

LW□-72.5/123/145 Outdoor SF6 Breaker

product structure

LW□-72.5/123/145 SF6 breaker air passage connection and density relay cable diagram(Diagram .1)

LW□-72.5/123/145 SF6 breaker body adopts self-energy arc extinction principle and spring operating mechanism.

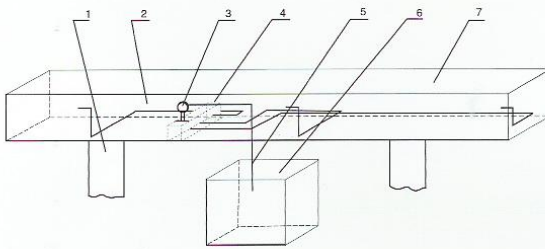
Every breaker is composed of three monopoles installed on a bunton and a spring operating mechanism. Among three monopoles is connecting system. The phase to phase driving type is double pull bar structure. It reduces impact on the explosion chamber. The spring operating mechanism is installed on the middle of bunton bottom(Diagram 2).

LW□-72.5/123/145 SF6 breaker adopts double O seal, reducing SF6 leakage. In order to watch SF6 easily, a pointer density relay is used. The arrangement of incoming and outgoing line is very flexible adopting “工” form.

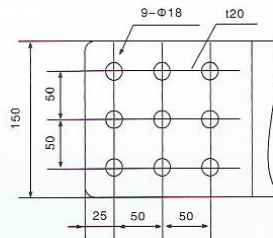
LW□-72.5/123/145 SF6 breaker foundation arrangement diagram(Diagram 3).

Acting force to foundation and outline size

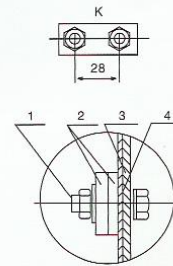
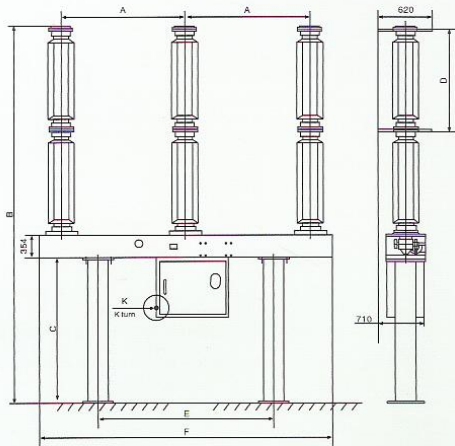
Item	Unit	LW□-72.5	LW□-123	LW□-145
Weight(Include mechanism)	kg	1200	1300	1450
SF6 gas weight	kg	4.0	6.0	6.5
Acting force during switching off (Downward)	N	19000	21000	23000
Acting force during switching on(Upward)	N	13000	15000	17000
Outline size (L x W x H)	mm	2600x710x4055	4000x710x5261	4000x710x5420



(Diagram 1) Air Passage connection and density relay cable diagram



Breaker terminal block size (Aluminum)



1. M10x55 stainless steel hexagonal bolt
2. Grounding clamp
3. Grounding copper bar in the mechanism case
4. Mechanism case

Note: above parts are all included in the product

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Main technical parameters

Item	Unit	LW□-72.5	LW□-123	LW□-145
Ambient temperature	°C	-40~+40	-30~+40	-30~+40
Wind pressure	Pa		≤700	
Altitude	m		≤2000	
Earthquake intensity	Measure		≤9	
Air pollution degree	Grade		III	
Horizontal longitudinal direction terminal fixed tensile force	N	750	1250	1250
Vertical direction terminal fixed tensile force	N	500	750	750
Horizontal crossl direction terminal fixed tensile force	N	750	1000	1000
Rated voltage	kV	72.5	123	145
Rated frequency	Hz		50/60	
Rated current	A		1250,2000,3150	
Rated short circuit breaking current	KA	31.5	31.5/40	31.5/40
Short line fault breaking current	KA		Ie x90%, Ie x 75%	
Rated short time withstand current(4s)	KA		31.5,40	
Rated peak value withstand current	KA		100	
Rated out of phase breaking current	A	8	10	10
Rated circuit charging breaking current	A	75	75	75
Rated SF6 gas pressure (20°C)	MPa	0.4	0.5	0.5
Loop resistance	μ Ω	≤40	≤45	≤45
Rated operating sequence		O-0.3s-CO-180s-CO(or)CO-15s-CO		
Mechanical endurance	Times	3000		
Sf6 Annual leakage rate	%	≤1		
Sf6 gas	PPm	≤150 (Pre-delivery)		
Creepage distance ratio	mm/kv	25		
Power frequency withstand voltage(Effevtive value, Dry, Wet)	Fracture space	202	303	315
	Interelectrode or pole to grounding	160	230	275
lightning impulse withstand voltage(Peak value) (Full wave 1.2/50 μ s)	Fracture space	409	650	750
	Interelectrode or pole to grounding	350	550	650
5min power frequency withstand voltage on SF6 zero air-pressure		163.3	284	325

Item	Parameter		
	LW□-72.5	LW□-123	LW□-145
Rated working pressure	LW35-73.5	0.5±0.015	0.5±0.015
Air supply alarm pressure	0.4±0.015	0.15±0.015	0.15±0.015
Minimum function pressure	0.35±0.015	0.43±0.015	0.43±0.015
Charged pressure in packing and transport	0.33±0.015	0.025	0.025

Item	Unit	LW□-72.5	LW□-123	LW□-145
Control and signal circuit voltage	V	DC110/DC220		
Motor Voltage/Power	V/W	DC/AC110(or)DC/AC220/750		
Moisture eliminator Voltage/Power	V/W	AV220/100		
Heater Voltage/Power	V/W	AC220/100		
Switching coil Voltage/current	V/A	DC110/4.3,DC220/2.8		
Switching coil resistance	Ω	25.5(DC110V),80(DC220V)		
Energy storage time on rated voltage	s	≤15		
Switch-off time	ms	28 ⁺² ₋₄		
Switch-on time	ms	100±20		
On-switch-off time	ms	Pre-delivery test time(5S working time)5S		
Off-switch-on time	ms	Pre-delivery test time(300s working time)300s		
Switch-off synchronism	ms	<3		
Switch-on synchronism	ms	<5		
Total breaking time	ms	60		