

# DCNLEV50 SERIES HIGH CURRENT HIGH VOLTAGE DC CONTACTOR RELAY



## Ordering Information

Please see page 2 for more information

## Specifications Overview

|                                 |  |
|---------------------------------|--|
| <b>Amperage:</b>                | 50A Continuous Carry   |
| <b>Housing:</b>                 | Nylon UL 94-V0   |
| <b>Voltage Rating:</b>          | 750V   |
| <b>Output Connectors:</b>       | M5 Bolt and Lockwasher Connections   |
| <b>Connectors:</b>              | Wire Leads for Control Circuit   |
| <b>Ingress Protections:</b>     | IP67   |
| <b>Operating Temperature:</b>   | -40 to 85°C  |
| <b>Circuitry:</b>               | SPST NO  |
| <b>Coil Voltage:</b>            | <b>B:</b> 12V DC Nominal, 8-16V DC Working<br><b>C:</b> 24V DC Nominal, 16-28V DC Working<br><b>E:</b> 48V DC Nominal, 33-52V DC Working |
| <b>Max Coil Inrush Current:</b> | <b>B:</b> 461mA Max to Coil<br><b>C:</b> 250mA Max to Coil<br><b>E:</b> 122mA Max to Coil  |
| <b>Mounting:</b>                | M4   |
| <b>Size:</b>                    | 46mm x 58mm x 41mm   |
| <b>Mounting Bolt Torque:</b>    | 2.3 Nm (20 in-lb)  |
| <b>Contact Torque:</b>          | 3.4 - 4.5 Nm (30 - 40 in-lb)   |
| <b>Terminals:</b>               | M5 Silver Plated Copper  |
| <b>Approvals:</b>               | UL File No. E510407 Recognized   |

## Description

High current and high voltage DC contactor relays for electric vehicle applications such as charging station, battery power supply, motor control, circuit protection, and other switch controls. Can also be used in uninterruptible power supply and industrial machinery. Are available with polarized and non-polarized contacts to best suit electrical systems' polarity.

## Features and Benefits

- High current (50A) and high voltage (900V) contactor for EV applications
- Compact structure, helping reduce noise when turned on
- Sealed IP67, gas-filled relay which mitigates arcing
- No mounting orientation restrictions
- Designed and manufactured under the IATF16949 certification for Automotive Quality Systems.
- Designed specifically for automotive applications.

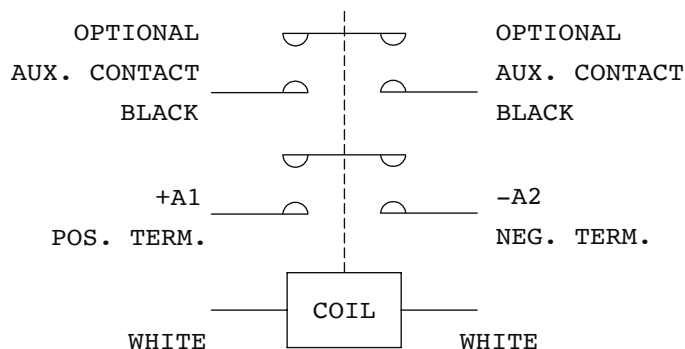
## Applications

- 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/DCNLEV50](http://littelfuse.com/DCNLEV50)

## Electrical Diagram



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## Ordering Information

| PART NUMBER   | DESCRIPTION   | COIL VOLTAGE 12V DC | COIL VOLTAGE 24V DC | COIL VOLTAGE 48V DC | AUXILIARY CONTACT SPST-NO | BOTTOM MOUNT | SIDE MOUNT | NON-POLARIZED TERMINALS |
|---------------|---|---------------------|---------------------|---------------------|---------------------------|--------------|------------|-------------------------|
| DCNLEV50-BS   | High Voltage DC Contactor Relay Side Mount with Polar Load Terminals                          | ●                   |                     |                     |                           |              | ●          |                         |
| DCNLEV50-BSN  | High Voltage DC Contactor Relay Side Mount Non-Polar  | ●                   |                     |                     |                           |              | ●          | ●                       |
| DCNLEV50-B    | High Voltage DC Contactor Relay Bottom Mount with Polar Load Terminals                        | ●                   |                     |                     |                           | ●            |            |                         |
| DCNLEV50-BN   | High Voltage DC Contactor Relay Bottom Mount Non-Polar  | ●                   |                     |                     |                           | ●            |            | ●                       |
| DCNLEV50-BAS  | High Voltage DC Contactor Relay Side Mount with Auxiliary Circuit with Polar Load Terminals   | ●                   |                     |                     | ●                         |              | ●          |                         |
| DCNLEV50-BASN | High Voltage DC Contactor Relay Side Mount with Auxiliary Circuit Non-Polar                   | ●                   |                     |                     | ●                         |              | ●          | ●                       |
| DCNLEV50-BA   | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit with Polar Load Terminals | ●                   |                     |                     | ●                         | ●            |            |                         |
| DCNLEV50-BAN  | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit Non-Polar                 | ●                   |                     |                     | ●                         | ●            |            | ●                       |
| DCNLEV50-CS   | High Voltage DC Contactor Relay Side Mount with Polar Load Terminals                          |                     | ●                   |                     |                           |              | ●          |                         |
| DCNLEV50-CSN  | High Voltage DC Contactor Relay Side Mount Non-Polar  |                     | ●                   |                     |                           |              | ●          | ●                       |
| DCNLEV50-C    | High Voltage DC Contactor Relay Bottom Mount with Polar Load Terminals                        |                     | ●                   |                     |                           | ●            |            |                         |
| DCNLEV50-CN   | High Voltage DC Contactor Relay Bottom Mount Non-Polar  |                     | ●                   |                     |                           | ●            |            | ●                       |
| DCNLEV50-CAS  | High Voltage DC Contactor Relay Side Mount with Auxiliary Circuit with Polar Load Terminals   |                     | ●                   |                     | ●                         |              | ●          |                         |
| DCNLEV50-CASN | High Voltage DC Contactor Relay Side Mount with Auxiliary Circuit Non-Polar                   |                     | ●                   |                     | ●                         |              | ●          | ●                       |
| DCNLEV50-CA   | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit with Polar Load Terminals |                     | ●                   |                     | ●                         | ●            |            |                         |
| DCNLEV50-CAN  | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit Non-Polar                 |                     | ●                   |                     | ●                         | ●            |            | ●                       |
| DCNLEV50-ES   | High Voltage DC Contactor Relay Side Mount with Polar Load Terminals                          |                     |                     | ●                   |                           |              | ●          |                         |
| DCNLEV50-ESN  | High Voltage DC Contactor Relay Side Mount Non-Polar  |                     |                     | ●                   |                           |              | ●          | ●                       |
| DCNLEV50-E    | High Voltage DC Contactor Relay Bottom Mount with Polar Load Terminals                        |                     |                     | ●                   |                           | ●            |            |                         |
| DCNLEV50-EN   | High Voltage DC Contactor Relay Bottom Mount Non-Polar  |                     |                     | ●                   |                           | ●            |            | ●                       |
| DCNLEV50-EAS  | High Voltage DC Contactor Relay Side Mount with Auxiliary Circuit with Polar Load Terminals   |                     |                     | ●                   | ●                         |              | ●          |                         |
| DCNLEV50-EASN | High Voltage DC Contactor Relay Side Mount with Auxiliary Circuit Non-Polar                   |                     |                     | ●                   | ●                         |              | ●          | ●                       |
| DCNLEV50-EA   | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit with Polar Load Terminals |                     |                     | ●                   | ●                         | ●            |            |                         |
| DCNLEV50-EAN  | High Voltage DC Contactor Relay Bottom Mount with Auxiliary Circuit Non-Polar                 |                     |                     | ●                   | ●                         | ●            |            | ●                       |

\* Box Packaging Available