

Type BP3 By-Pass Switch

• 3-Pull • 14.4, 25 & 34.5kV

U.S. Patent No. 6,525,274

Principal Application: Recloser Maintenance

By design, the Type BP3 Switch provides an economical means for bypassing and disconnecting a pole-mounted distribution recloser. This permits de-energized periodic maintenance of the recloser without interrupting service. The BP3 Switch accomplishes this by a combination of three disconnect switches mounted on a common base. By operating the blades in proper sequence, the recloser is bypassed and isolated from the distribution system.

Rated at 600 Amps, the BP3 Switch is available in nominal ratings of 14.4kV - 110kV LIW*, 25kV - 125kV or 150kV LIW*, and 34.5kV - 150kV LIW*. All are available with either a right or left opening direction of the by-pass blade.

*LIW = Lightning Impulse Withstand

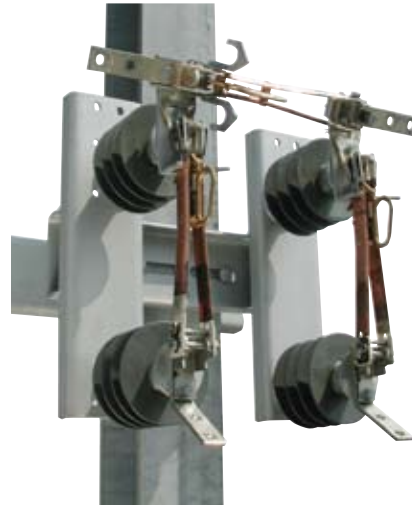
Operation

Figures below illustrate the BP3 By-Pass Switch operation.

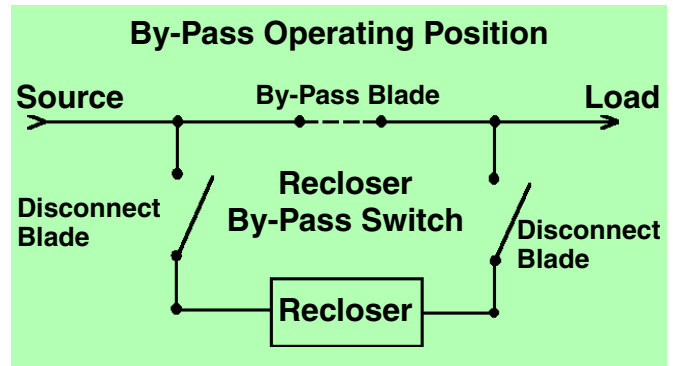
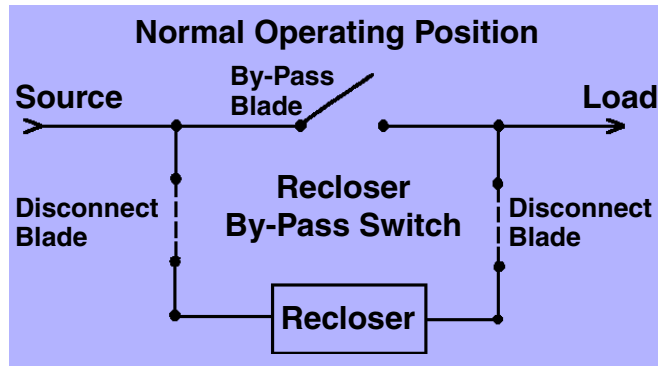
In normal operation, the by-pass switchblade is open and the two disconnect blades are closed, allowing the recloser to be in the circuit.

When recloser maintenance, testing, repair or removal is required, first close the by-pass blade to provide a parallel current path. Then open the recloser's internal contacts. And last, open both disconnect blades of the by-pass switch.

In this way, service continuity is maintained and the recloser is isolated from the line. To put the recloser back in service, the switch operating procedure is reversed.



Back Strap Mounting and Pole Mounting variations available



Performance Specifications

• 600 Amps Continuous • 65 kA Peak Withstand

Max. Design, kV	Lightning Impulse Withstand Rating, kV	Leakage Distance, in.	Weight, lb.
17.1	110	17.2	56
29	125	21.9	62
29	150	28.2	65
38	150	28.2	65

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BP3 Switch Components

1. Terminal Pads (All)

Tin-plated high conductivity copper, NEMA two-hole terminal pad. Parallel Groove connectors (ATC1343) and captive hardware are available as options.

2. Loadbreak Hooks

Hot dipped galvanized steel hooks. To allow use of portable loadbreak tool. Provided on by-pass blade only.

3. By-Pass and Disconnect Blades

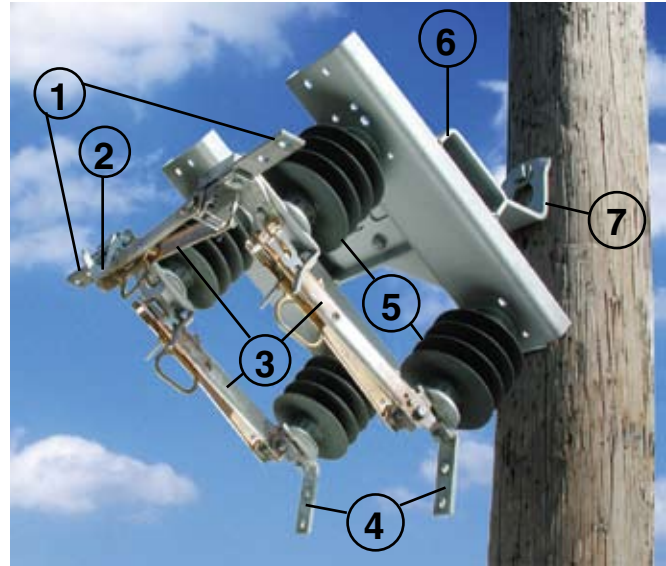
The by-pass and disconnect blades are of the same construction as those used on the M3 Hookstick Disconnect Switch. They are high conductivity copper blades, silver-plated at all contact areas. Stainless-steel back-up springs are used to maintain efficient current transfer between the stationary contact and the end of the blade. The by-pass blade is available in either right or left opening configurations (hinge on right or left). See Catalog page 14B-2 for further description.

4. Angled Terminal Pads

Angled construction allows for easier connection to a recloser while maintaining maximum pole clearance.

5. Insulators

ESP™ silicon alloy rubber, 2.25-inch bolt circle insulators. See Catalog page 14B-3 for further description.



6. Switch Base

Welded-construction galvanized steel base provides maximum rigidity to maintain consistent switch alignment for positive blade operation.

7. Pole Mounting Bracket

Single-piece galvanized steel mounting bracket facilitates ease of installation. A backstrap mounting option also is available.

Feature —

- ESP™ Silicon Alloy Rubber
2.25 in. Bolt-Circle Insulators
- Fully-welded mounting base
- Angled Terminal Pads
- Utilizes live parts from M3 switches

Advantage —

- Time proven insulator material provides maximum leakage distance and minimizes weight, up to 25% lighter than competitive designs
- Maximum rigidity, eliminates possibility of misalignment compared to bolt-together designs
- Maintains switch alignment for smooth, positive blade operation
- Facilitates connection to recloser with maximum pole clearance
- Time proven design provides reliable service under anticipated service conditions

Switch Variations

1. Right or Left By-Pass Blade Opening (BP3R or BP3L)

Right or left by-pass blade opening may be specified. A right opening by-pass blade opens to the right of the operator when standing in front of the switch. A left opening by-pass blade opens to the left. Illustrations here show only Right by-pass switch blade opening. Left by-pass switch blade opening will be opposite as shown but does not change installation or operation procedures.

2. Switch Mounting — Three options available are:

- **No Mounting Bracket (No option letter in Cat. No.)**
Provides holes and slots in the switch base for direct base to a vertical structure mounting without the use of a back strap or pole mounting bracket. The structure must be drilled to match the base mounting holes or slots. The user supplies the mounting hardware.
- **Back Strap (Option B)**
Provides a galvanized steel back strap and hardware for vertical structural applications. Mounting hardware supplied consists of two each 1/2"-diameter by 8" long and 10" long carriage bolts with square nuts and flat washers.

• Pole Mounting Bracket (Option M)

Provides a galvanized steel bracket for wood pole mounting and hardware to attach the switch to the bracket. The user supplies the bracket-to-pole hardware. (If the utility pole is other than a wood pole, contact your factory representative.)

3. Terminal Connectors — Three options available are:

- **No Terminal Hardware (No option letter in Cat. No.)**
The user supplies the terminal connectors and mounting hardware.
- **Captive Hardware (Option C)**
Provides 1/2" diameter by 1 3/4" long stainless bolt secured into each terminal pad hole. Each bolt is supplied with a hex nut and lock washer. Terminal connectors supplied by the user.
- **Terminal Connectors (Option P)**
Four fortified cadmium plated aluminum parallel groove terminal connectors (ATC1343) with terminal pad mounting hardware supplied. The connectors accommodate conductor sizes ranging from No 2 solid copper through 500 MCM copper or aluminum.

Type BP3 By-Pass Switch

Ordering Information
Catalog No. System

BP3

R = Right opening
L = Left opening

INSULATION	
1 = 14.4kV, 110kV LIW* (17.1kV max. design, 17.2" leakage distance)	3 = 25kV, 150kV LIW* (29kV max. design, 28.2" leakage distance)
2 = 25kV, 125kV LIW* (29kV max. design, 21.9" leakage distance)	4 = 34.5kV, 150kV LIW* (38kV max. design, 28.2" leakage distance)

*LIW = Lightning Impulse Withstand

OPTIONS
B = Mounting, Back Strap (not available with Option M)
C = Captive Terminal Hardware (not available with Option P)
M = Mounting, Pole Bracket (not available with Option B)
P = Terminal Connectors (ATC1343, 4 per switch) (not available with Option C)

