

Horizontal Break Switch Product Specification

Horizontal break disconnect switches are electrical devices used to isolate parts of an electrical circuit, providing a safe means to de-energize a section of the system for maintenance or fault isolation. These switches operate by moving the contacts in a horizontal direction, physically separating them to interrupt the electrical flow. When the switch is in the open position, the contacts are fully separated, ensuring no electrical current can pass through the circuit, which helps to prevent electrical hazards and allows for safe work on the system.

Typically used in high-voltage applications such as power substations, industrial plants, and utility systems, horizontal break disconnect switches are known for their simplicity and reliability. They are especially effective in situations where space and mounting configuration require a horizontal separation of contacts rather than a vertical one. The design ensures efficient current interruption, with an emphasis on reducing electrical arcing during the disconnection process.

Key features of horizontal break disconnect switches include:

1. **Horizontal Contact Separation:** Contacts move horizontally to break the electrical connection.
2. **High-Voltage Capability:** Designed to handle high-voltage circuits in substations and power transmission systems.
3. **Reliability:** Provides a dependable means of isolating electrical circuits with minimal wear over time.
4. **Safety:** Offers a clear, visible break in the circuit, indicating when it is safely de-energized.
5. **Space Efficiency:** Ideal for environments where horizontal mounting and installation are preferable or necessary.

These switches are an essential part of ensuring the safe and effective operation of electrical distribution systems, providing protection to both personnel and equipment during maintenance or fault conditions.

Application

In substations, horizontal break disconnect switches are commonly used to isolate sections of the electrical network for maintenance, troubleshooting, or fault isolation. Their design, which moves contacts horizontally to achieve a break in the circuit, is particularly suited for applications where space constraints or specific installation configurations require a horizontal switch operation. These switches allow operators to safely disconnect high-voltage equipment

and ensure that parts of the system can be worked on without the risk of electrical hazards. By providing a visible gap when the switch is open, horizontal break disconnect switches enhance safety for personnel performing maintenance or repairs. Their reliable performance and ability to handle high-voltage circuits make them essential components in substations, where maintaining safe operation and minimizing downtime are critical for the stability of the power grid.

The construction of substation horizontal break disconnect switches involves durable and high-quality materials designed to handle high-voltage applications and harsh environmental conditions. The switch features a robust metal frame that supports the horizontal movement of the contact mechanism, ensuring reliable and smooth operation. The contacts, typically made from copper or silver alloys, are designed to provide low resistance and high conductivity while withstanding wear over time. Insulating components, often made from porcelain or composite materials, are used to prevent electrical arcing and provide proper separation between live parts. The switch's mechanical components, such as the operating lever, pulleys, and gear mechanisms, are engineered for durability and ease of use, ensuring minimal maintenance requirements. To protect against environmental factors, the switch is often coated with corrosion-resistant materials and sealed against dust, moisture, and extreme weather conditions. Additionally, visible indicators are included to confirm whether the switch is in the open or closed position, providing clear communication to operators and ensuring safety during maintenance. The overall design is focused on reliability, safety, and ease of installation and operation, meeting stringent industry standards for electrical safety.

Offerings

kV	BIL kV	AMP cont	Mom kA
15	110	2000	100
		3000	120
23	150	2000	100
		3000	120
34	200	2000	100
		3000	120
46	250	2000	100
		3000	120
69	350	2000	100
		3000	120
115	550	2000	100
		3000	120
138	650	2000	100
		3000	120
161	750	2000	100
		3000	120
230	900	2000	100
		3000	120
500	1050	2000	100

		3000	120
800	1200	2000	100
		300	120