ZN12-12/40.5 indoor high voltage vacuum circuit breaker is a type of 12kv,50HZ three phase alternating switch. The mechanism and vacuum interrupter are designed to be a whole. Specialized 3AF type spring operating structure from Siemens can be operated by manual or carry out direct current energy saving operation.

It's can be designed as 210mm,230mm,250mm,275mm and other kinds of phase space, which matches better with different kinds of switchgear, such as handcart type JYN2-12,JYN6-12,KYN2-12

## **Environment Condition:**

- Ambient temperature:-25°C~+40°C
- Altitude: ≤1000m
- Daily average relative humidity: ≤95%; Monthly average relative humidity: ≤90%
- Daily average saturated vapor pressure: ≤2.2KPa; Monthly average value : ≤1.8KPa
- Earthquake intensity: ≤8 degree
- No fire, explosion, severe vibration, chemical corrosion and serious pollution

## **Technical Data**

| 1  | Rated voltage   | KV    | 12, 40.5                                    |                     |                |  |  |
|----|---|-------|---|---------------------|----------------|--|--|
| 2  | Rated lighting impulse withstand voltage                        | KV    | Phase to phase or to Ground 75, fracture 80 |                     |                |  |  |
| 3  | Rated short-time power frequency withstand voltage              | KV    | Phase to phase or to Ground 42, fracture 48 |                     |                |  |  |
| 4  | Rated short-circuit breaking current                            | KA    | 20, 25                                      | 31.5                | 40             |  |  |
| 5  | Rated current   | А     | 630/1250/1600                               | 1250/1600/2000/2500 | 1600/2000/3150 |  |  |
| 6  | Rated thermo stability current(valid)                           | KA    | 25  | 31.5                | 40             |  |  |
| 7  | Rated dynamic stability current(peak)                           | KA    | 63  | 80                  | 100            |  |  |
| 8  | Rated short-circuit making current(peak)                        | KA    | 63  | 80                  | 100            |  |  |
| 9  | Rated operations of short-circuit breaking current interruption | Times | 50(40kA is 30)                              |                     |                |  |  |
| 10 | Rated working current of over current and tripping coil         | A     | 5   |                     |                |  |  |
| 11 | Rated operating sequence  |       | 0-0.3s-CO-180s -CO/0-180s-CO-180s-CO(40KA)  |                     |                |  |  |
| 12 | Rated current of auxiliary switch                               | Α     | AC10,DC5                                    |                     |                |  |  |
| 13 | Rated voltage of energy saving release                          | V     | AC.DC220 AC.DC110                           |                     |                |  |  |
| 14 | Closing time  | Times | ≤75   |                     |                |  |  |
| 15 | Opening time  |       | ≤60(40)                                     |                     |                |  |  |
| 16 | Power of energy saving motor                                    | W     | 275   |                     |                |  |  |
| 17 | Energy saving time  | S     | ≤15   |                     |                |  |  |
| 18 | Mechanical life   | Times | 20000                                       |                     |                |  |  |

## Mechanical characteristics adjustment data

| 1 | Rated contact stroke                           | mm  | 11 ±1               |         |         |  |
|---|--|-----|---------------------|---------|---------|--|
| 2 | Contact over travel                            | mm  | 8±2                 |         |         |  |
| 3 | Average opening speed                          | m/s | 1.0~1.8             |         |         |  |
| 4 | Average closing speed                          | m/s | 0.6~1.1             | 0.8~1.3 | 0.8~1.3 |  |
| 5 | Contact bouncing duration at closing operation | ms  | ≤2                  |         |         |  |
| 6 | Core distance between phases                   | mm  | 210,230,250,275,280 |         |         |  |
| 7 | Three-pole simultaneity                        | ms  | ≤2                  |         |         |  |
| 8 | Conductive circuit resistance of each phases   | μΩ  | <40                 |         |         |  |

## **Outline Dimension**

