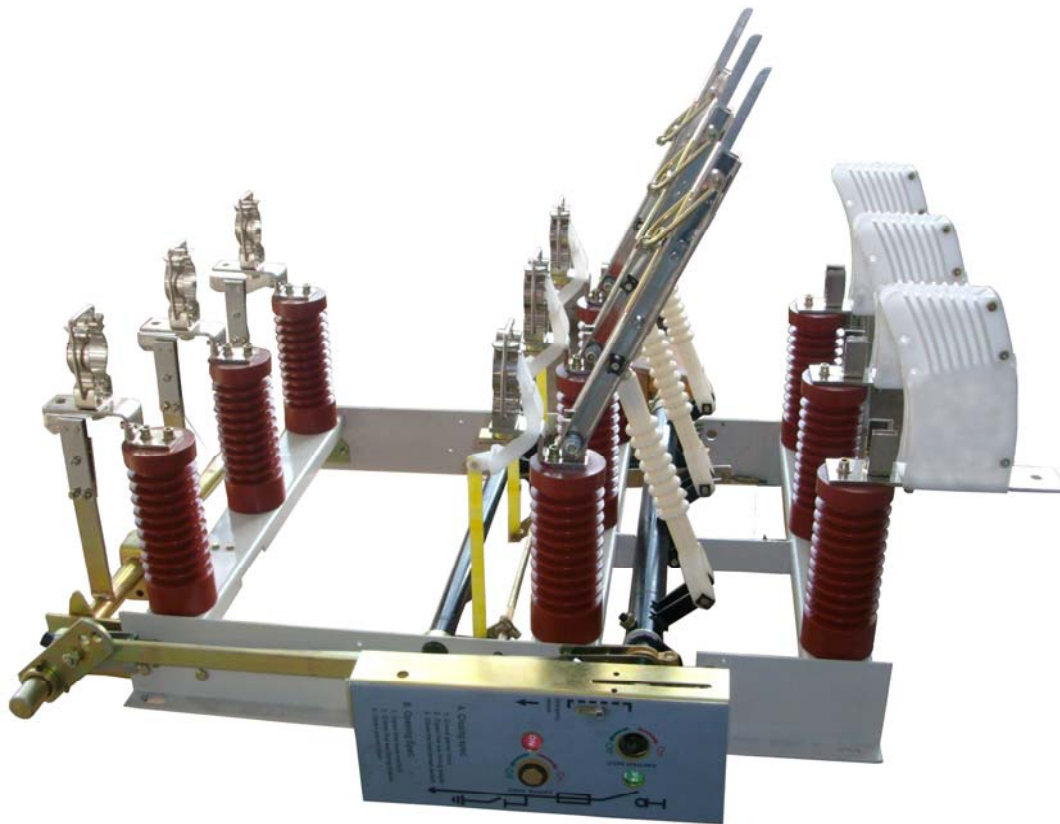




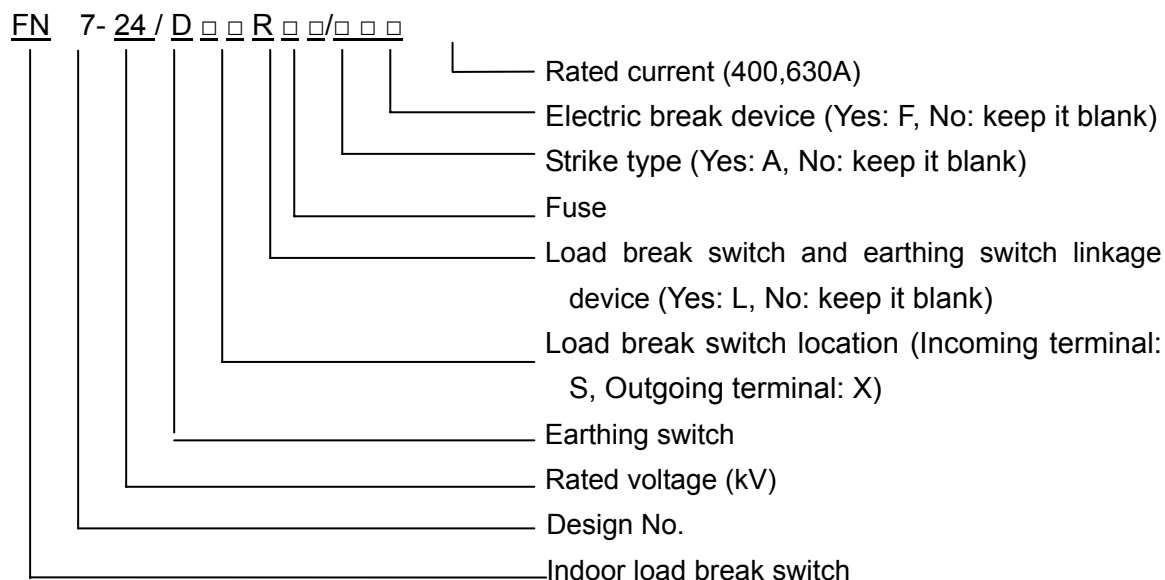
FN7-24(DR) Model

Indoor Air Break Load Break Switch

1. Main feature and scope

FN7-24(DR) type AC HV indoor load break switch applies to three-phase power supply system of rated voltage 24kV and AC 50/60 Hz. It used to switch on and off load-breaking current and short-circuit current.

Mode and its meaning:



2. Ambient condition

Ambient temperature: $-25^{\circ}\text{C} \leq T \leq +40^{\circ}\text{C}$;

Altitude: $\leq 1000\text{m}$;

Relative humidity: daily average $\leq 95\%$, monthly average $\leq 90\%$;

Applicable occasions should free from inflammables, explosives, corrosives and severe vibration.

3. Main mode and technical specification

Main mode, see the table1;

Rated technical specification, see the table2;

Rated technical specification for fuse, see the table3.

4. Structure

The load break switch is composed by base, insulator, moving-blade, fixed blade, arc-extinguishing blade, arc-contact, arc-extinguishing chamber, mechanism device, spring structure, fuse-CS6 and fuse-circuit plate operating mechanism. This load break switch can combine to earthing switch, which has the inter-locking device.

5. Function

Closing operation: The manual closing signal will be transmitted by gear mechanism to the spring mechanism in the operation mechanism. When the spring stops the energy storing, it will release the energy. Finally, the connect blade will be closed in high-speed;

Opening operation and arc-extinguishing principle: Under the manual opening operation, the opening spring will release energy, after the main connect blade breaking, the arc-connect blade will break instantaneous;

There is some arc at the instant of the opening of the arc-blade. The arc-extinguishing chamber will cooling the arc and produces the gas to extinguish the arc;

The load break switch with limited current fuse with bump device, which has automatic trip device. Combined to the non fully coherent fuse, the load break switch will break by itself, and it can be re-closed after the trip operation;

Load break switch with earthing switch does inter-lock through link mechanism;

When the fuse can not tie in the full type load break switch, it can use the fission load break switch;

Load break switch with automatic trip device, which can install the electric break device.

6. Overall dimension and installation

Overall dimension, see the Fig.1.

If there are two powers, the linkage of two switches will use the anti-fault process lock.

The principle drawing of load break switch with motor switching device see attached Fig20.

7. Installation and check

If the product had checked and got the qualification, it can not be adjust and operate before be installed.

The load break switch should be installed on the vertical wall and metal frame, with 4~6 M12 bolts, and fixed on the installation hole.

Linkage switch, busbar and copper busbar should be adjusted before the installation, and fixed by bolt to avoid the destruct of the overall dimension, conduct and connect.

This load break switch has the CS6 or circle plate manual operation mechanism. It is closed when the hand is upward, otherwise, it is open.

After the end of the installation of operation mechanism of load break switch and busbar, it should do open and close operation more than 5 times, make sure the moving-parts are flexible, the connect of conduct are well and the moving-blade and fixed blade are fixed right.

8. Usage and maintenance

The user should check the products and incident technical documents when open the packing of the load break switch accord the packing list, as well as whether there is any destruction through the transportation and keeping process;

Move the dust on the product and clean the insulator and earthing parts;

It should plaster neutral Vaseline on the conduct part and mechanical frictional part;

Check whether the wiring are right and earthing are credible after the installing;

It should check and maintenance annually. After 20 break rated load, the switch should be maintenance roundly;

The maintenance should not be electriferous, and also for insulator and connect of terminal;

The operator should familiar to the features, structure and installation of this kind load break switch.

9. Attached documents with ex-works products

One packing list;

Product's certification

Operation mechanism and other accessories

10. instruction for order

Type, name and quantity of load break switch;

If there is a fuse, please mark the type and the rated current of fuse.

Main Technical Data:

Note: (-) No (Δ) Yes

Table1

Name	Type	All-type	DS	DX	L	R	RA	F
			The earthing switch at the incoming terminal	The earthing switch at the outgoing terminal	Linkage device	HRC Fuse	Strike fuse	Electric break device
Load break switch	Without trip device	FN ₇ -24	-	-	-	-	-	-
		FN ₇ -24DSL	Δ	-	Δ	-	-	-
		FN ₇ -24DXL	-	Δ	Δ	-	-	-
		FN ₇ -24R	-	-	-	Δ	-	-
		FN ₇ -24DSL _R	Δ	-	Δ	Δ	-	-
		FN ₇ -24DXL _R	-	Δ	Δ	Δ	-	-
	With strike trip device	FN ₇ -24RAF	-	-	-	-	Δ	Δ
		FN ₇ -24DSL _{RAF}	Δ	-	Δ	-	Δ	Δ
		FN ₇ -24DXL _{RAF}	-	Δ	Δ	-	Δ	Δ

Rated specification:

Table2

Rated voltage (kV)	Max. voltage (kV)	Rated current (A)	1 min. power frequency withstand voltage (kV)	1s thermal stable current (virtual value) (kA)	Dynamic stable current (Peak value) (kA)	Short current making current (kA)	Rated basic insulation level(BIL) (kV)	Rated mechanical life (times)
20/22	24	400	50/60	16	40	40	125/145	2500
		630	50/60	20	50	50	125/145	2500

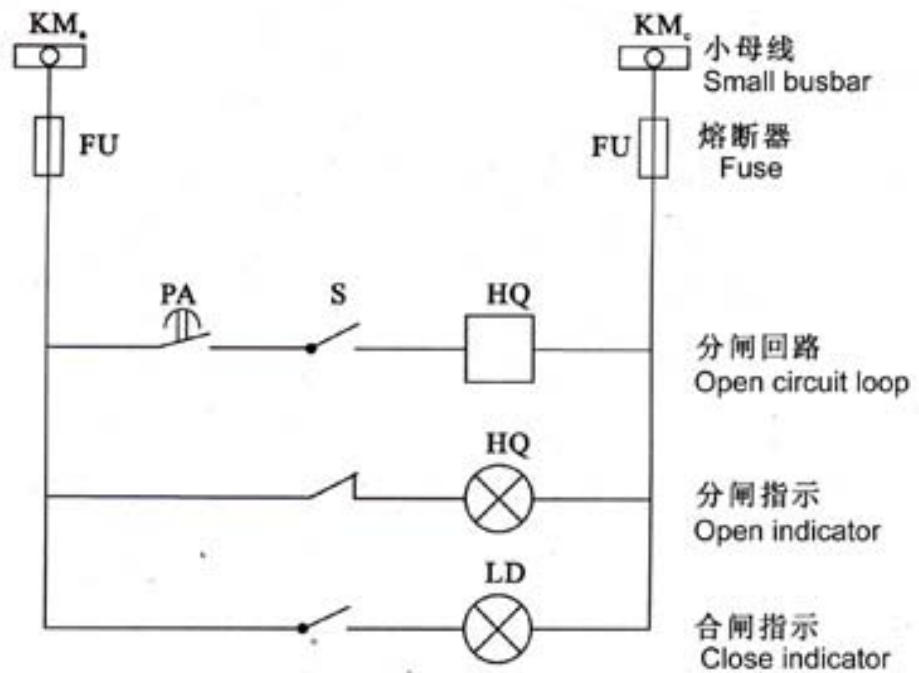
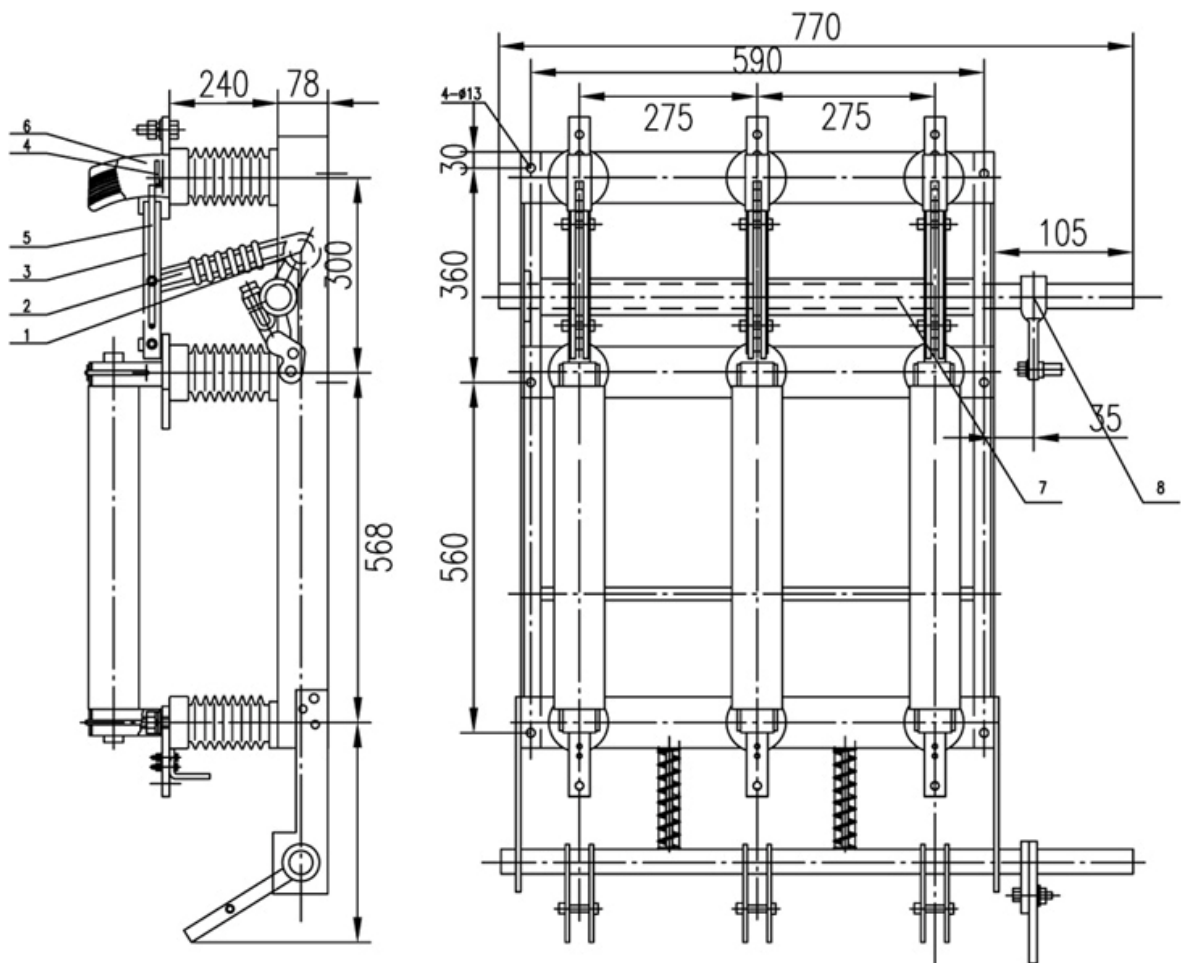


Fig.1 FN7-24DR Outline Diagram Drawing



No.	Code	Name	Type & Specification	Quantity	Remark
1	FU	Fuse	FS-10.5A	2	Provide by user
2	PA	Break button	TE-XB2-EA	1	Provide by user
3	S	Assistant switch	F9-4III/L AC 220V 5A	1	2K2B
4	HQ	Break electromagnet	AC 220V	1	3kg
5	HD LD	Indicator light	TE-XB2-EA	1	Provide by user

Fig.2 FN7-24(DR) Electric Circuit Principle Diagram