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# GW5A – 40.5

## ISOLATION SWITCH / DISCONNECTOR

### OUTDOOR / THREE-PHASE / HIGH-VOLTAGE







登高电气有限公司
DENGGAO ELECTRIC CO.,LTD.

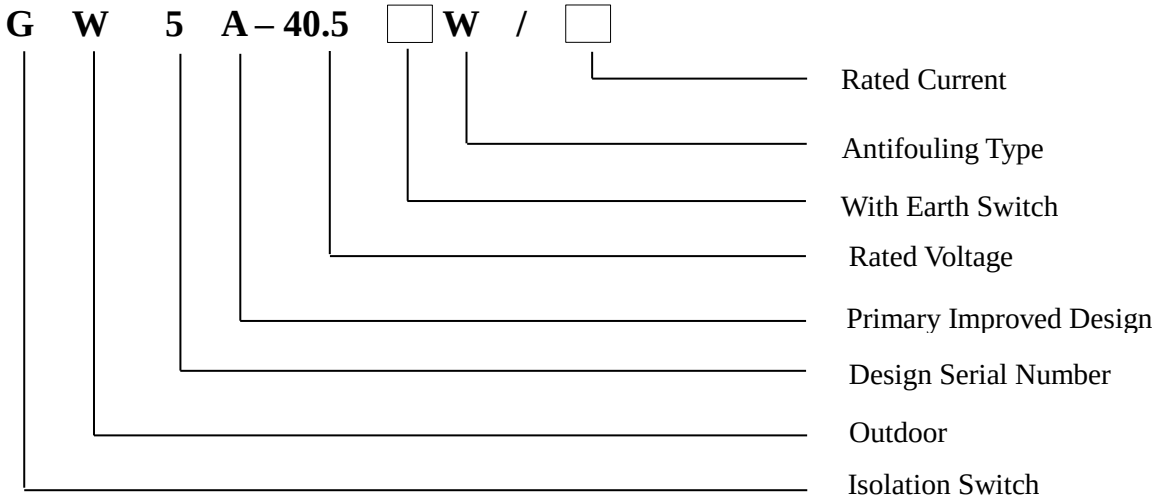
# GW5A – 40.5 OUTDOOR ISOLATION SWITCH / DISCONNECTOR

## 1. SUMMARY

GW5A-40.5 series outdoor high voltage AC disconnector (hereinafter referred to as "disconnectors/isolators") 'is an outdoor high-voltage switchgear with a rated frequency of 50Hz. It is used for the replacement of the high-voltage line under the condition of voltage and no load, and for the electrical isolation of the overhauled high-voltage bus, circuit breaker, and other electrical equipment from the charged high-voltage line. It can also be used for opening and closing small capacitance current and inductance current.

The Isolation switch meets the technical standards of high voltage AC disconnectors and earthing switches (GB/T 1985-2014) and high voltage AC disconnectors and earthing switches (DL/T 486-2010).

## 2. MODEL AND MEANING




## 3. USAGE: ENVIRONMENTAL CONDITIONS

1. Altitude: Not more than 1000m / Icing thickness: not more than 20mm
2. Ambient air temperature: maximum +40 ℃, minimum - 40 ℃, daily temperature difference 25K
3. Humidity: daily average relative humidity ≤ 95%, monthly average relative humidity ≤ 90%
4. Solar Radiation Intensity (outdoor)/ Pollution level: 0.1W/cm$^2$ / e-level
5. Winding speed / pressure (outdoor): 34m/s / 700Pa
6. Earthquake resistance: horizontal acceleration 0.3 m/s$^2$, vertical acceleration 0.15m/s$^2$
7. Safety factor: sinusoidal resonance three-cycle wave, safety factor above 1.67

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## 4. MAIN ADVANTAGES

1. Adopt perfect and improved design, installation without welding, simple and convenient operation;
2. A double column V-type rotating and contact turning structure is adopted, which has the ability to automatically clean the contact and improve the contact reliability;
3. The contact finger is made of new materials with high strength, high conductivity, and high elasticity. The contact is clamped by the elastic force of the contact finger to avoid the vicious cycle caused by the reduction of the clamping force of the contact caused by the spring corrosion and thermal annealing and the intensification of the contact heating;
4. The rotating part is designed according to the maintenance-free requirements
5. The stainless steel shaft pin and oil-free self-lubricating bearing are used to match the structure, and the steel parts are made of hot zinc to ensure that the product is flexible, light, reliable, and never rusted;
6. The insulator is made of high-strength porcelain material, with a large creepage distance design, strong pollution resistance, and environmental adaptability, and can meet the operation requirements in high-altitude areas.

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## 5. TECHNICAL PARAMETER TABLE

| No. | Item | | Unit | Parameters | | |
|---|---|---|---|---|---|---|
| 1 | Rated Frequency | | Hz | 50 / 60 | | |
| 2 | Rated Voltage | | kV | 40.5 | | |
| 3 | Rated Current | | A | 630 | 1500 | 2000 |
| 4 | Rated Short-Time Withstand Current | | kA | 20 / 4 | 31.5 | 40/50 |
| 5 | Rated Short-Time Withstand Current (Peak Value) | | kA | 50 / 63 | 80 | 100 / 125 |
| 6 | Rated Short-Time Power Frequency Withstand Voltage | Phase, to Earth (Dry) | kV / min | 95 / 1 | | |
| | | Fracture (Dry) | | 118 / 1 | | |
| 7 | Rated Lightning Impulse Withstand Voltage | Phase, to Earth | kV | 185 | | |
| | | Fracture | | 215 | | |
| 8 | Rated Short-Time Withstand Current and Continuous Time | | s | 4 (Isolation Switch), 2 (To Earth Switch) | | |
| 9 | Circuit Resistance | | μΩ | ≤ 100 | ≤ 80 | |
| 10 | Matching operating mechanism | Human Operational Mechanism | | CS14G (Without Earthing Switch) | | |
| | | | | Main force CS14G, grounding force CS11 (with single/double grounding switch) | | |
| | | Motor Operational Mechanism | | CJ6 type, motor voltage AC380V or DC220v, grounding voltage AC220V or DC220v, auxiliary contact 8 normally open and normally closed (standard configuration) | | |
| 11 | Mechanical Life | | Times | 2000 (Isolation Switch / To Earth Switch ) | | |
| 12 | Creepage distance / Pollution Grade | | mm | ≥ 1256 / E - level | | |
| If the altitude is over 1000m, the rated insulation level should be modified as appropriate | | | | | | |

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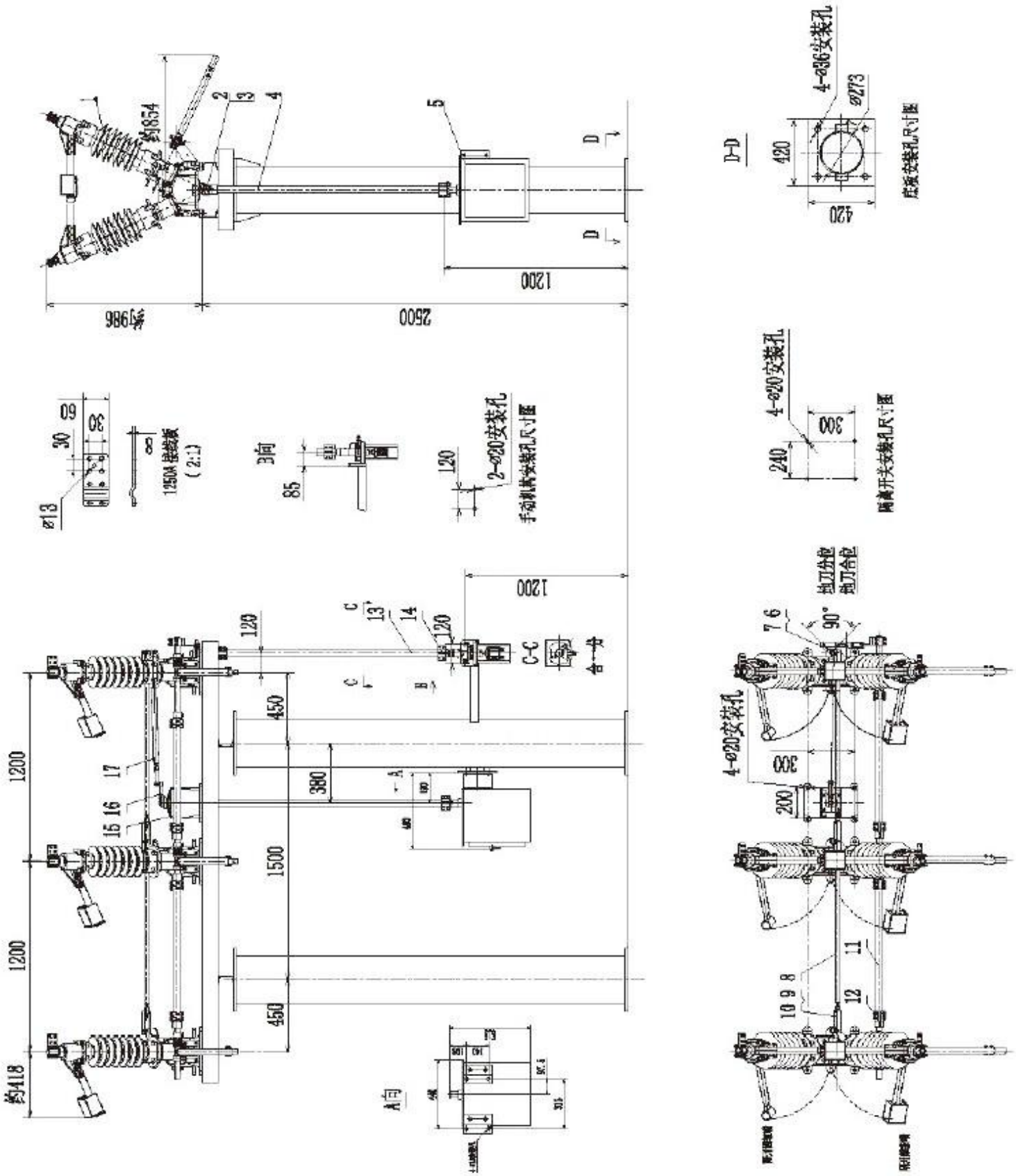
## 6. OUTLINE AND INSTALLATION DIMENSION



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