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## MPD-DS-SM-3P-4W-169KV-2000A-EF-BM-NC-GO-VB-M1

# Manual Operated Air Break Disconnect Switch, 2000 Amp, 169000V 3PH AC, 3-Pole 4-Wire, Structure Mount, Vertical Break, Group Operated, Outdoor Substation Rated

**Product ID: 335412**

**Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).**



Image: MPD-DS-SM-3P-4W-169KV-2000A-EF-BM-NC-GO-VB-M1

**Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.**

**MPD-DS-SM-3P-4W-169KV-2000A-EF-BM-NC-GO-VB-M1 Manual Operated Air Break Disconnect Switch**

**Unit Type:** Service Entrance Manual Operated Air Break Disconnect Switch, Vertical Break
**Line-In:** N/A (customer provided)
**Line-In Cord Cap:** N/A (customer provided)
**Line-In Connections:** NEMA Pad, 4-Hole, 1¾" Spacing
**Line-In Orientation:** Horizontal Bus Connection
**Nominal Voltage:** 161 KV AC Delta or Wye
**Rated Votage:** 170 kV
**BIL:** 750 KV
**Phase:** 3-Phase
**Configuration:** 3-Pole, Single Throw, Group Operated
**Frequency:** 60 Hz (60-Cycles)
**Insulators Per Pole:** 3 (Station Post, TR-291, 5" Bolt Circle)
**Protection Method:** Arc horns included
**Protection Type:** Outdoor Air Insulated, Braidless Design
**Protection Fuses:**
**Protection Ampacity:** 2000A
**Mains Rating (Amps):** 2000A
**Momentary Current Rating:** 100 kA

**Ratings**

NRTL Listed Service Equipment
NRTL Listed to ANSI/IEEE C37 Standards

Complies with ANSI C37.30
Complies with ANSI C37.32
Complies with ANSI C37.34
Complies with NEMA SG-6
Made in the USA

**Features**

Corona-free design
Arc horns included
High-strength insulators
RIV levels must match insulator ratings (open/closed positions)

**Short-Time Withstand (3 sec):** 63 kA RMS
**Disconnect Means:** Motor Operated, Group Operated
**Motor Voltage:** 125 VDC nominal (90–130 VDC operating range)
**Motor Torque:** Minimum 20,000 in-lbs
**Includes:** Heavy-duty manual handle, Positive adjustable stops (open and closed positions), Padlockable in open and closed positions, Interphase linkage for synchronized 3-pole operation, Smooth operation under ¾" radial ice conditions, Fully galvanized steel linkage (pipes, rods, levers, bearings)
**Operating Height:** Approx. 3 ft above foundation
**Neutral Connection:** Grounded structure with 4/0 copper flexible braid
**Operating Mechanism:** Galvanized steel interphase rods, vertical shafts, and bearings; adjustable for simultaneous make/break across all poles
**Manual Override:** Integrated crank-type manual operation
**Orientation:** Botto
**Line-Out:** N/A (customer provided)
**Line-Out Cord Cap:** N/A (customer provided)
**Line-Out Connection:** NEMA Pad, 4-Hole
**Line-Out Orientation:** Horizontal Bus
**Form Factor:** Open-air substation configuration (no enclosure)
**Live Parts Material:** Copper or aluminum alloy, silver-to-silver contact surfaces
**Bearings:** Maintenance-free, permanently lubricated
**Terminal Pads:** NEMA standard, 4-hole configuration
**Contacts:** Silver-plated, high-pressure contact design with magnetic blow-off characteristics
**Blades:** Tubular construction with counterbalance for smooth operation
**Fasteners:** Stainless steel, corrosion-resistant
**Mounting Type:** Structure Mount (Substation Steel)
**Mounting Configuration:** Horizontal mounting on utility structures
**Base:** Hot-dip galvanized structural steel base
**Ambient Temperature:** -40°C to +50°C
**Wind Rating:** 90 MPH
**Ice Loading:** ¾ inch radial ice
**Enclosure Type:** NEMA 3R Ventilated
**Dimensions:** Custom (based on structure and phase spacing)
**Weight:** 4500 lbs
**Shipping Dimensions:** -
**Shipping Weight:** -
***Note**: This manually operated vertical break switch is designed for high-voltage substation isolation, providing visible open-gap disconnection and reliable performance under extreme environmental conditions.*

**Special Orders - Special Requirements**
Contact us for special requirements
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**Intl:** 1-903-270-1187
**Fax:** 1-903-765-7664
**E-mail:** sales@larsonelectronics.com

Larson Electronics manufactures a wide variety of custom power distribution systems. The pictures displayed for this unit are a general representation of form factor and may not accurately represent this exact configuration in every detail due to being custom builds. The specifics for this configuration are listed in the specification table and one-line diagram.

*All grounding shall comply with state and local codes and meet the minimum requirements of the National Electronic Code section 250*

**Made in the USA**

**The Larson Electronics MPD-DS-SM-3P-4W-169KV-2000A-EF-BM-NC-GO-VB-M1 Power Distribution Manual Operated Air Break Disconnect Switch is designed for reliable, safe and convenient isolation of high-voltage power in utility and substation environments. This structure-mounted, vertical break disconnect switch is engineered for outdoor installations and features an open-air design suitable for high-voltage transmission and distribution systems.**

***PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER***

***DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS****

The MPD-DS-SM-3P-4W-169KV-2000A-EF-BM-NC-GO-VB-M1 air disconnect switch provides a safe and dependable method for isolating energized equipment in substation applications. Compatible with three-phase 169 kV AC Delta or Wye systems, this unit features a manual operating mechanism. The switch carries a continuous current rating of 2000 amps, with a momentary current rating of 100 kA and a 63 kA short-time withstand (3 seconds). Designed as a 3-pole, single throw, group-operated system, the unit includes arc horns for controlled interruption and is built with silver-to-silver contact surfaces for reliable conductivity.

**Operation:** The manual operating mechanism utilizes a heavy-duty worm gear system for smooth and controlled switching. The unit is designed for reliable performance under demanding conditions, including up to ¾ inch radial ice loading. Positive adjustable stops ensure accurate open and closed positioning, while provisions for padlocking in both positions enhance safety during maintenance. The group-operated linkage system ensures simultaneous operation of all three poles, providing consistent and dependable switching.

**Design:** This vertical break switch features a rugged, open-air construction utilizing high-strength station post insulators rated at 750 kV BIL. Live parts are constructed from copper or aluminum alloy, while all structural components are hot-dip galvanized steel for corrosion resistance. The tubular blade design with counterbalance ensures smooth operation, and maintenance-free bearings enhance long-term reliability. The unit is braidless and corona-free, optimized for high-voltage performance.

**Standards:** This unit is designed and manufactured in compliance with applicable ANSI/IEEE standards, including ANSI C37 series requirements for high-voltage air disconnect switches.

**Mount:** Operators can mount this disconnect switch directly onto substation steel structures. The design supports horizontal mounting with typical bus heights and phase spacing in utility installations.

**Customization:** The MPD-DS-SM-3P-4W-169KV-2000A-EF-BM-NC-GO-VB-M1 can be customized to meet specific substation and utility requirements. Example customizations include:

• Alternate motor voltages and control schemes

• Additional auxiliary contacts and SCADA integration

• Custom mounting configurations and hardware

• Extended environmental protection and coatings

• Integration with grounding switches or interlocks

**Applications:** This switch is suitable for outdoor substation use and applications including, but not limited to, electrical transmission and distribution systems, utility substations, renewable energy interconnections, and industrial high-voltage facilities.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our

craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

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# Frequently Asked Questions (FAQ)

There are no Faqs

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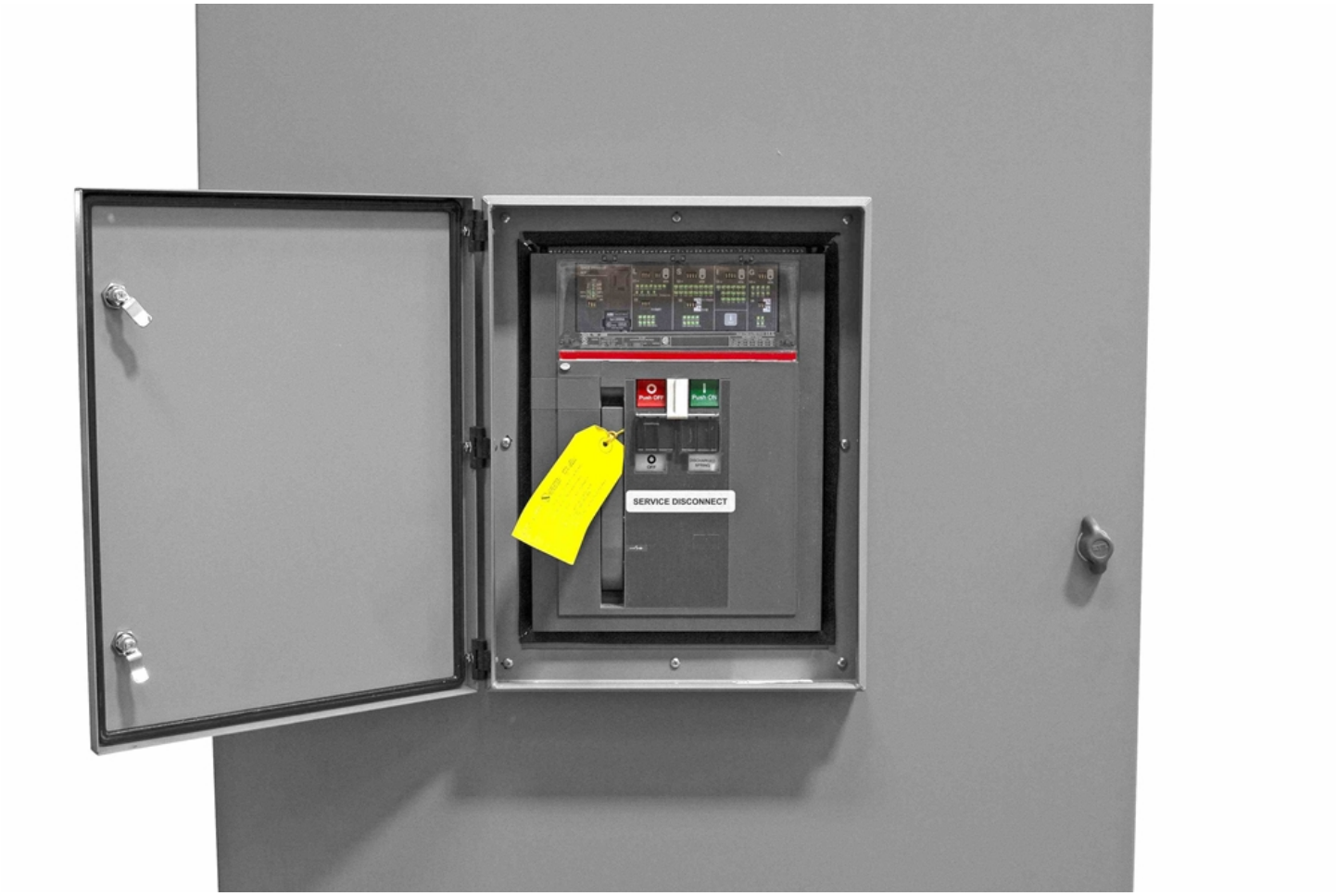


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**Export Control Classification Number (ECCN):** EAR99

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