

SAFE AND HIGH POWER DENSITY ELECTRICAL POWER DISTRIBUTION

As electric drive ships and power hungry weapon systems are fielded, 15kV generation and distribution systems become natural stepping stones. To minimize the risk, Leonardo DRS developed our 15kV 1600A medium voltage Vacuum Circuit Breaker (VCB). This circuit breaker is based on a COTS breaker that DRS militarized to provide a small, lightweight, and cost effective solution. Used on the latest U.S. Navy ships for power distribution, the military hardened VCB is designed to withstand rugged Navy combatant conditions for the life of the ship.

The Vacuum Interrupter design significantly reduces breaker size and weight as arc chutes are not needed. Maintenance is reduced since no contact adjustments are required, only a periodic check of the integral wear indicator is needed. The VCB is drawout (removable) for ease of inspection and replacement.

From power distribution and electrical control products to ship control automation, Leonardo DRS offers advanced product development, world-class manufacturing and global engineering services and support. That is why our products are found on all U. S. Navy combatants since WWII.

SELECTED FEATURES

- Maintenance free vacuum interrupter
- Trip free operation
- Interlocks for proper and safe operation
- · Built-in contact erosion indicator
- · Operations counter
- Mechanical position indicator
- · Closing springs charged indicator
- Mechanical and electric open and close capability





15kV VACUUM CIRCUIT BREAKER (VCB)

BREAKER SPECIFICATIONS

| CHARACTERISTICS | MEASUREMENT |
|--|-----------------------|
| Voltage | 5,000V to 15,000V |
| Dielectric Withstand | 36,000V for 1 second |
| Basic Impulse Level (BIL) | 95,000V |
| Corona Extinction Voltage Level | 17,500V |
| Max. Continuous Current | 1600A |
| Max. Voltage and Frequency | 15,000VAC, 60Hz |
| Max. Short Circuit Interrupting Current | 41,000A symmetrical |
| Short Circuit Duration | 3 seconds |
| Max. Short Circuit Making Current | 103,000A peak |
| Max. Trip Time | 3 cycles |
| Max. Close Time | 5 cycles |
| Mechanical Endurance | 10,000 cycles |
| Poles | 3 |
| Operating Temperature | -30 to +65° C |
| Operating Humidity | 95% non-condensing |
| Width | 27.6 inches (70.1 cm) |
| Height | 32.2 inches (81.8 cm) |
| Depth | 25.1 inches (63.8 cm) |
| Weight | 430 lbs. (195.0 kg) |

MILITARY STANDARD COMPLIANCE

- MIL-S-901, Grade A
- MIL-STD-167-1

ATTACHMENTS

| Electrical Closing Device | Standard |
|---------------------------|-------------------------------------|
| Shunt Trip Device | Standard |
| Charging Motor Protection | Standard |
| Grounding Contacts | Standard |
| Auxilliary Switches | Quantity: 15 |
| | Ratings: 120VAC, 15A/125VDC, 10A |
| Secondary Disconnect Pins | 50 |

This breaker fits in a two (2) VCB high, 80" high x 32" wide vertical unit.



Naval Power Systems

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