(H)GW4 Outdoor Medium-voltage AC Switch-disconnector

1 Overview

1.1 Application:

(H) GW4 series outdoor high-voltage single-phase disconnector (hereinafter referred to as disconnector) is a three-phase AC 50Hz outdoor high-voltage power distribution device with the rated voltage 12-40.5kV, suitable for 10-35kV power supply system for cutting off and closing the high-voltage line with voltage under non-load and for electrical isolation of the electrical devices under repair such as high-voltage bus and circuit breaker from the live high-voltage line. It is also used to turn on/off a very small capacitive current and inductive current. Among them, the anti-pollution disconnector can satisfy the users in the heavy foul area, and can effectively solve the pollution flashover problem occurred during the operation of general disconnector.

2 Type Designation

(H) G W 4 – □ □ / □ – □

- Rated short-time withstand current (kA)
- Rated current (A)
- None: Common type
- D: With earthing knife
- W: Anti-pollution type
- Rated voltage (kV)
- Design code
- Outdoor
- Disconnector
- Composite insulator None: Porcelain column type

3 Technical Parameters

No.	Name			Unit	Data	
1	Rated voltage			kV	12	40.5
2	Rated insulation level	Power frequency withstand voltage (1min)	To earth		42	95
			Open contacts		49	118
		Lightning impulse withstand voltage (peak)	To earth		75	185
			Open contacts		85	215
3	Rated current			A	400、630、1000、1250	630、1250、1600、2000
4	4S rated thermal stability current (effective value)			kA	20、25、31.5	
5	Rated dynamtic current (peak)				50、63、80	
6	Mechanical life			Times	3000	

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4 Environmental Conditions

4.1 Ambient air temperature: Max. temperature is +45℃, Min. temperature is -40℃, and the max. daily temperature difference up to 25K.

4.2 Relative humidity: The daily mean is not greater than 95%, and the monthly mean is not greater than 90%.

4.3 Altitude: Not exceed 1,000 meters.

4.4 Wind speed: Not exceed 35 m/s.

4.5 Pollution degree: Common (20mm/kV), 2 (25mm/kV), 4 (31mm/kV)

4.6 Icing thickness: 10 mm.

4.7 Seismic intensity should not exceed 8 magnitude scales.

4.8 There is no frequent violent vibration at the installation site.

4.9 There is no obvious pollutions such as dust, smoke, corrosive gas, or salt spray in the ambient air.

Please contact the manufacturer if the product works out of the normal working condition range.

5 Features

5.1 GW4-40.5 series outdoor AC high voltage switch disconnector is a dual post horizontal rotary center type disconnector. When closing, dual posts rotate 90°inwards, and the contact touches with the fixed base to perform the closing operation; when opening, dual posts rotate outwards, the contact is separated from the contact base, and then rotate to 90° continuously to form a clear and visual isolation gap.

5.2 The configurations of this product include: non-earth, single earth (left, right), and dual earth

The switch disconnector and earth switch can be equipped with a manual operating mechanism (standard) or a motor operating mechanism.

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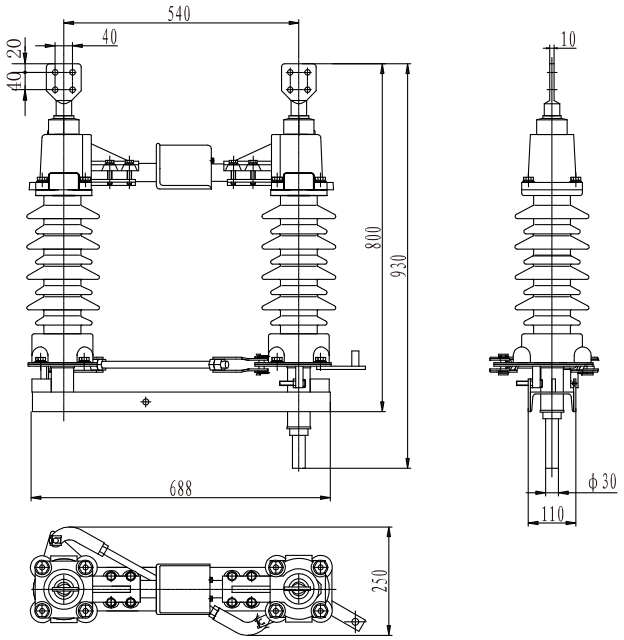
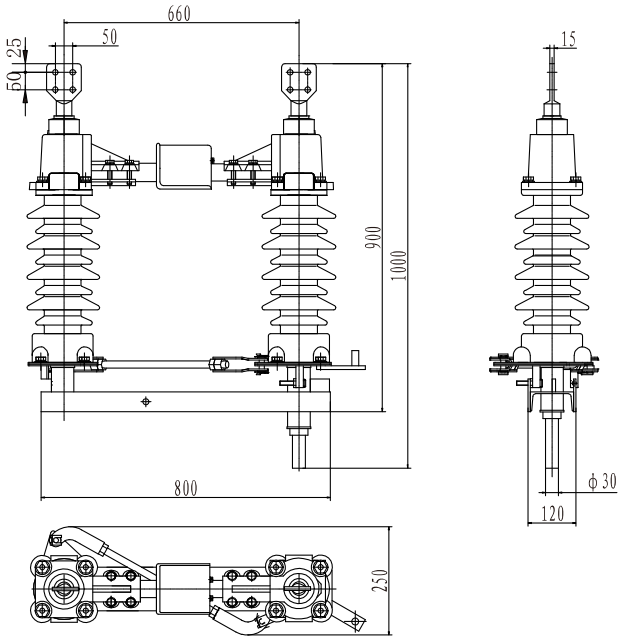
6 Outline and Installation Dimensions

6.1 GW4-40.5 porcelain-column type Grade-IV anti-pollution disconnector



Rated current ≤ 1250A



Rated current ≥ 1600A

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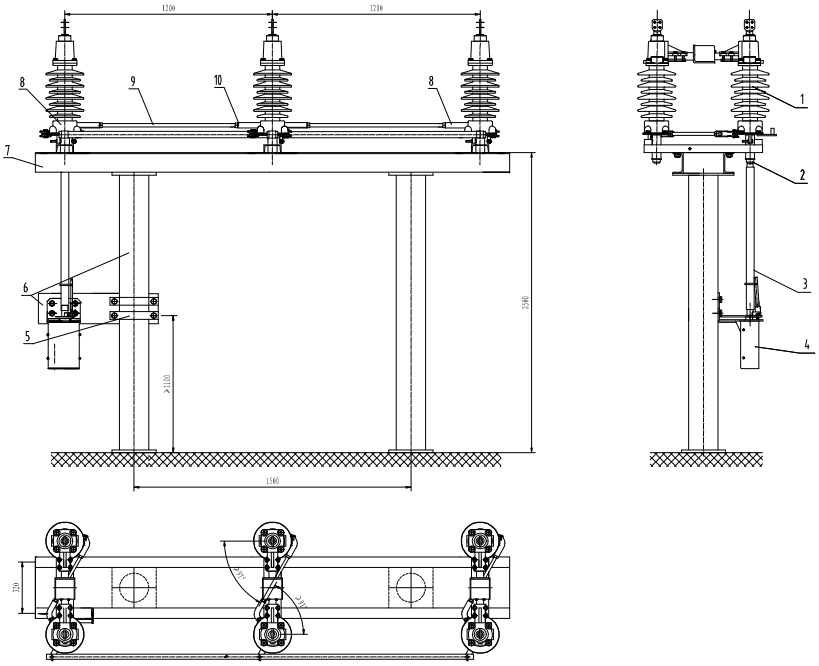
6.2 Level-3 installation diagram for GW4-40.5

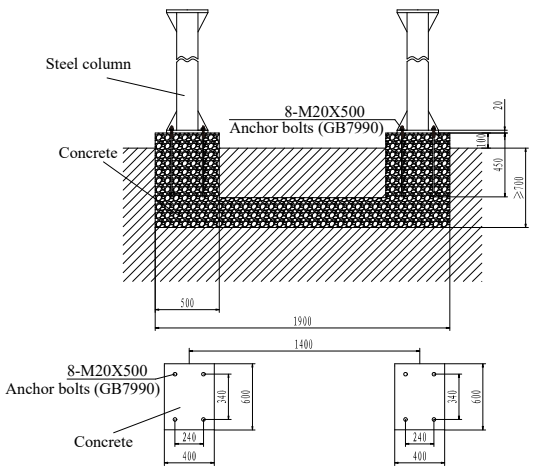


GW4-40.5 disconnector 3P linkage installation diagram

Note: All installation fasteners will be provided by user.

1. GW4-40.5 1P disconnector 2. Universal joint 3. 1″ gas pipe (provided by user)
4. CS-G manual operating mechanism 5. Hoop (provided by user)
6. Steel support (provided by user) 7. Channel steel (provided by user) 8. Coupler
9. 1″ gas pipe (provided by user) 10. Coupler 11. Earthing part

6.3 Diagram of GW4-40.5 steel column and cement



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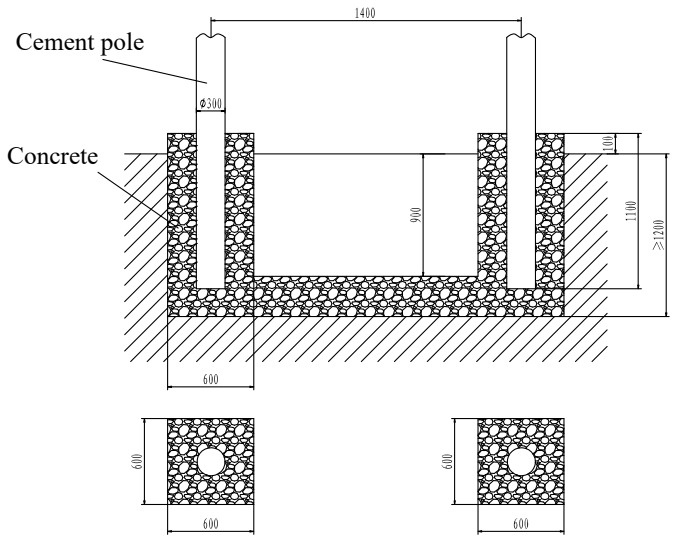
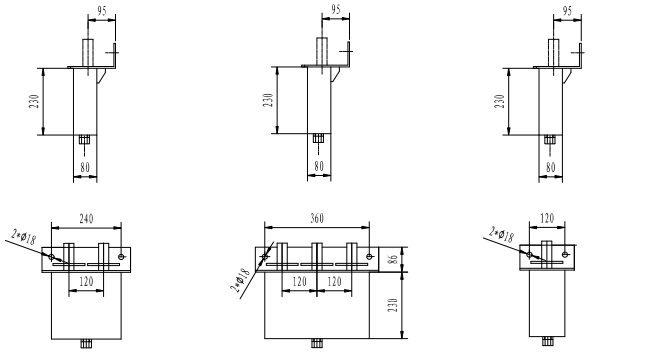
6.4 Diagram of GW4-40.5 cement pole



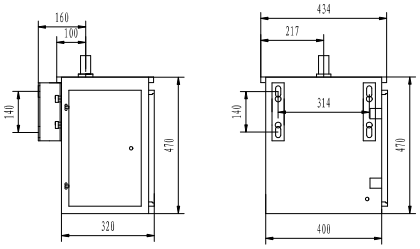
6.5 Outline diagram of operating mechanism



Dimensions of single phase earthing manual mechanism

Dimensions of double phase earthing manual mechanism

Dimensions of manual operating mechanism



Electric operating mechanism

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7 Ordering Technical Confirmation Form

Technical Confirmation Form for Ordering (H)GW4 Outdoor Medium-voltage AC Switch-disconnector

Please determine your requirements according to the items listed in the table below:

Product model		
Insulator material	□ Red brown ceramic (standard) □ Silicon rubber (□Red, others_____)	
Voltage grade (kV)	□ 40.5 □ Others_____	
Rated current (A)	□ 630 □ 1250 □ Others_____	
Order qty. (set)	____Sets (1 set = 3 pcs)	
Earth switch (Only one line is selected)	□Not earthed	Faced to the opening direction when the main switch contact arm is in the open state: Left earthed if an earth switch is mounted on the left side Right earthed if an earth switch is mounted on the right side Not earthed if not installed on both sides Dual earthed if installed on both sides
	□Left earthed / □Right earthed	
	□Dual earth (only for 40.5kV)	
Main switch mechanism Aux. switch (Only one line is selected)	Manual: □Common aux. 4 open 4 closed (standard) □ Vacuum aux. open closed	
	Electric: □Common 8 open 8 closed, motor AC380 V, control AC220 V (standard) □Vacuum aux. Open Closed, (Motor V, control V)	
Earth switch mechanism Aux. switch (Only one line is selected)	□ No (non-earthed selected)	
	Manual: □Common aux. 2 open 2 closed (standard) □ Vacuum aux. open closed	
	Electric: □Common 8 open 8 closed, motor AC380 V, control AC220 V (standard) □Vacuum aux. Open Closed, (Motor V, control V)	
Polltion degree	□Level II pollution (standard) □ Level III pollution □Level IV pollution Others_	
Mounting bracket	□No (standard) with bracket m (□Without anchor bolt / □ With anchor bolt	
Connecting rod	□No (standard) □ Yes (switch installation height m)	
Spring / pin material	□Common carton steel (standard) □Stainless steel S304	
Touch material Plating requirement	□Brass (standard) □T3 copper □T2 copper Others____ □Common tin plating (standard) □Silver plating____μm Others____	
Standard part	□Dacromet (standard) □Hot-dip galvanizing □Stainless steel S304	
Installation dimensions	□Tengen standard (standard) □Non-standard plan (please provide drawings and materials for customization)	
Other special requirements		Ordering unit (seal) Signature:_____ Confirmation date:_____ Tel:_____

Note: Options which is not checked according to the Tengen's standard configuration.