

Freedom Series



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## Product Overview

Freedom Series starters and contactors feature a compact, space-saving design, using state-of-the-art technology and the latest in high strength, impact and temperature resistant insulating materials.

## Features, Benefits and Functions

### Freedom NEMA

- Adjustable bimetallic ambient compensated overload relays with interchangeable heater packs—available in three basic sizes, covering applications up to 900 hp—reducing the number of different contactor/overload relay combinations that have to be stocked. Fixed heater overloads are optional
- Electronic overload relay (C440) available as a stand-alone unit and assembled with Freedom Contactor
- A full line of snap-on accessories— top and side mounted auxiliary contacts, solid-state and pneumatic timers, and so on
- Straight-through wiring— line lugs at top, load lugs at bottom
- Horizontal or vertical mounting on upright panel for application freedom
- Screw type power terminals have captive, backed-out self-lifting pressure plates with  $\pm$  screws—reduced wiring time
- Accessible terminals for easy wiring. Optional fingerproof shields available to prevent electrical shock
- Top located coil terminals convenient and readily accessible. 45 mm contactor magnet coils have three terminals, permitting either top or diagonal wiring—easy to replace European or U.S. style starters or contactors without changing wiring layout
- Designed to meet or exceed NEMA, UL, CSA, VDE, BS and other international standards and listings
- American engineering— built by Eaton, using the latest in statistical process control methods to produce high quality, reliable products
- Sized based on standard NEMA classifications
- Easy coil change and inspectable/replaceable contacts
- Available in open and NEMA Type 1, 3R, 4/4X and 12 enclosures

**Standards and Certifications**

- Standard: designed to meet or exceed UL, NEMA, IEC, CSA, VDE and BS
- UL listed: UL File #E1491, Guide #NLDX—Open and NEMA 1, 4, 12 Enclosed
- CSA Certified: CSA File #LR353, Class #321104 Open and NEMA 1 Enclosed



**ISO 9000 Certification**

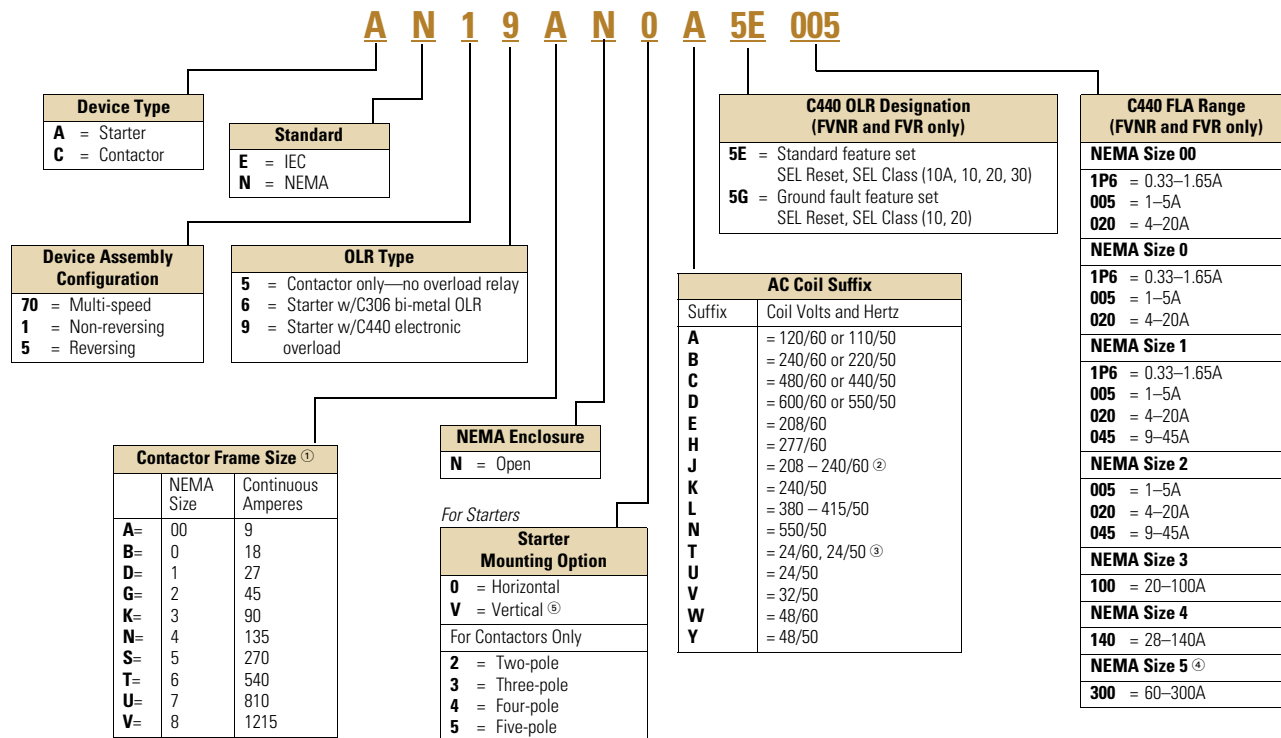
When you turn to Eaton’s products, you turn to quality. The International Standards Organization (ISO) has established a series of standards acknowledged by 91 industrialized nations to bring harmony to the international quest for quality. The ISO certification process covers 20 quality system elements in design, production and installation that must conform to achieve registration. This commitment to quality will result in increased product reliability and total customer satisfaction.

**Short Circuit Protection**

**Fuses and Inverse-Time Circuit Breakers** may be selected per Article 430, Part D of the National Electrical Code to protect motor branch circuits from fault conditions. If higher ratings or settings are required to start the motor, do **not** exceed the maximum as listed in Exception No. 2, Article 430-52.

**Catalog Number Selection**

**Freedom Series**

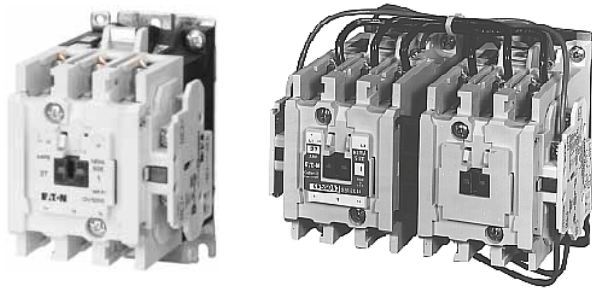


**Notes**

- ① For contactor only orders, add **B** to end of catalog number if NEMA Size 00–2, 6.
- ② NEMA Sizes 00 and 0 only.
- ③ NEMA Sizes 00 and 0 only. Sizes 1–8 are 24/60 only.
- ④ NEMA Size 5 requires the use of CTs with 1-5A OL relay.
- ⑤ Only available on AN56 reversing starters.

## Non-Reversing and Reversing Contactors

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## Contactors—Non-Reversing and Reversing

## Product Description

**Non-Reversing**

Contactors are most commonly used to switch motor loads in applications where running overcurrent protection is either not required or is provided separately. Contactors consist of a magnetically actuated switch which can be remotely operated by a pushbutton station or pilot device such as a proximity switch, limit switch, float switch, auxiliary contacts, and so on.

**Reversing**

Reversing contactors are used primarily for reversing single- or three-phase motors in applications where running overcurrent protection is either not required or is provided separately. They consist of two contactors mechanically and electrically interlocked to prevent line shorts and energization of both contactors simultaneously.

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## Features, Benefits and Functions

- Designed specifically for use in applications requiring NEMA ratings. Contactors meet or exceed NEMA standards ICS 2-1993
- Long life twin break, silver cadmium oxide contacts—provide excellent conductivity and superior resistance to welding and arc erosion
- Designed to 3,000,000 electrical operations at maximum hp ratings up through 25 hp at 600V
- Steel mounting plate standard on all open type contactors

**Non-Reversing**

- Holding circuit contact(s) supplied as standard:
  - Sizes 00–3 have NO auxiliary contact block mounted on right hand side (on Size 00, contact occupies 4th power pole position—no increase in width)
  - Sizes 4–5 have a NO contact block mounted on left side
  - Sizes 6–7 have a 2NO/2NC contact block on top left
  - Size 8 has a NO/NC contact block on top left back and a NO contact block on top right back

**Reversing**

- One NO-NC side mounted interlock supplied as standard on each contactor for Sizes 00–8