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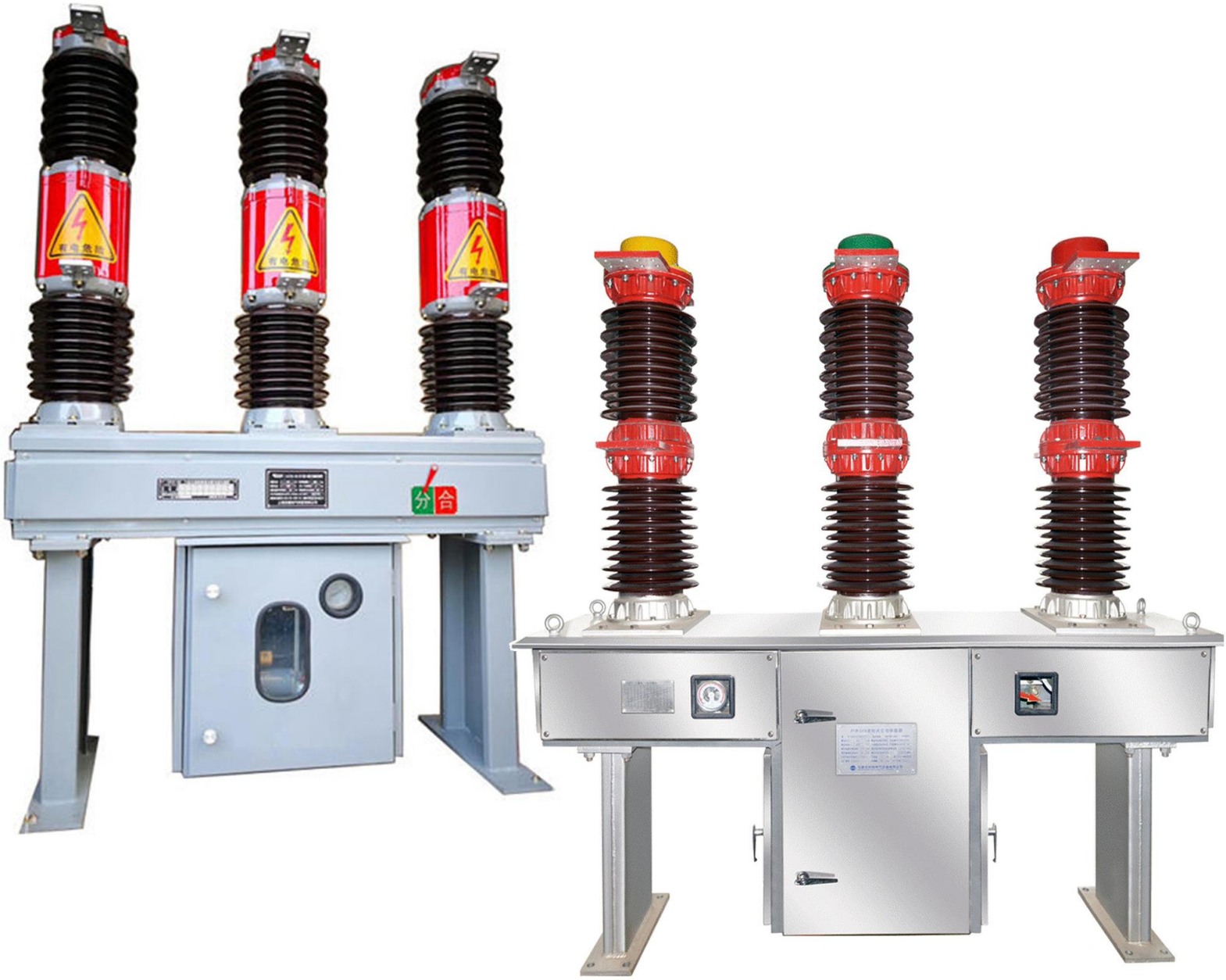
LW38 – 40.5

SF6 CIRCUIT BREAKER

OUTDOOR / THREE-PHASE / HIGH-VOLTAGE



登高电气有限公司
DENGGAO ELECTRIC CO.,LTD.

LW38 SULPHUR HEXAFLUORIDE (SF6) CIRCUIT BREAKER

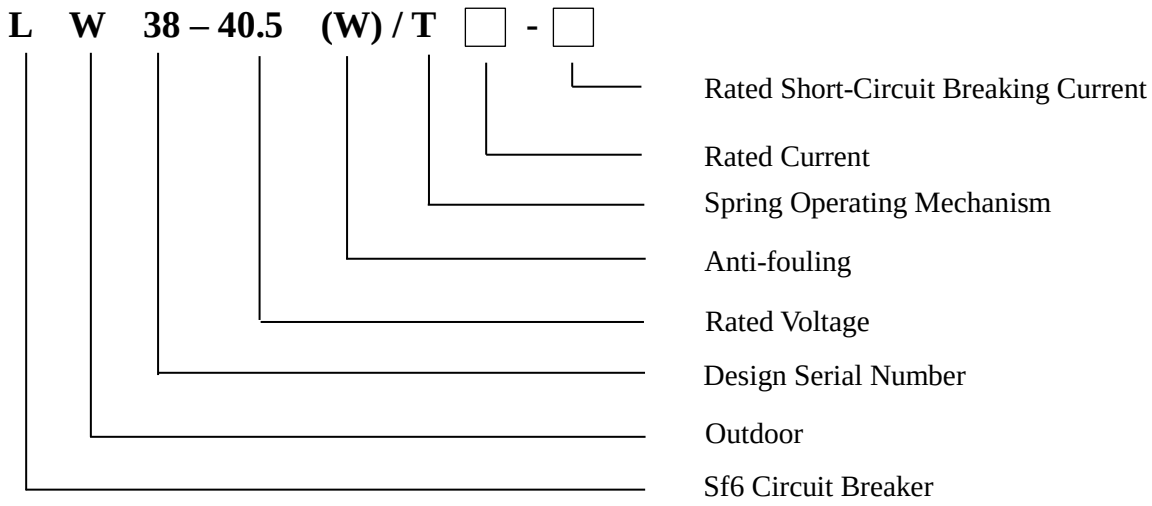
1. SUMMARY

LW38-40.5w outdoor AC High-Voltage Sulphur Hexafluoride (SF6) circuit breaker (hereinafter referred to as "circuit breaker") is an outdoor high-voltage distribution switchgear with three-phase AC 50Hz and rated voltage of 40.5kV. It can be used to open and close rated current and fault current, switch on and off capacitor banks, and switch lines. It is especially suitable for frequent operation and can also be used as a contact circuit breaker.

The circuit breaker uses SF6 gas as the arc extinguishing and insulation quality is installed outdoors and adopts the elevated porcelain column structure.

The circuit breaker complies with technical standards such as GB / t1984-2014 high voltage AC circuit breaker, DL / t402-2016 high voltage AC circuit breaker, and JB / T 9694-2008 high voltage AC sulphur fluoride circuit breaker..

2. MODEL AND MEANING



3. USAGE: ENVIRONMENTAL CONDITIONS

1. Altitude: ≤ 1000 m. If the altitude is higher than 1000m, the rated insulation level shall be corrected.
2. Ambient air temperature: maximum 40 ℃, minimum - 25 ℃, daily temperature difference 25k
3. Temperature: daily average relative humidity ≤ 95%, monthly average relative humidity ≤ 90%
4. Sunshine intensity: 0.1W/cm^2
5. Icing thickness: not more than 10mm
6. Resistance to floor drain: horizontal acceleration 0.3g, vertical acceleration 0.2g
7. Outdoor Wind speed (Wind pressure): 34m/s (700Pa)
8. Pollution level: e-level

4. MAIN ADVANTAGES

1. SF6 gas arc extinguishing and insulation, excellent insulation performance;
2. Simple structure, long maintenance cycle;
3. Strong breaking capacity and long mechanical life;
4. Either built-in or external current transformer, with high measurement accuracy;
5. Built-in intelligent wet temperature controller to ensure the safe and reliable operation of the circuit breaker in cold regions;
6. The overall sealing design of the shell is improved to effectively prevent the adverse effects of sandstorms and other bad weather on the circuit breaker.

5. TECHNICAL PARAMETER TABLE

No.	Item		Unit	Parameters		
1	Rated Frequency		Hz	50 / 60		
2	Rated Voltage		kV	40.5		
3	Rated Breaking Current		A	1250	1600	2000
4	Rated Short-time Power Frequency Withstand Voltage	Phase, To Earth (Wet)	kV / min	80/ 1		
		Phase, To Earth (Dry)		95 / 1		
		Fracture (Dry)		118 / 1		
		Secondary Circuit to Earth		2 / 1		
5	Lightning Impulse Withstand Voltage	Phase, To Earth	kV	185		
		Fracture		215		
6	Rated Short-Circuit Breaking Current		kA	31.5		
7	Rated Short-Circuit Making Current (Effective value)			80		
8	Rated Short-Time Withstand Current			31.5		
9	Rated Peak Value Withstand Current			80		
10	Rated Out of Step Breaking Current			10		
11	Rated Short-Circuit Breaking Current Breaking Times		Times	20		
12	Rated Short-Circuit Time		s	4		
13	Rated Operating Voltage & Auxiliary (Control) Circuit Rated Voltage		V	AC/DC220, AC/DC110		
14	Main Circuit Resistance	Rated Current 1600A and below	μΩ	≤ 90		
		Rated Current more than 1600A		≤ 40		
15	Closing Time	Under AC Voltage	ms	≤ 100		
		Under DC Voltage		55 ~ 100		
16	Opening Time	Under AC Voltage		≤ 60		
		Under DC Voltage		30 ~ 65		
17	Closing – Opening Time			≤ 120		
18	Opening – Closing Time			≤ 50		
19	Full Breaking Time			≤ 78		
20	Rated Operating Order			O – 0.3s – CO – 180s - CO		

21	Moving Contract Travel		mm	96 ±2.5
22	Contact Opening Distance			60 ±1.5
23	Closing Buffer Stroke			96 ±2
24	Phase – to – Phase Opening Synchronism		ms	≤ 3
25	Phase – to – Closing Opening Synchronism		ms	≤ 3
26	Phase Spacing		mm	725
27	Annual Gas Leakage Rate of SF6		%	≤ 0.5
28	Sf6 Gas Moisture content (ppm, gauge pressure at 20 ℃	Handover Acceptance Value	V / V	≤ 150
		Distance Travel		≤ 300
29	SF6 Gas Rated Pressure (Gauge pressure at 20 ℃)		MPa	0.45
30	SF6 Gas Replenish Pressure (Gauge pressure at 20 ℃)			0.42
31	SF6 Gas Locked Pressure (Gauge pressure at 20 ℃)			0.4
32	Mechanical Life Span		Times	6000
33	SF6 Gas Weight		kg	5
34	Weight (with CT)			800
	Weight (without CT)			1000
If the altitude is over 1000m, the rated insulation level should be modified as appropriate				

Note: If the parameters requested by the user are beyond the scope of the above table, they can be determined after consultation with our company.

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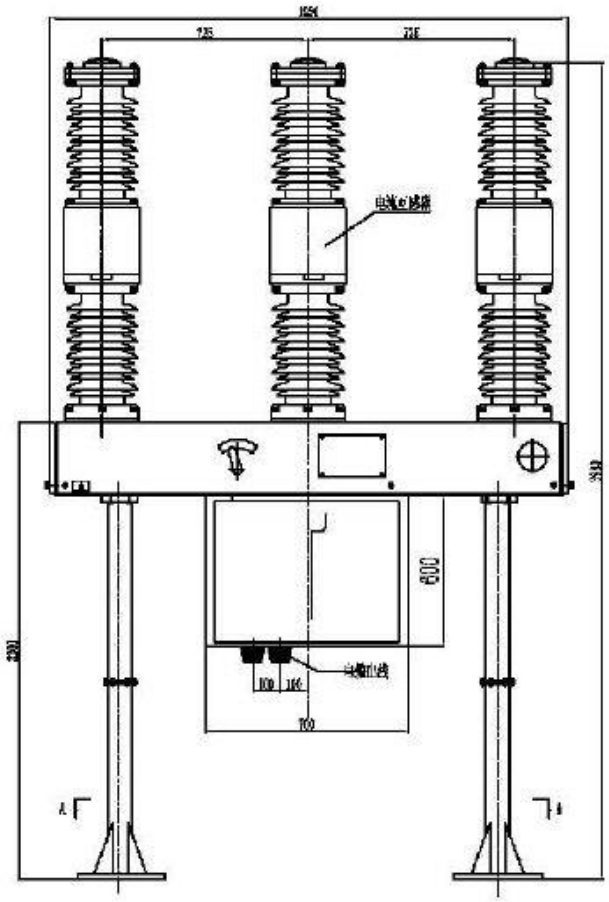
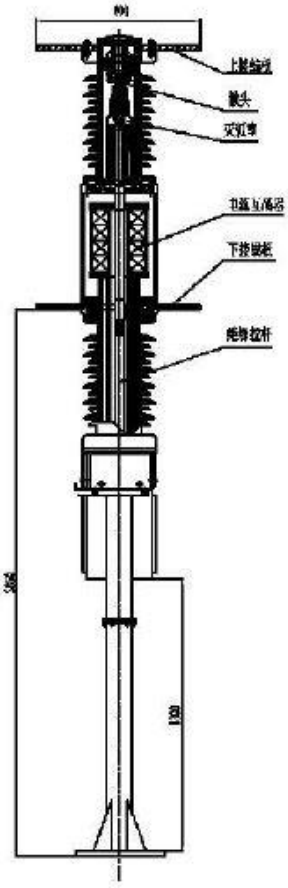
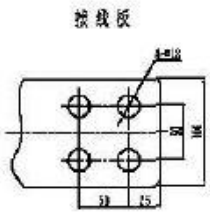
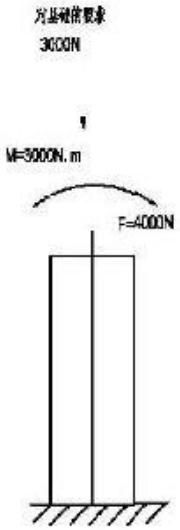
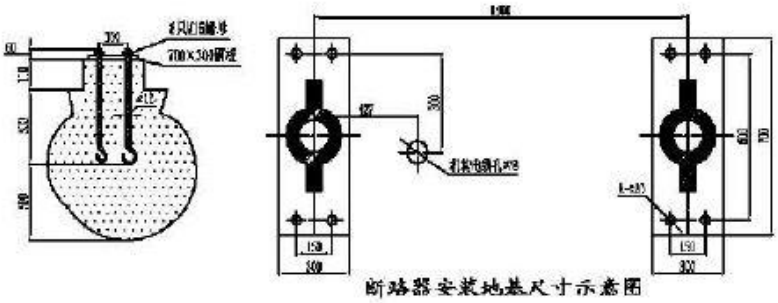
6. OUTLINE AND INSTALLATION DIMENSION











断路器安装地基尺寸示意图

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