

FZRN21-12D Indoor AC High Voltage Vacuum Load Break Switch-Fuse Combination Apparatus

Summary

FZRN21-12D indoor vacuum load break switch-fuse combination apparatus applies to power system of rated voltage 7.2~12kV, AC 50/60Hz. It distributes power, control and protect electric apparatus. The apparatus replace expensive VCB to service in electricity network. It can also be used in rural and urban power supply systems to break and make under rated current and short-circuit current when the circuit breaks down. It is also applicable to control and protect transformers. It is made as per IEC62271-105.



Ambient condition

1. Altitude: $\leq 1000\text{m}$;
2. Ambient temperature: $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$;
3. Relative humidity: daily average $\leq 95\%$, monthly average $\leq 90\%$;
4. Earthquake intensity: ≤ 8 degree;
5. Applicable occasions should free from inflammables, explosives, corrosives and severe vibration.

Product feature

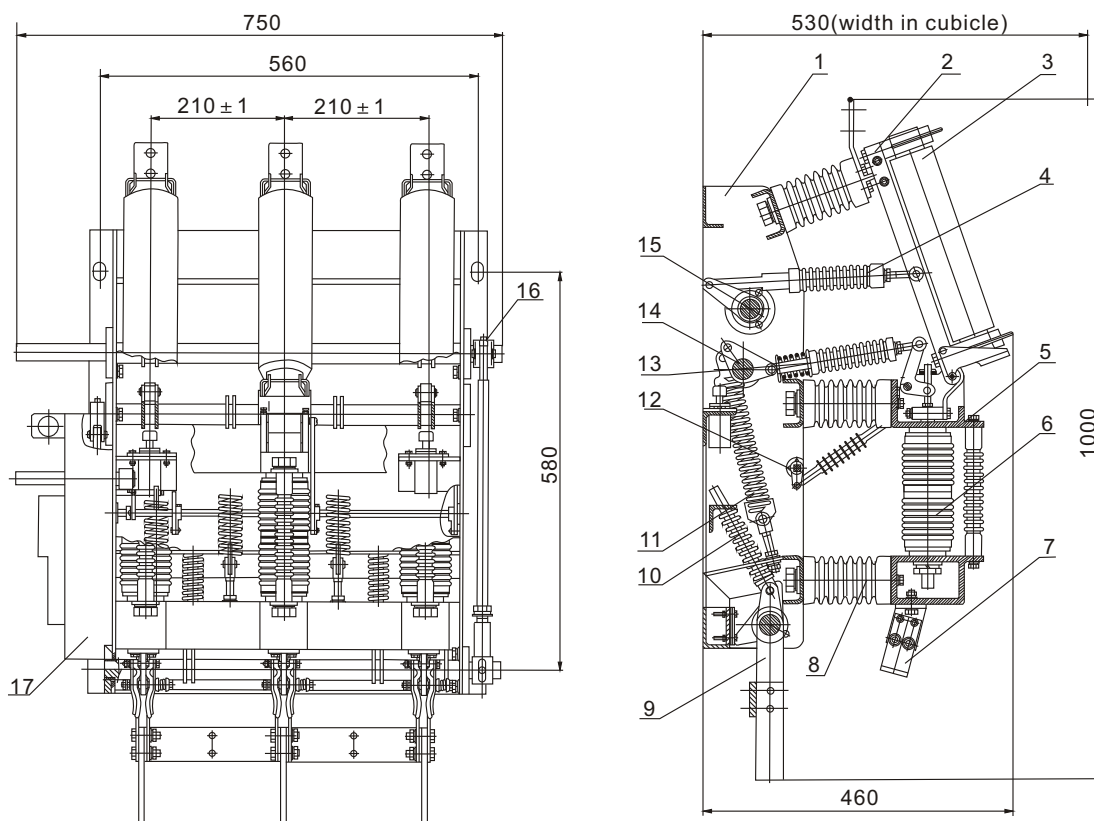
The load break switch is an interlock device of three-phase. The LBS is operated by electric motor or independent manual. The opening operation is of both independent manual and electric motor. There is reliable interlock between vacuum arc-extinguish chamber, disconnect blade and grounding blade. When the fuse breaks down, the load-breaking switch opens by the interlock mechanism. The load break switch can be mounted in switchgear and hang-on the wall to protect transformers.

Technical specification

| No. | HRC Fuse | Unit | Data |
|-----|---|------|------------|
| 1 | Rated voltage | kV | 12 |
| 2 | Rated frequency | Hz | 50/60 |
| 3 | Rated maximum current of fuse | A | 125 |
| 4 | Transfer current | A | 1550 |
| 5 | Opening duration of switch activated by fuse | ms | 40 ± 5 |
| 6 | Rated short-circuit breaking current | kA | 31.5 |
| 7 | Rated short-circuit making current (peak) | kA | 80 |
| 8 | 1min. PF withstand voltage (phase to phase/to earth, across open contacts) | kV | 42/49 |
| 9 | Lightning impulse withstand voltage (phase to phase/to earth, across open contacts) | kV | 75/85 |
| 10 | Fuse impinger model | | Middle |

| No. | LBS | Unit | Data |
|-----|---|-------|--|
| 1 | Rated voltage | kV | 12 |
| 2 | Rated frequency | Hz | 50/60 |
| 3 | Rated current | A | 630 |
| 4 | Rated active load breaking current | A | 630 |
| 5 | Rated closed-loop breaking current | A | 630 |
| 6 | 5% of active load breaking current | A | 31.5 |
| 7 | Rated breaking current of charging cable | A | 10 |
| 8 | Rated breaking current of no-load transformer | A | No-load current of 1250kVA transformer |
| 9 | 1min. PF withstand voltage(phase to phase/to earth, across open contacts) | kV | 42/49 |
| 10 | Lightning impulse withstand voltage (phase to phase/to earth, across open contacts) | kV | 75/85 |
| 11 | 4s rated short-time withstand current | kA | 31.5 |
| 12 | Rated peak withstand current | kA | 80 |
| 13 | Rated short-circuit making current | kA | 80 |
| 14 | Mechanical life | Times | 10,000 |
| 15 | Permissible corrosion thickness of contact | mm | 2 |
| 16 | C/O operating moment | N · m | ≤ 200 |

Outline dimension



- 1.Framework 2.Disconnect blade 3.Fuse 4.Insulating bar 5.Upper bracket
 6.Vacuum interrupter 7.Fixed contact 8.Insulator 9.Earthing blade
 10.Earthing spring 11.Opening spring 12.Trip driving device 13.Insulating bar
 14.Main shaft 15.Auxiliary axis 16.Adjusting bar 17.Spring operating mechanism