

Installation Instructions

DCNHE250 SERIES

Part Number: DCNHE250PFA-B, DCNHE250PFB-B, DCNHE250PFA-F, DCNHE250PFB-F, DCNHE250QFA-B, DCNHE250QFB-B, DCNHE250RFA-B, DCNHE250RFB-B, DCNHE250QFA-F, DCNHE250QFB-F, DCNHE250RFA-F, DCNHE250RFB-F, DCNHE250NFA-B, DCNHE250NFB-B, DCNHE250NFA-F, DCNHE250NFB-F, DCNHE250MFA-B, DCNHE250MFB-B, DCNHE250UFA-B, DCNHE250UFB-B, DCNHE250MFA-F, DCNHE250MFB-F, DCNHE250UFA-F, DCNHE250UFB-F



Expertise Applied | Answers Delivered



Description

The DCNHE250 Series contactor is designed for electric vehicle and energy storage systems requiring reliable switching of high-voltage DC power. It supports continuous current up to 250A and a maximum of 1000V, making it suitable for applications such as battery power supply, DC power control, charging systems, and other electronic control circuits.

A sealed, compact structure with a corrosion-resistant resin housing provides protection in harsh environments. The attached Coil Economizer uses Pulse Width Modulation (PWM) to reduce power consumption and heat generation after the contactor is energized.

The contactor is offered with either polarized or non-polarized load terminals. All models feature polarized coil terminals with voltage options of 12-36V or 48-95V. Auxiliary contact options include SPST-NO and SPST-NC for added control flexibility.

Web Resources

Download 2D print, installation guide and technical resources at: littelfuse.com/DCNHE250

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, red and black wires on the 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 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 5. Connecting the Switched Auxiliary Contact Wires - If an Auxiliary Contact is provided, connect the low power Line feed wire to one of the white wires and the low power Load output wire to the remaining white 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 by step images shown in Figure 2 on page 2.


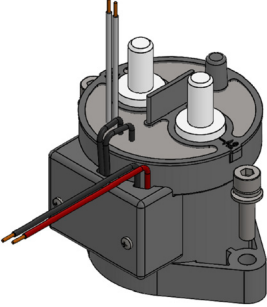
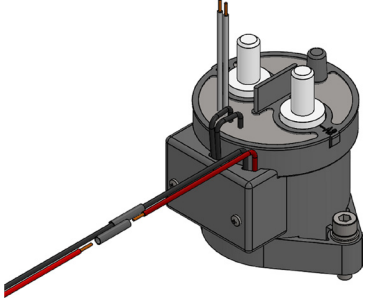
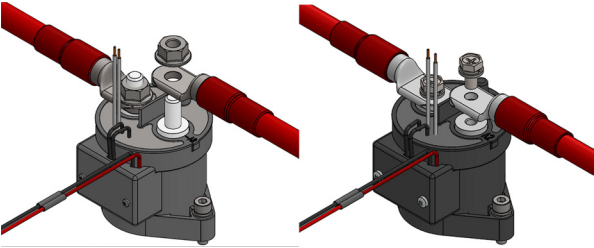
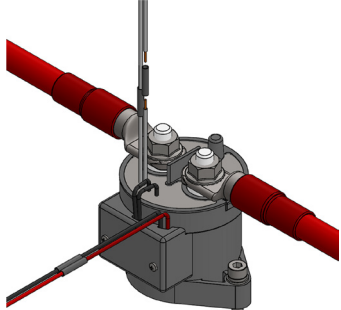
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<p>STEP 1</p>	 <p>DANGER</p> <p>Electrical Hazard Turn Off Power Before Servicing</p>	<p>Prepare the Work Area - It is always advisable when working with electricity to take caution and turn off any power unit you may encounter while installing any 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, red and black wires on the 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 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>
<p>STEP 5</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 white wires and the low power Load output wire to the remaining white 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>

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 for the most up-to-date technical information.