

GW7-252 Outdoor HV Disconnect Switch

Summary

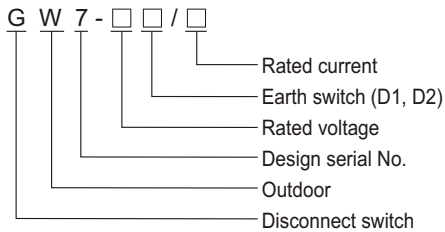
GW7-252 outdoor AC high voltage disconnect switch is used to open and close high voltage circuit in rated voltage 252kV, 50/60Hz power system. It can be used with motor operating mechanism and manual operating mechanism. It accords with the standards of IEC 62271-102 and GB1985-2004: AC high voltage disconnect switch and earthing switch.



Ambient condition

1. Altitude: $\leq 2000\text{m}$;
2. Ambient temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$;
3. Wind speed: $\leq 34\text{m/s}$;
4. Earthquake intensity: ≤ 8 degree;
5. Ice coverage thickness: $\leq 10\text{mm}$;
6. Pollution degree: I, II, III, IV;
7. Applicable occasions should be free from inflammables and frequent severe vibration.

Model



Product feature

GW7-252 disconnect switch is a three pole structure, contain frame, post insulator and conduct parts, three post insulator for each pole, revolving post on the centre axis frame, conduct knife fixed on the centre revolving post insulator, when operating mechanism working, it can drive revolving insulator revolving 71° to finish opening and closing operating. There is an interlock between disconnect switch and earth switch.

Technical specification

No.	Item	Unit	Data
1	Rated voltage	kV	252
2	Rated current	A	2000, 2500, 3150, 4000
3	Rated peak withstand current	kA	125 160
4	Rated short-time withstand current (with earth switch)	kA	50 63
5	Rated short-time withstand time	s	3
6	1 min P.F.withstand voltage	To phase	460
7		Across open contact	460+145
8	Rated lightning impulse withstand voltage	To phase	1050
9		Across open contact	1050+200
10	Weight for single pole	kg	500
	Mechanism operating times	times	3000
	Mechanism type	Main blade	CJ6A
		Earth blade	CSA

Item	Unit	CJ6B motor	CS17 manual
Main axes output angle	°	180	90
Rated output angle	N.m	1200	
Motor power	W	750	
Motor voltage	V	AC380, DC220V	
Motor rated current/ start current	A	1.3/4	
Motor rotate speed	r/min	1440	
Control voltage	V	AC220, DC220	
Anti-pollution degree		IP54	IP54
Mechanical life	times	10000	10000
Contact of auxiliary switch	pare	10NO+10NC	4NO+4NC, 8NO+8NC
Opening/closing time	s	5 ± 1	30
Mechanism weight	Kg	90	

Operating mechanism

GW7-252 disconnect switch is made of frame, post insulator and electric parts, each pole have three insulation post, revolving pole installed on the center revolving axis base. Electric blade fixed on the center revolving post insulator. Operating mechanism driving post insulator revolving 71° to finish closing. There is mechanism interlock during disconnect switch with earth switch.

Operating principle

1. Advanced driving structure

- 1.1 Driving part adopt composite axis cover of self-lubricate, no need to add lubricating oil. Axis pin and axis is made of stainless steel or alum bronze and have features of high precision and antirust.
- 1.2 Framework seal structure for axis base, it's sealed both for upper and underside, molybdenum for lubricant grease, no volatilization, and non-maintenance.
- 1.3 O/C position-limited reliable.
- 1.4 It adopt adjustable hoop connection for mechanism output axis with switch driving axis, no need jointing and easy connection.
- 1.5 It revolving 71° horizontal, then overturn 45° to make sure contact finger with contactor reliable, this can make operating slightly and structure reasonable.

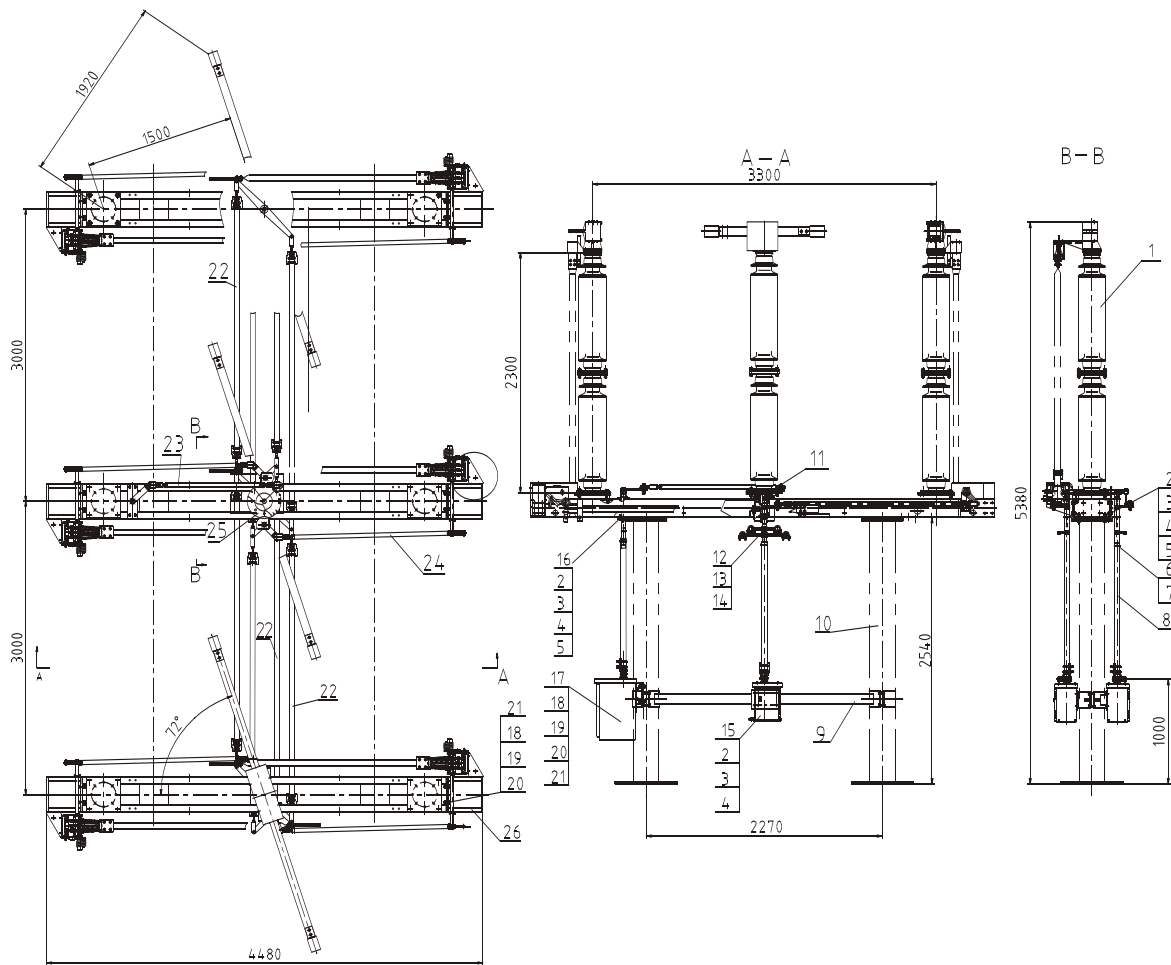
2. Well anti-rust performance

- 2.1 Different parts have different anti-rust method, hot-galvanized, hot extrusive zinc or painting.
- 2.2 Standard equipment is made of stainless steel or hot-galvanized, stainless steel for below M10 fixing equipment, hot-galvanized for other parts.

3. Credible main electric system

- 3.1 Contact finger silver-coating thickness $\geq 30\mu\text{m}$, hardness ≥ 120 Vickers.
- 3.2 Electric loop almost adopt fixing connection and can improve electric stability and reliability.
- 3.3 Outer-press type contactor, the material is copper, outer-press spring structure, insulation equipment between contact finger and spring can avoid spring diffidence and avoid overheat for contact.





1	2HY33.055.020	Single-phase assembly of main blade	3	
2	GB/T 5783	Hexagon bolt M12*14	32	Hot-galvanization
3	GB/T 95	Flat pad 12	56	Hot-galvanization
4	GB/T 93	Elastic pad12	32	Hot-galvanization
5	GB/T 41	Hexagon nut M12	32	Hot-galvanization
6	GB/T 882	Pin shaft with hole 12(HY331)*65	3	Stainless steel
7	GB/T 91	Cotter pin 4*25	3	Stainless steel
8	8HY33.175.011	Mechanism vertical output shaft	3	
9	5HY33.044.006	mechanism frame welding assembly	1	
10	5HY33.040.008	pole welding assembly	6	
11	5HY33.266.004	Earthing transitional device	6	
12	5HY33.232.005	Double po-arm	3	
13	GB/T 8791	Cylindrical pin 10*55	3	Stainless steel
14	GB/T 8791	Cylindrical pin 6*55	3	Stainless steel
15	CS□	Manual actuating mechanism	2	Output angle 90°
16	5HY33.266.005	Transitional device of disconnect switch	1	
17	CJ□	Motor actuating mechanism	1	Output angle 90°
18	GB/T 5783	Hexagon bolt M16*60	28	Hot-galvanization
19	GB/T 95	Flat pad 16	56	Hot-galvanization
20	GB/T 93	Elastic 16	28	Hot-galvanization
21	GB/T 41	Hexagon nut M16	28	Hot-galvanization
22	5HY33.233.053	Rod assembly between phases	4	
23	5HY33.233.051	Disconnect switch driving rod assembly	1	
24	5HY33.233.052	Earthing driving rod assembly	6	
25	8HY33.100.349	Interlocking panel	2	
26	5HY33.022.024	Single-pole assembly of earthing blade	6	

GW7-252D2/4000A Installation drawing (CJ6A main blade, CSA earthing blade)