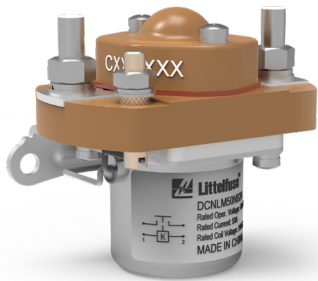
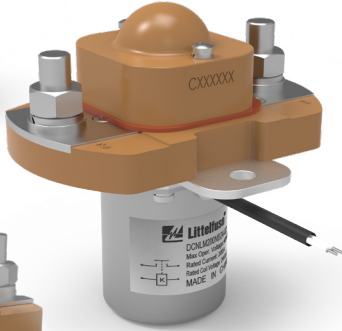


DCNLM SERIES

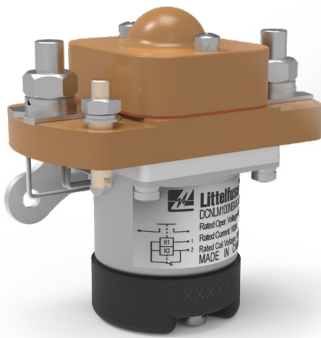
60V DC MAX CONTACTOR RELAY



DCNLM50



DCNLM200



DCNLM100

Description

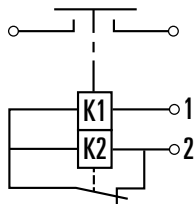
The DCNLM Series 48V High-Current DC Contactor Relay is available up to 400A contact switching capability as well as multiple coil voltage options to suit a wide variety of applications, including use in electrical control systems for communication power supplies, industrial machines, and uninterruptible power supplies (UPS).

The DCNLM normally open, high-current DC contactor features 48V non-polarized main contacts and is available in single-coil and double-coil configurations.

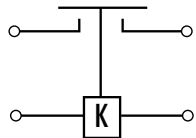
Web Resources

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

Electrical Diagram



DCNLM100NBxx-01
 DCNLM200NB12xx
 DCNLM400NB12
 DCNLM400NB24-01
 DCNLM400NB48-01



DCNLM50NBxx
 DCNLM200NBxx-01
 DCNLM200NB24-02
 DCNLM400NBxx

Specifications

| | |
|---------------------------------------|-------------------|
| Max Voltage Rating (V DC): | 60 |
| Current Rating Continuous (A): | 50, 100, 200, 400 |
| Coil Voltage Rating (V DC): | 12, 24, 48, 60 |
| Ingress Protection: | IP 40 |
| Operating Temperature (°C): | -40°C to +70°C |
| Approvals: | 400A have CCC, UL |

Applications

- Communication Power Supplies
- UPS

Features and Benefits

- Available up to 400A contact switching capability
- Main contacts are rated for 48V (typical) and 60V (max)
- Coil voltage options include 12V, 24V, 48V, and 60V
- Available in single-coil and double-coil configurations
- Normally open, monostable relay design
- Non-polarized main contacts

DCNLM SERIES

60V DC MAX CONTACTOR RELAY

Ordering Information

| PART NUMBER | CONTINUOUS CURRENT (A) | VOLTAGE RATING | | MOUNTING | COIL VOLTAGE (V DC) | COIL TYPE | AUX CONTACT | POLARIZED |
|-----------------|------------------------|-----------------------|--------------------|------------|---------------------|-----------|-------------|-----------|
| | | SYSTEM NOMINAL (V DC) | MAX VOLTAGE (V DC) | | | | | |
| DCNLM50NB12 | 50 | 48 | 60 | SIDE MOUNT | 12 | Single | No | No |
| DCNLM50NB24 | 50 | 48 | 60 | SIDE MOUNT | 24 | Single | No | No |
| DCNLM50NB48 | 50 | 48 | 60 | SIDE MOUNT | 48 | Single | No | No |
| DCNLM50NB60 | 50 | 48 | 60 | SIDE MOUNT | 60 | Single | No | No |
| DCNLM100NB12-01 | 100 | 48 | 60 | SIDE MOUNT | 12 | Dual | No | No |
| DCNLM100NB24-01 | 100 | 48 | 60 | SIDE MOUNT | 24 | Dual | No | No |
| DCNLM100NB48-01 | 100 | 48 | 60 | SIDE MOUNT | 48 | Dual | No | No |
| DCNLM200NB12 | 200 | 48 | 60 | SIDE MOUNT | 12 | Dual | No | No |
| DCNLM200NB24 | 200 | 48 | 60 | SIDE MOUNT | 24 | Dual | No | No |
| DCNLM200NB48 | 200 | 48 | 60 | SIDE MOUNT | 48 | Dual | No | No |
| DCNLM200NB12-01 | 200 | 48 | 60 | SIDE MOUNT | 12 | Single | No | No |
| DCNLM200NB24-01 | 200 | 48 | 60 | SIDE MOUNT | 24 | Single | No | No |
| DCNLM200NB48-01 | 200 | 48 | 60 | SIDE MOUNT | 48 | Single | No | No |
| DCNLM200NB24-02 | 200 | 48 | 60 | TOP MOUNT | 24 | Single | No | No |
| DCNLM400NB24 | 400 | 48 | 60 | SIDE MOUNT | 24 | Single | No | No |
| DCNLM400NB48 | 400 | 48 | 60 | SIDE MOUNT | 48 | Single | No | No |
| DCNLM400NB12 | 400 | 48 | 60 | SIDE MOUNT | 12 | Dual | No | No |
| DCNLM400NB24-01 | 400 | 48 | 60 | SIDE MOUNT | 24 | Dual | No | No |
| DCNLM400NB48-01 | 400 | 48 | 60 | SIDE MOUNT | 48 | Dual | No | No |

Performance Data

| MAIN CONTACT | | |
|------------------------------|-----------------|----------------|
| Contact Arrangement | SPST NO | |
| Rated Operating Voltage | 48V DC | |
| Max Short Circuit Current | DCNLM50 | 200A @ 48V DC |
| | DCNLM100 | 400A @ 48V DC |
| | DCNLM200 | 800A @ 48V DC |
| | DCNLM400 | 1600A @ 48V DC |
| Dielectric Withstand Voltage | 1000V AC | |
| Insulation Resistance | ≥50MΩ @ 500V DC | |
| Max Voltage Drop | DCNLM50 | ≤50mV @ 50 A |
| | DCNLM100 | ≤80mV @ 100 A |
| | DCNLM200, 400 | ≤50mV @ 100A |

| COIL DATA | | | | | |
|-----------------------------------|-------------|---------|--------|-------|------|
| Voltage Rating (V DC) | 12 | 24 | 48 | 60 | |
| Pickup Voltage @ 25°C (V DC MAX) | 8.4 | 16.8 | 33.6 | 42 | |
| Dropout Voltage @ 25°C (V DC MIN) | 1 | 2 | 4 | 5 | |
| Hold Current (A) | DCNLM50 | 0.71 | 0.35 | 0.18 | 0.13 |
| | DCNLM100(D) | 0.75 | 0.35 | 0.15 | / |
| | DCNLM200(S) | 0.84 | 0.4 | 0.21 | / |
| | DCNLM200(D) | 0.7 | 0.37 | 0.15 | / |
| | DCNLM400(S) | / | 0.39 | 0.24 | / |
| | DCNLM400(D) | 0.77 | 0.45 | 0.1 | / |
| Coil Watts @ 25°C (W) | DCNLM50 | 9 | 9 | 9 | 9 |
| | DCNLM100(D) | 150/9 | 150/9 | 150/9 | / |
| | DCNLM200(S) | 10 | 10 | 10.5 | / |
| | DCNLM200(D) | 180/8.5 | 170/9 | 180/8 | / |
| | DCNLM400(S) | / | 10 | 11.5 | / |
| | DCNLM400(D) | 80/9.5 | 175/11 | 154/5 | / |

| LIFE | |
|-----------------|-------------|
| Electrical Life | 6000 Cycles |
| Mechanical Life | 100,000 |

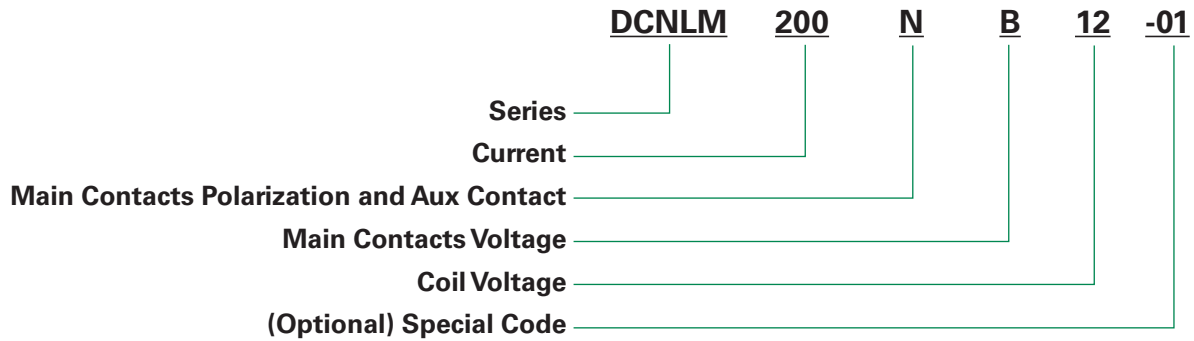
| OPERATE / RELEASE TIME | | |
|------------------------|----------|----|
| Close (ms) | DCNLM50 | 40 |
| | DCNLM100 | 30 |
| | DCNLM200 | 50 |
| | DCNLM400 | 50 |
| Release (ms) | DCNLM50 | 20 |
| | DCNLM100 | 30 |
| | DCNLM200 | 25 |
| | DCNLM400 | 25 |

| ENVIRONMENTAL DATA | | |
|-------------------------------|--|-------|
| Shock | DCNLM50NB DVP 50G, 6ms | |
| Vibration | 1~50Hz (freq.1~10Hz, amp;.25/f ² ; freq.10~50Hz, ampl.250/f ²) | |
| Operating Ambient Temperature | -40°C~+70°C | |
| Weight (g) | DCNLM50 | 157 |
| | DCNLM100NBxx-01 | 193.3 |
| | DCNLM200NBxx | 445.1 |
| | DCNLM200NBxx-0x | 439 |
| | DCNLM400NBxx | 866 |
| DCNLM400NBxx-01 | 888 | |

DCNLM SERIES

60V DC MAX CONTACTOR RELAY

Part Number System



| MAIN CONTACTS POLARIZATION AND AUX CONTACT | | |
|--|------------|----------------------|
| | POLARIZED? | INCLUDE AUX CONTACT? |
| N: | No | No |

| MAIN CONTACTS VOLTAGE RATING | | |
|------------------------------|----|------|
| B: | 48 | V DC |

| COIL VOLTAGE | | |
|--------------|----|------|
| 12: | 12 | V DC |
| 24: | 24 | V DC |
| 48: | 48 | V DC |
| 60: | 60 | V DC |