

# DCNEVT500 SERIES HIGH CURRENT HIGH VOLTAGE DC CONTACTOR RELAY



## Description

High current and high voltage DC contactor relays for electric vehicle, hybrid electric vehicle, circuit protection, battery switch disconnect, and main transfer switch. The Coil Economizer greatly reduces coil power and heating after the contactor is energized. Once the contactor is energized, it takes minimal coil power to keep the contacts closed due to Pulse Width Modulation (PWM) reducing the average power delivered by pulsing the electrical signal. Utilizes polarized contacts for optimum performance amidst polarized electrical loads.

## Features and Benefits

- High current (500A) and high voltage (1800V) contactor for EV applications
- Dual Coil Economizer greatly reduces coil power and heating
- Hermetically sealed contact chamber to protect all moving parts
- Optional auxiliary contacts available
- 360KW power switch capable

## Ordering Information

| PART NUMBER  | DESCRIPTION   | COIL VOLTAGE 12V DC | COIL VOLTAGE 24V DC | BOTTOM MOUNT | AUXILIARY CONTACT SPST-NO |
|--------------|---|---------------------|---------------------|--------------|---------------------------|
| DCNEVT500-C  | High Voltage DC Contactor Relay Bottom Mount with Polar Load Terminals                        |                     | ●                   | ●            |                           |
| DCNEVT500-CA | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit with Polar Load Terminals |                     | ●                   | ●            | ●                         |
| DCNEVT500-BA | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit with Polar Load Terminals | ●                   |                     | ●            | ●                         |
| DCNEVT500-B  | High Voltage DC Contactor Relay Bottom Mount with Polar Load Terminals                        | ●                   |                     | ●            |                           |

\* Box Packaging Available

## Specifications Overview

|                                 |   |
|---------------------------------|---|
| <b>Amperage:</b>                | 500A Continuous Carry   |
| <b>Housing:</b>                 | Nylon UL 94-V0  |
| <b>Voltage Rating:</b>          | 1800V   |
| <b>Output Connectors:</b>       | M10   |
| <b>Ingress Protections:</b>     | IP54  |
| <b>Operating Temperature:</b>   | -40 to 85°C   |
| <b>Circuitry:</b>               | SPST NO   |
| <b>Voltage:</b>                 | <b>B:</b> 12V DC Nominal, 9.9 - 14V DC Working<br><b>C:</b> 24V DC Nominal, 19.7 - 28V DC Working |
| <b>Max Coil Inrush Current:</b> | <b>B:</b> 3.3A<br><b>C:</b> 1.7A  |
| <b>Size:</b>                    | 74mm x 54mm x 120mm   |
| <b>Mounting:</b>                | M5  |
| <b>Mounting Bolt Torque:</b>    | 3-4 Nm (26-35 in-lb)  |
| <b>Contact Torque:</b>          | 13 - 15 Nm (115- 130 in-lb)   |
| <b>Terminals:</b>               | M10 Silver Plated Copper  |
| <b>Coil Terminals:</b>          | M3.5 x 0.6  |
| <b>Approvals:</b>               | UL File No. E510407   |

## Applications

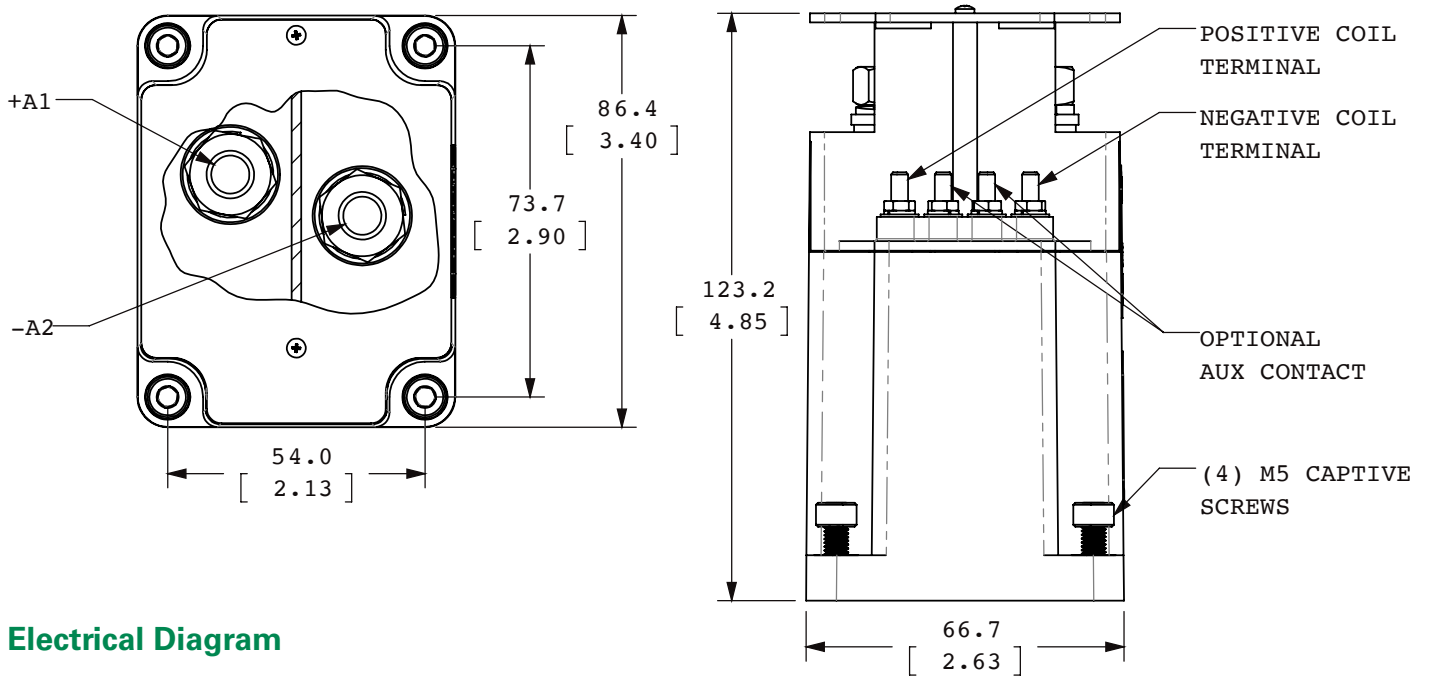
- Battery Electric Vehicles
- Hybrid Electric Vehicles
- Material Handling
- Electric Maintenance and Transport Vehicles
- Industrial Applications

## Web Resources

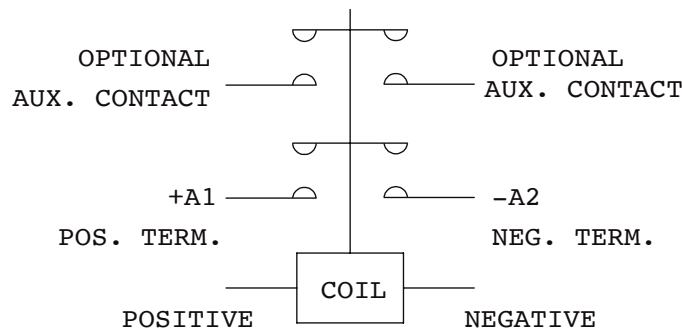
Download 2D print and technical resources at: [littelfuse.com/DCNEVT500](http://littelfuse.com/DCNEVT500)

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## Dimensions in MM



## Electrical Diagram



## Estimated Make Break Chart

