OVERHEAD TRANSMISSION SWITCHES

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INERTIA Engineering and Machine Works, Inc. adapted the industry leading design features of its distribution class G.O.A.B. switches, to produce an extremely high quality and cost effective, unitized side-break style transmission switch.

The ease of installation that unitized distribution class switches provide is now available for transmission class switches. The phase units are shipped as completely factory assembled and adjusted units. The actual configuration is delivered fully unitized or modularized for fast, simple and easy field installation.

The LineBOSS 46 kV-69 kV sidebreak switches are the lowest “cost to own” switches available today. Fully unitized or modular switches are hung on the pole in hours, not days. These switches also provide lower operating costs. Unbalanced conductor load or seasonal temperature changes can create line sag leading to contact misalignment on other style switches. This maintenance headache is eliminated by the LineBOSS sidebreak switch. Custom phase bases are available for installation on a wide variety of structures.

STANDARD FEATURES
• Unitized or modular construction on aluminum or steel crossarms for fast and easy installations
• Factory adjusted, ready to mount with minimal, if any, field assembly required
• Available with silicone (std.) or porcelain insulators
• Reverse loop, silver plated copper jaw contacts
• Maintenance-free, sealed, stainless steel ball bearings
• Meets all applicable NEMA and ANSI standards
• All ferrous components are hot dip galvanized
• Tinned copper two-hole and four-hole terminal pads

STANDARD CONFIGURATIONS
• Horizontal, center mount
• Vertical, phase over phase
• Delta, triangular/pole top
• Twin Circuit
• Tap Switch: one-way, two-way and three-way

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Voltage Class: 46 kV (48 kV max.) &amp; 69 kV (72.5 kV max.)</th>
<th>Current Class: 600, 900 and 1200 A, continuous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Momentary current: 600 A: 40,000 A-rms, 10 cycles</td>
<td>25,000 A-rms, 3 seconds</td>
</tr>
<tr>
<td>900 A: 51,000 A-rms, 10 cycles</td>
<td>32,000 A-rms, 3 seconds</td>
</tr>
<tr>
<td>1200 A: 70,000 A-rms, 10 cycles</td>
<td>44,000 A-rms, 3 seconds</td>
</tr>
</tbody>
</table>

Continuous current ratings tested to IEEE C37.32-1996

INTERRUPTER/LOADBREAK RATINGS (maximum)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Line Charging</th>
<th>Magnetizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>46 kV</td>
<td>18 A-rms (70 miles)</td>
<td>15 A-rms (70 MVA xfmr)</td>
</tr>
<tr>
<td>69 kV</td>
<td>18 A-rms (70 miles)</td>
<td>10 A-rms (70 MVA xfmr)</td>
</tr>
</tbody>
</table>

AmpVac Interrupters:

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Line Charging</th>
<th>Magnetizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>46 kV*</td>
<td>69 kV*</td>
<td>46 kV</td>
</tr>
<tr>
<td>46 kV</td>
<td>69 kV</td>
<td>69 kV</td>
</tr>
<tr>
<td>1500</td>
<td>1500</td>
<td>2000</td>
</tr>
<tr>
<td>3 **</td>
<td>3 **</td>
<td>450</td>
</tr>
<tr>
<td>600</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>700</td>
<td>800</td>
<td>600</td>
</tr>
</tbody>
</table>

* Recovery voltage below 38 kV. ** For higher rating check with factory.
Note: Consult the factory for any options not listed, including; arrestors, sensors, support brackets etc.
A Fax-back form can be found on the next page. Copy, fill-out and fax it back with your requirements.
LineBOSS™
Transmission Switch Fax-Back
Form for Price Quotations
(209) 931-8186

Company Name ____________________________________________
Address 1 __________________________________________________
Address 2 __________________________________________________
City _____________________________ State Zip code ____________

Contact Name _____________________________________________
Telephone Number __________________________________________
Facsimile Number __________________________________________
E-mail address _____________________________________________

Make copies of this form to transmit your switch requirements. If you have your own standard's drawing, please fill out the customer information and send it with this fax form.

Step 1. Voltage Class _______kV   Continuous Current rating (ANSI): ___________Amps

Step 2. Insulator type (circle one):  Silicone       Porcelain

Step 3. Interrupter type:  None   ArcHorn   ArcWhip   Hi-speed Whip   AmpVac   V2   V3

Step 4. Select the configuration (circle one) and specify spacing dimensions, if necessary:

“A” ________ “B” ________ “C” ________ “D” ________ “E” ________

Step 5. Select Crossarm type:  ☐ Galvanized Steel   ☐ Aluminum

Step 6. Select the control mechanism (circle):  Reciprocating (☞)   Torsional (☜) Clockwise or Counterclockwise to open; viewed looking down on the handle

1 LineBOSS switches are ANSI rated switches. The LineBOSS Lx6xxxxx is rated 600 Amps continuous current per the ANSI C37.30 temperature rise test requirements, and for 900 Amp continuous current per the IEEE 1247 temperature rise test requirements. The LineBOSS Lx9xxxxx is rated 900 Amps continuous current per the ANSI C37.30 temperature rise test requirements. The LineBOSS Lx1xxxxx is rated 1200 Amps continuous current per the ANSI C37.30 temperature rise test requirements. Momentary current ratings (10 cycle) are:

Lx6xxxx 600 A (ANSI C37.30) = 40 kA
Lx9xxxx 900 A (ANSI C37.30) = 51 kA
Lx1xxxx 1200 A (ANSI C37.30) = 70 kA
Step 7. Select control rod (circle one): Galvanized pipe: 1" 1½" other ________
Fiberglass: 1¾" square other ________

Step 8. Select control rod length (circle one): 30 ft. 40 ft. other ________

Step 9. Select additional accessories and modifications (check off and write in)

- Provision for Neutral (4-wire)
- Pole mounting bands
- Substation mounting: Specify base mounting dimensions or furnish drawing.
- Surge Arrestor brackets: set of 3 arrestor brackets set of 6 arrestor brackets
- Extension links: set of 6; each 6" long set of 6; each 14" long “Y” Ball Clevis
- Terminals: Terminal paddle for fired wedge connectors (specify size)
  - Terminals, 2-hole copper NEMA pad #2-500 kcmil (600 & 900 A switch) Specify:______
  - Terminals, 4-hole copper NEMA pad 500-750 kcmil (1200 A switch) Specify:______
  - Terminals, other: (specify size)
- Sensor Brackets; 1 set of 3 brackets
- Current/Voltage Sensors, 3 each of . . . Current Voltage Current/Voltage
- Fiberglass section in pipe control rod: 1¾” square fiberglass
- Station post insulator in control rod section
- Intermediate control rod guides Swing-arm type
- Bonded handle Grounding connector on crossarm ________ AWG range
- Key Interlock - single key for circuit switching safety (“locked open”) 
- Crossarm Braces Galvanized Steel
- Lifting points Single Double

Notes/Sketches
The AmpVac is an enclosed vacuum bottle interrupter where no gases are vented to the atmosphere. The AmpVac interrupter has much higher interruption capabilities than other load break devices. Single contact AmpVac interrupters break loads up to 1500 amps at 35 kV. Single vacuum bottle interrupters may be used at reduced voltages for parallel or loop switching applications as long as the peak recovery voltage does not exceed 38 kV. The mechanical and electrical life of the AmpVac is 5000 operations at full load.

The AmpRupter was tested to IEEE 1247-1998.

The Arc Horn is not an interrupter and has no ratings. It is used as an arc deflecting mechanism to save the life of switch blades and contact clips. The ArcHorn, also known as “sacrificial arcing horn”, is the first point of contact during switch closing operations. The initial making current during a closing operation creates small arcs; pitting the arc horns. This “sacrificial” mechanism prevents degradation of the main contacts. The Arc Horn is used to redirect the arc resulting from residual or stored charge left in a line after a down-line circuit is opened. Arc Horns will not prevent damage from the inadvertent opening of a loaded switch.

The Arc Whip is similar to an Arc Horn, but unlike Arc Horns, the Arc Whip has a small interrupting rating between 10 and 20 amps. Arc Whips can clear arcs from residual energy stored in capacitor banks, transformers or conductors. Arc Whips are only in the current path during switch opening operations. They have an average life of 150 open operations.

The Arc Chute Interrupter is a minimal load-breaking device that utilizes air break technology. The arc is quenched as the two Delrin arc chute plates close and the arc whip breaks away establishing the required metal-to-metal open gap. Arc Chute interrupters are widely used for line charging and magnetizing current interrupting. Full load break and parallel breaking currents up to 150 amps at 21 kV or 20 amps at 34.5 kV are common applications. Arc Chute interrupters are only in the current path during the opening process and have an average life of 150 operations.

INERTIA Engineering & Machine Works, Inc.
6665 Hardaway Road • Stockton, CA  95215
Tel: 800-791-9997
Fax: 209-931-8186
E-mail: sales@inertiaworks.com
**High Speed Whip**

**LineBOSS™ 46 kV - 69 kV Selection Guide suffix “S”**

The HSW, high speed whip Interrupters are used to interrupt line charging current at system voltages up to 72.5 kV. They can also interrupt transformer magnetizing current at system voltages up to 72.5 kV. These interrupters are designed for 5000 open operations.

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**Vacuum Bottle Interrupter Applications:**

<table>
<thead>
<tr>
<th>Type of Switching</th>
<th>AmpVac, 1-Gap Vacuum Interrupter</th>
<th>V2, 2-Gap</th>
<th>V3, 3-Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loadbreak, 70% PF</td>
<td>15.5 kV 25.8 kV 38.0 kV* 48.3 kV* 72.5 kV*</td>
<td>1500 A 1500 A 1500 A 1500 A</td>
<td>38.0 kV 48.3 kV 48.3 kV 72.5 kV</td>
</tr>
<tr>
<td>Parallel Break &lt; 30% PF</td>
<td>1500 A 1500 A 1500 A 1500 A</td>
<td>1500 A 1500 A 1500 A 1500 A</td>
<td>2000 A 2000 A 2000 A 2000 A</td>
</tr>
<tr>
<td>Cable Charging</td>
<td>1500 A 950 A 100 A 7 A** 3 A**</td>
<td>600 A 450 A 600 A 70 A</td>
<td></td>
</tr>
<tr>
<td>Magnetizing</td>
<td>1500 A 1000 A 300 A 7 A** 3 A**</td>
<td>700 A 700 A 800 A 600 A</td>
<td></td>
</tr>
<tr>
<td>Capacitor Bank, (grnd. neut.)</td>
<td>1500 A 950 A 100 A 7 A** 3 A**</td>
<td>600 A 700 A 800 A 600 A</td>
<td></td>
</tr>
</tbody>
</table>

* Recovery voltage between source and load must be less than 38 kV, immediately.
** Higher current rating available with use of a voltage limiter; Consult the factory for details.

---

**Interrupter Attachment Device Applications:**

<table>
<thead>
<tr>
<th>Switching Type</th>
<th>ArcHorn</th>
<th>ArcWhip</th>
<th>ArcChute</th>
<th>Hi-speed whip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line Charging</td>
<td>NA</td>
<td>&lt;72.5 kV : 2.5 A (10 miles)</td>
<td>&lt;72.5 kV : 2.5 A (10 miles)</td>
<td>72.5 kV : 18 A (70 miles)</td>
</tr>
<tr>
<td>Magnetizing</td>
<td>NA</td>
<td>&lt;72.5 kV : 3500 kVA xfmr</td>
<td>&lt;72.5 kV : 3500 kVA xfmr</td>
<td>46 kV-72.5 kV : 70 MVA xfmr</td>
</tr>
</tbody>
</table>
### LineBOSS™

**46 kV & 69 kV 600-1200 Amp Sidebreak Style Switch**

**Features and Benefits**

**Unitized transmission switches install with the speed and ease of distribution switches and provide years of maintenance-free operation.**

Specify these features for the lowest installed, lowest operating cost switch.

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unitized/Modular Switches</td>
<td>The LineBOSS™ 46 kV and 69 kV switches come from the factory with each phase unit completely unitized and adjusted. When the switch configuration calls for partial assembly, the LBS switch is broken down into easily assembled modules. The locations of the modules are fixed, requiring very little, if any, adjustment. Benefit: Greatly reduced installed cost with minimal field assembly and adjustment of the switch.</td>
</tr>
<tr>
<td>Interlocking phase base design with through-hole mounting bolts.</td>
<td>The LBS 46 kV and 69 kV phase units have an interlocking design that securely clamps and locates each phase unit on the crossarm. Secure phase bases result in minimal movement over the life of the switch. Adjustments to the switch are virtually eliminated. The through-bolt fastening assures that user specified phase spacing is met without additional field measurements or adjustments. Benefit: Reduced installed cost due to minimal assembly Reduced maintenance cost through secure clamping</td>
</tr>
<tr>
<td>Stainless steel/brass bearings in the bellcrank</td>
<td>Bearings in the bellcrank mechanism reduce the force required to operate the switch and eliminate corrosion caused by plated metal-to-metal abrasion and wear. Benefit: The ease of operation reduces risk of injury to personnel operating the switch and also translates into greater switch life.</td>
</tr>
<tr>
<td>Busbar grade copper contact components.</td>
<td>Inertia uses busbar grade copper contact components as they are structurally and electrically superior to cast contact materials. Cast aluminum and copper bronze contact castings are 34-36% conductive and often contain unseen surface irregularities and voids that create ‘hot spots’. Busbar grade C110 copper is 99% conductive and is many times smoother to provide better connection surfaces and is not subject to porosity. Benefit: Reduced operating cost due to a cooler running switch. Longer service life with reduced energy loss.</td>
</tr>
<tr>
<td>ANSI TR2xx series, 3” (46kV) &amp; 5” (69kV) bolt circle station post insulators are provided in silicone or porcelain.</td>
<td>The LBS switches are offered with silicone or porcelain, three inch (3”) and five inch (5”) bolt circle station post insulators. Silicone insulators are standard, with porcelain available as a lower cost alternate. Benefit: Silicone insulated switches are lighter and easier to install with minimal chance of damage when uncrating and erecting. Porcelain insulators provide a lower cost option.</td>
</tr>
<tr>
<td>Sealed stainless steel ball bearings on rotating stacks</td>
<td>The rotating insulators pivot on double sealed stainless steel ball bearings at both the top and bottom of the phase base providing smooth maintenance-free operation of the switch throughout its life. Benefit: Total operating cost of the switch is reduced as less site visits are required for maintenance.</td>
</tr>
</tbody>
</table>
Catalog Description: 46 kV (48.5 kV maximum) or 69 kV (72.5 kV maximum) GANG OPERATED LOAD-
BREAK OVERHEAD SWITCH (Vertical, Horizontal, Delta (pole top), Riser, Twin circuit, Tiered outboard and Tap).

1. Nominal voltage: (46 kV or 69 kV), continuous current rating: (600, 900 or 1200 A)
2. Insulators: Silicone rubber station post, BIL rating 46 kV: 250 kV BIL, 69 kV: 350 kV BIL
3. Switch bearings: Sealed stainless steel ball bearings on all rotating insulators.
5. The switch shall provide means to attach line current/voltage sensors.
6. All ferrous components shall be hot-dip galvanized.
7. Loadbreak shall be self-resetting; where the tripping speed of the loadbreak is independent of the switch operating speed.
8. Switch base (crossarm) is to be hot-dipped galvanized steel or aluminum. Pole clearance spacing can be specified by the customer.
9. Operating rod: specify type and length of control rod, and insulated section, if required (see selection guide).
10. The gang operated sidebreak style switch shall be capable of seamless automation with a reciprocating motor operator. It shall be available with the motorized switch operator replacing the manual handle.
11. Switch phases shall be completely factory assembled. The switch configuration shall be either fully factory unitized and adjusted, or be modularized including factory assembled phase units for easy field assembly.
12. Crossarms shall have predrilled galvanized locating/mounting holes as prescribed by customer-specified phase spacings.

**Switch Ratings**

Voltage Class: 46 kV (48 kV max.) & 69 kV (72.5 kV max.)

<table>
<thead>
<tr>
<th>Momentary current:</th>
<th>600 Amp: 40 kA-rms, 10 cycles</th>
<th>25 kA-rms, 3 sec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>900 Amp: 51 kA-rms, 10 cycles</td>
<td>32 kA-rms, 3 sec.</td>
<td></td>
</tr>
<tr>
<td>1200 Amp: 70 kA-rms, 10 cycles</td>
<td>44 kA-rms, 3 sec.</td>
<td></td>
</tr>
</tbody>
</table>

Current Class: 600, 900 and 1200 A, continuous current per IEEE C37.32-1996

**Loadbreak Device Ratings**

<table>
<thead>
<tr>
<th>ArcWhip: Voltage</th>
<th>Cable Charging</th>
<th>Line Charging</th>
</tr>
</thead>
<tbody>
<tr>
<td>48.3 kV</td>
<td>15 A-rms</td>
<td>3500 kVA</td>
</tr>
<tr>
<td>72.5 kV</td>
<td>15 A-rms</td>
<td>3500 kVA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ArcChute: Voltage</th>
<th>Cable Charging</th>
<th>Line Charging</th>
</tr>
</thead>
<tbody>
<tr>
<td>48.3 kV</td>
<td>15 A-rms</td>
<td>3500 kVA</td>
</tr>
<tr>
<td>72.5 kV</td>
<td>15 A-rms</td>
<td>3500 kVA</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>HS Whip: Voltage</th>
<th>Cable Charging</th>
<th>Line Charging</th>
</tr>
</thead>
<tbody>
<tr>
<td>48.3 kV</td>
<td>25 A-rms</td>
<td>70 MVA</td>
</tr>
<tr>
<td>72.5 kV</td>
<td>20 A-rms</td>
<td>70 MVA</td>
</tr>
</tbody>
</table>

**Vacuum Bottle Interrupter Applications:**

<table>
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<tr>
<th>Type of Switching</th>
<th>AmpVac, 1-Gap Vacuum Interrupter</th>
<th>V2, 2-Gap</th>
<th>V3, 3-Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loadbreak, 70% PF</td>
<td>15.5 kV 25.8 kV 38.0 kV* 48.3 kV* 72.5 kV*</td>
<td>38.0 kV 48.3 kV 48.3 kV 72.5 kV</td>
<td></td>
</tr>
<tr>
<td>Cable Charging</td>
<td>1500 A 950 A 100 A 7 A** 3 A**</td>
<td>600 A 450 A 600 A 70 A</td>
<td></td>
</tr>
<tr>
<td>Magnetizing</td>
<td>1500 A 1000 A 300 A 7 A** 3 A**</td>
<td>700 A 700 A 800 A 600 A</td>
<td></td>
</tr>
<tr>
<td>Capacitor Bank, (grnd. neut.)</td>
<td>1500 A 950 A 100 A 7 A** 3 A**</td>
<td>600 A 700 A 800 A 600 A</td>
<td></td>
</tr>
</tbody>
</table>

* Recovery voltage between source and load must be less than 38 kV, immediately.
** Higher current rating available with use of a voltage limiter; consult the factory for details.
This drawing is for illustrative purposes only and therefore; may, or may not reflect the current revision of this drawing. Please request the current revision from the factory.

**48 kV Switch with Analog Sensor Attached**

All LBS4 Series switches use sealed, stainless steel ball bearings. All current carrying components & contacts silver plated C110 copper. All ferrous components are hot dip galvanized. No aluminum or copper cast components used.

**Switch Ratings**

<table>
<thead>
<tr>
<th>Voltage Class</th>
<th>48 kV nom. (48.5 kV max.)</th>
<th>250 kV BIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Class</td>
<td>600, 900 and 1200 Amps, continuous</td>
<td></td>
</tr>
<tr>
<td>Momentary Current Rating:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 A Continuous</td>
<td>40,000 Amps, 10 cycles</td>
<td>25,000 Amps, 3 seconds</td>
</tr>
<tr>
<td>900 A Continuous</td>
<td>51,000 Amps, 10 cycles</td>
<td></td>
</tr>
<tr>
<td>1200 A Continuous</td>
<td>70,000 Amps, 10 cycles</td>
<td>44,000 Amps, 3 seconds</td>
</tr>
</tbody>
</table>

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**SWITCH RATINGS**

<table>
<thead>
<tr>
<th>Voltage Class: 48 kV nom. (48.5 kV max.) 250 kV BIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Class: 600, 900 and 1200 Amps, continuous</td>
</tr>
<tr>
<td>Momentary Current Rating:</td>
</tr>
<tr>
<td>600 A Continuous: 40,000 Amps, 10 cycles</td>
</tr>
<tr>
<td>900 A Continuous: 51,000 Amps, 10 cycles</td>
</tr>
<tr>
<td>1200 A Continuous: 70,000 Amps, 10 cycles</td>
</tr>
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<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** RECIPROCATING CONTROL MECHANISM SHOWN. TORSIONAL "SWING HANDLE CONTROLS ARE AVAILABLE.

Material: LBS, 48 kV, Horizontal, Upright Dimensions

Description: LBS, 48 kV, Horizontal, Upright Dimensions

Material: LBS, 48 kV, Horizontal, Upright Dimensions

Finish: None

Scale: None

Drawn by: None

Date: 10/16/01

Drawing No: 9232M

Revision: 0
This drawing is for illustrative purposes only and therefore; may, or may not reflect the current revision of this drawing. Please request the current revision from the factory.

**Material:**

**Finish:**

**Scale:** None

**Drawn by:**

**Date:** 09/22/01

**Description:**

**LBS 48 kV Horizontal (centermount) Dimensions**

**Drawing No:** 9222M

**Revision:** 0
This drawing is for illustrative purposes only and therefore; may, or may not reflect the current revision of this drawing. Please request the current revision from the factory.

**PHASE OVER PHASE (VERTICAL) SWITCHES ARE AVAILABLE WITH RECIPROCATING (UP AND DOWN) CONTROL MECHANISMS, ONLY.**

**SWITCH RATINGS**

<table>
<thead>
<tr>
<th>Voltage Class: 48 kV nom. (48.5 kV max.)</th>
<th>250 kV BIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Class: 600, 900 and 1200 Amps, continuous</td>
<td></td>
</tr>
<tr>
<td>Momentary Current Rating:</td>
<td></td>
</tr>
<tr>
<td>600 A Continuous: 40,000 Amps, 10 cycles</td>
<td></td>
</tr>
<tr>
<td>25,000 Amps, 3 seconds</td>
<td></td>
</tr>
<tr>
<td>900 A Continuous: 51,000 Amps, 10 cycles</td>
<td></td>
</tr>
<tr>
<td>32,000 Amps, 3 seconds</td>
<td></td>
</tr>
<tr>
<td>1200 A Continuous: 70,000 Amps, 10 cycles</td>
<td></td>
</tr>
<tr>
<td>44,000 Amps, 3 seconds</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

- **3/4" BOLT HOLES (3X)**
- **ADJUSTING SCREW**
- **CLOSED LOCK HOLE**
- **OPEN LOCK HOLE**
- **HANDLE DETAIL**
- **DEAD-END BRACKETS (3X)**

**LBS, 48 kV, Vertical (Phase-over-Phase)**
LineBOSS™ TAP SWITCH Configurations

THE VERTICALLY MOUNTED TAP SWITCH IS A GANG OPERATED POLE MOUNTED SWITCH WHICH CAN BE USED IN VARIOUS CONSTRUCTION APPLICATIONS. RIGHT HAND (SHOWN) AND LEFT HAND OPERATING MODELS ARE ADAPTABLE TO EXTREME HORIZONTAL AND VERTICAL LINE ANGLES. TIN PLATED COPPER BUSS ‘TEES’ AND BOLTED CONDUCTOR CLAMPS ARE AVAILABLE FOR CONNECTING TWO, THREE AND FOUR-WAY SWITCH CONFIGURATIONS.

Switch dead-end conductor can dead-end to the pole at up to 45° on this side.

Switch dead-end conductor can dead-end to the pole at up to 90° on this side.

OPTIONAL ARC-WHIPS
BLADE ROTATION (RIGHT HAND)

Switching dead-end conductor can dead-end to the pole at up to 45° on this side.

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11/14/01 9237M 0

LBS 48-69 kV, LineBOSS™ Tap Switch Dimensions

<table>
<thead>
<tr>
<th>Voltage Class</th>
<th>Current Class</th>
<th>Continuous</th>
<th>Momentary Current Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 kV nom. (48.5 kV max.)</td>
<td>600 A Continuous</td>
<td>40,000 Amps, 10 cycles</td>
<td></td>
</tr>
<tr>
<td>69 kV nom. (75.5 kV max.)</td>
<td>900 A Continuous</td>
<td>51,000 Amps, 10 cycles</td>
<td></td>
</tr>
<tr>
<td>600 A Continuous</td>
<td>600, 900 and 1200 Amps, continuous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 A Continuous</td>
<td>44,000 Amps, 3 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>900 A Continuous</td>
<td>70,000 Amps, 10 cycles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 A Continuous</td>
<td>25,000 Amps, 3 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1200 A Continuous</td>
<td>32,000 Amps, 3 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 A Continuous</td>
<td>44,000 Amps, 3 seconds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
LBS 48 kV, LineBOSS™ DELTA configuration

Dimensions

Material: 
Finish: 
Scale: None

Drawn by: 
Date: 11/14/01

Description: 

Date: 11/14/01

Revision: 0

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**SWITCH RATINGS**

Voltage Class: 69 kV nom. (72.5 kV max.)  350 kV BIL  
Current Class: 600, 900 and 1200 Amps, continuous

Momentary Current Rating:
- 600 A Continuous: 40,000 Amps, 10 cycles  
- 900 A Continuous: 51,000 Amps, 10 cycles  
- 1200 A Continuous: 70,000 Amps, 10 cycles

- 25,000 Amps, 3 seconds  
- 32,000 Amps, 3 seconds  
- 44,000 Amps, 3 seconds

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**SWITCH RATINGS**

Voltage Class: 69 kV nom. (72.5 kV max.) 350 kV B.I.L.

Current Class: 600, 900 and 1200 Amps, continuous

Momentary Current Rating:
- 600 A Continuous: 40,000 Amps, 10 cycles
- 900 A Continuous: 51,000 Amps, 10 cycles
- 1200 A Continuous: 70,000 Amps, 10 cycles
- 900 A Continuous: 51,000 Amps, 10 cycles
- 1200 A Continuous: 70,000 Amps, 10 cycles

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**SWITCH RATINGS**

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- **Momentary Current Rating:**
  - 600 A Continuous: 40,000 Amps, 10 cycles
  - 25,000 Amps, 3 seconds
  - 900 A Continuous: 51,000 Amps, 10 cycles
  - 32,000 Amps, 3 seconds
  - 1200 A Continuous: 70,000 Amps, 10 cycles
  - 44,000 Amps, 3 seconds

Material: |
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Finish: |
Scale: None |
Drawn by: |
Date: 09/15/04 |

Description: LBS6 (72.5 kV) RISER SWITCH

Drawing No: 9390M

Revision: 0
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**SWITCH RATINGS**

| Voltage Class: 69 kV nom. (72.5 kV max.) 350 kV BIL |
| Current Class: 600, 900 and 1200 Amps, continuous |

**Momentary Current Rating:**
- 600 A Continuous: 40,000 Amps, 10 cycles
- 25,000 Amps, 3 seconds
- 900 A Continuous: 51,000 Amps, 10 cycles
- 32,000 Amps, 3 seconds
- 1200 A Continuous: 70,000 Amps, 10 cycles
- 44,000 Amps, 3 seconds