

“Compact AREVS150 200A High Voltage Contactor”

Executive Summary

Altran Magnetics introduces the AREVS150 200A high voltage contactor, a revolutionary component in the realm of energy storage and electric vehicles (EVs). Designed to provide high performance in a compact form factor, the AREVS150 is the same size as a traditional 100A contactor, making it an ideal choice for applications demanding high current handling with limited space. This whitepaper explores the features, benefits, and potential applications of the AREVS150, positioning it as a key solution for modern energy management systems.

Introduction

As the demand for efficient energy storage solutions and electric vehicles continues to rise, the need for reliable, compact, and high-performance components becomes critical. The Altran Magnetics AREVS150 200A high voltage contactor addresses these needs by offering a powerful, yet space-efficient, solution.

Product Overview

The AREVS150 contactor is engineered to handle up to 200A of current at high voltage levels. Despite its robust capabilities, it maintains the same dimensions as a traditional 100A contactor, ensuring that it fits seamlessly into existing designs without requiring additional space.

Key Features:

- **High Current Carry and High Voltage:** Capable of managing up to 200A, the AREVS150 is suitable for high-demand applications requiring both high current and voltage handling.
- **Inert Gas Filled Arc Chamber:** Designed with an inert gas-filled arc chamber suitable for high voltage switching, ensuring safe and efficient operation.
- **Compact Structure, Low Noise:** Features a small, low-profile design with low noise during operation, whether carrying or switching loads.
- **Coil Economizer:** Incorporates an "M" coil economizer for low power consumption, enhancing energy efficiency.
- **Safe for Explosive Environments:** Hermetically sealed design ensures no arc leakage, making it safe for use in explosive environments.
- **High Reliability Design:** The hermetic sealing creates a stable environment for high voltage switching, ensuring consistent performance and longevity.
- **No Specific Mounting Arrangement:** Can be mounted in any orientation without a reduction in performance, providing flexibility in system design.
- **Auxiliary Contacts Available:** Offers auxiliary contacts for additional functionality and system integration.
- **Bi-Directional Options:** Available in bi-directional configurations to support a variety of operational requirements.
- **Side Mount Available:** Can be side-mounted to accommodate different installation needs and preferences.

“Compact AREVS150 200A High Voltage Contactor ”

Benefits:

- ∞ *Space Efficiency:* By providing high current handling in a compact form, the AREVS150 allows for more efficient use of space in energy storage systems and EVs.
- ∞ *Cost Savings:* The ability to replace lower capacity contactors without redesigning systems can lead to significant cost savings in both materials and labor.
- ∞ *Enhanced Performance:* Higher current capacity enhances the performance of energy storage and electric vehicle systems, supporting greater energy throughput and efficiency.
- ∞ *Versatility:* Suitable for a wide range of applications, including renewable energy storage, electric vehicles, and other high-voltage systems.
- ∞ *Energy Efficiency:* The coil economizer feature reduces power consumption, contributing to overall system efficiency.
- ∞ *Safety:* The hermetically sealed design ensures safety in explosive environments, reducing the risk of arc-related incidents.
- ∞ *Flexibility:* Auxiliary contacts, bi-directional options, and side-mount capability provide additional flexibility in design and application.

Applications:

- Energy Storage Systems:** The AREVS150's high current and voltage handling capabilities make it ideal for use in energy storage systems, helping to improve the efficiency and capacity of these systems.
- Electric Vehicles:** In EVs, where space and weight are critical, the compact AREVS150 provides the necessary current handling without compromising on design or performance.
- Renewable Energy Systems:** Suitable for use in solar and wind energy systems where high current and voltage management are essential.
- Industrial Applications:** The contactor can be employed in various industrial settings where high voltage and current are required.

Technical Specifications:

- ✓ **Current Rating:** 200A
- ✓ **Voltage Rating:** High voltage capability
- ✓ **Size:** Equivalent to a traditional 100A contactor
- ✓ **Materials:** High-quality, durable components to ensure long-term reliability
- ✓ **Arc Chamber:** Inert gas-filled for high voltage switching
- ✓ **Noise Level:** Low noise during load carrying and switching
- ✓ **Power Consumption:** Low, due to the coil economizer
- ✓ **Mounting:** Flexible, no specific mounting orientation required
- ✓ **Auxiliary Contacts:** Available for additional system integration
- ✓ **Bi-Directional Options:** Available to support various operational needs
- ✓ **Side Mount:** Available for different installation preferences

Conclusion

The Altran Magnetics AREVS150 200A high voltage contactor represents a significant advancement in the field of energy management components. Its ability to provide high current handling in a compact form factor makes it an ideal choice for modern energy storage systems, electric vehicles, and other high-voltage applications. By integrating the AREVS150, designers and engineers can achieve greater performance and efficiency without compromising on space or reliability.