

S&C Alduti-Rupter® Switches 46-kV Double-Break Style and Double-Break Integer Style



S&C's 46-kV Double-Break Style and Double-Break Integer Style Alduti-Rupter Switches have been redesigned for higher performance, with a streamlined profile that's perfect for both manual and automated switching applications on modern sub-transmission systems.

Improved Operation, Increased Performance

Reverse-loop contacts make the switch easier to operate, even after years in the field—while providing the same short-time performance and higher fault-closing capability.

Substantial Endurance and Ice-Breaking Ratings

Improved mechanical endurance accommodates 2,000 mechanical operations, and $\frac{3}{4}$ -inch (19-mm) ice-breaking ratings ensure robust and lasting switching performance, even in challenging environments.

Slim, Modern Profile

The redesigned switch is approximately one foot (305 mm) narrower in depth, resulting in a compact, space-saving profile and a streamlined look.

Automation-Friendly

An S&C 6801M Automatic Switch Operator and current and voltage sensors can be added to provide a fully automated switch—either from the factory or retrofitted in the field.



Switch Operation

When the switch is closed, each interrupter shunt arm is positioned between the auxiliary return arm and the shunt contact. The return arm is an extra visual assurance that the interrupter was reset to the Closed position and is ready for the next Open operation. See Figure 1.

As the switch is opened, each interrupter shunt arm engages the shunt contact, transferring current through each pair of interrupters. The curved shape of the shunt contact guides the shunt arm through its travel and centers the arm on the contact surface. A copper-bronze alloy inset minimizes display. See Figure 2.

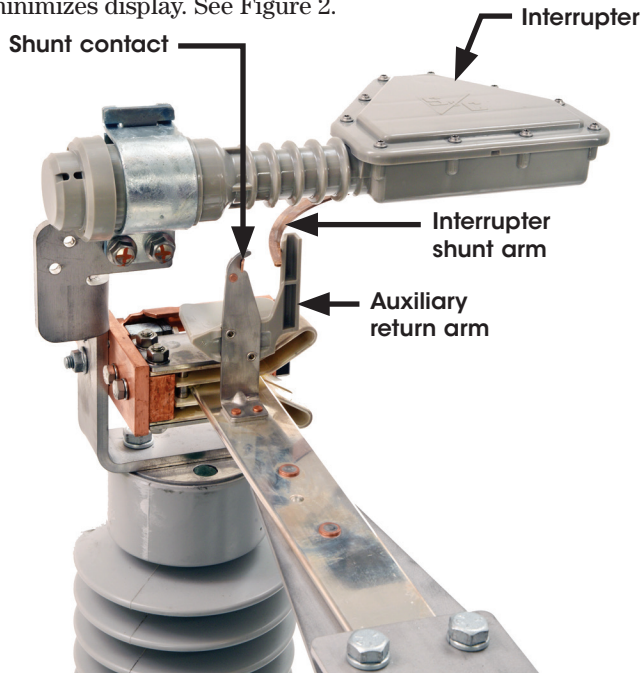


Figure 1. Switch in the Closed position. The interrupter shunt arm is between the shunt contact and the auxiliary return arm.

As each blade reaches approximately 45 degrees open, the latch inside the interrupter holding the spring-loaded trailer releases. This provides a consistent interrupting speed, regardless of the speed of the operating pipe. As the blades open to 90 degrees, the interrupter shunt arm snaps back into position beneath the interrupter.

As the switch is closed, each interrupter shunt arm is guided into position by the curved back of the shunt contact as the reverse-loop jaw contacts guide the blade into place. See Figure 3. The shunt arm again comes to rest between the return arm and the shunt contact, as shown in Figure 1.

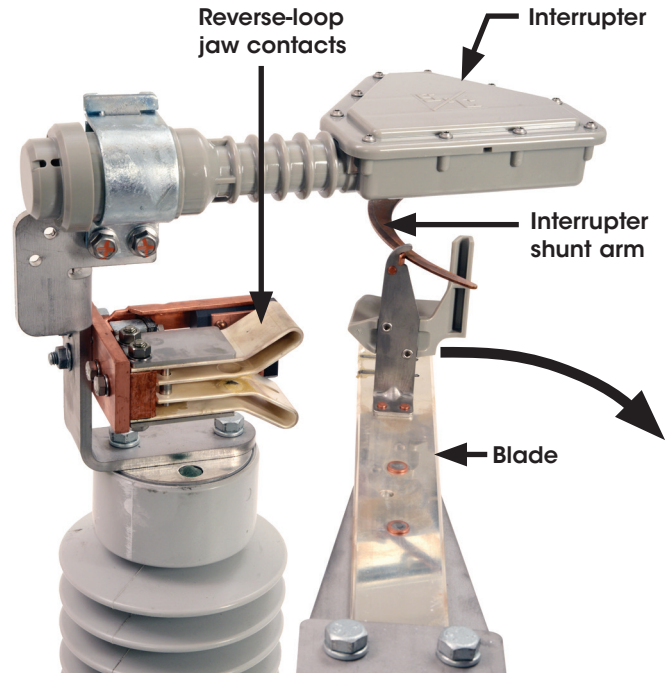


Figure 2. Switch during opening. The interrupter shunt arm engages the shunt contact, transferring current through each pair of interrupters.

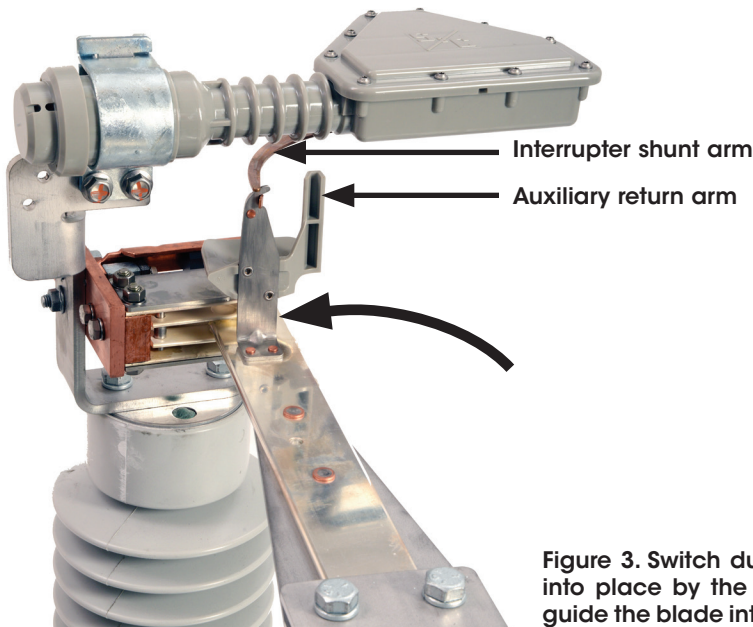


Figure 3. Switch during closing. The interrupter shunt arm is guided into place by the shunt contact as the reverse-loop jaw contacts guide the blade into place.

Switch Details

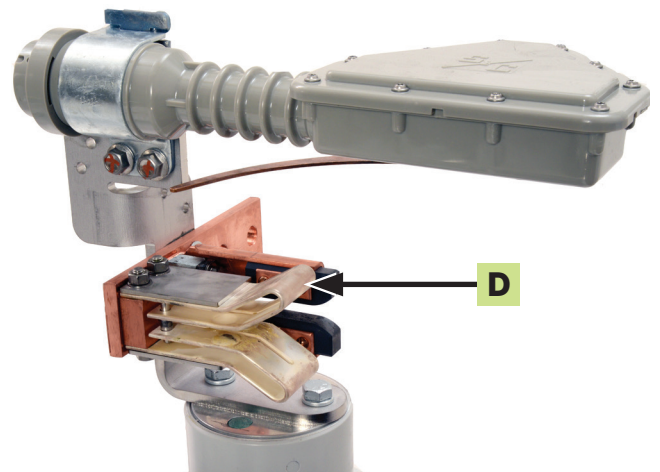
- A No-External-Arc Interrupter.** High-performance, speed-independent, UV-resistant polycarbonate thermoplastic interrupters
- B Shunt Arm and Operating Cam.** Design ensures the interrupters will be in the proper Open/Close position, while also reducing installation time and complexity
- C Blade.** Busbar-style blade is made of nickel-silver-plated copper and is aligned at the factory without any requirement for field adjustment
- D Reverse-Loop Jaw Contacts.** Redesigned jaw-contact assembly uses a reverse-loop design improves ease of operation while retaining momentary, 3-second, and fault-closing current capabilities



Optional Features and Accessories^①

- **Provisions for power operation by an S&C 6801M Automatic Switch Operator.** Available for rotating- or reciprocating-type operating mechanisms
- **Sensors.** One voltage/three current, three voltage/three current, or six voltage/three current, available on integer-style switches
- **Ice shields**—Enable ¾-inch (19-mm) ice-breaking ratings on opening and closing

① For a full list of optional features and accessories, please consult S&C Specification Bulletin 761-31.



Switch Ratings

Style	kV			Amperes						Fault-Closing Capability, Amperes Peak	
	Nom.	Max	BIL	Cont.	Interrupting	Line-Dropping	Cable-Dropping	Mom. (Peak)	Three-Second	Two-Time Duty-Cycle	
Three-pole double-break	46	48.3	250	630	630	15	50	65 000	25 000	■	
Three-pole double-break integer	46	48.3	250	630	630	15	50	65 000	25 000	36 000▲	

■ Three-pole double-break style switches, while provided with design features for fault closing, are not assigned fault-closing ratings or capabilities because special mounting arrangements may deny the requisite high-speed closing behavior.

▲ Fault-closing *rating* when power-operated by an S&C 6801M Automatic Switch Operator and fault-closing *capability* when power-operated by an S&C Type AS-1A or Type AS-10 Switch Operator.