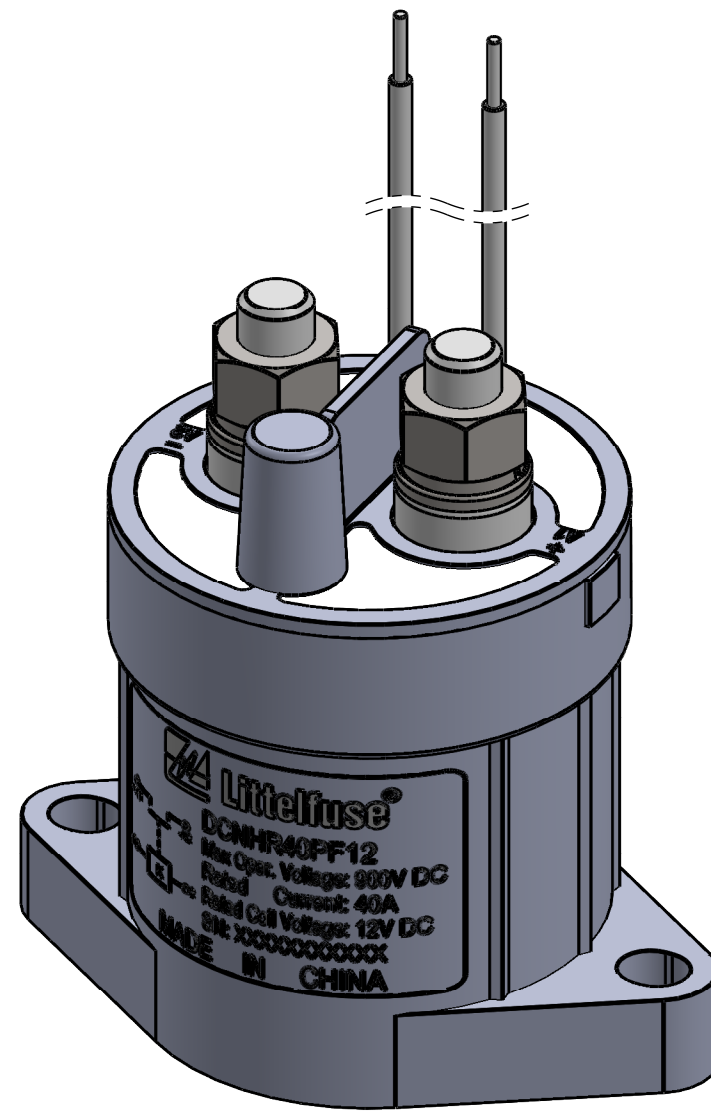
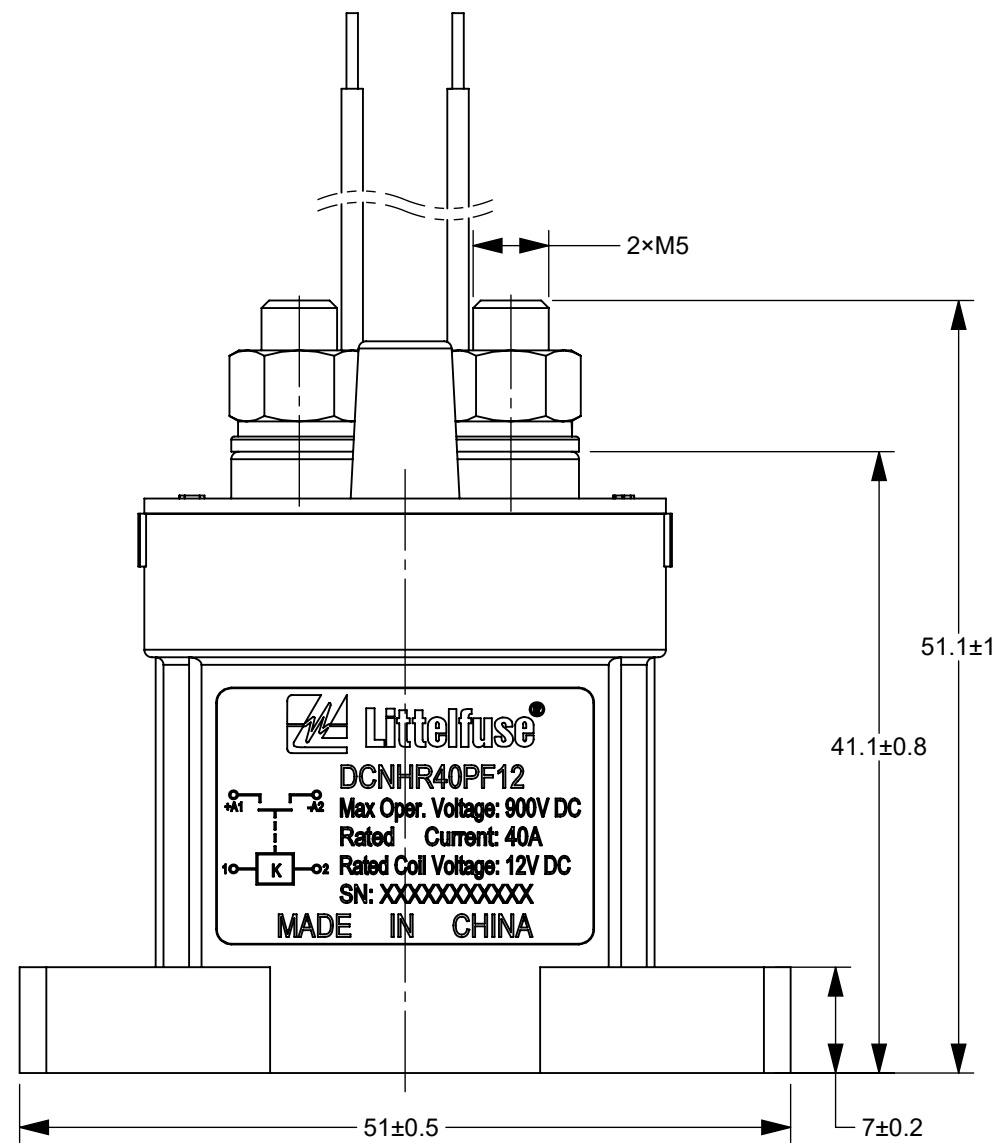
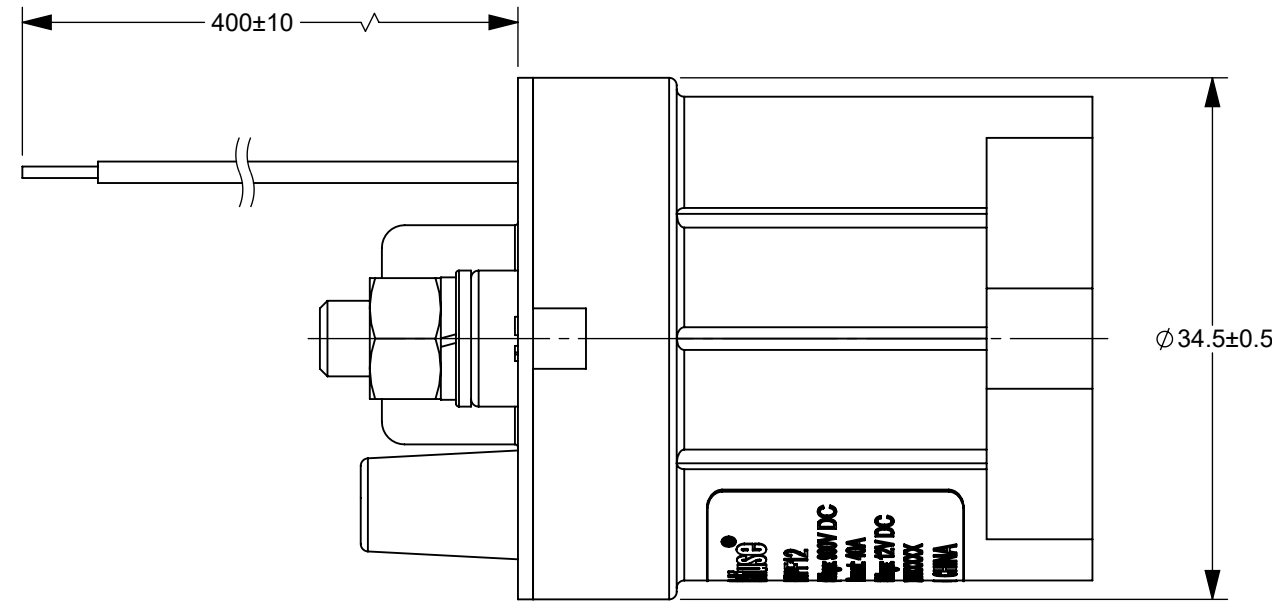
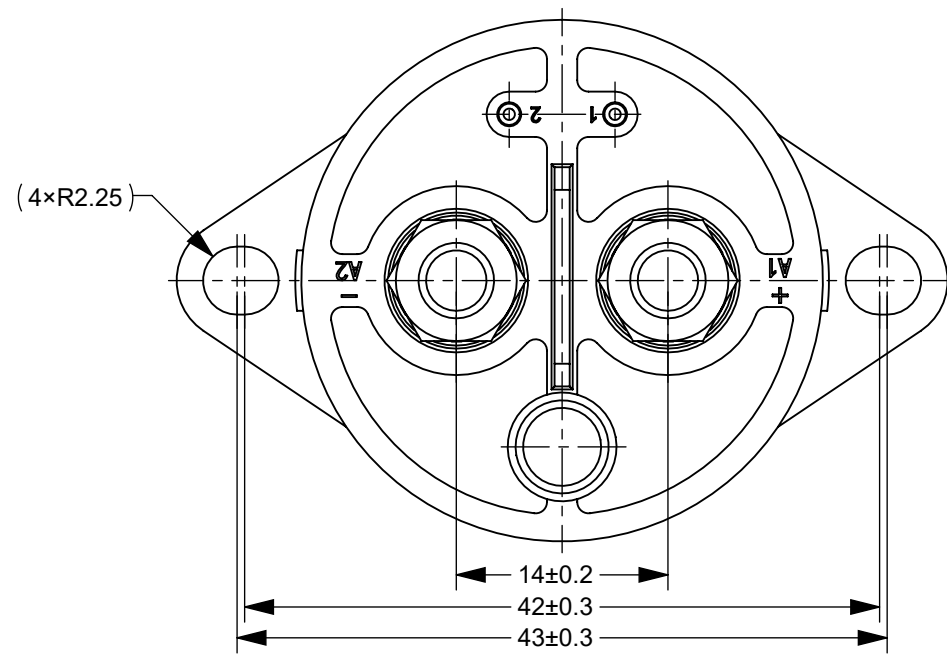
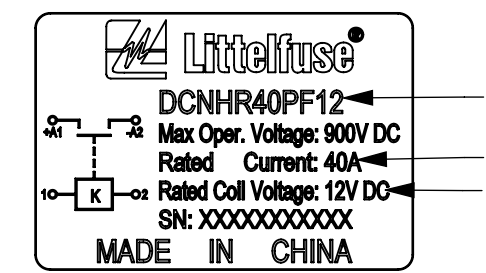
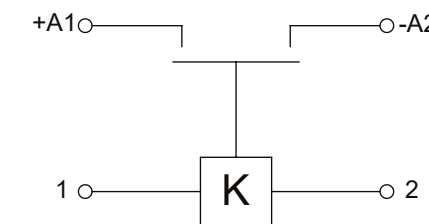


THIS DRAWING AND THE INFORMATION CONTAINED WITHIN IT ARE CONFIDENTIAL AND MAY NOT BE COPIED OR DISCLOSED WITHOUT THE WRITTEN PERMISSION OF LITTELFUSE.

| REVISIONS |      |                            |              |          |
|-----------|------|----------------------------|--------------|----------|
| ZONE      | REV. | DESCRIPTION                | DATE         | APPROVED |
|           | A    | GCF#524714 INITIAL RELEASE | NOV./25/2021 | D. ZHANG |



CIRCUIT SCHEMATIC DIAGRAM



NAME PLATE

TABLE 1

| PN   | DCNHR40PF12   | DCNHR40PF24                  | DCNHR40PF48 |
|--|---|------------------------------|-------------|
|  | DCNHR30PF12   | DCNHR30PF24                  | DCNHR30PF48 |
|  | DCNHR20PF12   | DCNHR20PF24                  | DCNHR20PF48 |
| MAX OPER. VOLTAGE                          | 900V DC   |                              |             |
| RATED CONTACT CURRENT                      | DCNHR40PF SERIES: 40A<br>DCNHR30PF SERIES: 30A<br>DCNHR20PF SERIES: 20A |                              |             |
| COIL RATED VOLTAGE                         | 12V DC  | 24V DC                       | 48V DC      |
| OPERATING VOLTAGE IN COLD STATE @ (23±5)°C | OPERATE   | 9V DC MAX                    | 18V DC MAX  |
|  | RELEASE   | 1V DC MIN                    | 2V DC MIN   |
| OPERATE TIME                               | 25ms MAX  |                              |             |
| CONTACT BOUNCE TIME                        | 7ms MAX   |                              |             |
| RELEASE TIME                               | 12ms MAX  |                              |             |
| MAIN CONTACT RESISTANCE(@ 20A)             | ≤2mΩ  |                              |             |
| INSULATION RESISTANCE @ 500 V (INITIAL)    | ≥100 MΩ   |                              |             |
| DIELECTRIC STRENGTH (LEAKAGE CURRENT≤1 mA) | 2200V AC, 1 MINUTE  |                              |             |
| ELECTRIC LIFE                              | DCNHR40PF SERIES  | 6000 CYCLES (40A @ 450V DC)  |             |
|  | DCNHR30PF SERIES  | 75000 CYCLES (30A @ 450V DC) |             |
|  | DCNHR20PF SERIES  | 10000 CYCLES (20A @ 450V DC) |             |
| MECHANICAL LIFE(NO LOAD, CYCLES)           | 200, 000  |                              |             |
| WORKING DUTY                               | CONTINUOUS  |                              |             |

TABLE 2 (CONFIGURATION)

| NO. | PN          | "A"         | "B"                | "C"                  | REMARK |
|-----|-------------|-------------|--------------------|----------------------|--------|
| 1   | DCNHR40PF12 | DCNHR40PF12 | Rated Current: 40A | Coil Voltage: 12V DC |        |
| 2   | DCNHR40PF24 | DCNHR40PF24 |                    | Coil Voltage: 24V DC |        |
| 3   | DCNHR40PF48 | DCNHR40PF48 |                    | Coil Voltage: 48V DC |        |
| 4   | DCNHR30PF12 | DCNHR30PF12 | Rated Current: 30A | Coil Voltage: 12V DC |        |
| 5   | DCNHR30PF24 | DCNHR30PF24 |                    | Coil Voltage: 24V DC |        |
| 6   | DCNHR30PF48 | DCNHR30PF48 |                    | Coil Voltage: 48V DC |        |
| 7   | DCNHR20PF12 | DCNHR20PF12 | Rated Current: 20A | Coil Voltage: 12V DC |        |
| 8   | DCNHR20PF24 | DCNHR20PF24 |                    | Coil Voltage: 24V DC |        |
| 9   | DCNHR20PF48 | DCNHR20PF48 |                    | Coil Voltage: 48V DC |        |

- NOTES:  
 1. ALL DIMENSIONS ARE REFERENCE ONLY.  
 2. SEE TABLE 2 FOR NAME PLATE AND PNs  
 3. PRODUCT TYPE: SPST-NO, POLAR CONTACTOR.  
 4. MATERIALS AND FINISH:  
 4.1 HOUSING: THERMOPLASTIC PLASTICS.  
 4.2 CONTACTS: COPPER ALLOY.  
 4.3 CONTACT STUDS: COPPER ALLOY.  
 4.4 COIL TERMINALS: TEFLON WIRE UL1332 22AWG-WHITE.  
 5. MAIN CONTACT M5 STUD, TORQUE: 1.7~2N·m.  
 6. MOUNTING: M4 BOLT, RECOMMENDED TORQUE 1.8 ~ 2.3N·m.  
 7. CONTACTOR PARAMETERS ARE SHOWN IN TABLE 1.

DIMENSIONS ARE SHOWN IN MILLIMETERS. DIMENSIONS AND TOLERANCES ARE DEFINED ACCORDING TO ANSIS/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

| NAME          | DATE         |
|---------------|--------------|
| DRAWN JY. SHI | NOV./25/2021 |
| CHECKED J. LI | NOV./15/2021 |

FORM NO. CVP-PE40-0005 REV B  
 THIRD ANGLE PROJECTION

**Littelfuse**  
 Expertise Applied | Answers Delivered

TITLE: DCNHR 40A POLAR CONTACTOR

SIZE: C DWG. NO. OUTLINE OL-DCNHR40PF, CHART 1 REV. A  
 DO NOT SCALE DRAWING SCALE 2:1 SHEET 1 OF 1