

## GW5-40.5/72.5/126/145 Outdoor HV Disconnect Switch

### Summary

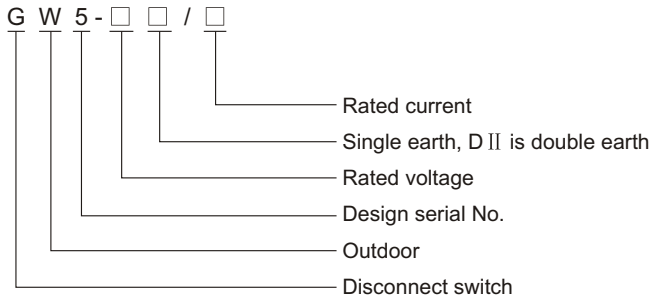
GW5-40.5/72.5/126/145 outdoor high voltage disconnect switch is used to make or break high voltage circuit in rated voltage 40.5kV, 72.5kV, 126/145kV, AC 50/60Hz system. It is able to open and close small capacitance and inductive current. This disconnect switch accords with standards: IEC62271-103 High voltage switches. GB1985: AC High voltage disconnect switch and earthing switch and IEC60694 & GB/T11022: Common technical requirements of HV switchgear and control equipment.



### Ambient condition

1. Altitude:  $\leq 1000\text{m}$ ;
2. Ambient temperature:  $-40^{\circ}\text{C}\sim+40^{\circ}\text{C}$ ;
3. Wind speed:  $\leq 34\text{m/s}$ ;
4. Pollution degree:  $\leq \text{III}$ ;
5. Earthquake intensity:  $\leq 8$  degree;
6. Ice thickness:  $\leq 10\text{mm}$ .

### Model

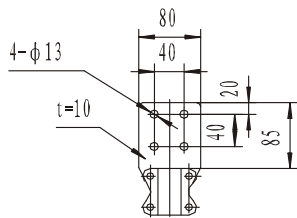
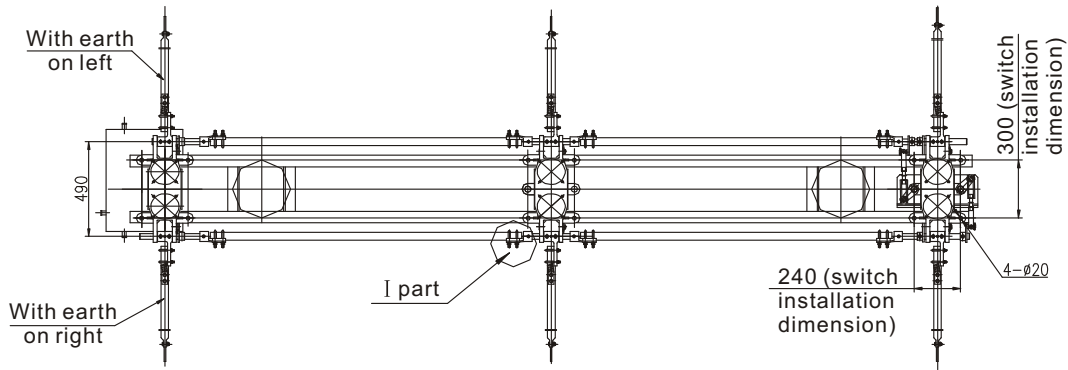


### Structure feature

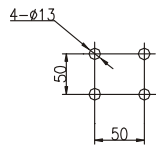
Disconnect switch is made up of three single phase, V type for each phase, symmetrical angle is  $50^{\circ}$ , disconnect switch is made of pedestal, post insulator and electric part. For disconnect with earth switch, it also has male and female contact, blade, driving parts and interlock plate. Main blade with CJ6 motor or CS17 manual operating mechanism, earth blade can be matched with CS17 manual operating mechanism. There are different installation methods containing obverse, side, diagonal and reversal, etc. also it can be used for outdoor and indoor, the installation method can be according to the user's requirement.

### Technical specification

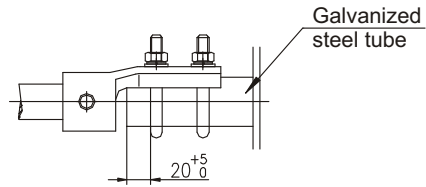
Item	Unit	Data			
		40.5	72.5	126	145
Rated voltage	kV	40.5	72.5	126	145
Rated current	A	630 1250 1600 2000			
Rated peak withstand current	kA	63 80 100			
4s short-time withstand current		25 31.5 40			
Rated short-time withstand time	s	3/4			
Rated power frequency	Hz	50/60			



630A/1250A Connection plate dimension (alum)

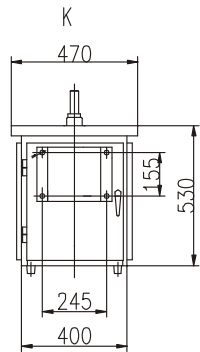


1600A/2000A Connection plate dimension (alum)

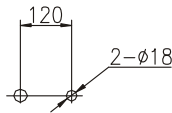


I part blown-up scale:5:1

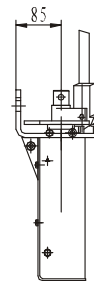
1. CJ6B motor mechanism weight and output moment: 90kg/500N.M (main blade)
2. CS17 manual mechanism weight and operating force: 15kg/≤200N.
3. Single phase windward acreage: 0.5m<sup>2</sup>
4. Barycenter height: 600mm



CJ6B



CS17



CS17 side view

Item	L1	L2	L3	L4	L5
145kV with earth	2500	4000	1820	1860	1840
145kV without earth	2500	4000	1820	1860	
126kV with earth	2000	3000	1660	1680	1640
126kV without earth	2000	3000	1660	1680	
72.5kV with earth	1700	2400	1290	1300	1215
72.5kV without earth	1700	2400	1290	1300	

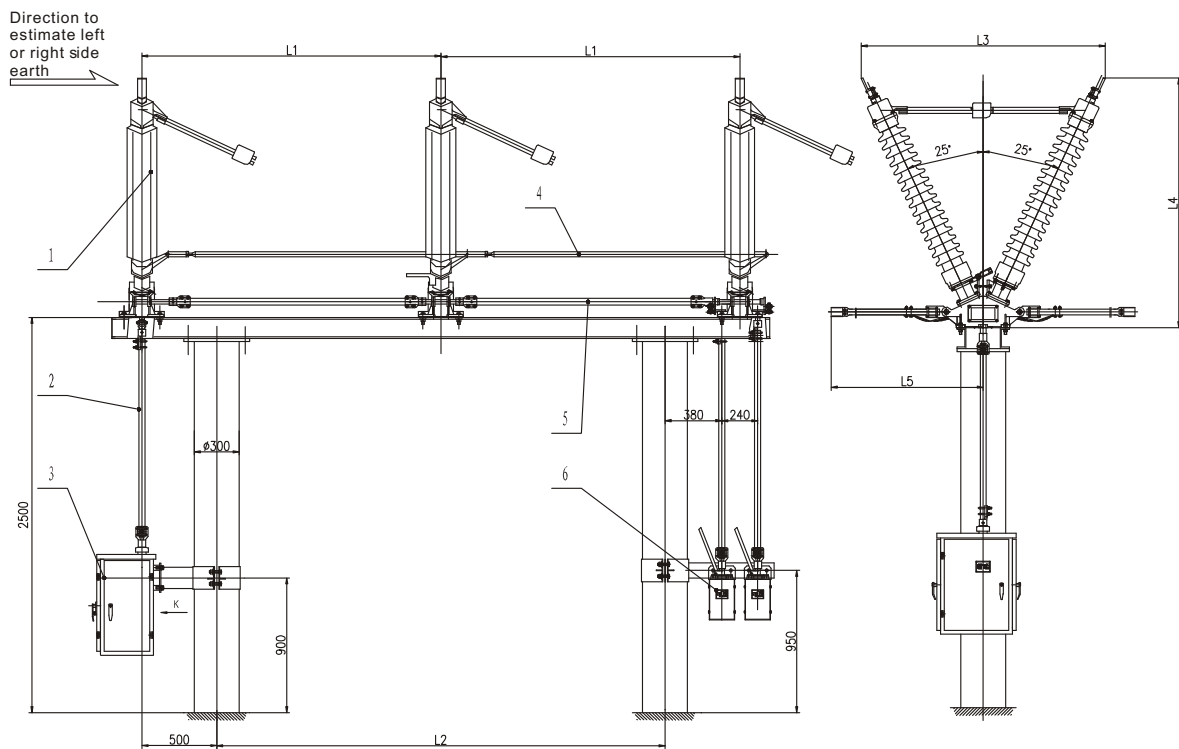
Drawing 1 GW5-<sup>630</sup><sub>72.5</sub>/<sup>1250</sup><sub>1600</sub>/<sup>2000 Outdoor HV disconnect switch  
(main blade with CJ6B mechanism, earth blade with CS17 mechanism)</sup>

Item		Unit	Data			
1min power frequency withstand voltage	phase to earth	kV	95	160	230	275
	across open contacts		115	200	230+70	315
Lightning impulse withstand voltage(peak)	phase to earth		185	350	550	650
	across open contacts		215	410	550+100	750
Main loop resistance	630A	$\mu\Omega$	$\leq 150$	$\leq 200$	$\leq 225$	$\leq 250$
	1250A		$\leq 100$	$\leq 125$	$\leq 150$	$\leq 175$
	1600A		$\leq 80$	$\leq 100$	$\leq 120$	$\leq 125$
	2000A		$\leq 60$	$\leq 80$	$\leq 100$	$\leq 125$
Main blade open contacts		mm	$\geq 400$	$\geq 900$	$\geq 1050$	$\geq 1350$
Single phase weight		kg	90	250	300	350
Mechanical steady operating times		times	3000			
Operating mechanism type	main blade		CJ6B or CS17			
	earth blade		CS17			

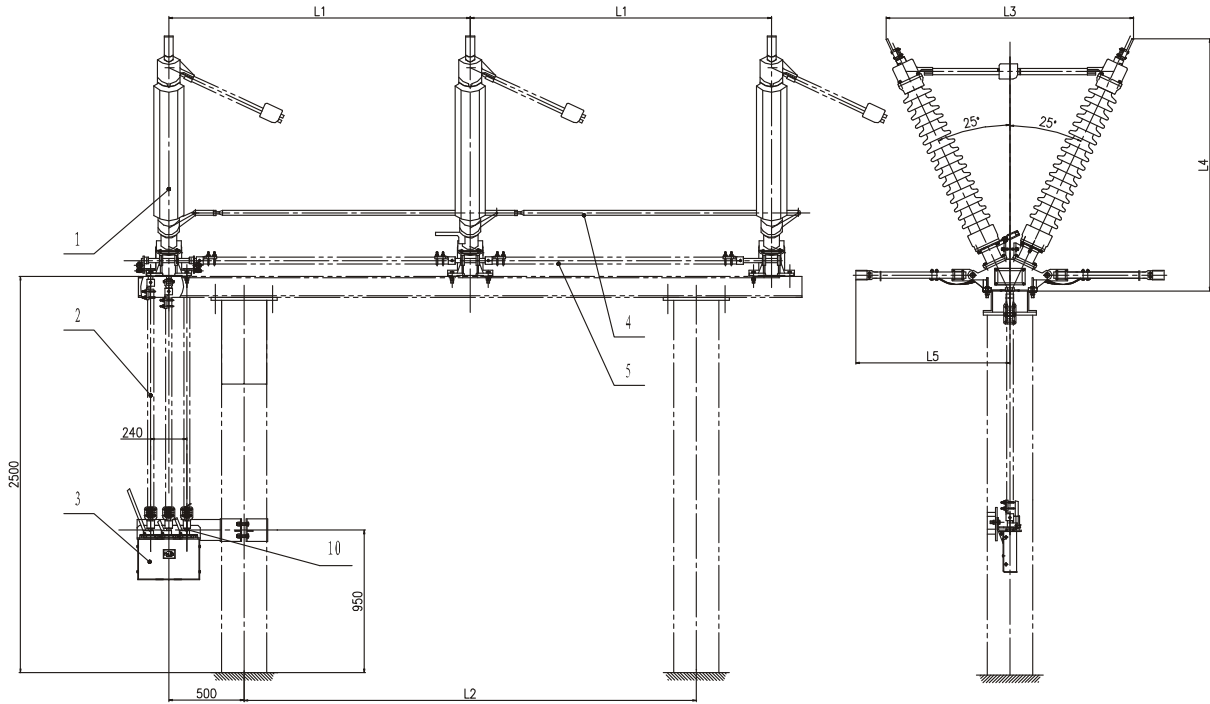
## Product feature

There are two supporting insulators fixed on the pedestals respectively with the 50° inclination, and the main components include pedestals, supporting insulators, connection seat, contacts earthing blades, earthing fixed contact and so on. There are three kinds of disconnect switch: without earthing, single-earthing and double-earthing. It can be provided with mechanism linkage between principal axis and earthing blades and assistant switch, operating can be achieved by manual and motor.

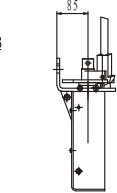
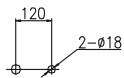
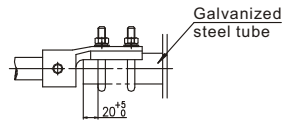
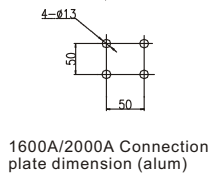
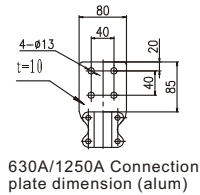
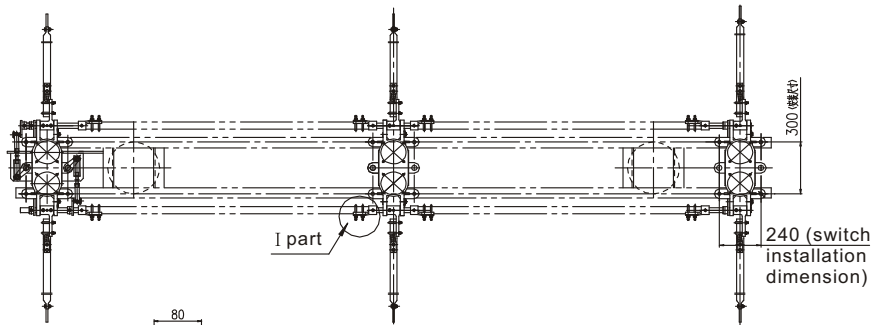
## Outline dimension



1.Switch 2.Vertical connection bar 3.CJ6B motor operating mechanism  
4.Horizontal connection bar 5.Horizontal connection bar for earth switch  
6.CS17 manual operating mechanism



1.Switch 2.Vertical connection bar 3.CS17 manual operating mechanism  
4.Horizontal connection bar 5.Horizontal connection bar for earth switch



- 1.CS17 manual mechanism weight and operating force:15kg/≤200N.
- 2.Single phase windward acreage:0.5m<sup>2</sup>
- 3.Barycenter height:600mm

Item	L1	L2	L3	L4	L5
145kV with earth	2500	4000	1820	1860	1840
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Drawing 2 GW5-<sup>630</sup><sub>126</sub> / <sup>1250</sup><sub>1600</sub> / <sup>2000 Outdoor HV disconnect switch  
(main blade and earth blade both with CS17 mechanism)</sup>