## 

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

## Summary

GW5-40.5/7 2.5/126/145 outdoor high voltage disconnect switch is used to make or break high voltage circuit in rated voltage $40.5 \mathrm{kV}, 72.5 \mathrm{kV}, 126 / 145 \mathrm{kV}$, AC $50 / 60 \mathrm{~Hz}$ 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: $\leqslant 1000 \mathrm{~m}$;
2. Ambient temperature: $-40^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$;
3. Wind speed: $\leqslant 34 \mathrm{~m} / \mathrm{s}$;
4. Pollution degree: $\leqslant$ III;
5. Earthquake intensity: $\leqslant 8$ degree;
6. Ice thickness: $\leqslant 10 \mathrm{~mm}$.

## Model



## Structure feature

Disconnect switch is make 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 disconnector with earth switch, it also have male and female contact, blade, drving parts and interlock plate. Main blade with CJ6 motor or CS17 manual oper ating mechanism, earth blade can be match with CS17 manual operating mechanism. There are different installation method contain 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 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rated voltage | kV | 40.5 | 72.5 | 126 | 145 |
| Rated current | A | 630125016002000 |  |  |  |
| Rated peak withstand current | kA | $\begin{array}{llll}63 & 80 & 100\end{array}$ |  |  |  |
| 4s short-time withstand current |  | $25 \quad 31.540$ |  |  |  |
| Rated short-time withstand time | s | 3/4 |  |  |  |
| Rated power frequency | Hz | 50/60 |  |  |  |

## 

| Item |  | Unit | Data |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 min power frequency | 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 | $\mu \Omega$ | $\leqslant 150$ | $\leqslant 200$ | $\leqslant 225$ | $\leqslant 250$ |
|  | 1250A |  | $\leqslant 100$ | $\leqslant 125$ | $\leqslant 150$ | $\leqslant 175$ |
|  | 1600A |  | $\leqslant 80$ | $\leqslant 100$ | $\leqslant 120$ | $\leqslant 125$ |
|  | 2000A |  | $\leqslant 60$ | $\leqslant 80$ | $\leqslant 100$ | $\leqslant 125$ |
| Main blade open contacts |  | mm | $\geqslant 400$ | $\geqslant 900$ | $\geqslant 1050$ | $\geqslant 1350$ |
| 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 fixuped on the pedestals respectively with the $50^{\circ} \mathrm{C}$ 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 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 barfor earth switch 6.CS17 manual operating mechanism

## CH:




630A/1250A Connection plate dimension (alum)


1600A/2000A Connection plate dimension (alum)

1.CJ6B motor mechanism weight and output moment: $90 \mathrm{~kg} / 500 \mathrm{~N} . \mathrm{M}$ (main blade)
2.CS17 manual mechanism weight and operating force: $15 \mathrm{~kg} / \leqslant 200 \mathrm{~N}$.
3.Single phase windward acreage: $0.5 \mathrm{~m}^{2}$
4.Barycenter height: 600 mm


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

Drawing 1 GW5- $-_{126}^{72.5} \stackrel{\substack{630 \\ 1250 \\ 16000 \\ 2000}}{ }$ Outdoor HV disconnect switch (main blade with CJ6B mechanism, earth blade with CS17 mechanism)

## 


1.Switch 2.Vertical connection bar 3.CS17manual operating mechanism 4.Horizontal connection bar 5.Horizontal connection barfor earth switch

1.CS17 manual mechanism weight and operating force: $15 \mathrm{~kg} / \leqslant 200 \mathrm{~N}$.

2. Single phase windward acreage: $0.5 \mathrm{~m}^{2}$
3. Barycenter height: 600 mm

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

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[^0]:    Drawing 2 GW5 $725{ }^{630}$
    Drawing 2 GW5-126 $/ 16000$ Outdoor HV disconnect switch (main blade and earth blade both with CS17 mechanism)

