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## REVISIONS

| ZONE | REV. | DESCRIPTION                | DATE         | APPROVED |
|------|------|----------------------------|--------------|----------|
|      | A    | GCF#524667 INITIAL RELEASE | AUG./25/2021 | D. ZHANG |

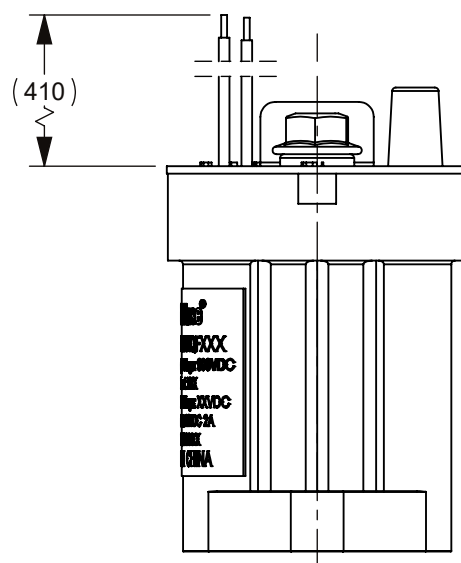
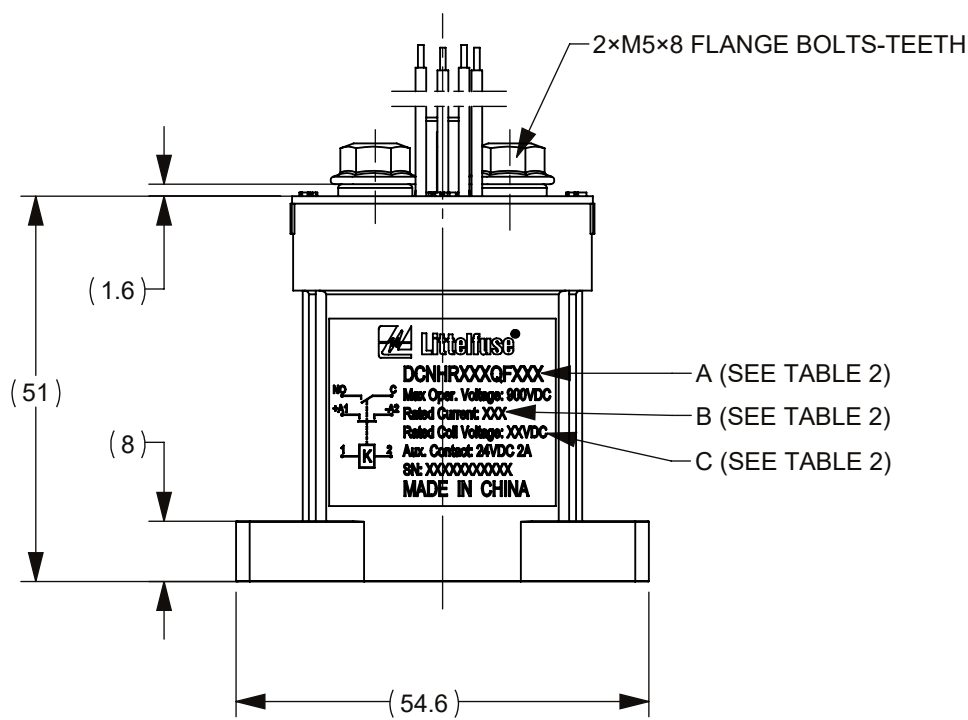
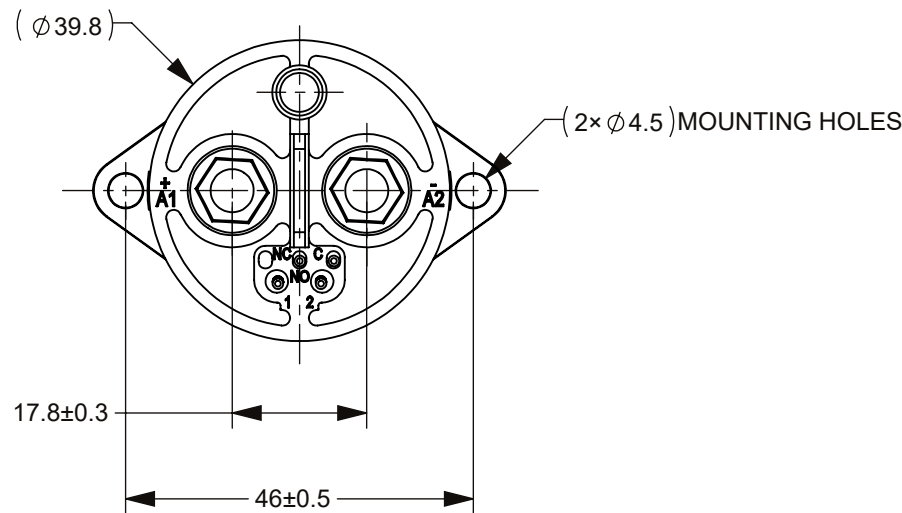
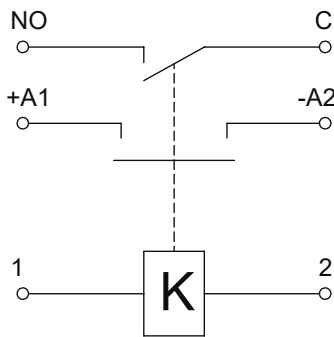
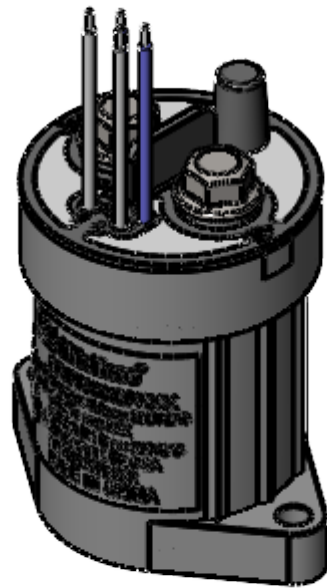


TABLE 1: TECHNICAL PARAMETERS

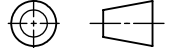
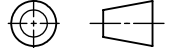
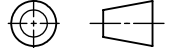
| ITEM                                        |               | PARAMETER                 |              |              |                          |             |             |
|---------------------------------------------|---------------|---------------------------|--------------|--------------|--------------------------|-------------|-------------|
|                                             |               | DCNHR100QF12              | DCNHR100QF24 | DCNHR100QF48 | DCNHR50QF12              | DCNHR50QF24 | DCNHR50QF48 |
| RATED COIL VOLTAGE                          |               | 12V DC                    | 24V DC       | 48V DC       | 12V DC                   | 24V DC      | 48V DC      |
| OPERATING VOLTAGE IN COLD STATE AT (20±5) C | PICKUP (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                   |              |              |                          |             |             |
| AUX. CONTACT RESISTANCE (@ 100mA)           |               | MAX 500mΩ                 |              |              |                          |             |             |
| 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         |
| AUX. CONTACT RATED LOAD                     |               | 24V DC, 2A                |              |              |                          |             |             |
| LIMIT BREAKING ABILITY                      |               | 4le/5ms,1CYCLES           |              |              |                          |             |             |
| ELECTRIC LIFE                               |               | 3000 CYCLES(100A@450V DC) |              |              | 6000 CYCLES(50A@450V DC) |             |             |
| MECHANICAL LIFE                             |               | 200,000 CYCLES            |              |              |                          |             |             |
| WORKING DUTY                                |               | CONTINUOUS                |              |              |                          |             |             |

TABLE 2

| PRODUCT NUMBER | "A"          | "B"  | "C"    |
|----------------|--------------|------|--------|
| DCNHR100QF12   | DCNHR100QF12 | 100A | 12V DC |
| DCNHR100QF24   | DCNHR100QF24 | 100A | 24V DC |
| DCNHR100QF48   | DCNHR100QF48 | 100A | 48V DC |
| DCNHR50QF12    | DCNHR50QF12  | 50A  | 12V DC |
| DCNHR50QF24    | DCNHR50QF24  | 50A  | 24V DC |
| DCNHR50QF48    | DCNHR50QF48  | 50A  | 48V DC |

NOTES:

1. ALL SIZES ARE FOR REFERENCE ONLY.
2. MATERIALS AND FINISHING:
  - 2.1 HOUSING: THERMOSETTING PLASTIC, UL94V-0.
  - 2.2 CONTACTS: SILVER ALLOY.
3. PRODUCT PN AND NAMEPLATE CONFIGURATION RELATION SEE TABLE 2
4. PRODUCT TECHNICAL PARAMETERS: SEE TABLE 1.
5. MAIN CONTACT ARRANGEMENT: SPST-NO.
6. AUXILIARY CONTACT ARRANGEMENT: SPST-NO.
7. CONNECTION BOLT: M5 BOLT, RECOMMENDED TORQUE 3 N•m ~ 4 N•m.
8. 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 CH-ANPD20-0008 PROCEDURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  FIT/ FUNCTION CRITICAL CHARACTERISTICS                                                                                                                               |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  SAFETY/ COMPLIANCE CRITICAL CHARACTERISTICS SYMBOL                                                                                                                   |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CPK DENOTES CPK DIMENSIONS MINIMUM CPK VALUE                                                                                                                                                                                                               |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  DENOTES A CHARACTERISTIC THAT PROVIDES AN INDICATION OF PROCESS PERFORMANCE PROCEDURE FOR DOCUMENTATION 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                                                                                               |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| <table><tr><th></th><th>NAME</th><th>DATE</th></tr><tr><td>DRAWN</td><td>MJ DAI</td><td>AUG/25/2021</td></tr><tr><td>CHECKED</td><td>J. LI</td><td>AUG./30/2021</td></tr><tr><td></td><td>-</td><td>-</td></tr><tr><td></td><td>-</td><td>-</td></tr><tr><td></td><td>-</td><td>-</td></tr><tr><td colspan="3">FORM NO: CVP-PE40-0005 REV B</td></tr><tr><td colspan="3">THIRD ANGLE PROJECTION</td></tr><tr><td colspan="3"></td></tr><tr><td colspan="3">DO NOT SCALE DRAWING</td></tr></table> |                                                                                                                                                                                                                                                            |              | NAME | DATE | DRAWN | MJ DAI | AUG/25/2021 | CHECKED | J. LI | AUG./30/2021 |  | - | - |  | - | - |  | - | - | FORM NO: CVP-PE40-0005 REV B |  |  | THIRD ANGLE PROJECTION |  |  |  |  |  | DO NOT SCALE DRAWING |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NAME                                                                                                                                                                                                                                                       | DATE         |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| DRAWN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MJ DAI                                                                                                                                                                                                                                                     | AUG/25/2021  |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| CHECKED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | J. LI                                                                                                                                                                                                                                                      | AUG./30/2021 |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -                                                                                                                                                                                                                                                          | -            |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -                                                                                                                                                                                                                                                          | -            |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -                                                                                                                                                                                                                                                          | -            |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| FORM NO: CVP-PE40-0005 REV B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| THIRD ANGLE PROJECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| DO NOT SCALE DRAWING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| <div> <b>Littelfuse®</b><br/>Expertise Applied   Answers Delivered</div>                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| TITLE<br>DCNHR 100A HIGH VOLTAGE CONTACTOR<br>WITH POLARITY AND AUXILIARY CONTACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| SIZE C<br>SCALE 1:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DWG. NO.<br>OUTLINE<br>OL-DCNHR100QF CHART                                                                                                                                                                                                                 |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |
| REV. A<br>SHEET 1 OF 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                            |              |      |      |       |        |             |         |       |              |  |   |   |  |   |   |  |   |   |                              |  |  |                        |  |  |                                                                                       |  |  |                      |  |  |