

TYPE CB CENTER BREAK SWITCH

030-180117.1
(Rev. of 030-170331.1)

3-PHASE, GROUP-OPERATED (SUBSTATION AND TRANSMISSION APPLICATIONS)



- Horizontal upright, vertical or underhung mounting
- 23KV through 345KV
- 1200A through 4000A
- Manual or motor operated control mechanism

*Available in Copper

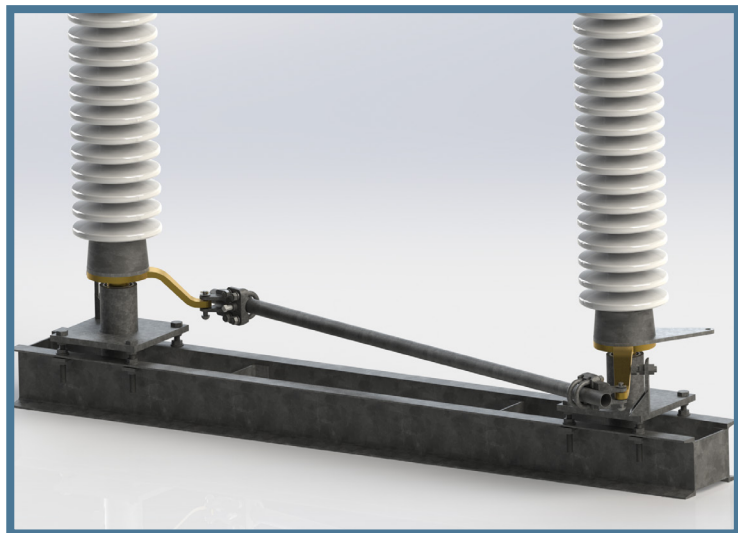
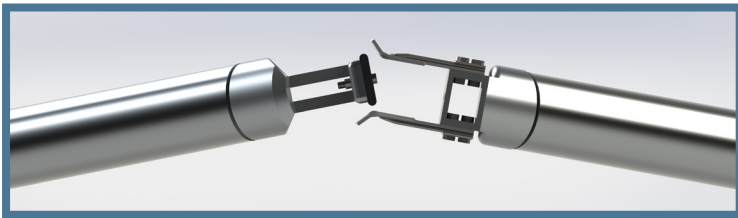


MANUFACTURER OF HIGH VOLTAGE PRODUCTS SINCE 1914
1.800.426.4380

FEATURES OF TYPE CB SWITCH

A 3-phase, group operated, center break, air break switch for substations and transmission lines. Since 1961, components of this design have proven their adaptability to system requirements and the validity of the philosophy "simplicity means reliability."

- Tubular or flat truss type blade.
- Silver contact surfaces.
- Assembled and adjusted at the factory.
- Switch controls available for manual (swing handle or gear), or motor driven operation.
- Available with various current interrupting devices.
- Ratings from 23kV to 345kV --- 1200A to 4000A.
- Leveling nuts for uneven mounting surfaces.



Positive Contact Assembly

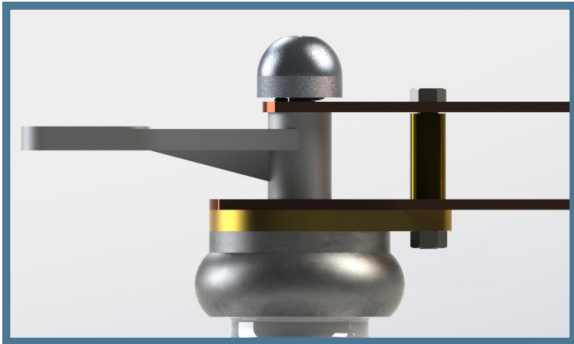
Current transfer points are independent contact shoes with silver to silver contact surfaces (heavy plating, inserts or flame spray metallizing as the application requires). Individual stainless steel backup springs on each shoe assures high pressure contact wiping on the tubular blade switch. Phosphor bronze backup springs perform the same function on the flat blade switch.

Maintenance Free Bearing Design and Positive Linkage Tie

Each insulator stack is supported by double ball bearings permanently lubricated and sealed for the life of the switch. The two rotating insulators are locked together through a maintenance-free tie rod which assures proper alignment at the switch contacts. The base assembly has open position and close position stops for a 90° full throw of the switch.

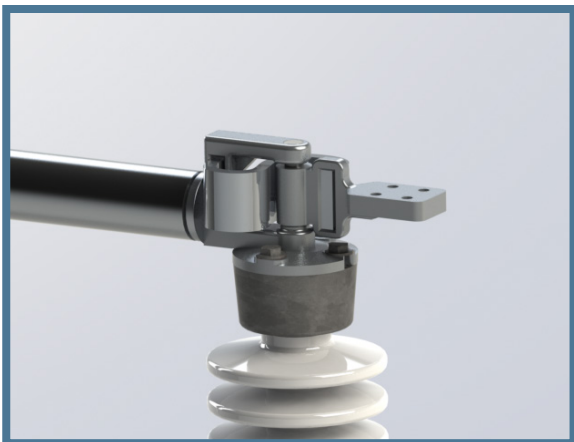
Copper Positive Hinge Contact

The hinge swivels on a stainless steel bearing rod. A high pressure stainless steel spring, outside the current path, applies pressure to the silver to silver current transfer points.



Laminate Hinge Contact

The hinge swivels on a stainless steel bearing rod. Hinge design utilizes a welded lamination to carry the current.



OPERATING CONTROL MECHANISM

The standard control mechanism is the torsional type using galvanized steel pipe. This control includes a toggle arrangement to assure mechanical locking of the switch poles in the open and closed positions. This arrangement gives the center break switch maximum mechanical capability for ease of operation under normal and icing conditions. The manual swing handle or optional gear operator can be padlocked in either the open or closed position. The torsional control pipe can be converted to power operation.

CURRENT INTERRUPTING DEVICES

Arcing Horns

Arcing horns are designed to prevent arcing at the main switch contacts. They have no interrupting rating, however, they are commonly used to interrupt small values of current such as transformer magnetizing current, or the charging current of a short length of line.

Quick-Break

The quick-break circuit interrupter is capable of interrupting a limited amount of line charging or transformer magnetizing current. It provides high speed contact separation by the means of a spring loaded whip.

RVI-38 Vacuum Interrupter

The vacuum interrupter will permit currents up to 2000 amperes to be interrupted. Loop splitting or parallel switching up to 161kV, if peak recovery voltage does not exceed 30kV. It is in the power circuit for only a few seconds during the opening operation, and is not in the circuit while the switch is closed or closing. Continuous, momentary, and impulse ratings of the switch are unaffected.

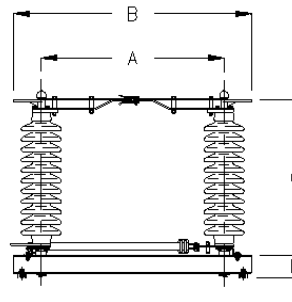
TYPE CB SWITCH SPECIFICATIONS

030-180117.1
(Rev. of 030-170331.1)

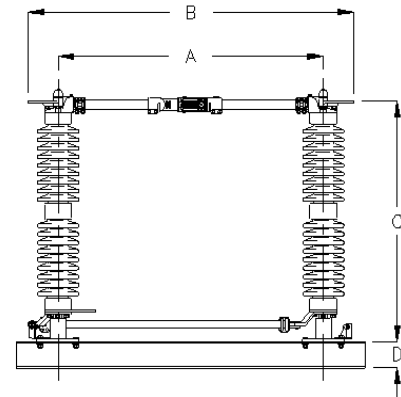
| kV Nom. (kV Max.) | Amps Continuous (kA Momentary) | Insulator T.R. No. | B.I.L. Rating (kV) | Catalog Number | Dimensions (in) | | | | Approx Single Pole Weight (Lbs.) |
|--------------------------------------|--------------------------------|--------------------|--------------------|----------------|-----------------|---------|-----------|-----------|----------------------------------|
| | | | | | A | B | C | D | |
| COPPER TRUSS BLADE SWITCHES | | | | | | | | | |
| 34.5 (38) | 1200 (61) | 210 | 200 | CCBF3412 | 24 | 36 3/4 | 23 1/2 | 5 | 181 |
| 46 (48.3) | 1200 (61) | 214 | 250 | CCBF4612 | 30 | 42 3/4 | 27 1/2 | | 199 |
| 69 (72.5) | 1200 (61) | 216 | 350 | CCBF6912 | 42 | 54 3/4 | 35 1/2 | | 270 |
| COPPER TUBULAR BLADE SWITCHES | | | | | | | | | |
| 46 (48.3) | 1200 (61) | 214 | 250 | CCB4612 | 30 | 42 5/8 | 31 3/4 | 5 | 222 |
| 69 (72.5) | 1200 (61) | 216 | 350 | CCB6912 | 42 | 54 5/8 | 39 3/4 | | 304 |
| 115 (123) | 1200 (61) | 286 | 550 | CCB11512 | 60 | 72 5/8 | 51 11/16 | 6 | 574 |
| 138 (145) | 1200 (61) | 288 | 650 | CCB13812 | 72 | 84 5/8 | 60 11/16 | | 624 |
| 161 (170) | 1200 (61) | 291 | 750 | CCB16112 | 84 | 96 5/8 | 68 11/16 | | 855 |
| ALUMINUM BLADE SWITCHES | | | | | | | | | |
| 23 (27) | 1200 (61) | 208 | 150 | ACB2312 | 24 | 38 5/8 | 23 3/8 | 5 | 143 |
| | 2000 (100) | | | ACB2320 | | 40 5/8 | | | 149 |
| 34.5 (38) | 1200 (61) | 210 | 200 | ACB3412 | 24 | 38 5/8 | 25 3/8 | | 159 |
| | 2000 (100) | | | ACB3420 | | 40 5/8 | | | 165 |
| | 3000 (120) | | | ACB3430 | 42 | 65 3/16 | 27 3/4 | | 192 |
| 46 (48.3) | 1200 (61) | 214 | 250 | ACB4612 | 30 | 44 5/8 | 29 3/8 | | 178 |
| | 2000 (100) | | | ACB4620 | | 42 5/8 | | | 185 |
| | 3000 (120) | | | ACB4630 | 42 | 65 3/16 | 31 3/4 | | 212 |
| 69 (72.5) | 1200 (61) | 216 | 350 | ACB6912 | 42 | 56 5/8 | 37 3/8 | | 257 |
| | 2000 (100) | | | ACB6920 | | 58 5/8 | | | 264 |
| | 3000 (120) | | | ACB6930 | | 65 3/16 | | 39 3/4 | 294 |
| | 4000 (120) | | | ACB6940 | | 54 5/8 | | 39 3/4 | 304 |
| 115 (123) | 1200 (61) | 286 | 550 | ACB11512 | 60 | 75 3/8 | 54 13/16 | 532 | |
| | 2000 (100) | | | ACB11520 | | 82 1/8 | | 57 1/16 | 577 |
| | 3000 (120) | | | ACB11530 | | | | 58 11/16 | 614 |
| | 4000 (120) | | | ACB11540 | | 82 3/8 | | 58 11/16 | 626 |
| 138 (145) | 1200 (61) | 288 | 650 | ACB13812 | 72 | 87 3/8 | 63 13/16 | 579 | |
| | 2000 (100) | | | ACB13820 | | 94 1/8 | | 66 1/16 | 625 |
| | 3000 (120) | | | ACB13830 | | | | 67 11/16 | 640 |
| | 4000 (120) | | | ACB13840 | | 94 3/8 | | 67 11/16 | 678 |
| 161 (170) | 1200 (61) | 291 | 750 | ACB16112 | 84 | 99 3/8 | 71 13/16 | 807 | |
| | 2000 (100) | | | ACB16120 | | 106 1/8 | | 74 1/16 | 854 |
| | 3000 (120) | | | ACB16130 | | | | 75 11/16 | 866 |
| | 4000 (120) | | | ACB16140 | | 106 3/8 | | 75 11/16 | 911 |
| 230 (245) | 1200 (61) | 304 | 900 | ACB23012 | 96 | 111 3/8 | 89 13/16 | 925 | |
| | 2000 (100) | | | ACB23020 | | 118 1/8 | | 92 1/16 | 974 |
| | 3000 (120) | | | ACB23030 | | | | 93 11/16 | 1082 |
| | 4000 (120) | | | ACB23040 | | 118 3/8 | | 93 11/16 | 1147 |
| | 1200 (61) | 312 | 1050 | ACB23012Z | 116 | 131 3/8 | 101 13/16 | 1034 | |
| | 2000 (100) | | | ACB23020Z | | 138 1/8 | | 104 1/16 | 1083 |
| | 3000 (120) | | | ACB23030Z | | | | 105 11/16 | 1199 |
| | 4000 (120) | | | ACB23040Z | | 138 3/8 | | 105 11/16 | 1267 |
| 345 (362) | 1200 (61) | 324 | 1300 | ACB34512 | 132 | 147 3/8 | 116 9/16 | 1259 | |
| | 2000 (100) | | | ACB34520 | | 154 1/8 | | 118 15/16 | 1313 |
| | 3000 (120) | | | ACB34530 | | | | 118 15/16 | 1434 |

NOTES

1. Dimensions are for NEMA standard station post insulators.
2. All dimensions are in inches.
3. Non-standard insulators are available upon request.



Truss Blade Switch



Tubular Blade Switch

MANUFACTURER OF HIGH VOLTAGE PRODUCTS SINCE 1914

1.800.426.4380