Numbering Reference Guide

Modification Codes

(Including Fixed Heaters

for Classes 9, 10 & 11)

See Chart 9

Disconnect Fuse Clip

Ratings

 $\mathbf{B} = 30 \text{ A}/250 \text{ V R} \quad \mathbf{G} = 100 \text{ A J}$

C = 30 A/600 V R H = 100 A gG

HMCPE or Breaker Ratings

 $\mathbf{D} = 60 \text{ A}/250 \text{ V R}$

E = 60 A/600 V R

D= 15 A

E = 30 A

Cover Control

(Starters Only)

See Charts 3 & 4

Coil Voltage and/or

Control Transformer

See Charts 1 & 2

= Type 1 – General Purpose

2 = Type 3R - Rainproof

8 = Type 12 – Dust-Tight

L = 85 A

M = 105 A

N = 140 A

P= 170 A

 $\mathbf{R} = 200 \, \text{A}$

S = 300 A

T = 420 A

U = 520 A

V = 550 A

Ampere Rating (UL 600 V)

 $\mathbf{A} = 7 A$

B= 10 A

C = 12 A

D= 18 A

 $\mathbf{E} = 25 \, \mathbf{A}$

F = 32 A

G = 37 A

 $\mathbf{H} = 44 \, \mathbf{A}$

J = 60 A

K = 73 A

Enclosure Type

3 = Type 4 – Watertight (Painted Steel)

4 = Type 4X - Watertight (Stainless Steel)

5 = Type 4X – Corrosion (Non-Metallic)

9 = Type 4X - Stainless Steel (316-Grade)

 $\mathbf{F} = 60 \text{ A gG}$

J = 250 A

Enclosed Control Freedom & Intelligent Technologies (17.) NEMA IEC

IEC Design

4 For IT. and XT IEC

Starters, add an

11th character for

the corresponding

02 = Reversing Contactors

05 = FVNR Starter, Non-Combination,

Fixed Heater OLR (IT. Only)

09 = FVNR Starter, Non-Combination

Fixed Heater OLR (XT Only)

Fixed Heater OLR (XT Only)

11 = FVNR Starter, Non-Combination,

16 = Fusible Switch, Fixed Heater OLR,

17 = Fusible Switch, Fixed Heater OLR,

19 = Fusible Switch, Fixed Heater OLR

20 = Fusible Switch, Fixed Heater OLR

22 = HMCPE, Fixed Heater OLR, FVNR

23 = HMCPE, Fixed Heater OLR, FVR

25 = HMCPE, Fixed Heater OLR FVNR

26 = HMCPE, Fixed Heater OLR FVR

76 = Combination Motor Controller

FVNR (IT. Only)

FVR (IT. Only)

FVNR (XT Only)

FVR (XT Only)

(*IT.* Only)

(*IT.* Only)

(**XT** Only)

10 = Reversing Starter, Non-Combination,

Fixed Heater OLR, with CPT (XT Only)

Fixed Heater OLR (XT Compact Version)

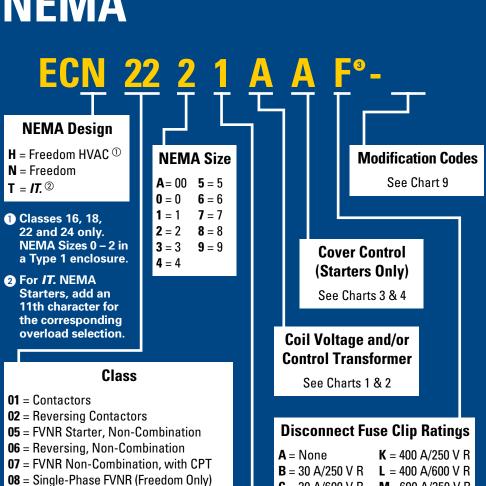
06 = Reversing Starter, Non-Combination,

01 = Contactors

 $X = XT^{4}$

R = *IT.* 4

ECR 05 D 1 A A A



 $\mathbf{C} = 30 \text{ A}/600 \text{ V R}$ $\mathbf{M} = 600 \text{ A}/250 \text{ V R}$ 16 - Combination with Disconnect Switc $\mathbf{D} = 60 \text{ A}/250 \text{ V R}$ $\mathbf{N} = 600 \text{ A}/600 \text{ V R}$ 17 = Reversing, Combination with E = 60 A/600 V R P = 800 A/600 V LDisconnect Switch $\mathbf{F} = 100 \text{ A}/250 \text{ V R} \quad \mathbf{Q} = 1200 \text{ A}/600 \text{ V L}$ 18 = Combination with Disconnect Switch, $\mathbf{G} = 100 \text{ A}/600 \text{ V R} \quad \mathbf{R} = 1600 \text{ A}/600 \text{ V L}$ with CPT H = 200 A/250 V R S = 2000 A/600 V L**22** = Combination with HMCP J = 200 A/600 V R T = By Description23 = Reversing, Combination with HMCP 24 = Combination with HMCP with CPT **HMCP or Breaker Ratings** 33 = Multispeed 2S2W Non-Combination

34 = Multispeed 2S1W CT or VT

39 = Multispeed with HMCP, 2S2W

41 = Multispeed with HMCP, 2S1W CH

42 = Autotransformer, Non-Combination

44 = Autotransformer, with HMCP

47 = Part-Winding, with Thermal

49 = Y-D, Open Transition, with

Disconnect Switch

52 = Y-D, Closed Transition,

Disconnect Switch

68 = Duplex, Non-Combination 69 = Duplex, with Disconnect Switch

70 = Duplex, with HMCP

with Disconnect Switch

53 = Y-D, Closed Transition, with

62 = Autotransformer Pump Panel,

Magnetic Circuit Breakers

45 = Part-Winding, Non-Combination

46 = Part-Winding, with Disconnect Switch

50 = Y-D, Open Transition, with Thermal

51 = Y-D, Closed Transition, Non-Combination

Thermal Magnetic Circuit Breakers

63 = Autotransformer Pump Panel, HMCP **64** = Part-Winding Pump Panel, Disconnect 65 = Part-Winding Pump Panel, HMCP

Magnetic Circuit Breakers

40 = Multispeed with HMCP, 2S1W CT or VT

Non-Combination

2S1W CT or VT

43 = Autotransformer, with

Disconnect Switch

2S1W CH

K = 400 AA = None L = 600 A**B**= 3 A $\mathbf{C} = 7 \, \mathbf{A}$ M = 800 A35 = Multispeed 2S1W CH Non-Combination **D** = 15 A N = 1000 A36 = Multispeed with Disconnect Switch, E = 30 A**P**= 1200 A $\mathbf{F} = 50 \text{ A}$ $\mathbf{0} = 2000 \text{ A}$ 37 = Multispeed with Disconnect Switch, **G**= 100 A**R**= 3000 AH = 150 A**T** = By Description 38 = Multispeed with Disconnect Switch, J = 250 A

> and starters, include the letter (A) as the 10th character.

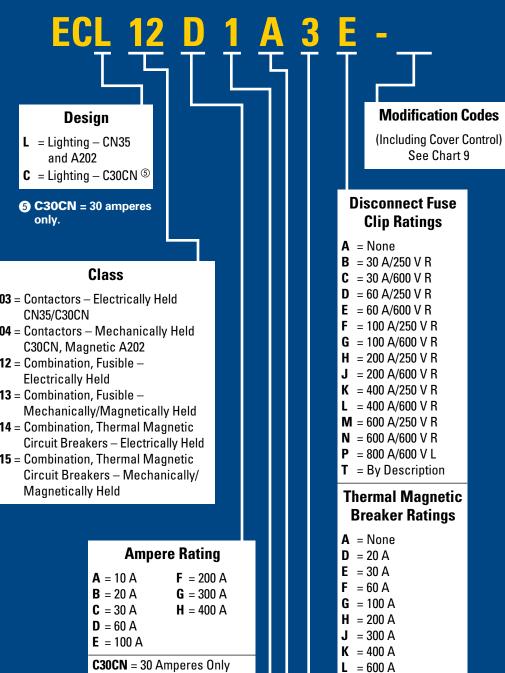
Enclosure Type = Type 1 – General Purpose 2 = Type 3R - Rainproof3 = Type 4 – Watertight (Painted Steel) 4 = Type 4X – Watertight (Stainless Steel) 5 = Type 4X - Corrosion (Non-Metallic)

6 = Type 7/9 - Bolted Hazardous Location**48** = Y-D, Open Transition, Non-Combination 7 = Type 7/9 – Threaded Hazardous Location 8 = Type 12 - Dust-Tight

| NEMA | Ampere | Horsepower Rating |
|-------------------|-------------|----------------------------|
| | | |
| A = Type 3 | R – Rainpro | of (304-Grade Stainless St |
| 9 = Type 4 | X – Stainle | ss Steel (316-Grade) |
| | | |

| NEMA | Ampere | Horsepower Rating | | | | | | | | |
|-----------------|--------|-------------------|----------|---------------|-------|-------|-------|--|--|--|
| Size Starter | Rating | 1-Phas | se 60 Hz | 3-Phase 60 Hz | | | | | | |
| Otal to: | | 115 V | 230 V | 200 V | 230 V | 460 V | 575 V | | | |
| 00 | 9 | .33 | 1 | 1.5 | 1.5 | 2 | 2 | | | |
| 0 | 18 | 1 | 2 | 3 | 3 | 5 | 5 | | | |
| 1 | 27 | 2 | 3 | 7.5 | 7.5 | 10 | 10 | | | |
| 2 | 45 | 3 | 7.5 | 10 | 15 | 25 | 25 | | | |
| 3 | 90 | 7.5 | 15 | 25 | 30 | 50 | 50 | | | |
| 4 | 135 | | — | 40 | 50 | 100 | 100 | | | |
| 5 | 270 | — | _ | 75 | 100 | 200 | 200 | | | |

Enclosed Control Lighting Controllers



Enclosure Type I = Type 1 – General Purpose 2 = Type 3R - Rainproof3 = Type 4 - Watertight

M = 800 A

Total Number

of Poles ⁶

2 = 2 Poles Required

3 = 3 Poles Required

4 = 4 Poles Required

5 = 5 Poles Required

6 = 6 Poles Required

7 = 7 Poles Required

8 = 8 Poles Required

9 = 9 Poles Required

Z = Consult Factory

Combination Devices -

A = 10 Poles

B = 12 Poles

C = 20 Poles

3-Pole Only

Other Poles -

Consult Factory

6 For NC poles on

SCC product, see

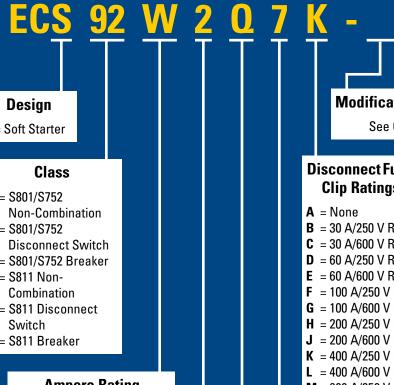
Modification Codes

F = By Description

(Painted Steel) 4 = Type 4X – Watertight (Stainless Steel) 6 = Type 7/9 - BoltedHazardous Location 7 = Type 7/9 - Threaded**Hazardous Location** 8 = Type 12 - Dust-Tight9 = Type 4X - Stainless Steel(316-Grade)

> Coil Voltage See Charts 1 & 2

Enclosed Control Soft Starters



Modification Codes Design See Chart 9 **S** = Soft Starter Disconnect Fuse Clip Ratings **90** = S801/S752 Non-Combination B = 30 A/250 V R91 = \$801/\$752 $\mathbf{C} = 30 \text{ A}/600 \text{ V R}$ Disconnect Switch $\mathbf{D} = 60 \text{ A}/250 \text{ V R}$ 92 = S801/S752 Breaker 93 = S811 Non-E = 60 A/600 V R= 100 A/250 V R Combination **94** = S811 Disconnect H = 200 A/250 V RSwitch **95** = S811 Breaker J = 200 A/600 V R= 400 A/600 V R **Ampere Rating** M = 600 A/250 V RN = 600 A/600 V RS801/S811 **S752** P = 800 A/600 V L= 0.8 A $\mathbf{0} = 37 \text{ A}$ $\mathbf{Q} = 1200 \text{ A}/600 \text{ V L}$ $\mathbf{K} = 1.9 \, \mathbf{A}$ S = 66 AR = 1600 A/600 V LL = 4.4 AV = 105 AS = 2000 A/600 V LM = 9.0 A**W** = 135 A T = By Description $\mathbf{N} = 16 \, \mathbf{A}$ Y = 180 A**HMCP** or $\mathbf{P} = 27 \, \mathbf{A}$ Z = 240 A $\mathbf{R} = 50 \, \mathbf{A}$ 1 = 304 A**Breaker Ratings 2** = 360 A A = None**3** = 420 A $\mathbf{B} = 3 A$ 4 = 500 A $\mathbf{C} = 7 \, \mathbf{A}$ 5 = 650 A**D**= 15 A**6** = 720 A E = 30 A**7** = 850 A F = 50 A**8** = 1000 A G = 100 AH = 150 AJ = 250 A**Enclosure Type** K = 400 AI = Type 1 – General Purpose L = 600 A2 = Type 3R - Rainproof M = 800 A3 = Type 4 - WatertightN = 1000 A(Painted Steel) **P**= 1200 A4 = Type 4X - Watertight $\mathbf{Q} = 2000 \text{ A}$ (Stainless Steel) $\mathbf{R} = 3000 \, \text{A}$ 6 = Type 7/9 - Bolted**T** = By Description Hazardous Location 7 = Type 7/9 - ThreadedHazardous Location 8 = Type 12 - Dust-Tight9 = Type 4X - Stainless Steel(316-Grade) **Control Power** Transformer See Chart 2 **Cover Control A** = Use Modification Codes

Examples: ELN163ABG Freedom combination with disconnect switch size 3, NEMA Type 3R enclosure, without CPT magnet coil of 120 V/60 Start/Stop pushbutton Fuse clips 100 A/600 V.

| A = 120/60 110/50 | K = 240/50 | U = 24/50 |
|--------------------------------|------------------------------------|-------------------|
| $\mathbf{B} = 240/60 \ 220/50$ | L = 380/50 | V = 32/50 |
| $\mathbf{C} = 480/60 \ 440/50$ | M = 415/50 | W = 48/60 |
| $\mathbf{D} = 575/60 \ 550/50$ | $\mathbf{P} = 12 \text{Vdc}$ | X = 104 - 120/60 |
| E = 208/60 | $\mathbf{Q} = 24 \text{Vdc}$ | Y = 48/50 |
| G = 550/50 | $\mathbf{R} = 48 \text{Vdc}$ | $\mathbf{Z} = By$ |
| H = 277/60 | $\mathbf{S} = 120/125 \text{Vdc}$ | Description |
| $\mathbf{J} = 208 - 240/60$ | T = 24/60 | |

Chart 1: Magnet Coil

Codes (System Voltage) ®

Codes (CI – CII) are used, pick the system (primary) voltage from this chart. See Chart 2. **Note:** All **IT.** contactors and starters are furnished with 24 Vdc coil and control power supply. The eighth digit Q denotes separate 24 Vdc control source.

8 When control power transformer Modification

Chart 6: Overload Size (XT IEC)

| FLA Ratings | B – D Frames 12 A | E – H Frames 32 A | J – L Frames 65 A |
|----------------|----------------------|----------------------|----------------------|
| 0.10 - 0.16 | Α | A | _ |
| 0.16 - 0.24 | В | В | |
| 0.24 - 0.40 | C | C | |
| 0.40 - 0.60 | D | D | _ |
| 0.60 - 1.00 | E | E | _ |
| 1.00 - 1.60 | F | F | |
| 1.60 - 2.40 | G | G | |
| 2.40 - 4.00 | Н | Н | _ |
| 4-6 | 1 | I | _ |
| 6 - 10 | J | J | J |
| 9 - 12 | K | _ | |
| 10 – 16 | _ | L | L |
| 16 – 24 | _ | М | M |
| 24 - 32 | — | N | N |
| 24 - 40 | — | | P |
| 40 - 57 | — | | Q |
| 50 - 65 | — | _ | R |

Chart 7: Overload Size (IT. NEMA)

| For <i>IT</i> . NEMA Starters, Add an 11th Digit to Choose Overload Size | | | | | | | | | | | |
|---|------|---|---|---|-----|---|---|--|--|--|--|
| FLA | Size | | | | | | | | | | |
| Range | 00 | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| .25 – .8 | Α | Α | Α | _ | _ | _ | _ | | | | |
| .59 - 1.9 | В | В | В | — | l — | — | _ | | | | |
| 1.4 - 4.4 | C | C | C | _ | _ | _ | _ | | | | |
| 2.8 - 9.0 | D | D | D | — | — | — | _ | | | | |
| 5.0 – 16 | _ | _ | F | _ | _ | _ | _ | | | | |
| 6.3 - 20 | _ | G | | _ | _ | _ | _ | | | | |
| 8.4 - 27 | _ | _ | Н | — | l — | — | _ | | | | |
| 14 – 45 | _ | _ | — | K | — | _ | _ | | | | |
| 28 – 90 | | | _ | _ | М | _ | _ | | | | |
| 42 - 135 | _ | _ | — | — | l — | Р | _ | | | | |
| 84 - 270 | _ | _ | _ | _ | _ | _ | S | | | | |

Example: ECT2238CAG-M = Size 3 IT. combination NEMA 12, 28 – 90 ampere overload.

Chart 2: Control Power Transformer Codes (System Voltage)

| Coue | Primary | Secondar |
|------------|--------------------------------------|--------------|
| B = | 240/480 - 220/440 Wired for 240 V | 120/60 — 110 |
| C = | 240/480 - 220/440 Wired for 480 V | 120/60 — 110 |
| D = | 575/60 — 550/50 | 120/60 - 110 |
| E = | 208/60 | 120/60 |
| H = | 277/60 | 120/60 |
| K = | 380/415 V | 220 V |
| L = | 380/50 | 110/50 |
| M = | 415/50 | 110/50 |
| P = | 120/60 | 24 |
| 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 = | 575/60 | 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 | |
| | | |

Note: Use when ordering classes with CPT

| Code | Primary | Seconda |
|------------|--------------------------------------|-------------|
| B = | 240/480 - 220/440 Wired for 240 V | 120/60 — 11 |
| C = | 240/480 - 220/440 Wired for 480 V | 120/60 — 11 |
| D = | 575/60 — 550/50 | 120/60 — 11 |
| E = | 208/60 | 120/60 |
| H = | 277/60 | 120/60 |
| K = | 380/415 V | 220 V |
| L = | 380/50 | 110/50 |
| M = | 415/50 | 110/50 |
| P = | 120/60 | 24 |
| 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 = | 575/60 | 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 | |

Chart 3: Cover Control

| е | Primary | Secondary | A = None |
|---|------------------------------|-----------------|---|
| | 240/480 – 220/440 Wired | 120/60 — 110/50 | B = Start/Stop Pushbuttons |
| | for 240 V | 120,00 110,00 | C = Start/Stop Pushbuttons, Ru |
| | 240/480 - 220/440 Wired | 120/60 - 110/50 | D = Start/Stop Pushbuttons, Rur |
| | for 480 V | | E = On/Off Pushbuttons |
| | 575/60 — 550/50 | 120/60 — 110/50 | F = On/Off Pushbuttons, Run (F |
| | 208/60 | 120/60 | G = On/Off Pushbuttons, Run (R |
| | 277/60 | 120/60 | H = Hand/Off/Auto Selector Sw |
| | 380/415 V | 220 V | J = Hand/Off/Auto Selector Swi |
| | 380/50 | 110/50 | K = Hand/Off/Auto Selector Sw |
| | 415/50 | 110/50 | Pilot Lights |
| | 120/60 | 24 | L = Start Pushbutton |
| | 208/60 | 24 | M = On Pushbutton |
| | 240/480 - 220/440 Wired | 24 | N = Off Pushbutton |
| | for 240 V | | P = Run-Red Pilot Light |
| | 240/480 - 220/440 Wired | 24 | Q = Off-Green Pilot Light |
| | for 480 V | | $\mathbf{R} = \text{Run}(\mathbf{R}) - \text{Off}(\mathbf{G}) \text{ Pilot Lights}$ |
| | 575/60 | 24 | S = Start/Stop Selector Switch |
| | 277/60 | 24 | T = Start/Stop Selector Switch |
| | 380/50 | 24 | U = Start/Stop Selector Switch |
| | 415/50 | 24 | Pilot Lights |
| | 240/480/600 Wired for 480 V | 120 | V = 0n/0ff Selector Switch |
| | 2/10//20/600 Wired for /20 V | 24 | W - On/Off Salactor Switch Ru |

installed (i.e., ECN 18) and when using Modification

— Non-Reversing o

| Primary | Secondary | A = None |
|-----------------------------|-----------------|--|
| 240/480 – 220/440 Wired | 120/60 — 110/50 | B = Start/Stop Pushbuttons |
| for 240 V | 120/00 — 110/30 | C = Start/Stop Pushbuttons, Run (R) Pilot Light |
| 240/480 - 220/440 Wired | 120/60 — 110/50 | D = Start/Stop Pushbuttons, Run (R), Off (G) Pilot Lig |
| for 480 V | , | E = On/Off Pushbuttons |
| 575/60 - 550/50 | 120/60 — 110/50 | $\mathbf{F} = \text{On/Off Pushbuttons, Run (R) Pilot Light}$ |
| 208/60 | 120/60 | $\mathbf{G} = \text{On/Off Pushbuttons, Run (R), Off (G) Pilot Light}$ |
| 277/60 | 120/60 | H = Hand/Off/Auto Selector Switch |
| 380/415 V | 220 V | J = Hand/Off/Auto Selector Switch, Run (R) Pilot Lig |
| 380/50 | 110/50 | K = Hand/Off/Auto Selector Switch, Run (R), Off (G |
| 415/50 | 110/50 | Pilot Lights |
| 120/60 | 24 | L = Start Pushbutton |
| 208/60 | 24 | M = On Pushbutton |
| 240/480 - 220/440 Wired | 24 | N = Off Pushbutton |
| for 240 V | | P = Run-Red Pilot Light |
| 240/480 – 220/440 Wired | 24 | Q = Off-Green Pilot Light |
| for 480 V | | $\mathbf{R} = \operatorname{Run}(R) - \operatorname{Off}(G) \operatorname{Pilot Lights}$ |
| 575/60 | 24 | S = Start/Stop Selector Switch |
| 277/60 | 24 | T = Start/Stop Selector Switch, Run (R) Pilot Light |
| 380/50 | 24 | U = Start/Stop Selector Switch, Run (R), Off (G) |
| 415/50 | 24 | Pilot Lights |
| 240/480/600 Wired for 480 V | 120 | V = 0n/Off Selector Switch |
| 240/480/600 Wired for 480 V | 24 | W = 0n/0ff Selector Switch, Run (R) Pilot Light |
| | | |

9 Starters only — contactor cover control: use Modification Codes.

Chart 4: Cover Control — Reversing ®

= Forward/Reverse/Stop Pushbuttons, 2 Red

= Forward/Reverse/Stop Pushbuttons, 2 Red,

= Up/Stop/Down Pushbuttons, 2 Red Pilot Lights

= Forward/Off/Reverse Selector Switch, 2 Red

= Forward/Off/Reverse Selector Switch, 2 Red,

= Forward/Off/Reverse Selector Switch

| | Use for Class 06, 10, 17, 20, 23, 26 |
|--------|--|
| | A = None |
| | B = Forward/Reverse/Stop Pushbuttons |
| Lights | C = Forward/Reverse/Stop Pushbuttons Pilot Lights |
| ıhts | D = Forward/Reverse/Stop Pushbuttons 1 Green Pilot Lights |
| | E = Up/Stop/Down Pushbuttons |
| Light | F = Up/Stop/Down Pushbuttons, 2 Red |
| (G) | H = Forward/Off/Reverse Selector Swit |
| | J = Forward/Off/Reverse Selector Swit Pilot Lights |
| | K = Forward/Off/Reverse Selector Swit1 Green Pilot Lights |
| | P = 2 Red Pilot Lights |
| | Q = 1 Green Pilot Light |
| | R = 2 Red, 1 Green Pilot Lights |
| | V = Open/Off/Close Selector Switch |
| ht | W = Open/Off/Close Selector Switch, 2 F Pilot Lights |
| | X = Open/Off/Close Selector Switch, 2 F1 Green Pilot Lights |
| | Z = By Description |

= Open/Off/Close Selector Switch **N** = Open/Off/Close Selector Switch, 2 Red Pilot Lights = Open/Off/Close Selector Switch, 2 Red, 1 Green Pilot Lights By Description

X = On/Off Selector Switch, Run (R), Off (G) Pilot Lights Starters only — contactor cover control: **Z** = By Description

use Modification Codes.

Chart 5: Overload Size (IT. IEC)

| FLA Range | A-Frame 27 mm | | B-Frame 45 mm | | C-Frame 54 mm | | D-Frame 76 mm | | | E-Frame 105 mm | | | F-Frame 140 mm | | | | |
|---|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|-------------|-------------------|----------|-------------|-------------------|-------------|-------------|------------------|-------------|
| | A 6 | B 9 | C 12 | D 18 | E 25 | F 32 | G 40 | H 50 | J 65 | K 80 | L 100 | M 125 | N 160 | P 200 | R 250 | S 315 | 2 |
| .258 .59 - 1.9 1.4 - 4.4 | A B C | | _ _ _ | A B C | | | | | _ _ _ | | | | | _ _ _ | _ _ _ | _ _ _ | - |
| 2.8 - 9.0 3.8 - 12 5.0 - 16 | D — | D E | _ E _ | D — | | | | | _ _ _ | _ _ _ | | | | | _ _ _ | _ _ _ | - |
| 6.3 – 20 8.4 – 27 10 – 32 | _ _ _ | | | G _ _ | G | _ _ J | H — | | _ _ _ | _ _ _ | | | _ _ _ | | _ _ _ | _ _ _ | - |
| 14 – 45 16 – 50 31 – 100 | | | _ _ _ | _ _ _ | | | L L | _ L _ | K — N | N | _ N | | | _ _ _ | _ _ _ | _ _ _ | - |
| 42 - 135 63 - 200 84 - 270 131 - 420 | | _ _ _ | _ _ _ | _ _ _ | | | _ _ _ | | _ _ _ | _ _ _ | | P — — | R — | | | — — — T | - - - |

Chart 8: Modification Codes — Solid-State Overload for Freedom Starters

| NEMA | Full Load Current | 3-Phase Manual R | eset Overload | 3-Phase Automatic | /Manual Reset | Ground Fault | |
|-----------|--|--|--|--|--|--|--|
| Size | Adjustment Range (A) | Class 10 | Class 20 | Class 10 | Class 20 | Class 10/20 | |
| Catalog N | umber Suffix | R52 | R50 | R53 | R51 | R54 | |
| 00 | 0.1 – 1.3 0.3 – 1.0 1.0 – 2.9 1.6 – 5.0 | G101 G102 G103 G104 | G81 G82 G83 G84 | G141 G142 G143 G144 | G121 G122 G123 G124 | G221 G222 G223 G224 G225 | |
| 0 & 1 | 3.7 - 12 0.1 - 1.3 0.3 - 1.0 1.0 - 2.9 1.6 - 5.0 3.7 - 12 | G105 G101 G102 G103 G104 G105 G106 | G85 G81 G82 G83 G84 G85 | G145 G141 G142 G143 G144 G145 | G125 G121 G122 G123 G124 G125 G126 | G225 G221 G222 G223 G224 G225 G226 | |
| 2 | 12 – 37 14 – 45 | G107 G108 | G87 G88 | G147 G148 | G127 G128 | — G227 | |
| 3 | 26 – 85 | G109 | G89 | G149 | G129 | G228 | |
| 5 | 57 – 180 96 – 300 | G112 G104 | G92 G84 | G152 G144 | G132 G124 | _ | |
| 6 | 192 – 600 | G104 | G84 | G144 | G124 | _ | |

Example: R50/G87 = Class 20, 12 – 37 ampere overload for A size 2 starters.

Chart 9: Typical Examples of Common Modification Codes

| A 1 | = Ammeter, panel type wired to current transformer in line. |
|------------|--|
| A2 | = Ammeter, panel type, selector switch, and 3 current transformers wired to ammeter. |
| A 7 | = Ammeters, (single-phase) total of 3. |
| A13 | = Auxiliary Contact, 1NO top mounted. |
| A15 | = Auxiliary Contact, 1NO – 1NC top mounted. |
| A16 | = Auxiliary Contact, 2NO top mounted. |
| A44 | = Auxiliary Contact, omitted. |
| A23 | = Auxiliary Contact, 2NO – 2NC top mounted. |
| A29 | = Auxiliary Contact, 1NO – 1NC side mounted. |
| B1 | = Breaker Modifications, 1NO – 1NC Auxiliary Contact on HMCP. |
| В3 | = Breaker Modifications, Shunt Trip on circuit breaker, 48 – 127 Vac or Vdc. |
| C1 | = Control Power Transformer, standard size, 120 V/60 Hz secondary. |
| C3 | = Control Power Transformer, 100 VA extra capacity, 120 V/60 Hz secondary. |
| C4 | = Control Power Transformer, 100 VA extra capacity, 24 V/60 Hz secondary. |
| C1/ | - Control Polary 4 pola upwired A600 rating 120 V poil |

C14 = Control Relay, 4-pole, unwired, A600 rating, 120 V coil. C35 = Control, wired for separate. **C36** = Customer supplied material. C37 = Customer supplied drawings.

D15 = HOA for each motor (duplex pumps). E3 = Enclosure Modifications, oversize enclosure

E11 = Safety Door Interlock enclosure assembly.

G3 = Ground Fault Relay, unwired, installed.

L3 = Lightning Arrester installed on panel. **L10** = Carton Label — order by description. **L21** = 1NC Power Pole. **L22** = 2NC Power Pole. **L23** = 3NC Power Pole. **L24** = 4NC Power Pole. **L25** = 5NC Power Pole. **L26** = 6NC Power Pole. **L27** = 7NC Power Pole. **L28** = 8NC Power Pole. **N1** = Nameplate — order by description. **P1** = Push-to-Test Pilot Light (red RUN) wired to magnet coil. **P2** = Push-to-Test Pilot Light (green OFF) wired to magnet coil. **P7** = Start/Stop Pushbutton. **P18** = Pushbutton with Legend Plate — order by description. P32 = Phase Unbalance Relay. P34 = Phase Monitoring Relay. **S3** = Selector Switch HOA. **\$18** = Selector Switch, HIGH-LOW-OFF-AUTO. **\$40** = Selector Switch — order by description. **T15** = Customer designated terminal points.