

Installation Instructions

DCNHF20 Series

Part Number: DCNHF20NH12-Q & DCNHF20NH24-Q



Expertise Applied | Answers Delivered



Description

The DCNHF20 Series high-voltage DC contactor relay is engineered for electric vehicle and industrial high-voltage DC applications that require flexible system integration and reliable low-current switching. Rated for 20A continuous current and up to 1500V DC, it is ideal for use in battery power supply systems, charging piles, motor control, circuit isolation, circuit protection, and industrial safety devices.

Featuring SPST normally open (NO) circuitry with non-polarized contacts, the DCNHF20 Series supports bidirectional current flow, making it well suited for a wide range of electrical systems. Its compact design helps minimize operational noise during switching, while a robust housing delivers dependable performance in demanding automotive and industrial environments.

The bottom-mounting DCNHF20 Series contactor is equipped with quick-connect (QC) terminals for efficient installation and secure electrical connections and is available with 12V DC or 24V DC coil voltage options to support common EV and industrial control systems.

Web Resources

Download 2D print, installation guide and technical resources at: littelfuse.com/DCNHF20

Ordering Information

PART NUMBER	RATED CURRENT(A)	POLARIZED	AUX. CONTACT	COIL VOLTAGE(V DC)	MOUNTING	POWER CONNECTION
DCNHF20NH12-Q	20	No	No	12	Bottom	QC Terminal
DCNHF20NH24-Q	20	No	No	24	Bottom	QC Terminal

Installation

Assemble the relay 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 mounting hardware that is supplied with the contactor or 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. Prepare the QC terminal with wires. Connect the control wires to the coil solenoid first, red connect and black connect wires connect the terminal marked "5" and "6" 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 "1" and "2". Using the terminal that is supplied with the contactor or the recommended terminal, connect the Line power feed wire to the contactor terminal marked "1". Connect the Load power output wire to the contactor terminal marked "2". 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.


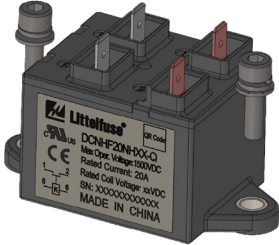
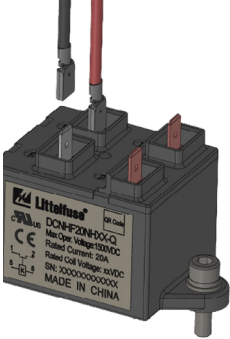
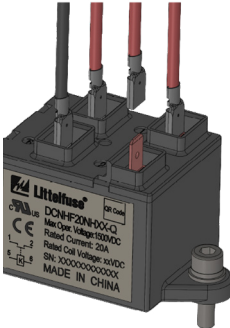
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<p>STEP 1</p>	 <p>DANGER</p> <p>Electrical Hazard Turn Off Power Before Servicing</p>	<p>Prepare the Work Area - It is always advisable when working with electricity to take caution and turn off any power unit you may encounter while installing any electrical device.</p>
<p>STEP 2</p>		<p>Mount the Contactor - Mount the contactor using the mountin hardware that is supplied with the contactor or 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. Prepare the QC terminal with wires. Connect the control wires to the coil solenoid first, red connect and black connect wires connect the teiminal marked "5" and "6" 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 "1" and "2". Using the terminal that is supplied with the contactor or the recommended terminal, connect the Line power feed wire to the contactor terminal marked "1". Connect the Load power output wire to the contactor terminal marked "2". 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 for the most up-to-date technical information.