



FN5-12 Series

Indoor High Voltage Air Load Break Switch

FN5-12 type indoor AC high voltage load break switch (Hereinafter referred to as load break switch) applies to AC 50Hz 12kV network, for breaking load current and closing short circuit current. Load break switch with fuse can cut off short circuit current for switch protection.

The load break switch can be used with CS6-1 type manual operating mechanism, and this product special uses CS □ manual operating mechanism.



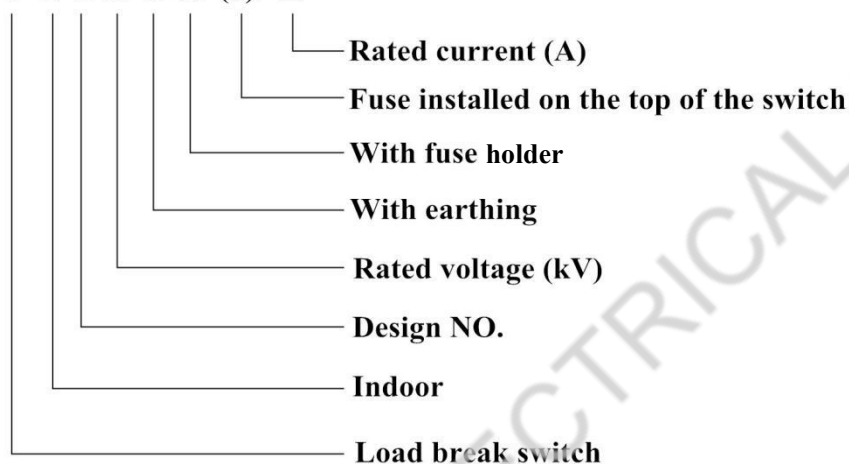
※ Application

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※ Type and Meaning

F N 5-12 D R (S)/ □



※ Use environment

- Altitude $\leq 1000\text{m}$;
- Ambient air temperature: $-25\sim+40^{\circ}\text{C}$, (motorized operating mechanism $\geq -5^{\circ}\text{C}$);
- Relative humidity: daily average $\leq 95\%$, monthly average $\leq 90\%$ ($+25^{\circ}\text{C}$);
- Ambient air without obvious pollution, like corrosive or flammable gas, water vapor, etc.
- Without frequent strong vibration.

※ Technical data

4.1 Load break switch technical parameters

table 1

Name	Unit	Value	
Rated voltage	kV	12	
Maximum working voltage	kV	12	
Rated frequency	Hz	50	
Rated current	A	400	630
Rated short time withstand current (thermal stability current)	kA/S	12.5/4	20/2
Rated peak withstand current (dynamic stability current)	kA	31.5	50
Rated closed loop breaking current	A	400	630
Rated power loading breaking current	A	400	630
5% rated power loading breaking current	A	20	31.5
Rated cable charging breaking current	A	10	
Rated no load transformer breaking current		1250kVA no-load current of transformer	
Rated short circuit closing current	kA	31.5	50
Load current breaking times	Load/times	100%/20 60%/35	30%/75 5%/80
1min power frequency withstand voltage (RMS), phase-to-phase / isolating fracture	kV	42/48	
Power frequency withstand voltage between isolating fractures	kV	53	
Lightning impulse withstand voltage to ground(peak), phase-to-phase/isolating fracture	kV	75/85	
Opening/closing operating torque	Nm(N)	90(80)	100(200)

Note: FN5-12D grounded part of the load switch with short-circuit making current capacity.

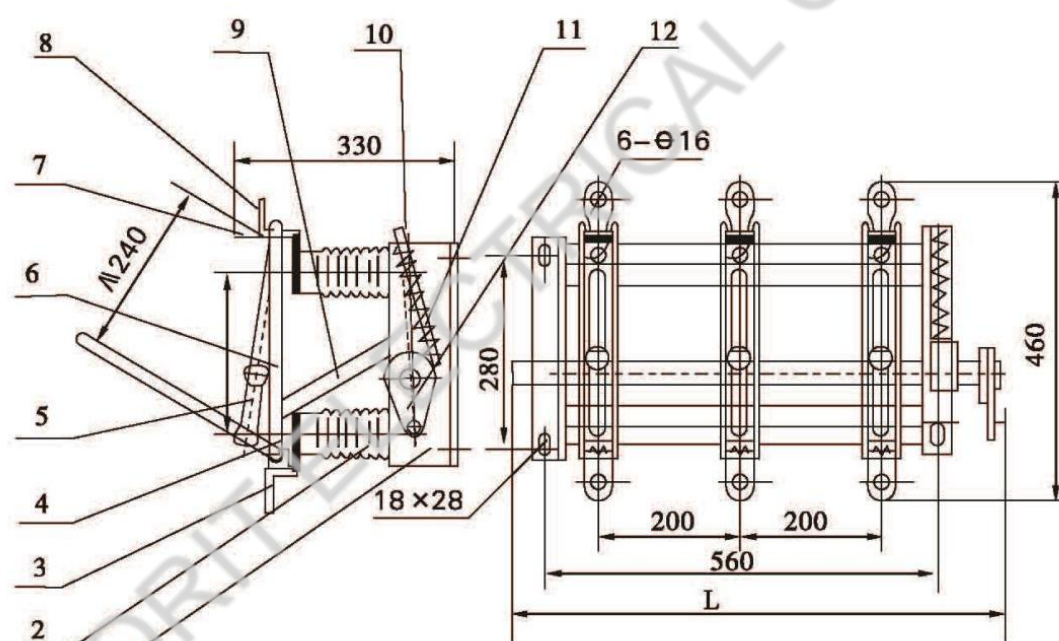
4.2 Fuse technical parameter

table2

Model	Rated voltage KV	Fuse Rated current A	Rated breaking current KA	Rated current of fuse-element
RN3	12	50	12.5	2, 3, 5, 7.5, 12, 15, 20, 30, 40, 50
		75		75
		100		100
		200		150 200
SDL*J	12	40	50	6.3, 10, 16, 20, 25, 31.5, 40
SFL*J	12	100		50, 63, 71, 80, 100
SKL*J	12	126		125

※ Appearance and Installation Dimensions (mm)

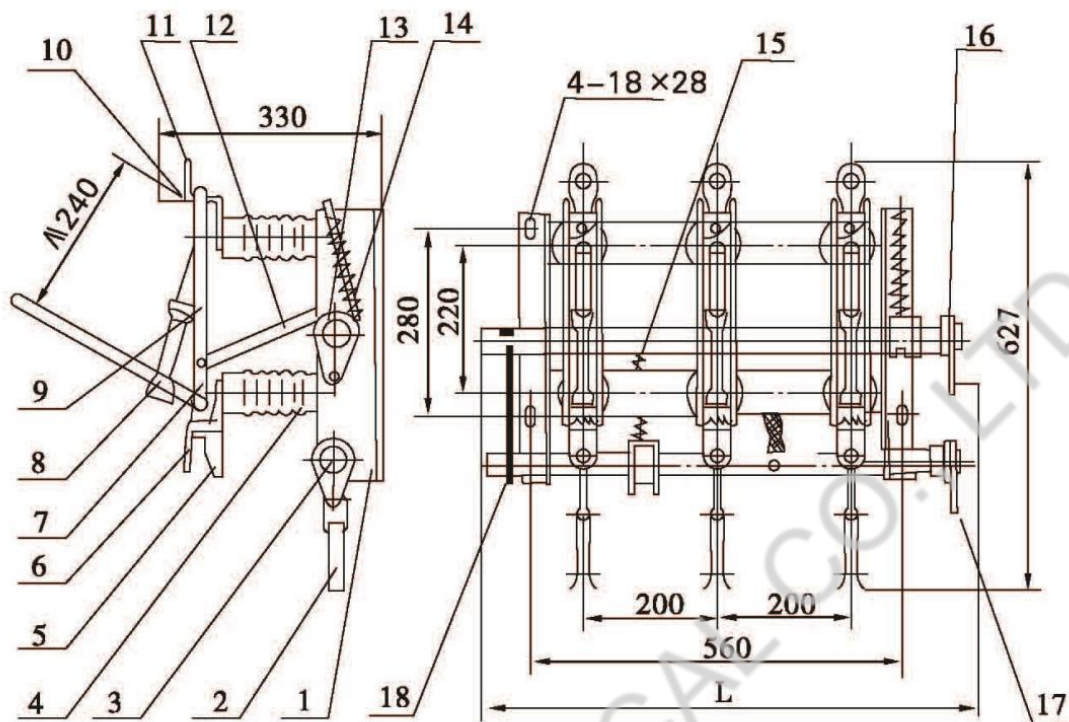
Fig. 1 FN5-12



Mechanism model	L
CS6-1	768
CS□	735

1. Framework 2. Post insulator 3. Bearing wiring board 4. Blade 5. Arc extinguisher
 6. Torsional spring and its pin bearing 7. Guide bar 8. Wiring board 9. Lever
 10. Load switch moving bearing 11. Spring charging mechanism 12. Operating mechanism

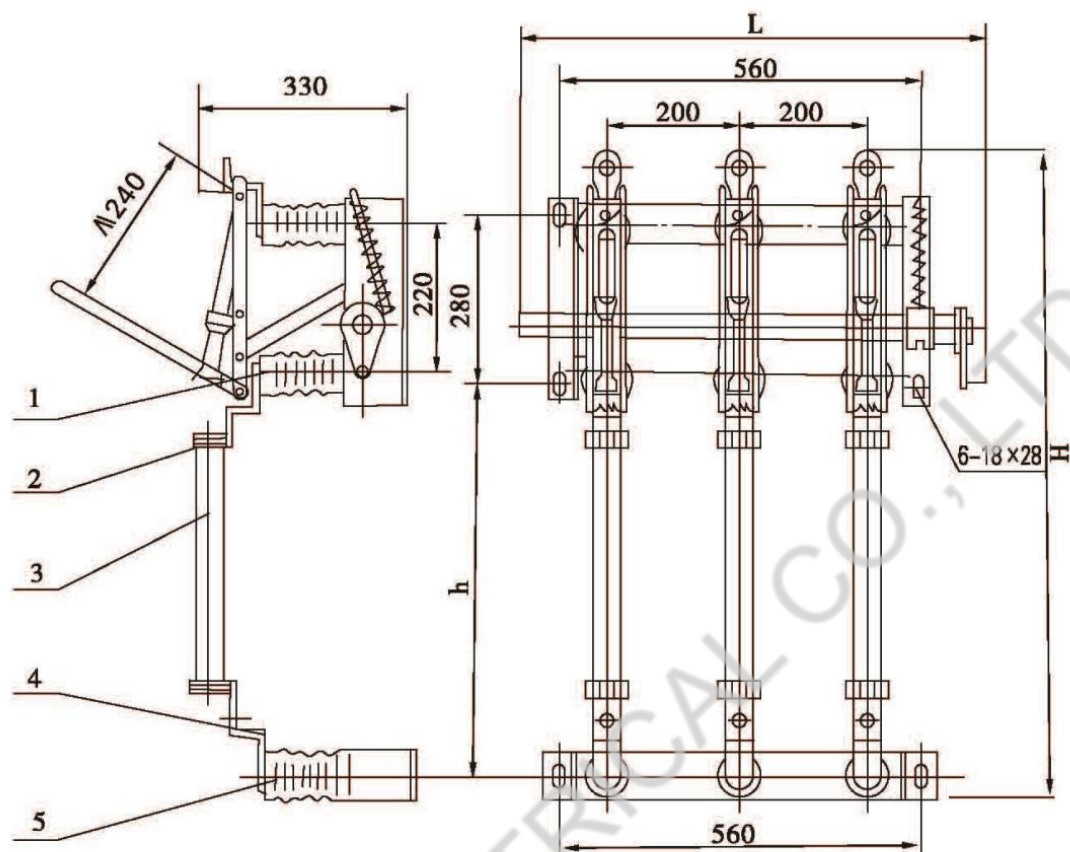
Fig. 2 FN5-12D



Mechanism model	L
CS6-1	768
CS□	735

1. Framework 2. Earth blade 3. Earth switch moving bearing 4. Post insulator
5. Earth moving bearing 6. Bearing wiring board 7. Blade 8. Arc extinguisher
9. Draw spring and torsional spring's pin bearing 10. Guide bar 11. Wiring board 12. Lever
13. Load switch moving bearing 14. Load switch spring charging mechanism
15. Earth switch spring charging mechanism 16. Load switch operating mechanism
17. Earth switch operating mechanism 18. Interlock mechanism

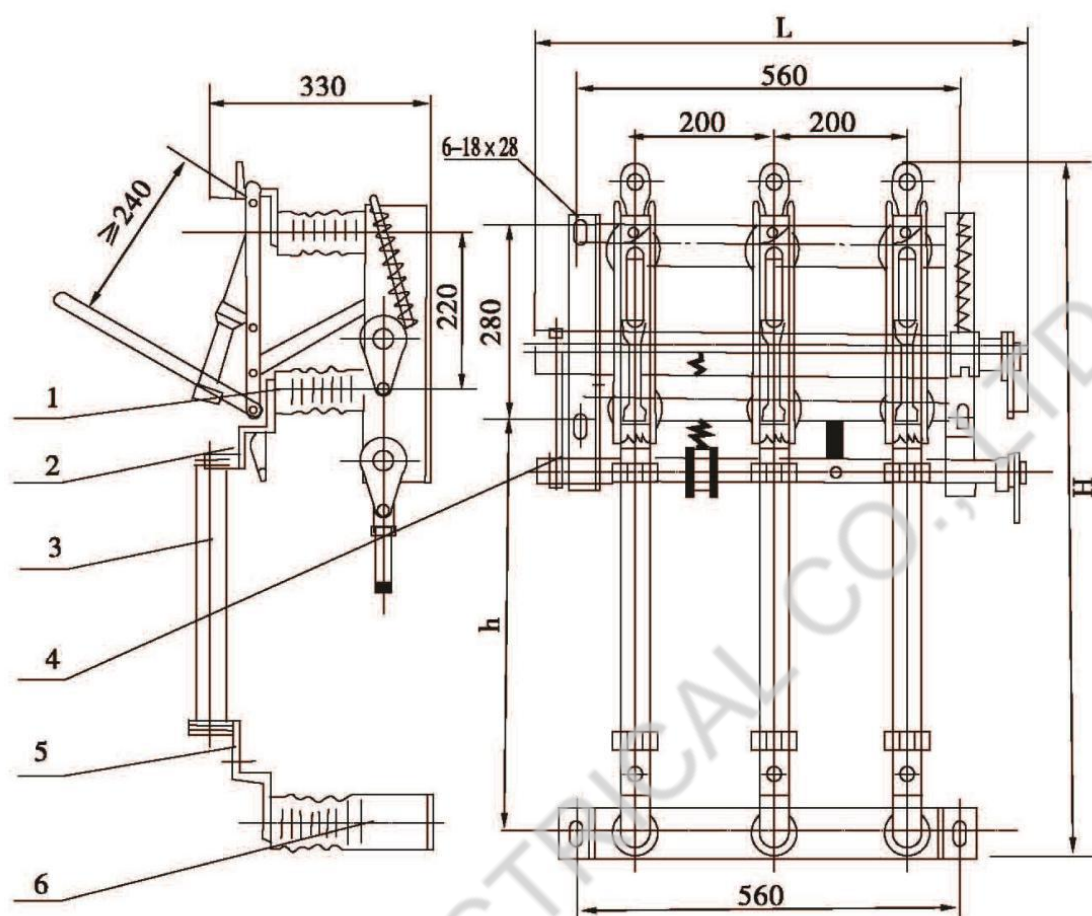
Fig. 3 FN5-12R



Mechanism model	L	Fuse model	H	h
CS6-1	768	SDL*J、SFL*J、SKL*J	935	530
CS□	735	RN3-10	< 75	585
			≥ 75	635

1. FN5-12R load switch 2. Bering fuse wiring board 3. Fuse link 4. Fuse wiring board
5. Fuse base

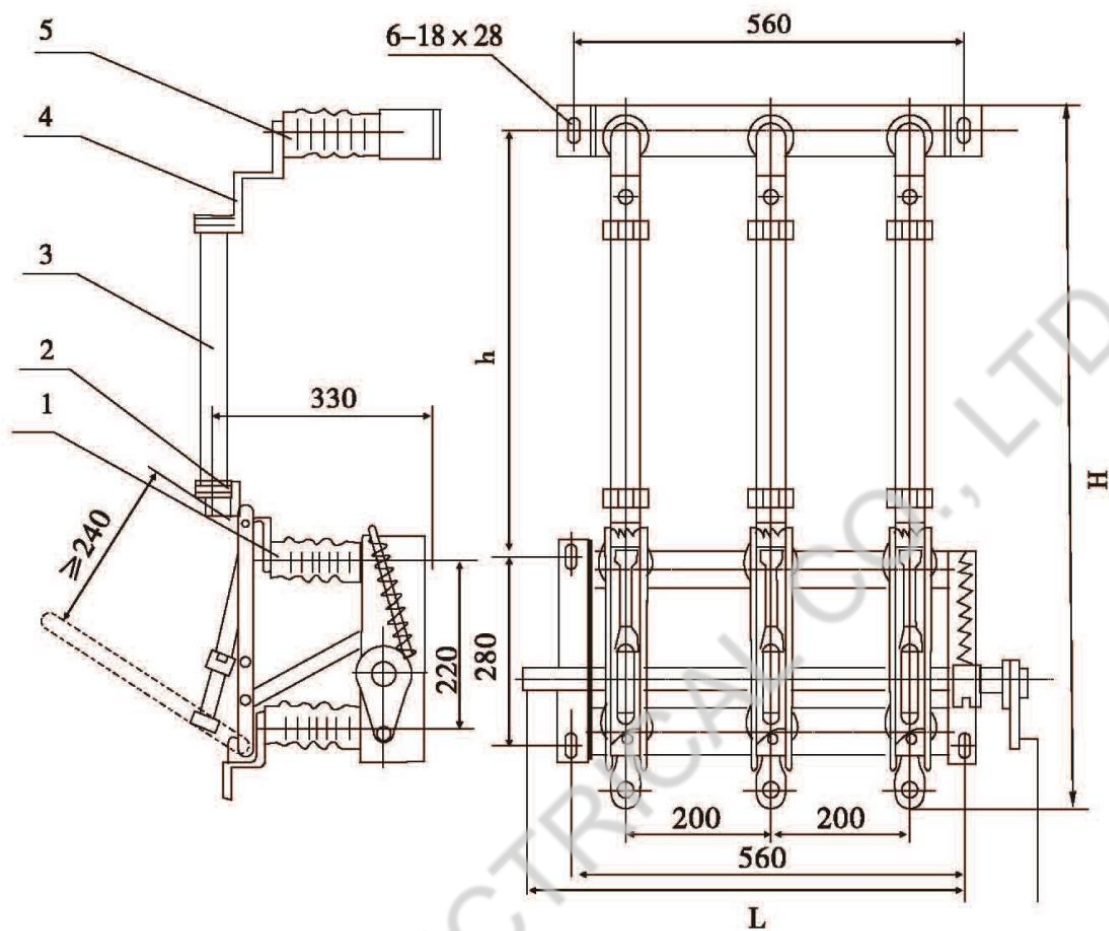
Fig. 4 FN5-12DR



Mechanism model	L	Fuse model	H	h
CS6-1	768	SDL*J、SFL*J、SKL*J	935	530
CS□	735	RN3-10	< 75	585
			≥ 75	635

1. FN5-12D load switch 2. Bering fuse wiring board 3. Fuse 4. Fuse wiring board
5. Fuse base

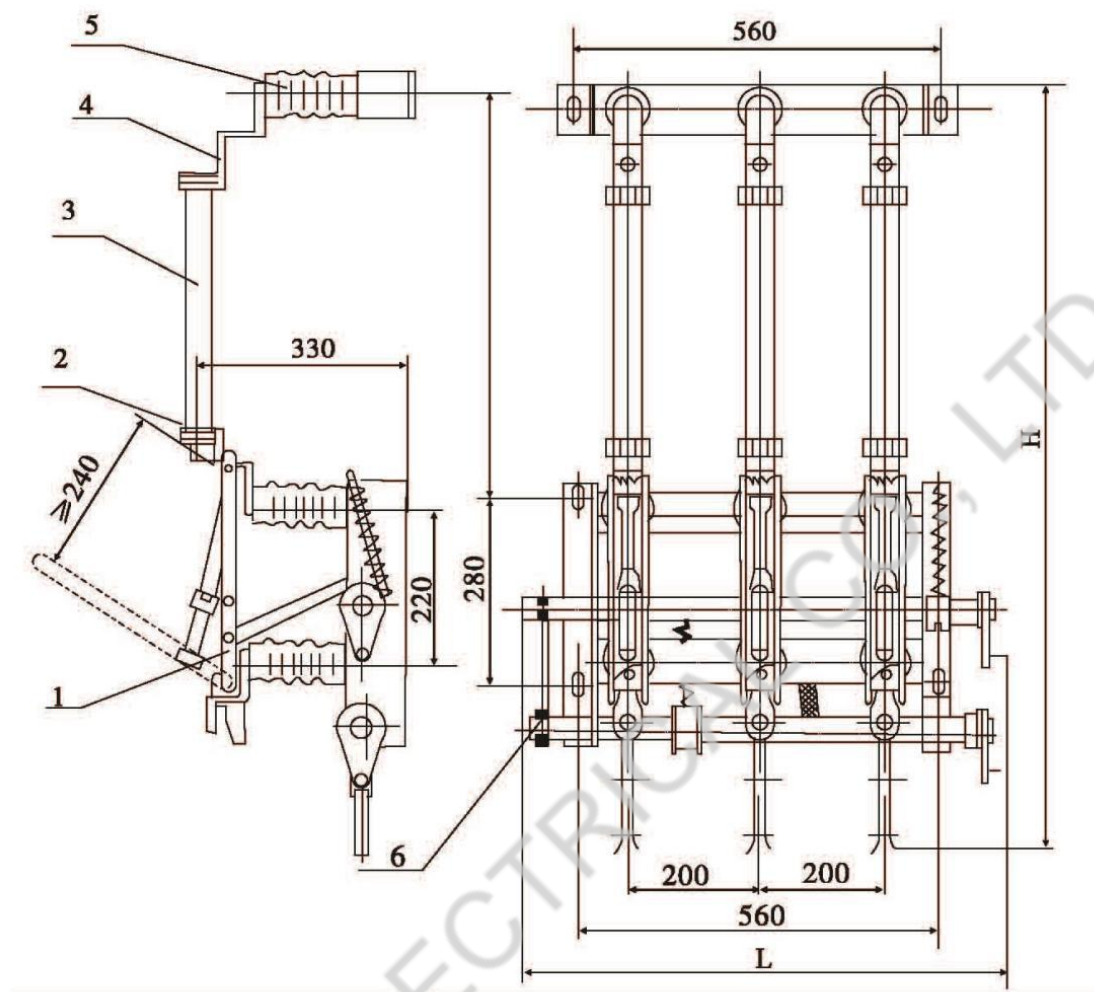
Fig. 5 FN5-12R(S)



Mechanism model	L	Fuse model	H	h
CS6-1	768	SDL*J, SFL*J, SKL*J	935	530
CS□	735	RN3-10	< 75	585
			≥ 75	635

1. FN5-12 load switch 2. Bering fuse wiring board 3. Fuse 4. Fuse wiring board 5. Fuse base

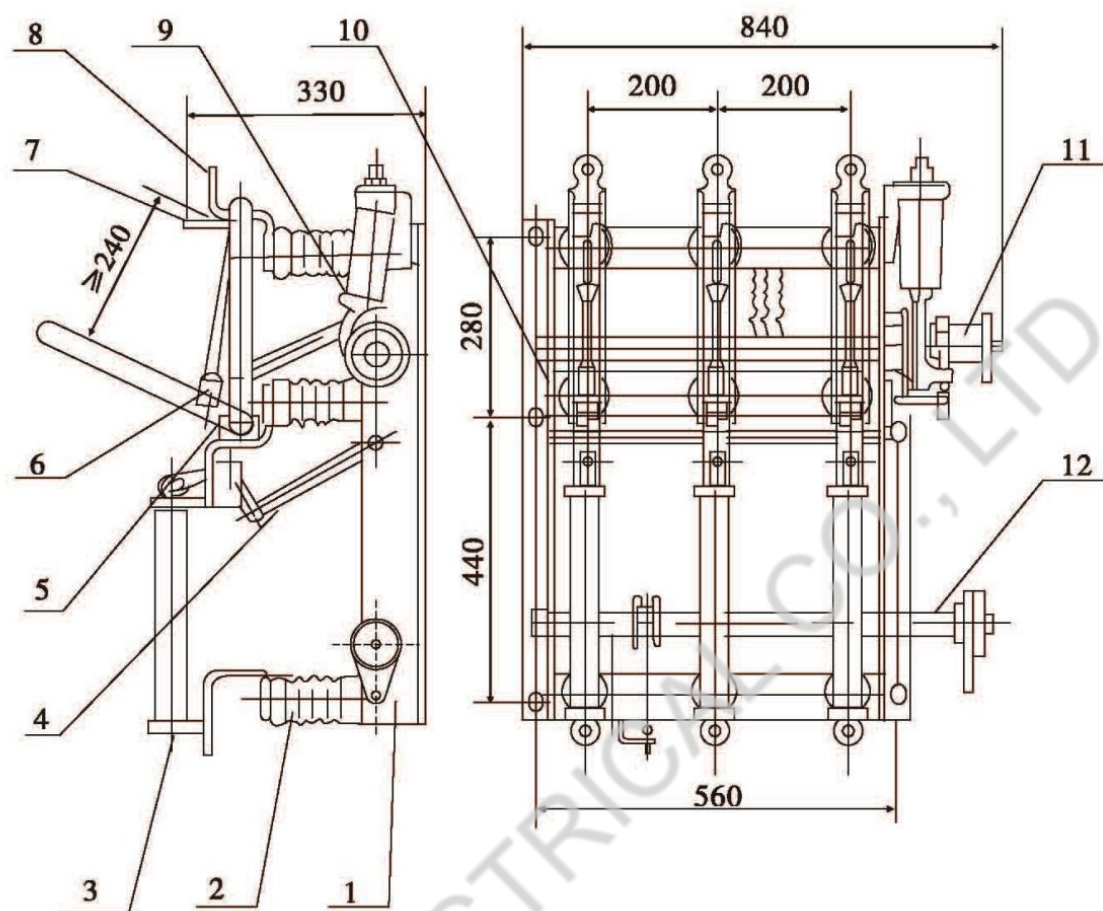
Fig. 6 FN5-12DR(S)



Mechanism model	L	Fuse model	H	h
CS6-1	768	SDL*J, SFL*J, SKL*J	1102	530
CS□	735	RN3-10	< 75	585
			≥ 75	635

1. FN5-12D load switch 2. Bearing fuse wiring board 3. Fuse 4. Fuse wiring board
5. Fuse base 6. Interlock mechanism

Fig. 7 FN5-12R(D)L



1. Under frame 2. Insulator 3. Fuse 4. Tripper device 5. Moving contact 6. Arc extinguisher
7. Guide bar 8. Static contact 9. Opening/closing mechanism 10. Interlock device
11. Load switch operating mechanism 12. Earth switch