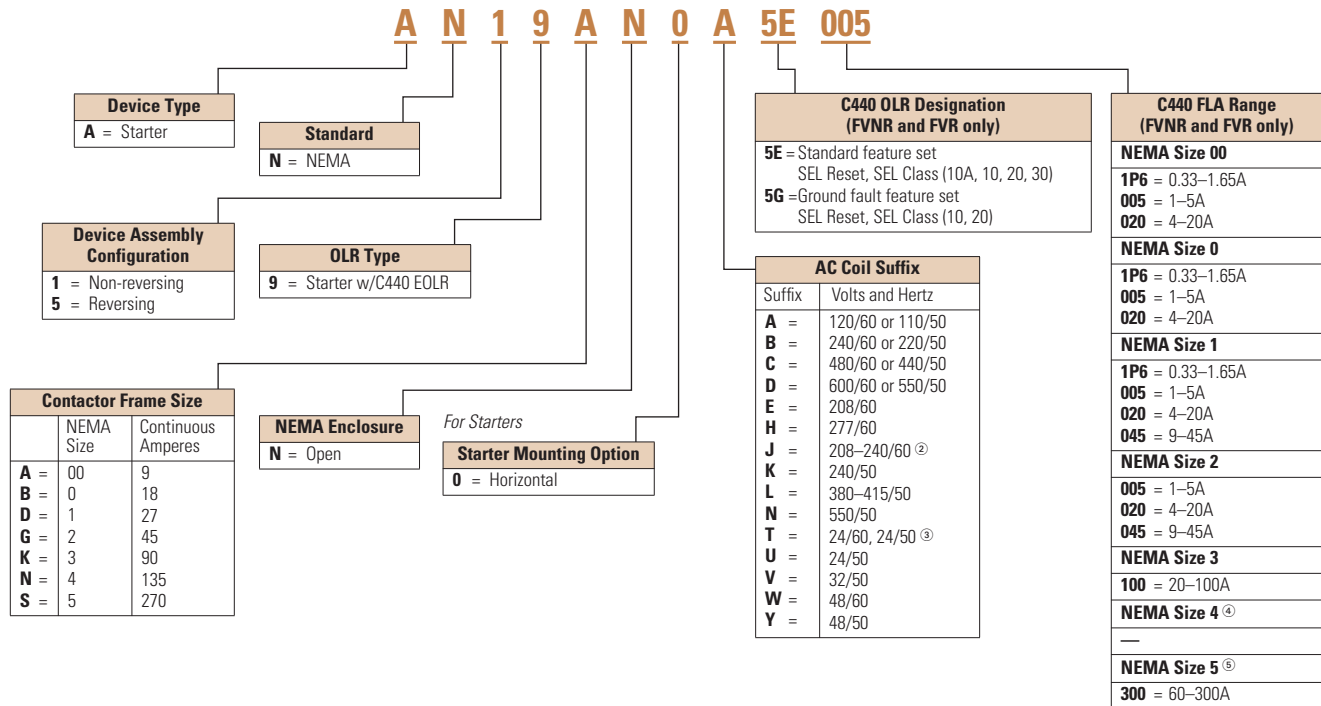


Catalog Number Selection

Freedom Series NEMA Starters with C440 Electronic Overload Relays ①



Notes

- ① See Page 292 for Product Selection.
- ② NEMA Sizes 00 and 0 only.
- ③ NEMA Sizes 00 and 0 only. Sizes 1–3 are 24/60 only.
- ④ Starter not shipped as an assembled unit. Order NEMA Size 4 contactor (CN15NN3A) plus current transformers (ZEB-XCT300) and 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).
- ⑤ NEMA Size 5 starter available with 60–300A panel mounted CTs. Starter shipped as an assembled unit with 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).

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NEMA Contactors and Starters

Freedom Series

Product Selection

Type AN19/59 Freedom Series Starters

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Type AN19/59 Freedom Series Starters with C440 Electronic Overload Relays

NEMA Starter



Non-Reversing and Reversing

| NEMA Size | Continuous Ampere Rating | Service Limit Current Rating (Amps) | Maximum UL Horsepower | | | | | | Three-Pole Non-Reversing ^{①②} Catalog Number | Three-Pole Reversing ^{①②} Catalog Number |
|----------------|--------------------------|-------------------------------------|-----------------------|-------|-------------|-------|------|------|--|--|
| | | | Single-Phase | | Three-Phase | | 480V | 600V | | |
| | | | 115V | 230V | 208V | 240V | | | | |
| 00 | 9 | 11 | 1/3 | 1 | 1-1/2 | 1-1/2 | 2 | 2 | AN19AN0_5E_ | AN59AN0_5E_ |
| 0 | 18 | 21 | 1 | 2 | 3 | 3 | 5 | 5 | AN19BN0_5E_ | AN59BN0_5E_ |
| 1 | 27 | 32 | 2 | 3 | 7-1/2 | 7-1/2 | 10 | 10 | AN19DN0_5E_ | AN59DN0_5E_ |
| 2 | 45 | 52 | 3 | 7-1/2 | 10 | 15 | 25 | 25 | AN19GN0_5E_ | AN59GN0_5E_ |
| 3 | 90 | 104 | — | — | 25 | 30 | 50 | 50 | AN19KN0_5E_ | AN59KN0_5E_ |
| 4 ^③ | 135 | 156 | — | — | 40 | 50 | 100 | 100 | ③ | ③ |
| 5 ^④ | 270 | 311 | — | — | 75 | 100 | 200 | 200 | AN19SN0_5E_ | AN59SN0_5E_ |

Type AN19/59 Freedom Series Starters with C440 with Ground Fault Electronic Overload Relays

NEMA Starter with Ground Fault



Non-Reversing and Reversing

| NEMA Size | Continuous Ampere Rating | Service Limit Current Rating (Amps) | Maximum UL Horsepower | | | | | | Three-Pole Non-Reversing ^{①②} Catalog Number | Three-Pole Reversing ^{①②} Catalog Number |
|----------------|--------------------------|-------------------------------------|-----------------------|-------|-------------|-------|------|------|--|--|
| | | | Single-Phase | | Three-Phase | | 480V | 600V | | |
| | | | 115V | 230V | 208V | 240V | | | | |
| 00 | 9 | 11 | 1/3 | 1 | 1-1/2 | 1-1/2 | 2 | 2 | AN19AN0_5G_ | AN59AN0_5G_ |
| 0 | 18 | 21 | 1 | 2 | 3 | 3 | 5 | 5 | AN19BN0_5G_ | AN59BN0_5G_ |
| 1 | 27 | 32 | 2 | 3 | 7-1/2 | 7-1/2 | 10 | 10 | AN19DN0_5G_ | AN59DN0_5G_ |
| 2 | 45 | 52 | 3 | 7-1/2 | 10 | 15 | 25 | 25 | AN19GN0_5G_ | AN59GN0_5G_ |
| 3 | 90 | 104 | — | — | 25 | 30 | 50 | 50 | AN19KN0_5G_ | AN59KN0_5G_ |
| 4 ^③ | 135 | 156 | — | — | 40 | 50 | 100 | 100 | ③ | ③ |
| 5 ^④ | 270 | 311 | — | — | 75 | 100 | 200 | 200 | AN19SN0_5G_ | AN59SN0_5G_ |

Coil Suffix Codes

| Suffix | Coil Volts and Hertz | Suffix | Coil Volts and Hertz |
|--------|----------------------|--------|----------------------|
| A | 120/60 or 110/50 | L | 380–415/50 |
| B | 240/60 or 220/50 | N | 550/50 |
| C | 480/60 or 440/50 | T | 24/60, 24/50 |
| D | 600/60 or 550/50 | U | 24/50 |
| E | 208/60 | V | 32/50 |
| H | 277/60 | W | 48/60 |
| J | 208–240/60 | Y | 48/50 |
| K | 240/50 | | |

C440 FLA Range (FVNR and FVR Starters Only)

| NEMA Size | OLR Code | FLA Range | OLR Code | FLA Rating |
|----------------|----------|------------|----------|------------|
| 00 | 1P6 | 0.33–1.65A | 020 | 4.0–20A |
| | 005 | 1.0–5.0A | — | — |
| 0 | 1P6 | 0.33–1.65A | 020 | 4.0–20A |
| | 005 | 1.0–5.0A | — | — |
| 1 | 1P6 | 0.33–1.65A | 020 | 4.0–20A |
| | 005 | 1.0–5.0A | 045 | 9.0–45A |
| 2 | 005 | 1.0–5.0A | 045 | 9.0–45A |
| | 020 | 4.0–20A | — | — |
| 3 | 100 | 20–100A | — | — |
| 4 ^③ | 300 | — | — | 60–300A |
| 5 ^③ | 300 | 60–300A | — | — |




Notes

- ① Underscore (_) indicates coils suffix required, see Coil Suffix table above.
- ② Underscore (_) indicates OLR designation required, see C440 FLA Range table above.
- ③ Starter not shipped as an assembled unit. Order NEMA Size 4 contactor (CN15NN3A) plus current transformers (ZEB-XCT300) and 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).
- ④ NEMA Size 5 starter available with 60–300A panel mounted CTs. Starter shipped as an assembled unit with 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).

Accessories

CT Kits

Accessories

| | Description | Catalog Number |
|--|--|---|
| Safety Cover  | Safety Cover Clear Lexan cover that mounts on top of the FLA dial and DIP switches when closed. | ZEB-XSC |
| Reset Bar  | Reset Bar Assembles to the top of the overload to provide a larger target area for door mounted reset operators. | ZEB-XRB |
| Remote Reset  | Remote Reset Remote reset module (24 Vdc) ① Remote reset module (120 Vac) ① Remote reset module (24 Vac) ① | C440-XCOM ZEB-XRR-120 ZEB-XRR-24 |

Communication

The C440 is provided with two levels of communication capability.

Basic Communication via Expansion Module—Monitoring Only

Basic communication on the C440 is accomplished using an expansion module. The expansion module plugs into the expansion bay on the C440 overload relay, enabling communications with the overload via their Modbus RTU (RS-485) network. No additional parts are required. See figure below.



Basic Communication—Modbus

Advanced Communication—Monitoring and Control

C440 also has the ability to communicate on industrial protocols such as DeviceNet, PROFIBUS, Modbus RTU and Modbus TCP, and Ethernet (planned) while providing control capability using I/O.

An expansion module (mentioned earlier) combined with a communication adapter and a communication module allows easy integration onto the customer’s network. See figure below.



Advanced Communication—Communication Adapter with Communication Module

Advanced Communication—Communication Module

The communication adapter comes standard with four inputs and two outputs (24 Vdc or 120 Vac) while providing the customer with flexible mounting options (DIN rail or panel). See figure below,

Note

① Customer can wire remote mounted button to reset module (i.e., 22 mm pushbutton, catalog number M22-D-B-GB14-K10).

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NEMA Contactors and Starters



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The following information can be viewed using the communication option:

- Motor status—running, stopped, tripped or resetting
- Individual rms phase currents (A, B, C)
- Average of three-phase rms current
- Percent thermal capacity
- Fault codes (only available prior to reset)
- Percent phase unbalance
- Ground fault current and percent
- Overload relay settings—trip class, DIP switch selections, reset selections
- Modbus address (can be set over the network)

Communication Accessories

| | Description | Catalog Number |
|--|--|---------------------|
| Expansion Module  | Expansion module (Remote Reset/Modbus RTU, RS-485 Communication) | C440-XCOM |
| Communication Adapter  | Communication adapter kit (DIN C Panel mounted adapter, required for advance communication option) | C440-COM-ADP |
| | DeviceNet communication module kit—120V I/O (consists of C440-XCOM + C441K + C440-COM-ADP) | C440-DN-120 |
| | DeviceNet communication module kit—24 Vdc I/O (consists of C440-XCOM + C441L + C440-COM-ADP) | C440-DN-24 |
| | PROFIBUS communication module kit—120V I/O (consists of C440-XCOM + C441S + C440-COM-ADP) | C440-DP-120 |
| | PROFIBUS communication module kit—24V I/O (consists of C440-XCOM + C441Q + C440-COM-ADP) | C440-DP-24 |
| | Modbus communication module kit—120V I/O (consists of C440-XCOM + C441N + C440-COM-ADP) | C440-MOD-120 |
| | Modbus communication module kit—24 Vdc I/O (consists of C440-XCOM + C441P + C440-COM-ADP) | C440-MOD-24 |
| | Ethernet IP communication module kit—120V I/O (consists of C440-XCOM + C441R + C440-COM-ADP) | C440-EIP-120 |

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NEMA Contactors and Starters

Freedom Series

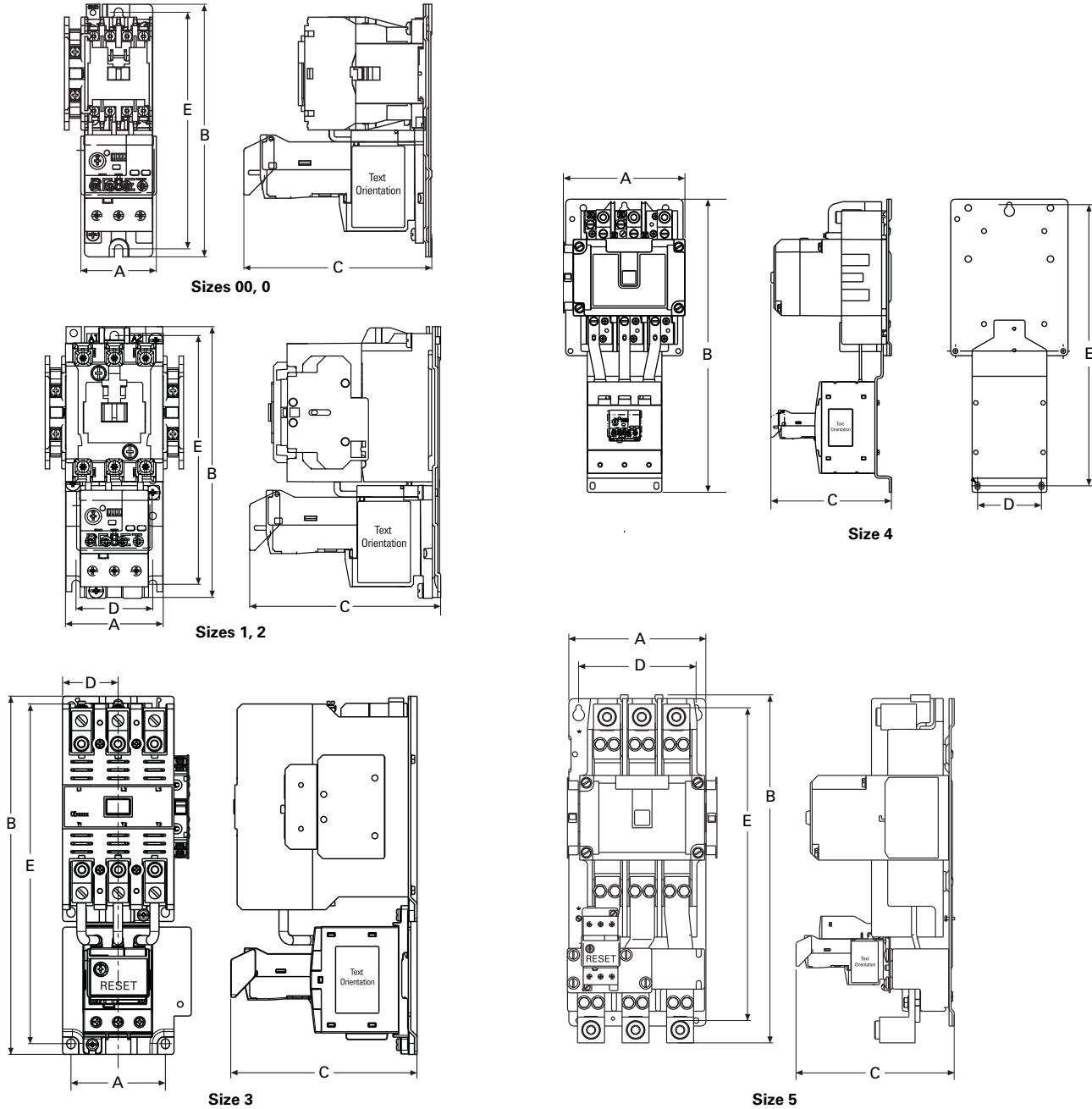
Dimensions

Approximate Dimensions in Inches (mm)

2

NEMA Starters

Full Voltage Non-Reversing Starters



| NEMA Size | A | B | C | D | E |
|-----------|--------------|---------------|--------------|--------------|---------------|
| 00, 0 | 1.97 (50.0) | 6.60 (167.6) | 4.90 (124.5) | — | 6.18 (157.0) |
| 1, 2 | 2.60 (65.0) | 7.10 (180.0) | 4.98 (126.5) | 2.00 (50.8) | 6.50 (165.0) |
| 3 | 4.09 (103.8) | 11.40 (289.6) | 5.92 (150.3) | 1.77 (44.9) | 10.81 (274.6) |
| 4 | 7.10 (179.0) | 17.00 (432.0) | 7.00 (177.0) | 3.70 (94.0) | 16.30 (415.0) |
| 5 | 7.00 (177.8) | 17.81 (452.3) | 8.08 (205.2) | 6.00 (152.4) | 16.01 (406.6) |