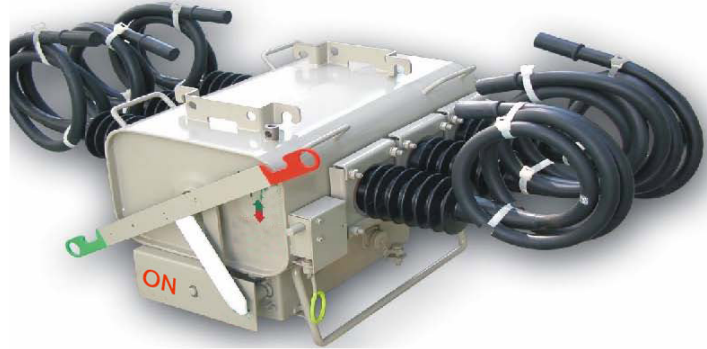
4. Specifications

No	Item				Data		
1	Rated Voltage			kV	12	24	40.5
2	Rated Frequency			Hz	50/60	50/60	50/60
		Lighting	Relative		75	125	185
3	BIV (SF6 0.07Mpa / 20℃)	Impulse	Fracture	kV	85	145	215
		P.F Withstand	Relative	kV	42	64	95
4	Insulation level of zero pressure	1min		kV	30		
		The highest phase voltage 5min			9		
5	Rated current			A	630	630	630
6	Rated short-circuit making current (0.07Mpa / 20℃)			A	630	630	630
7	Breaking capacity under zero pressure			A	630	630	630
8	Peak withstand current			kA	50	50	50
9	Short time making current			kA	50	50	50
11	Rated short time withstand current			KA/s	20/4	20/4	20/4
12	Rated cable charging breaking current			A	25	25	25
13	Rated line charging breaking current			A	16	16	16
14	Rated closed-loop breaking current			A	630	630	630
15	Exciting current			A	21	21	21
16	Rated current breaking times			time	≥400	≥400	≥400
17	Rated working pressure			MPa	0.03	0.03	0.25
18	Main circuit resistance			μ Ω	≤150	≤150	≤150
19	Gas leakage rate			/year	≤1%	≤1%	≤1%
20	Mechanical stability			time	6000	6000	6000
22	Operation voltage			V	DC 220/ 110/48/24	DC 220/ 110/48/24	DC 220/ 110/48/24
					AC 220/110	AC 220/110	AC 220/110
23	Weight	M type			115	125	135
		A Type		kg	135	145	155

5. Type of Sf6 Load Break switches



Load switch with Porcelain Bushing



Load switch with Polymer Bushing



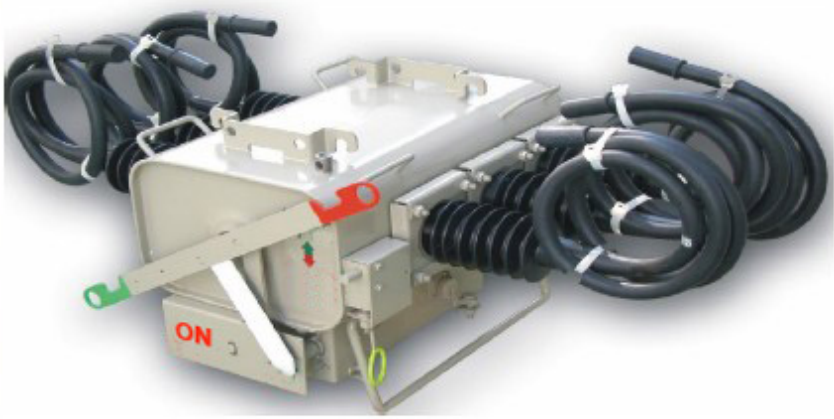
Load switch with Polymer Terminal



Load switch with Arrester

6. Switch and Control panel

6.1



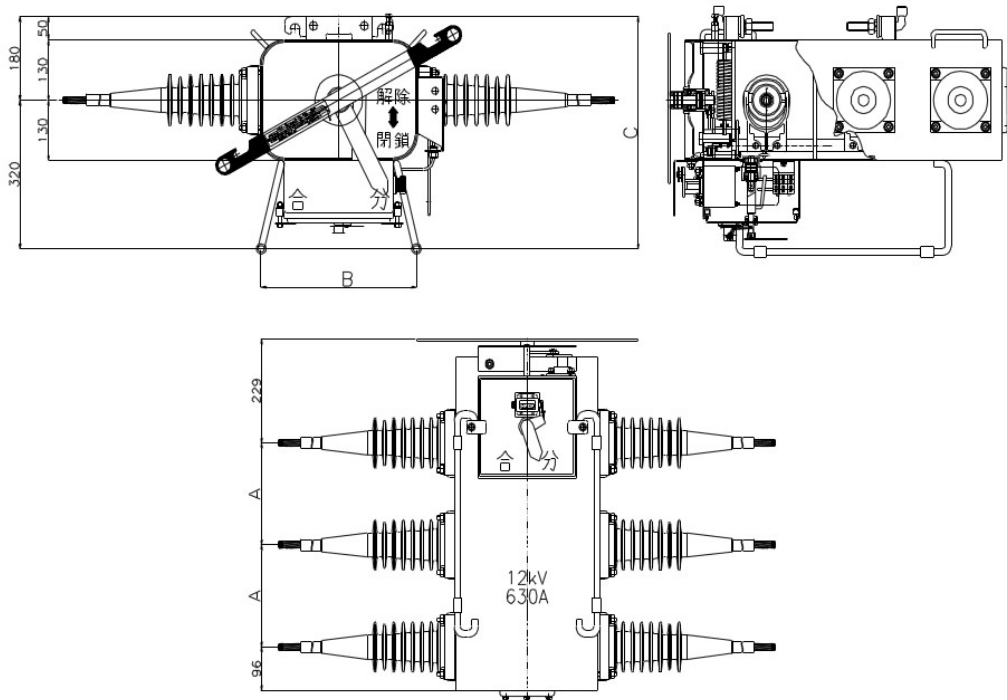
6.2 Features

- Ground fault
- Phase fault over current protection.
- Short circuit protection.
- Auto Reclosing.
- Self-check function.
- Cold load pick up.
- Inrush restraint
- Loss of phase protection.

6.3 Communication and Protocol

- RS-232/RS-485; IEC60870-5-101&104; DNP 3.0 GPRS/CDMA.

6.4 Dimensions

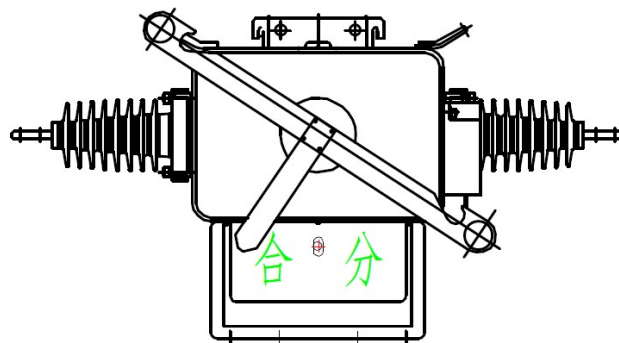


Dimensions(mm)				Installation(mm)	Package(mm)	Leakage Distance
	A	B	C	L X W	L X W X H	mm
12Kv	225	435	500	500×125 (390)	1100×900×700	556
24kv	300	435	500	500×125 (390)	1300×1100×700	840
40.5Kv	350	435	500	700×125 (390)	1400×1200×700	1250

6.5

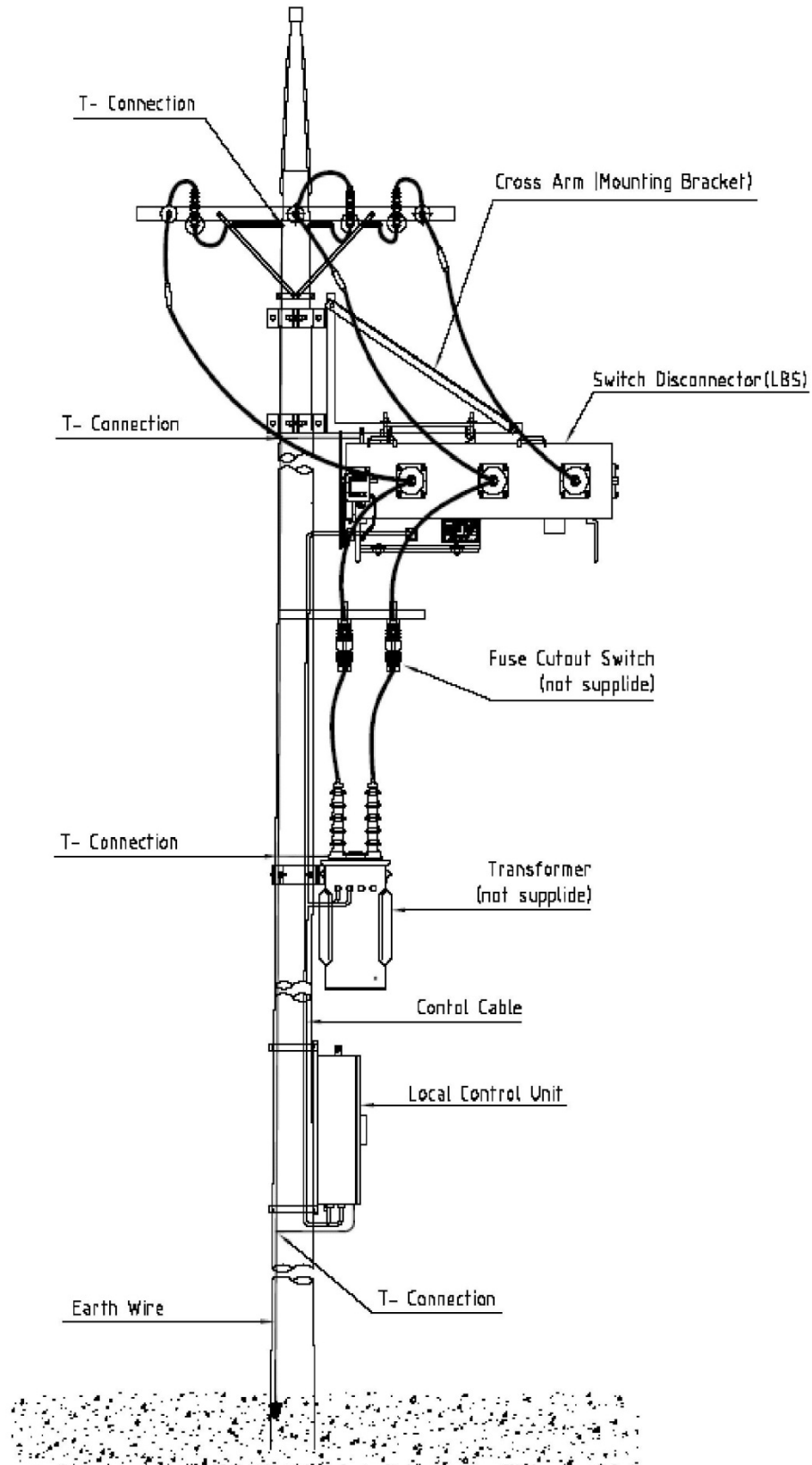
The LBS uses “puffer” interrupters inside a fully welded and sealed stainless steel tank filled with SF6 gas. Three interrupters are ganged together on a common shaft that is driven by an over-centering spring mechanism which is activated either by:

Manual rotation of the operating arm using a hook sticks from ground level. By pulling downwards on the appropriate side of the arm the LBS can be opened or closed. The mechanism is “operator independent” so that it does not matter how fast or slow the arm is moved by the operator.

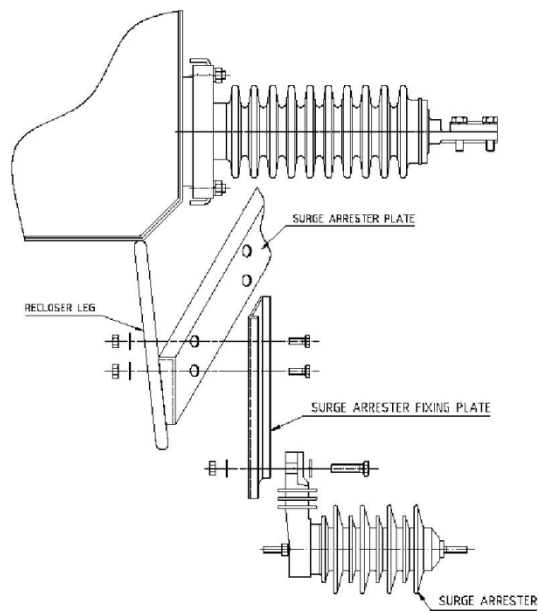
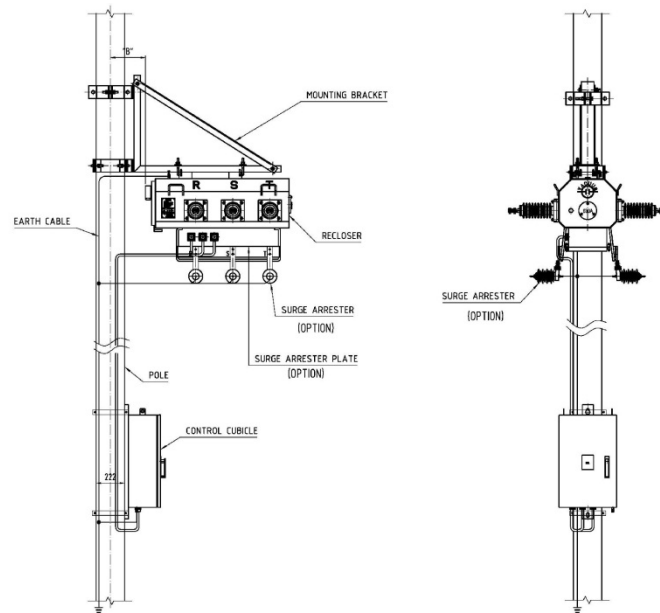


7. Installation

7.1 On the pole by Cross arm



7.2 Arrester installation



7.3 Installation of earthing terminal

