

# Installation Instructions

## DCNHE50 SERIES

Part Number: DCNHE50MFXX-F, DCNHE50MFXX-T, DCNHE50NFXX-F, DCNHE50NFXX-T, DCNHE50QFXX-B, DCNHE50QFXX-F, DCNHE50QFXX-T, DCNHE50PFXX-F, DCNHE50PFXX-T



Expertise Applied | Answers Delivered



## Description

Designed for use in battery electric vehicles (BEVs), hybrid electric vehicles (HEVs), and other high-voltage DC systems, the DCNHE50 Series DC Contactor Relay is rated for a continuous current of 50A and a maximum voltage of 1000V. Its compact structure minimizes operational noise and supports flexible, orientation-free installation.

A UL 94-V0 nylon housing provides corrosion resistance in harsh environments, while sealed SPST-NO contacts prevent electrical arc leakage for enhanced safety. Optional mechanically linked auxiliary contacts enable system status monitoring.

IP67-rated, the DCNHE50 Series ensures durable, dependable performance in demanding EV and industrial applications, with a wide variety of configurations available, including those with polarized or non-polarized contacts, stud or internal-thread terminals, side- or bottom-mount options, and 12V, 24V, or 48V coil voltages to meet diverse system requirements.

## Web Resources

Download 2D print, installation guide and technical resources at: [littelfuse.com/DCNHE50](http://littelfuse.com/DCNHE50)

## Order Information:

See datasheet for part numbers and descriptions.

## Installation

Assemble the contactor in the following sequence:

**Step 1. Prepare the Work Area** - It is always advisable when working with electricity to take caution and turn off any power unit you may encounter while installing any electrical device.

**Step 2. Mount the Contactor** - Mount the contactor using the recommended fasteners.

**Step 3. Prepare the Wiring and Connect the Control Wires** - Strip all the wires that will be connected to the control coil and the contactor terminations with a wire stripper. Remove approximately 1/2 inch of the wire's insulation to expose the bare copper wire. Connect the control wires to the coil solenoid first, white wires on contactor. When installing the wires, be sure that a good electrical connection is made by using an appropriate electrical connector. Do not allow any loose strands to short against any equipment and cause electrical damage.

**Step 4. Connecting the Switched Auxiliary Contact Wires** - If an Auxiliary Contact is provided, connect the low power Line feed wire to one of the blue wires and the low power Load output wire to the remaining blue wire. When installing the wires, be sure that a good electrical connection is made. Do not allow any loose strands to short against any equipment and cause electrical damage.

**Step 5. Connecting the Switched Power Wires** - Verify the switched contacts are open, no continuity between terminals "A1" and "A2". Using the hardware that is supplied with the contactor or the recommended fasteners, connect the Line power feed wire to the contactor terminal marked "A1". Connect the Load power output wire to the contactor terminal marked "A2". As with the control wires, be sure that a good electrical connection is made. Do not allow any loose strands to short against any equipment and cause electrical damage.

**Step by step images shown in Figure 2 on page 2.**



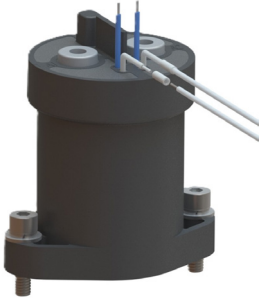

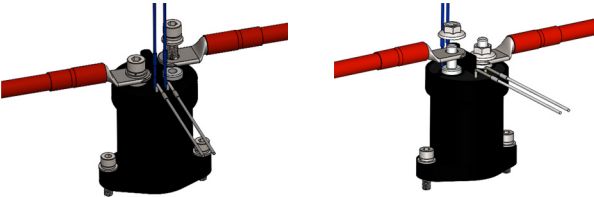
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DCNHE50NFXX-T, DCNHE50QFXX-B, DCNHE50QFXX-F, DCNHE50QFXX-T,  
DCNHE50PFXX-F, DCNHE50PFXX-T



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<p>STEP 1</p>	 <p><b>DANGER</b></p> <p>Electrical Hazard Turn Off Power Before Servicing</p>	<p>Prepare the Work Area - It is always advisable when working with electricity to take caution and turn off any power unit you may encounter while installing any electrical device.</p>
<p>STEP 2</p>		<p>Mount the Contactor - Mount the contactor using the recommended fasteners.</p>
<p>STEP 3</p>		<p>Prepare the Wiring and Connect the Control Wires - Strip all the wires that will be connected to the control coil and the contactor terminations with a wire stripper. Remove approximately 1/2 inch of the wire's insulation to expose the bare copper wire. Connect the control wires to the coil solenoid first, white wires on contactor. When installing the wires, be sure that a good electrical connection is made by using an appropriate electrical connector. Do not allow any loose strands to short against any equipment and cause electrical damage.</p>
<p>STEP 4</p>		<p>Connecting the Switched Auxiliary Contact Wires - If an Auxiliary Contact is provided, connect the low power Line feed wire to one of the blue wires and the low power Load output wire to the remaining blue wire. When installing the wires, be sure that a good electrical connection is made. Do not allow any loose strands to short against any equipment and cause electrical damage.</p>
<p>STEP 5</p>		<p>Connecting the Switched Power Wires - Verify the switched contacts are open, no continuity between terminals "A1" and "A2". Using the hardware that is supplied with the contactor or the recommended fasteners, connect the Line power feed wire to the contactor terminal marked "A1". Connect the Load power output wire to the contactor terminal marked "A2". As with the control wires, be sure that a good electrical connection is made. Do not allow any loose strands to short against any equipment and cause electrical damage.</p>

Specifications, descriptions and illustrative material in this literature are as accurate as known at the time of publication, and are subject to changes without notice. Visit [littelfuse.com](http://littelfuse.com) for the most up-to-date technical information.