

#### Freedom Full Voltage Controls

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#### Product Description

Eaton's Freedom Series™ starters and contactors feature a compact, space-saving design, high strength, impact and temperature resistant insulating materials.

#### Features

- C440 solid-state electronic overload providing reliable, accurate and value-driven protection, including communication capabilities, while reducing inventory carrying costs with wide FLA adjustment (5:1) and selectable trip class
- Adjustable bimetallic ambient compensated overload relays with interchangeable heater packs—available in three basic sizes, covering applications up to 900 hp
- Fixed heater overloads optional
- 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 ± 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
- Encapsulated dual voltage/frequency magnet coils—permanently marked with voltage, frequency and part number
- Designed to meet or exceed UL, CSA®, IEC, VDE, BS and other international standards and listings

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#### Standards and Certifications

**Note:** See **Tab 17** for additional information on standards and certifications that apply to all enclosed control products.

- UL Listed
- cUL® Listed (indicates appropriate CSA Standard investigation)
- ABS Type Approved
- OSHPD Certified (OSP-0015-10)

#### Certified Type 2 Coordination

Eaton's Freedom Series NEMA starters are UL Certified to achieve IEC 947 Type 2 coordination against 100,000 A short-circuit fault currents. Any brand of properly selected fuse can be used. Type 2 coordination means that the starter will be suitable for further use following a short-circuit fault.

### ISO 9001 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. The enclosed control is manufactured in our Fayetteville, NC plant, and this facility is registered ISO 9001. This commitment to quality results in increased product reliability and total customer satisfaction.

Freedom NEMA contactors and starters are extremely rugged products built for any application. Their long electrical/mechanical life is extended through easy maintainability.

- Meets and exceeds all UL and CSA standards
- Sized based on standard NEMA size classifications
- Designed and built for a variety of demanding applications
- Easy coil change and inspectable/replaceable contacts
- Available open and in Type 1, 3R, 4, 4X, 7/9 and 12 enclosures

### 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.

### Additional Reference

Other Magnet Coils .....	<b>V10-T2-4</b>
Cover Control .....	<b>V10-T2-6</b>
Dimensions .....	<b>Tab 14</b>
Accessories and Modifications .....	<b>Tab 15</b>
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## NEMA Contactors and Starters

Freedom Full Voltage Controls

### Catalog Number Selection

#### NEMA Freedom Line Enclosed Control

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**EC N 22 2 1 A A F -**

Design
N = Freedom NEMA 2 = A200

Class	Page
01 = Non-reversing contactor—three-pole Non-reversing contactor—two-pole Non-reversing contactor—four-pole Non-reversing contactor—five-pole	V10-T2-10 V10-T2-12 V10-T2-14 V10-T2-15
02 = Reversing contactor—three-pole	V10-T2-16
05 = Non-combination non-reversing starter	V10-T2-18
05 = Non-combination single-phase non-reversing starter	V10-T2-20
06 = Non-combination reversing starter	V10-T2-21
07 = Non-combination non-reversing starter with CPT	V10-T2-23
16 = Combination non-reversing starter—fusible disconnect Combination non-reversing starter—non-fusible disconnect Special enclosure combination non-reversing starter—fusible/non-fusible disconnect	V10-T2-25 V10-T2-27 V10-T2-29
17 = Combination reversing starter—fusible disconnect Combination reversing starter—non-fusible disconnect	V10-T2-31 V10-T2-33
18 = Combination non-reversing starter—fusible disconnect with CPT Combination non-reversing starter—non-fusible disconnect with CPT	V10-T2-35 V10-T2-37
22 = Combination non-reversing starter—circuit breaker Special enclosure combination non-reversing starter—circuit breaker	V10-T2-39 V10-T2-42
23 = Combination reversing starter—circuit breaker	V10-T2-44
24 = Combination non-reversing starter—circuit breaker with CPT	V10-T2-47

NEMA Size		
A = Size 00	3 = Size 3	7 = Size 7
0 = Size 0	4 = Size 4	8 = Size 8
1 = Size 1	5 = Size 5	9 = Size 9
2 = Size 2	6 = Size 6	

Modification/Overload Codes
All modification codes, see <b>Tab 15</b> . For solid-state overload codes, <b>Page V10-T2-5</b>

Disconnect Fuse Clip Ratings		
A = None	G = 100 A/600 V R	N = 600 A/600 V R
B = 30 A/250 V R	H = 200 A/250 V R	P = 800 A/600 V L
C = 30 A/600 V R	J = 200 A/600 V R	Q = 1200 A/600 V L
D = 60 A/250 V R	K = 400 A/250 V R	R = 1600 A/600 V L
E = 60 A/600 V R	L = 400 A/600 V R	S = 2000 A/600 V L
F = 100 A/250 V R	M = 600 A/250 V R	T = By description

Circuit Breaker Ratings		
A = None	H = 150 A	R = 3000 A
B = 3 A	J = 250 A	T = By description
C = 7 A	K = 400 A	5 = 3 A ①
D = 15 A	L = 600 A	6 = 7 A ①
E = 30 A	M = 800 A	7 = 15 A ①
F = 50 A	N = 1000 A	8 = 30 A ①
W = 70 A	P = 1200 A	9 = 50 A ①
G = 100 A	Q = 2000 A	I = 100 A ①

Cover Control
Type 1 non-comb. (NEW BOX 1 only), <b>Page V10-T2-6</b> Type 1 non-comb., <b>Page V10-T2-7</b> All others, <b>Page V10-T2-8</b>
Contactor
3 = Three poles

Coil Voltage and/or Control Transformers
See code tables below

Enclosure Type
1 = Type 1—General purpose 2 = Type 3R—Rainproof 3 = Type 4—Watertight (painted steel) 4 = Type 4X—Watertight (304-Grade stainless steel) 5 = Type 4X—Corrosion (non-metallic) 6 = Type 7/9—Bolted hazardous location 7 = Type 7/9—Threaded hazardous location 8 = Type 12—Dust-tight 9 = Type 4X—316-Grade stainless steel

#### Magnetic Coil Codes (System Voltage) ②

Code	Magnet Coil	Code	Magnet Coil	Code	Magnet Coil
A	120/60–110/50	K	240/50	U	24/50
B	240/60–220/50	L	380/50	V	32/50
C	460/60–440/50	M	415/50	W	48/60
D	575/60–550/50	P	12 Vdc	X	104–120/60
E	208/60	Q	24 Vdc	Y	48/50
G	550/50	R	48 Vdc	Z	By description
H	277/60	S	125 Vdc		
J	208–240/60	T	24/60		

#### Notes

- ① Use for 0–3, HMCP 600 V applications only.
- ② When control power transformer modification codes (**C1–C11**) are used or when starter class includes CPT (that is ECN07, 18) see the table at right for system voltage code.

#### Control Power Transformer Codes (System Voltage)

Code	Primary	Secondary
B	240/480–220/440 wired for 240 V	120/60–110/50
C	240/480–220/440 wired for 480 V	120/60–110/50
D	600/60–550/50	120/60–110/50
E	208/60	120/60
H	277/60	120/60
L	380/50	110/50
M	415/50	110/50
Q	208/60	24
R	240/480–220/440 wired for 240 V	24
S	240/480–220/440 wired for 480 V	24
T	600/60	24
U	277/60	24
V	380/50	24
W	415/50	24
X	240/480/600 wired for 480 V	120
Y	240/480/600 wired for 480 V	24
Z	By description	—

### C440 Solid-State Overload Modifications

#### Reliability and Improved Uptime

- C440 provides the users with peace of mind knowing that their assets are protected with the highest level of motor protection and communication capability in its class
- Extends the life of plant assets with selectable motor protection features such as trip class, phase unbalance and ground fault
- Protects against unnecessary downtime by discovering changes in your system (line/load) with remote monitoring capabilities
- Status LED provides added assurance that valuable assets are protected by indicating the overload operational status

#### Flexibility

- Improves return on investment by reducing inventory carrying costs with wide FLA adjustment (5:1) and selectable trip class
- Design incorporates built-in ground fault protection thus eliminating the need for separate CTs and modules
- Flexible communication with optional I/O enables easy integration into plant management systems for remote monitoring and control

#### Monitoring Capabilities

- Individual phase currents RMS
- Average three-phase current RMS
- Thermal memory
- Fault indication (overload, phase loss, phase unbalance, ground fault)

#### Safety

- IP20 rated terminal blocks
- Available in Eaton's industry leading FlashGard MCCs
- Tested to the highest industry standards such as UL, CSA, CE and IEC
- RoHS compliant

For solid-state overload enclosed control, add R63 or R64 modification code after the base Catalog Number. (Example, ECN0501AAA-**R63/B**).

Modification	IEC Size	NEMA Size	Full Load Current Adjustment Range (A)	Three-Phase without Ground Fault Auto/Manual Reset Overload Selectable Class 10/20/30	Three-Phase with Ground Fault Auto/Manual Reset Overload Selectable Class 10/20/30
Solid-state electronic overload relay <sup>①</sup>	B and C	00	0.33–1.65 <sup>②</sup>	<b>R63/A</b>	<b>R64/A</b>
			1–5	<b>R63/B</b>	<b>R64/B</b>
			4–20	<b>R63/C</b>	<b>R64/C</b>
	C and D	0 and 1	0.33–1.65 <sup>②</sup>	<b>R63/A</b>	<b>R64/A</b>
			1–5	<b>R63/B</b>	<b>R64/B</b>
			4–20	<b>R63/C</b>	<b>R64/C</b>
			9–45	<b>R63/D</b>	<b>R64/D</b>
	D	2	9–45	<b>R63/D</b>	<b>R64/D</b>
	D, F and G	3	20–100	<b>R63/E</b>	<b>R64/E</b>
G	4	28–140	<b>R63/F</b>	<b>R64/F</b>	
N/A	5	60–300	<b>R63/G</b>	<b>R64/G</b>	
N/A	6	120–600	<b>R63/H</b>	<b>R64/H</b>	

#### Notes

- <sup>①</sup> Features:
- Self-powered
  - Phase loss protection
  - Current adjustment knob
  - ±1% repeat accuracy
  - 1NO and 1NC isolated contacts
- <sup>②</sup> Not UL Listed.

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## NEMA Contactors and Starters

### Freedom Full Voltage Controls

#### Cover Control

#### Product Selection

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#### Type 1 Non-Combination Cover Control (Box 1 Only)

- Cover control for non-combination starters uses M22 style devices as standard
- Pushbuttons are momentary type
- Field convertible selector switches from momentary to maintained operation and vice versa
- Cover control kits include hardware, M22 pushbuttons, bracket and pre-wired wire harnesses
- See Volume 7, Tab 1, for more details on M22 pushbuttons

#### Type 1 Non-Combination Cover Control (Box 1 Only)

Box 1 offering includes FVNR contactor sizes 00–2, electronic FVNR starters size 00–2 and bi-metallic FVNR starters size 00–1.



Description	Factory Installed Flange Control Position 9 Cover Control Code	Field Installation Kits Catalog Number
<b>Non-Reversing</b>		
No cover mounted pilot devices	<b>A</b>	—
STOP/START oval pushbuttons	<b>B</b>	<b>C600M1</b>
With red RUN pilot light	<b>C</b>	<b>C600M101_①</b>
With red RUN/green OFF lights	<b>D</b>	<b>C600M102_①</b>
OFF/ON oval pushbuttons	<b>E</b>	<b>C600M2</b>
With red RUN pilot light	<b>F</b>	<b>C600M201_①</b>
With red RUN/green OFF lights	<b>G</b>	<b>C600M202_①</b>
STOP/START selector switch	<b>S</b>	<b>C600M13</b>
With red RUN pilot light	<b>T</b>	<b>C600M131_①</b>
With red RUN/green OFF lights	<b>U</b>	<b>C600M132_①</b>
OFF/ON selector switch	<b>V</b>	<b>C600M14</b>
With red RUN pilot light	<b>W</b>	<b>C600M141_①</b>
With red RUN/green OFF lights	<b>X</b>	<b>C600M142_①</b>
HAND/OFF/AUTO selector switch	<b>H</b>	<b>C600M12</b>
With red RUN pilot light	<b>J</b>	<b>C600M121_①</b>
With red RUN/green OFF lights	<b>K</b>	<b>C600M122_①</b>
Green START pushbutton	<b>L</b>	<b>C600M3</b>
Red STOP pushbutton	<b>Y</b>	<b>C600M7 ①</b>
Green ON pushbutton	<b>M</b>	<b>C600M4</b>
Red OFF pushbutton	<b>N</b>	<b>C600M5</b>
Red RUN pilot light	<b>P</b>	<b>C600M9_①</b>
Green OFF pilot light	<b>Q</b>	<b>C600M10_①</b>
Red RUN/green OFF lights	<b>R</b>	<b>C600M11_①</b>
TEST/OFF/AUTO selector switch	—	<b>C600M8</b>

**Note**

① Add code letter from the table below to catalog number for voltage. Example: C600M101**A**.

Rating	Code Letter
85–264 Vac	<b>A</b>
480 Vac	<b>C</b>
12–30 Vac/Vdc	<b>T</b>

### Type 1 Non-Combination Cover Control (Box 2 and Larger Enclosures Only)

- Cover control for combination starters uses 10250T style devices as standard
- Selector switches are maintained with lever operators
- Pushbuttons are momentary type with extended pushbutton
- The kit includes hardware and connecting wires (where possible)
- For factory installed control devices other than shown below, refer to modification codes, **Tab 15**

#### Type 1 Cover Control



### Type 1 Non-Combination Cover Control (Box 2 and Larger Enclosures Only)

Box 2 and Larger Enclosure offering includes contactors size 3–5, electronic starters size 3–5 and bi-metallic starters size 2–5.

Description	Factory Installed Flange Control ① Position 9 Cover Control Code	Field Installation Kits Catalog Number
<b>Non-Reversing</b>		
No cover mounted pilot devices	<b>A</b>	<b>C400GK0</b>
STOP/START pushbuttons	<b>B</b>	<b>C400GK1</b>
With red RUN pilot light	<b>C</b>	<b>C400GK12</b> ②
With red RUN/green OFF lights	<b>D</b>	<b>C400GK16</b> ②
HAND/OFF/AUTO selector switch	<b>H</b>	<b>C400GK3</b>
With red RUN pilot light	<b>J</b>	<b>C400GK32</b> ②
With red RUN/green OFF lights	<b>K</b>	<b>C400GK36</b> ②
Red RUN pilot light	<b>P</b>	<b>C400GK42</b> ②
Green OFF	<b>Q</b>	<b>C400GK41</b> ②
Red RUN/green OFF pilot lights	<b>R</b>	<b>C400GK46</b> ②
<b>Reversing</b>		
No cover mounted pilot devices	<b>A</b>	<b>C400GK0</b>
FOR/REV/STOP pushbuttons	<b>B</b>	<b>C400GR1</b>
With two red pilot lights	<b>C</b>	<b>C400GR14</b> ②
UP/STOP/DOWN pushbuttons	<b>E</b>	<b>C400GR2</b>
With two red pilot lights	<b>F</b>	<b>C400GR24</b> ②
Two red pilot lights	<b>P</b>	<b>C400GK44</b> ②
One green pilot light	<b>Q</b>	<b>C400GK41</b> ②

#### Notes

- ① For more available factory installed flange control, see **Page V10-T2-8**.
- ② Add code letter from the table below to catalog number for voltage—kits only. Example: C400GK0B.

Rating	Code Letter	Rating	Code Letter	Rating	Code Letter
120 V 60 Hz	<b>A</b>	277 V 60 Hz	<b>H</b>	480 V 60 Hz	<b>C</b>
208 V 60 Hz	<b>E</b>	380 V 50 Hz	<b>L</b>	600 V 60 Hz	<b>D</b>
240 V 60 Hz	<b>B</b>				

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## NEMA Contactors and Starters

### Freedom Full Voltage Controls

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#### Type 1 Combination and All Type 3R, 4X and 12 Cover Control

- Cover control for combination starters uses 10250T style devices as standard
- Selector switches are maintained with lever operators
- Pushbuttons are momentary type with extended pushbutton
- The kit includes hardware and connecting wires (where possible)
- For factory installed control devices other than shown below, refer to modification codes, **Tab 15**

#### 10250T Cover Control Kits



#### Type 1 Combination and All Type 3R, 4X and 12 Cover Control <sup>①</sup>

Description	Factory Installed Flange Control Position 9 Cover Control Code	Field Installation Kits Catalog Number
<b>Non-Reversing</b>		
No cover mounted pilot devices	<b>A</b>	—
START/STOP pushbuttons	<b>B</b>	<b>C400T1</b>
With red RUN pilot light	<b>C</b>	—
With red RUN/green OFF lights	<b>D</b>	—
ON/OFF pushbuttons	<b>E</b>	<b>C400T2</b>
With red RUN pilot light	<b>F</b>	—
With red RUN/green OFF lights	<b>G</b>	—
HAND/OFF/AUTO selector switch	<b>H</b>	<b>C400T12</b>
With red RUN pilot light	<b>J</b>	—
With red RUN/green OFF lights	<b>K</b>	—
START pushbutton	<b>L</b>	<b>C400T3</b>
ON pushbutton	<b>M</b>	<b>C400T4</b>
OFF pushbutton	<b>N</b>	<b>C400T5</b>
Red RUN pilot light	<b>P</b>	<b>C400T9</b> <sup>②</sup>
Green OFF	<b>Q</b>	<b>C400T10</b> <sup>②</sup>
Red RUN/green OFF pilot lights	<b>R</b>	<b>C400T11</b> <sup>②</sup>
START/STOP selector switch	<b>S</b>	<b>C400T13</b>
With red RUN pilot light	<b>T</b>	—
With red RUN/green OFF lights	<b>U</b>	—
ON/OFF selector switch	<b>V</b>	<b>C400T14</b>
With red RUN pilot light	<b>W</b>	—
With red RUN/green OFF lights	<b>X</b>	—
<b>Reversing</b>		
No cover mounted pilot devices	<b>A</b>	—
FOR/REV/STOP pushbuttons	<b>B</b>	<b>C400T6</b>
With two red pilot lights	<b>C</b>	—
With two red/one green pilot lights	<b>D</b>	—
UP/STOP/DOWN pushbuttons	<b>E</b>	—
With two red pilot lights	<b>F</b>	—
FOR/OFF/REV selector switch	<b>H</b>	<b>C400T15</b>
With two red pilot lights	<b>J</b>	—
With two red/one green pilot lights	<b>K</b>	—
Two red pilot lights	<b>P</b>	<sup>③</sup>
One green pilot light	<b>Q</b>	<b>C400T10</b> <sup>②</sup>
Two red/one green pilot lights	<b>R</b>	—
OPEN/OFF/CLOSE selector switch	<b>V</b>	<b>C400T16</b>
With two red pilot lights	<b>W</b>	—
With two red/one green pilot lights	<b>X</b>	—

#### Notes

- <sup>①</sup> For Type 1 non-combination field installation kits, see **Page V10-T2-7**.
- <sup>②</sup> Add code letter from the table below to catalog number for voltage—kits only. Example: C400T9**B**.

Rating	Code Letter	Rating	Code Letter	Rating	Code Letter
120 V 60 Hz	<b>A</b>	277 V 60 Hz	<b>H</b>	480 V 60 Hz	<b>C</b>
208V 60 Hz	<b>E</b>	380 V 50 Hz	<b>L</b>	600 V 60 Hz	<b>D</b>
240 V 60 Hz	<b>B</b>				

- <sup>③</sup> Order quantity (2) of **C400T10**.

### Type 1 Non-Combination Empty Enclosure (Box 1 Only)

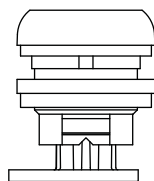
There is a universal empty enclosure for the non-metallic Type 1 Non-Combination Box 1 regardless of the starter or the contactor needed. The only difference is the length of the easily interchangeable reset rod. The reset rod kit provides everything needed to install the correct reset rod, including all the reset rod lengths, a protective shroud, a paddle and a reset button with nut.

Box 1 offering includes FVNR contactors size 00–2, FVR contactors size 00–0, FVNR electronic starters size 00–2, and FVNR bi-metallic starters size 00-1.

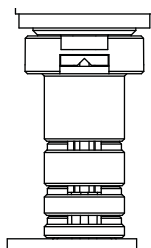
Empty Enclosure Stocking Needs	Catalog Number
Empty enclosure	<b>C899B001</b>
Reset rod kit	<b>RESET001</b>

The table below shows which reset rod is used with each starter or contactor.

Starter or Contactor	Reset Rod Length
NEMA FVNR Size 00–2, solid-state overload	0.43-inch reset
NEMA FVNR Size 00–1, bi-metallic overload	1.68-inch reset
All NEMA FVNR and FVR contactors	No reset needed



FVNR Solid State  
OL Reset—0.43 inches



FVNR Bi-Metallic  
OL Reset—1.68 inches

### Class ECN17—Combination Reversing Starter—Non-Fusible Disconnect

NEMA Size	Motor Voltage	Maximum hp Rating	Magnet Coil Voltage	Disconnect Amps	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Watertight and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) Catalog Number
0	—	—	120	30 A	ECN1701AAA	ECN1702AAA	ECN1704AAA	ECN1708AAA	AN56BN0AC
	200	3	208		ECN1701EAA	ECN1702EAA	ECN1704EAA	ECN1708EAA	AN56BN0EC
	230	3	240		ECN1701BAA	ECN1702BAA	ECN1704BAA	ECN1708BAA	AN56BN0BC
	460	5	480		ECN1701CAA	ECN1702CAA	ECN1704CAA	ECN1708CAA	AN56BN0CC
	575	5	600		ECN1701DAA	ECN1702DAA	ECN1704DAA	ECN1708DAA	AN56BN0DC
1	—	—	120	30 A	ECN1711AAA	ECN1712AAA	ECN1714AAA	ECN1718AAA	AN56DN0AB
	200	7-1/2	208		ECN1711EAA	ECN1712EAA	ECN1714EAA	ECN1718EAA	AN56DN0EB
	230	7-1/2	240		ECN1711BAA	ECN1712BAA	ECN1714BAA	ECN1718BAA	AN56DN0BB
	460	10	480		ECN1711CAA	ECN1712CAA	ECN1714CAA	ECN1718CAA	AN56DN0CB
	575	10	600		ECN1711DAA	ECN1712DAA	ECN1714DAA	ECN1718DAA	AN56DN0DB
2	—	—	120	60 A	ECN1721AAA	ECN1722AAA	ECN1724AAA	ECN1728AAA	AN56GN0AB
	200	10	208		ECN1721EAA	ECN1722EAA	ECN1724EAA	ECN1728EAA	AN56GN0EB
	230	15	240		ECN1721BAA	ECN1722BAA	ECN1724BAA	ECN1728BAA	AN56GN0BB
	460	25	480		ECN1721CAA	ECN1722CAA	ECN1724CAA	ECN1728CAA	AN56GN0CB
	575	25	600		ECN1721DAA	ECN1722DAA	ECN1724DAA	ECN1728DAA	AN56GN0DB
3	—	—	120	100 A	ECN1731AAA	ECN1732AAA	ECN1734AAA	ECN1738AAA	AN56KN0A
	200	25	208		ECN1731EAA	ECN1732EAA	ECN1734EAA	ECN1738EAA	AN56KN0E
	230	30	240		ECN1731BAA	ECN1732BAA	ECN1734BAA	ECN1738BAA	AN56KN0B
	460	50	480		ECN1731CAA	ECN1732CAA	ECN1734CAA	ECN1738CAA	AN56KN0C
	575	50	600		ECN1731DAA	ECN1732DAA	ECN1734DAA	ECN1738DAA	AN56KN0D
4	—	—	120	200 A	ECN1741AAA	ECN1742AAA	ECN1744AAA	ECN1748AAA	AN56NN0A
	200	40	208		ECN1741EAA	ECN1742EAA	ECN1744EAA	ECN1748EAA	AN56NN0E
	230	50	240		ECN1741BAA	ECN1742BAA	ECN1744BAA	ECN1748BAA	AN56NN0B
	460	100	480		ECN1741CAA	ECN1742CAA	ECN1744CAA	ECN1748CAA	AN56NN0C
	575	100	600		ECN1741DAA	ECN1742DAA	ECN1744DAA	ECN1748DAA	AN56NN0D

#### Notes

**Starters do not include heater packs.** Select one carton of three heater packs. For heater pack selection, see **Tab 15**.

**Starters with electronic overload,** see Modification Codes in **Tab 15**, or solid-state overload codes on **Page V10-T2-5**.

① The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN1704AAA. To order Type 4X 316-Grade stainless steel, change that digit to **9**. To order Type 4 painted steel, change that digit to **3**. To order non-metallic, change that digit to **5**. For details on these alternate enclosures, see **Tab 13**.

② All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.

③ Type 12 enclosure is without safety door interlock. When safety door interlock is required, add modification **E11**.