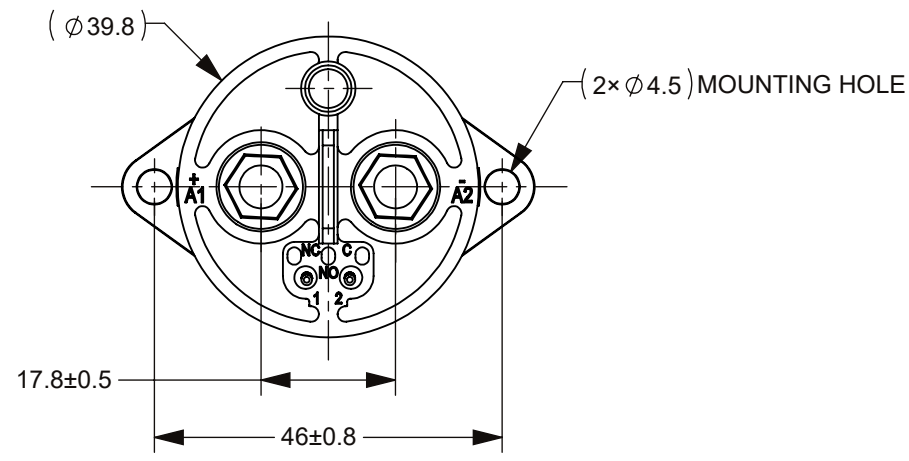


| REVISIONS |      |  |              |          |
|-----------|------|--|--------------|----------|
| ZONE      | REV. | DESCRIPTION  | DATE         | APPROVED |
|           | A    | GCF#524667 INITIAL RELEASE                                   | AUG./25/2021 | D. ZHANG |
| B8        | B    | ECR#525202 DELETE: "AUXILIARY CONTACT RESISTANCE" IN TABLE 1 | 5/10/2022    | D. ZHANG |



CIRCUIT SCHEMATIC DIAGRAM

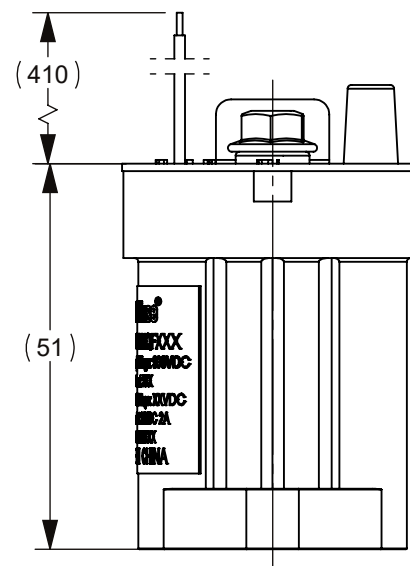
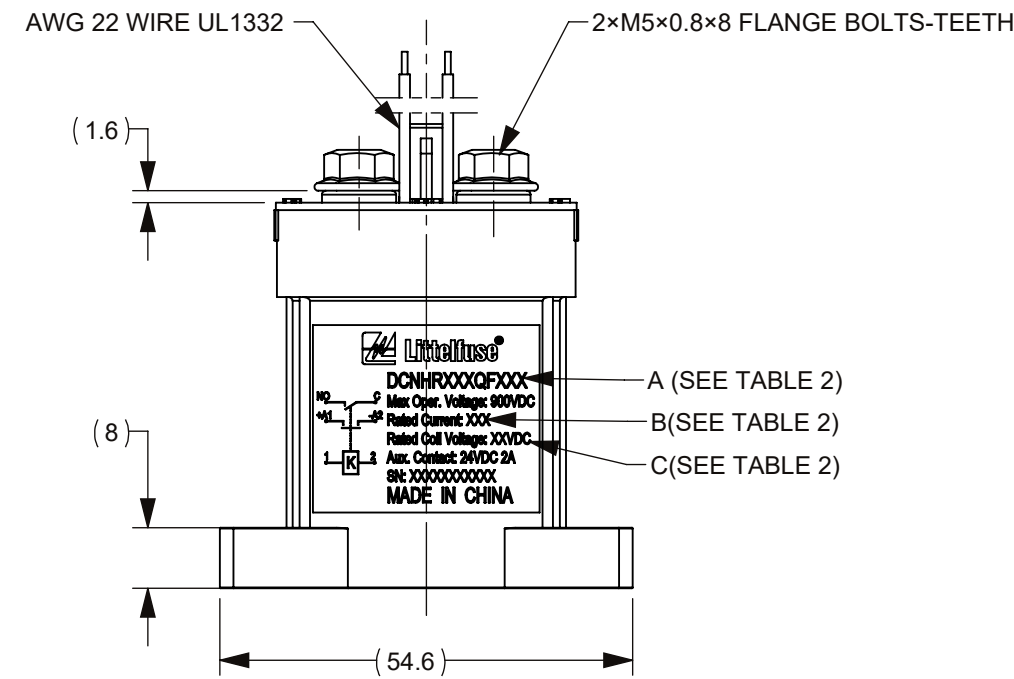
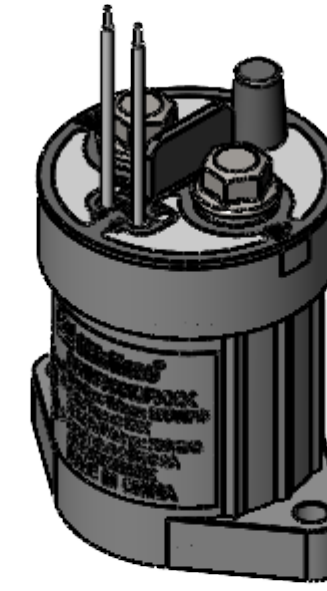
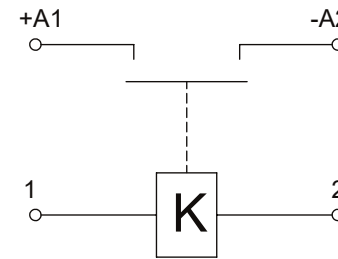


TABLE 1: TECHNICAL PARAMETERS

| ITEM  | PARAMETER                 |              |              |                           |             |             |          |
|---|---------------------------|--------------|--------------|---------------------------|-------------|-------------|----------|
|   | DCNHR100PF12              | DCNHR100PF24 | DCNHR100PF48 | DCNH50PF12                | DCNHR50PF24 | DCNHR50PF48 |          |
| RATED COIL VOLTAGE                          | 12V DC                    | 24V DC       | 48V DC       | 12V DC                    | 24V DC      | 48V DC      |          |
| OPERATING VOLTAGE IN COLD STATE AT (20±5) C | PICK-UP (V DC)            | MAX 8.4      | MAX 16.8     | MAX 33.6                  | MAX 8.4     | MAX 16.8    | MAX 33.6 |
|   | RELEASE(V DC)             | MIN 1        | MIN 2        | MIN 4                     | MIN 1       | MIN 2       | MIN 4    |
| PICK-UP TIME                                | MAX 25ms                  |              |              |                           |             |             |          |
| RELEASE TIME                                | MAX 12ms                  |              |              |                           |             |             |          |
| BOUNCE TIME                                 | MAX 7ms                   |              |              |                           |             |             |          |
| MAIN CONTACT RESISTANCE (@ 20A)             | MAX 2mΩ                   |              |              |                           |             |             |          |
| DIELECTRIC STRENGTH (LEAKAGE CURRENT ≤1 mA) | 2200V AC, 50Hz, 1min.     |              |              |                           |             |             |          |
| INSULATION RESISTANCE                       | ≥100MΩ@500VDC             |              |              |                           |             |             |          |
| MAXIMUM CONTACT VOLTAGE                     | 900V DC                   |              |              |                           |             |             |          |
| RATED CONTACT CURRENT                       | 100A                      | 100A         | 100A         | 50A                       | 50A         | 50A         |          |
| LIMIT BREAKING ABILITY                      | 4le/5ms, 1CYCLES          |              |              |                           |             |             |          |
| ELECTRIC LIFE                               | 3000 CYCLES(100A@450V DC) |              |              | 6000 CYCLES(100A@450V DC) |             |             |          |
| MECHANICAL LIFE                             | 200,000 CYCLES            |              |              |                           |             |             |          |
| WORKING DUTY                                | CONTINUOUS                |              |              |                           |             |             |          |

TABLE 2

| PRODUCT NUMBER | "A"          | "B"  | "C"    |
|----------------|--------------|------|--------|
| DCNHR100PF12   | DCNHR100PF12 | 100A | 12V DC |
| DCNHR100PF24   | DCNHR100PF24 | 100A | 24V DC |
| DCNHR100PF48   | DCNHR100PF48 | 100A | 48V DC |
| DCNHR50PF12    | DCNHR50PF12  | 50A  | 12V DC |
| DCNHR50PF24    | DCNHR50PF24  | 50A  | 24V DC |
| DCNHR50PF48    | DCNHR50PF48  | 50A  | 48V DC |

NOTES:

- ALL SIZES ARE FOR REFERENCE ONLY.
- MATERIALS AND FINISHED:
  - HOUSING: THERMOSETTING PLASTIC, UL94V-0.
  - CONTACTS: SILVER ALLOY.
- PRODUCT PN AND NAMEPLATE CONFIGURATION RELATION SEE TABLE 2.
- PRODUCT TECHNICAL PARAMETERS: SEE TABLE 1.
- MAIN CONTACT ARRANGEMENT: SPST-NO.
- CONNECTION BOLT: M5 BOLT, RECOMMENDED TORQUE 3 N•m ~ 4 N•m.
- MOUNTING: M4 BOLT, RECOMMENDED TORQUE 1.7 N•m ~ 2.5 N•m.

DIMENSIONS ARE SHOWN IN MILLIMETERS. DIMENSIONS AND TOLERANCES ARE DEFINED ACCORDING TO ANSI/ASME Y14.5-1994.

PER CHNFPD20-008 PROCEDURE

- FIT/ FUNCTION CRITICAL CHARACTERISTICS
- <S> SAFETY/ COMPLIANCE CRITICAL CHARACTERISTICS SYMBOL
- CPK DENOTES CPK DIMENSIONS MINIMUM CPK VALUE
- (ST) DENOTES A CHARACTERISTIC THAT PROVIDES AN INDICATION OF PROCESS PERFORMANCE PROCEDURE FOR MEASUREMENT AND TRACKING TO BE DEFINED IN LITTELFUSE INSPECTION INSTRUCTIONS
- CP DENOTES CP DIMENSIONS. MINIMUM CP VALUE MUST BE WITHIN THE DIMENSIONAL LIMITATIONS SHOWN ON DRAWING AND INITIALLY LOCATED TO ALLOW FOR MAXIMUM TOOL LIFE

|         |         |              |
|---------|---------|--------------|
| DRAWN   | MJ. DAI | AUG./25/2021 |
| CHECKED | J. LI   | AUG./30/2021 |

FORM NO. CVP-PE40-0005 REV B

THIRD ANGLE PROJECTION

**Littelfuse**  
Expertise Applied | Answers Delivered

TITLE: DCNHR 100A HIGH VOLTAGE CONTACTOR WITH POLARITY

SIZE: C DWG. NO. OL-DCNHR100PF CHT REV. B

DO NOT SCALE DRAWING SCALE 1:1 SHEET 1 OF 1