

# Installation Instructions

## DCNHF500 SERIES

Part Number: DCNHF500MH12-F, DCNHF500MH24-F



### Description

The DCNHF500 Series high-voltage DC contactor has a 500A continuous current rating and a maximum contact voltage of 1800V. The dependable contactor is designed for use in electric vehicle (EV) and industrial applications, such as battery power supply, charging systems, motor control, circuit insulation, circuit protection, and safety-critical systems.

Featuring non-polarized, sealed contacts and a double-coil design, this industrial and EV contactor supports flexible operation in electrical systems regardless of polarity and can be mounted in any orientation. Its double-coil economizer minimizes power consumption once the contactor is engaged, reducing heat generation and improving overall efficiency and reliability.

The DCNHF500 Series contactor also includes an auxiliary contact and is available in 12V or 24V polarized coil configurations with internal thread terminals.

### Web Resources

Download 2D print, installation guide and technical resources at: [littelfuse.com/DCNHF500](https://littelfuse.com/DCNHF500)

### Ordering Information

PART NUMBER	RATED CURRENT(A)	POLARIZED	AUX. CONTACT	COIL VOLTAGE(VDC)	MOUNTING	POWER CONNECTION
DCNHF500MH12-F	500	No	Yes	12	Bottom	Internal Thread
DCNHF500MH24-F	500	No	Yes	24	Bottom	Internal Thread

### 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 ½ inch of the wire's insulation to expose the bare copper wire. Connect the control wires to the coil solenoid first, red connect +(positive) and black connect -(negative) 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 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.


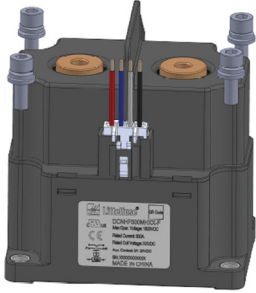
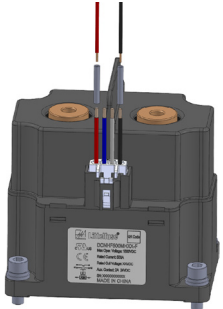
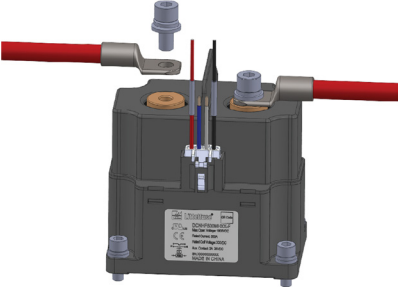
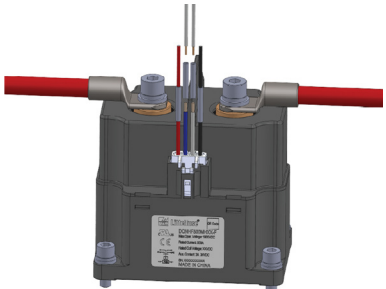
**Step 5. Connecting the Switched Auxiliary Contact Wires** - Connect the low power Line feed wire to the white wire and the low power Load output wire to the blue wire. When installing the wires, be sure that a good electrical connection is made. Do not allow any loose strands to short against any equipment and cause electrical damage.

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

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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 ½ inch of the wire's insulation to expose the bare copper wire. Connect the control wires to the coil solenoid first, red connect +(positive) and black connect -(negative) 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 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 - Connect the low power Line feed wire to the white wire and the low power Load output wire to the 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>

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.