

# DCNLJ Series

60V and 110V MAX High-Current High-Voltage DC Contactor Relays



## Description

The DCNLJ Series Max High-Current High-Voltage DC Contactor Relay is designed for high-current contact switching in electric control systems of communication power supplies and uninterruptible power supplies (UPS) as well as other industrial and vehicle applications.

This normally open relay comes in a variety of configurations to suit your application requirements. Polarized models with main contacts rated for 96V (110V max) and non-polarized models with main contacts rated for 48V (60V max) are available with a continuous current rating of 250A.

Available coil options for the contactor relay vary depending on the model's continuous current rating and include 12V.

## Web Resources

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

## Ordering Information

PART NUMBER	CONTINUOUS CURRENT (A)	VOLTAGE RATING		MOUNTING	COIL VOLTAGE (V DC)	COIL TYPE	AUX CONTACT	POLARIZED	2D PRINT
		SYSTEM NOMINAL (V DC)	MAX VOLTAGE (V DC)						
DCNLJ250PD12	250	96	110	Side	12	Single	No	Yes	<a href="#">Download</a>
DCNLJ250NB12-01 <sup>1</sup>	250	48	60	Side	12	Single	No	No	<a href="#">Download</a>

<sup>1</sup> Includes coil wires and connector. Refer to the 2D print for details.

## Specifications

Max Voltage Rating (V DC):	60, 110
Current Rating Continuous (A):	250
Coil Voltage Rating (V DC):	12
Ingress Protection:	IP 40
Operating Temperature (°C):	-40 to +85

## Applications

- Communication Power Supplies
- UPS
- Material Handling
- Industrial Machinery

## Features and Benefits

- Available with a 250A continuous current rating for high-current contact switching
- Main contacts rated for 48V typical (60V max) or 96V typical (110V max)
- 48V units have non-polarized magnets and 96V units have polarized magnets
- Single-pole, single-throw (SPST), normally open contact arrangement
- Coil rating options include 12V (availability varies with the unit's continuous current rating)
- Robust standard industrial footprint

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## Performance Data

MAIN CONTACT	
Contact Arrangement	SPST NO
Rated Operating Voltage	96V DC (DCNLJ250PDXX) 48V DC (DCNLJ250NBXX)
Max Short Circuit Current	1000A @96V DC (DCNLJ250PD12) 1000A @48V DC (DCNLJ250NB12-01)
Dielectric Withstand Voltage	1000V AC
Insulation Resistance	≥50MΩ @ 500V DC
Max Voltage Drop	≤50mV @ 100A

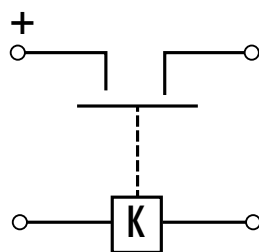
COIL DATA	
Voltage Rating (V DC)	12
Pickup Voltage @ 25°C (V DC MAX)	8.4
Dropout Voltage @ 25°C (V DC MIN)	1
Hold Current (A)	1.3
Coil Watts @ 25°C (W)	16

LIFE	
Electrical Life	100,000
Mechanical Life	3,000,000

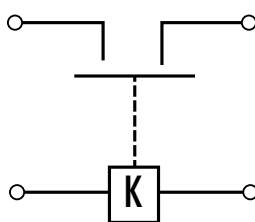
OPERATE / RELEASE TIME	
Close (ms)	60
Release (ms)	25

ENVIRONMENTAL DATA	
Shock	20G
Vibration	1~50Hz (freq.1~10Hz, amp; 25/f <sup>2</sup> ; freq.10~50Hz, ampl.250/f <sup>2</sup> )
Operating Ambient Temperature	-40°C~+85°C
Weight (g)	776

## Electrical Diagram



DCNLJ250PD12

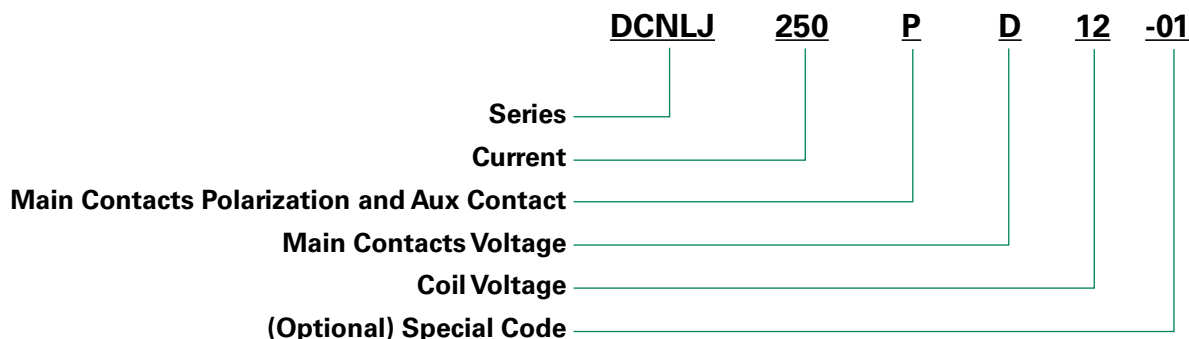


DCNLJ250NB12-01

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## Part Number System



MAIN CONTACTS POLARIZATION AND AUX CONTACT		
	POLARIZED?	INCLUDE AUX CONTACT?
P:	Yes	No
N:	No	No

MAIN CONTACTS VOLTAGE RATING		
B:	48	V DC
D:	96	V DC

COIL VOLTAGE		
12:	12	V DC

## Application Notes & Definitions

- Be sure to use a washer to prevent screws from loosening. Tighten the screw so that the torque is in the range specified below. Exceeding the maximum torque can lead to product rupture.
- Please refer to the drawing for connection polarity.
- Do not use dropped products.
- Avoid installing the product in a strong magnetic field (Close to the transformer or magnet), or near an object with heat radiation.
- Electrical life  
Please use under load capability and life cycle so as not to cause a function failure. (Please also treat the contactor as a product with specified life and replace it when necessary). It is possible to make parts burn around the contactor once operating failure happens. So it is necessary to take layout into account to make sure power shall be cut off within 1 second.
- Do not let particle and oil stain on the main terminal with which the load shall make a reliable contact or it will cause a lot of heat.

PRODUCT SERIES	PRODUCT MODEL	CONTACT TERMINAL		COIL TERMINAL		MOUNTING	
		HOLE OR BOLT	REFERENCE TORQUE	HOLE/BOLT/WIRE/TERMINAL	REFERENCE TORQUE	REFERENCE BOLT SIZE	REFERENCE TORQUE
DCNLJ250	DCNLJ250PD12	Bolt : M10	9~11N.m	TE Connector # 1-178128-2	/	M8	12~15N.m
	DCNLJ250NB12-01			TE Connector # 1-178128-3			