

Enclosed S611 with Breaker Disconnect



Enclosed 40 hp /T/ Soft Starter



Type 3R Fused S801+ /T/ Soft Starter



Type 12 HMCP Combination /T/ Soft Starter



5.1 S611 Solid-State Soft Starter

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S611 Solid-State Soft Starter



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Product Description

Eaton's line of S611 reduced voltage soft starters is multi-functional, easy to install and easy to program. The S611 soft starter includes advanced feature set and user-friendly interface module to enhance system performance and reduce commissioning time. Easy communication interface, as well as metering, monitoring, and diagnostics are possible with this revolutionary soft starter.

Designed to control acceleration and deceleration of three-phase motors up to 600V, current ratings from 26 to 414 amps, and suitable for mounting in a variety of enclosures including NEMA Type 1, 12, 3R, 4, and 4X.

- Intuitive User Interface Module (UI)
- Internal run bypass
- 120 Vac control voltage
- Open architecture for serviceability (PCBs and contactors can be replaced in the field)
- Built-in overload protection
 - Adjustable trip class 5, 10, 20, 30
 - 50–100% FLA adjustment
- Selectable current limit or ramp start
- Adjustable ramp times
 - 0–180 seconds standard
 - Extended ramps available
- Adjustable torque control
- Adjustable kick start control
- Soft stop control
 - 0–60 seconds standard
 - Extended times available
- Built-in low impedance contactor
- Six SCR control in all units
- Selectable phase reversal protection
- User interface module

Features and Benefits

- Mechanical stress on system
 - Reduced wear on belts, gears, chains, clutches, shafts and bearings. You can get up to 2–6 times the life on standard belts by switching to a soft starter
 - Elimination of water-hammer in pumping applications extends component life and helps limit leakage in system
 - Lower shock to product on conveyor lines and material handling gear
 - Able to catch motors and fans on the fly and control their acceleration
- Electrical system improvements
 - Limits the peak inrush current as required by many local codes
 - Helps to eliminate sags on the plant electrical grid when starting large loads, thus avoiding brownout conditions

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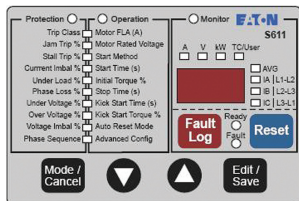
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User Interface Module (UI)

The S611 has an easy to use User Interface Module (UI) that allows the user to configure the device and to read system parameters and values. The UI includes an LED display and keypad to scroll through the various parameters. The UI allows the user to modify control parameters, enable or disable protections, set communication variables, monitor system values such as line voltages and currents and access the fault queue.

The UI can be removed from the S611 and remote mounted. Kits are available to door mount the DIM, enabling users to safely configure, commission, monitor and troubleshoot the system at the electrical panel without opening the enclosure door. Factory assembled units are supplied with door mounted keypad. If door mounted keypad is not needed, consult factory.

User Interface Module (UI)



Additional Reference

Dimensions **Tab 14**
 Accessories and Modifications **Tab 15**
 Technical Data and Specifications **Tab 17**

Options

S611

Description	Modification Code
Pump control option	Standard
Door mounted keypad	Standard
Extended ramp	R1

Pump Control Option

- Designed to reduce “water-hammer” during start-up and stopping sequences
- Stop ramp extended to 120 seconds to help control larger motors and systems with long piping runs

Communications

The S611 has built-in communication capabilities through two communications ports to connect the soft starter to a variety of networks, including Modbus (resident), DeviceNet™, PROFIBUS®, and Ethernet.

The S611 communication parameters can be configured with the UI or through the Fieldbus.

Advanced communication configuration settings provide the system integrator with powerful tools to facilitate system optimization.

Network Communications Reference

Description	Catalog Number
Modbus communication adapter without I/O	C441M
Modbus communication adapter with 120 Vac I/O	C441N
Modbus communication adapter with 24 Vdc I/O	C441P
DeviceNet communication adapter with 120 Vac I/O	C441K
DeviceNet communication adapter with 24 Vdc I/O	C441L
PROFIBUS communication adapter with 120 Vac I/O	C441S
PROFIBUS communication adapter with 24 Vdc I/O	C441Q
EtherNet/IP and Modbus TCP communication adapter with 120 Vac I/O	C441R
EtherNet/IP and Modbus TCP communication adapter with 24 Vdc I/O	C441T
Communication adapter	C440-COM-ADP

Standards and Certifications

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

- UL Listed
- IEC 947-4-2
- EN 60947.2 (for motor controller)
- cUL (indicates appropriate CSA Standard investigation)
- ABS Type Approved

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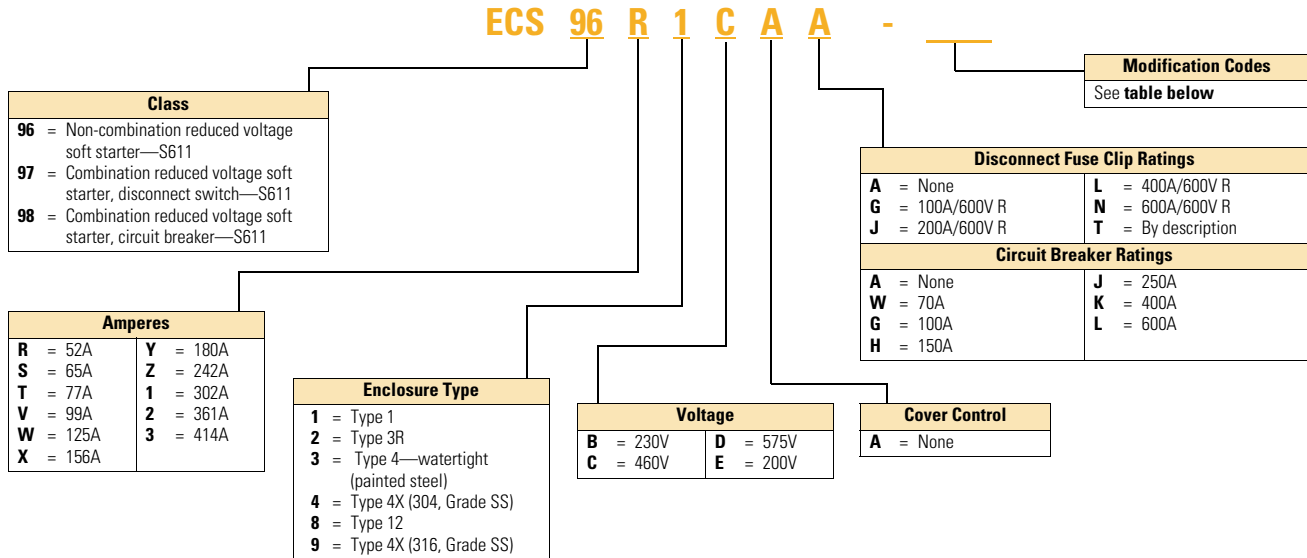
Reduced Voltage Starter

S611 Solid-State Soft Starter

Catalog Number Selection

S611 Solid-State Soft Starters

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Enclosed S611 Modification Codes

Modification Code	Description
A47	2 N.O. / 2 N.C. auxiliary relay (soft start)
C1	Standard size CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C42	With 50 VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C3	With 100 VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C5	With 200 VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C7	With 300 VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C8	With 400 VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C9	With 1K VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C10	With 2K VA extra capacity CPT, 120V/60 Hz, 110V 50 Hz secondary w/fuses
C12	2-pole 120V coil control relay
C47	Bypass starter with SSOL - S611 ONLY
P7	PB - START/STOP
P23	PL - red RUN
P25	PL - green OFF
S3	HAND-OFF-AUTO selector switch
S44	2-position selector switch
T15	Terminal point per customer specification, wired

Note: Door mounted keypad and pump control algorithm are provided as standard.

Product Selection

Non-Combination

Class ECS96—Non-Combination Reduced Voltage Soft Starter—S611

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame A								
52A	200V	15	120 Vac	ECS96R1EAA	ECS96R2EAA	ECS96R4EAA	ECS96R8EAA	S611A052P3S
	230V	15		ECS96R1BAA	ECS96R2BAA	ECS96R4BAA	ECS96R8BAA	
	460V	40		ECS96R1CAA	ECS96R2CAA	ECS96R4CAA	ECS96R8CAA	
	575V	50		ECS96R1DAA	ECS96R2DAA	ECS96R4DAA	ECS96R8DAA	
65A	200V	20	120 Vac	ECS96S1EAA	ECS96S2EAA	ECS96S4EAA	ECS96S8EAA	S611A065P3S
	230V	20		ECS96S1BAA	ECS96S2BAA	ECS96S4BAA	ECS96S8BAA	
	460V	50		ECS96S1CAA	ECS96S2CAA	ECS96S4CAA	ECS96S8CAA	
	575V	60		ECS96S1DAA	ECS96S2DAA	ECS96S4DAA	ECS96S8DAA	
77A	200V	25	120 Vac	ECS96T1EAA	ECS96T2EAA	ECS96T4EAA	ECS96T8EAA	S611A077P3S
	230V	25		ECS96T1BAA	ECS96T2BAA	ECS96T4BAA	ECS96T8BAA	
	460V	60		ECS96T1CAA	ECS96T2CAA	ECS96T4CAA	ECS96T8CAA	
	575V	75		ECS96T1DAA	ECS96T2DAA	ECS96T4DAA	ECS96T8DAA	
Frame B								
99A	200V	30	120 Vac	ECS96V1EAA	ECS96V2EAA	ECS96V4EAA	ECS96V8EAA	S611B099P3S
	230V	30		ECS96V1BAA	ECS96V2BAA	ECS96V4BAA	ECS96V8BAA	
	460V	75		ECS96V1CAA	ECS96V2CAA	ECS96V4CAA	ECS96V8CAA	
	575V	100		ECS96V1DAA	ECS96V2DAA	ECS96V4DAA	ECS96V8DAA	
125A	200V	40	120 Vac	ECS96W1EAA	ECS96W2EAA	ECS96W4EAA	ECS96W8EAA	S611B125P3S
	230V	40		ECS96W1BAA	ECS96W2BAA	ECS96W4BAA	ECS96W8BAA	
	460V	100		ECS96W1CAA	ECS96W2CAA	ECS96W4CAA	ECS96W8CAA	
	575V	125		ECS96W1DAA	ECS96W2DAA	ECS96W4DAA	ECS96W8DAA	
Frame C								
156A	200V	50	120 Vac	ECS96X1EAA	ECS96X2EAA	ECS96X4EAA	ECS96X8EAA	S611C156P3S
	230V	60		ECS96X1BAA	ECS96X2BAA	ECS96X4BAA	ECS96X8BAA	
	460V	125		ECS96X1CAA	ECS96X2CAA	ECS96X4CAA	ECS96X8CAA	
	575V	150		ECS96X1DAA	ECS96X2DAA	ECS96X4DAA	ECS96X8DAA	
180A	200V	60	120 Vac	ECS96Y1EAA	ECS96Y2EAA	ECS96Y4EAA	ECS96Y8EAA	S611C180P3S
	230V	60		ECS96Y1BAA	ECS96Y2BAA	ECS96Y4BAA	ECS96Y8BAA	
	460V	150		ECS96Y1CAA	ECS96Y2CAA	ECS96Y4CAA	ECS96Y8CAA	
	575V	150		ECS96Y1DAA	ECS96Y2DAA	ECS96Y4DAA	ECS96Y8DAA	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS96R4EAA. 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 12**.

5.1

Reduced Voltage Starter

S611 Solid-State Soft Starter

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Class ECS96—Non-Combination Reduced Voltage Soft Starter—S611, continued

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame D								
242A	200V	75	120 Vac	ECS96Z1EAA	ECS96Z2EAA	ECS96Z4EAA	ECS96Z8EAA	S611D242P3S
	230V	75		ECS96Z1BAA	ECS96Z2BAA	ECS96Z4BAA	ECS96Z8BAA	
	460V	200		ECS96Z1CAA	ECS96Z2CAA	ECS96Z4CAA	ECS96Z8CAA	
	575V	250		ECS96Z1DAA	ECS96Z2DAA	ECS96Z4DAA	ECS96Z8DAA	
Frame E								
302A	200V	100	120 Vac	ECS9611EAA	ECS9612EAA	ECS9614EAA	ECS9618EAA	S611E302P3S
	230V	100		ECS9611BAA	ECS9612BAA	ECS9614BAA	ECS9618BAA	
	460V	250		ECS9611CAA	ECS9612CAA	ECS9614CAA	ECS9618CAA	
	575V	300		ECS9611DAA	ECS9612DAA	ECS9614DAA	ECS9618DAA	
361A	200V	125	120 Vac	ECS9621EAA	ECS9622EAA	ECS9624EAA	ECS9628EAA	S611E361P3S
	230V	150		ECS9621BAA	ECS9622BAA	ECS9624BAA	ECS9628BAA	
	460V	300		ECS9621CAA	ECS9622CAA	ECS9624CAA	ECS9628CAA	
	575V	350		ECS9621DAA	ECS9622DAA	ECS9624DAA	ECS9628DAA	
Frame F								
414A	200V	150	120 Vac	ECS9631EAA	ECS9632EAA	ECS9634EAA	ECS9638EAA	S611F414P3S
	230V	150		ECS9631BAA	ECS9632BAA	ECS9634BAA	ECS9638BAA	
	460V	350		ECS9631CAA	ECS9632CAA	ECS9634CAA	ECS9638CAA	
	575V	450		ECS9631DAA	ECS9632DAA	ECS9634DAA	ECS9638DAA	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS96Z4EAA. 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 12**.

Combination—Disconnect Switch

Class ECS97—Combination Reduced Voltage Soft Starter—Disconnect Switch (Non-Fusible)—S611

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame A								
52A	200V	15	120 Vac	ECS97R1EAA	ECS97R2EAA	ECS97R4EAA	ECS97R8EAA	S611A052P3S
	230V	15		ECS97R1BAA	ECS97R2BAA	ECS97R4BAA	ECS97R8BAA	
	460V	40		ECS97R1CAA	ECS97R2CAA	ECS97R4CAA	ECS97R8CAA	
	575V	50		ECS97R1DAA	ECS97R2DAA	ECS97R4DAA	ECS97R8DAA	
65A	200V	20	120 Vac	ECS97S1EAA	ECS97S2EAA	ECS97S4EAA	ECS97S8EAA	S611A065P3S
	230V	20		ECS97S1BAA	ECS97S2BAA	ECS97S4BAA	ECS97S8BAA	
	460V	50		ECS97S1CAA	ECS97S2CAA	ECS97S4CAA	ECS97S8CAA	
	575V	60		ECS97S1DAA	ECS97S2DAA	ECS97S4DAA	ECS97S8DAA	
77A	200V	25	120 Vac	ECS97T1EAA	ECS97T2EAA	ECS97T4EAA	ECS97T8EAA	S611A077P3S
	230V	25		ECS97T1BAA	ECS97T2BAA	ECS97T4BAA	ECS97T8BAA	
	460V	60		ECS97T1CAA	ECS97T2CAA	ECS97T4CAA	ECS97T8CAA	
	575V	75		ECS97T1DAA	ECS97T2DAA	ECS97T4DAA	ECS97T8DAA	
Frame B								
99A	200V	30	120 Vac	ECS97V1EAA	ECS97V2EAA	ECS97V4EAA	ECS97V8EAA	S611B099P3S
	230V	30		ECS97V1BAA	ECS97V2BAA	ECS97V4BAA	ECS97V8BAA	
	460V	75		ECS97V1CAA	ECS97V2CAA	ECS97V4CAA	ECS97V8CAA	
	575V	100		ECS97V1DAA	ECS97V2DAA	ECS97V4DAA	ECS97V8DAA	
125A	200V	40	120 Vac	ECS97W1EAA	ECS97W2EAA	ECS97W4EAA	ECS97W8EAA	S611B125P3S
	230V	40		ECS97W1BAA	ECS97W2BAA	ECS97W4BAA	ECS97W8BAA	
	460V	100		ECS97W1CAA	ECS97W2CAA	ECS97W4CAA	ECS97W8CAA	
	575V	125		ECS97W1DAA	ECS97W2DAA	ECS97W4DAA	ECS97W8DAA	
Frame C								
156A	200V	50	120 Vac	ECS97X1EAA	ECS97X2EAA	ECS97X4EAA	ECS97X8EAA	S611C156P3S
	230V	60		ECS97X1BAA	ECS97X2BAA	ECS97X4BAA	ECS97X8BAA	
	460V	125		ECS97X1CAA	ECS97X2CAA	ECS97X4CAA	ECS97X8CAA	
	575V	150		ECS97X1DAA	ECS97X2DAA	ECS97X4DAA	ECS97X8DAA	
180A	200V	60	120 Vac	ECS97Y1EAA	ECS97Y2EAA	ECS97Y4EAA	ECS97Y8EAA	S611C180P3S
	230V	60		ECS97Y1BAA	ECS97Y2BAA	ECS97Y4BAA	ECS97Y8BAA	
	460V	150		ECS97Y1CAA	ECS97Y2CAA	ECS97Y4CAA	ECS97Y8CAA	
	575V	150		ECS97Y1DAA	ECS97Y2DAA	ECS97Y4DAA	ECS97Y8DAA	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS97R4EAA. 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 12**.

5.1

Reduced Voltage Starter

S611 Solid-State Soft Starter

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Class ECS97—Combination Reduced Voltage Soft Starter—Disconnect Switch (Non-Fusible)—S611, continued

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame D								
242A	200V	75	120 Vac	ECS9721EAA	ECS9722EAA	ECS9724EAA	ECS9728EAA	S611D242P3S
	230V	75		ECS9721BAA	ECS9722BAA	ECS9724BAA	ECS9728BAA	
	460V	200		ECS9721CAA	ECS9722CAA	ECS9724CAA	ECS9728CAA	
	575V	250		ECS9721DAA	ECS9722DAA	ECS9724DAA	ECS9728DAA	
Frame E								
302A	200V	100	120 Vac	ECS9711EAA	ECS9712EAA	ECS9714EAA	ECS9718EAA	S611E302P3S
	230V	100		ECS9711BAA	ECS9712BAA	ECS9714BAA	ECS9718BAA	
	460V	250		ECS9711CAA	ECS9712CAA	ECS9714CAA	ECS9718CAA	
	575V	300		ECS9711DAA	ECS9712DAA	ECS9714DAA	ECS9718DAA	
361A	200V	125	120 Vac	ECS9721EAA	ECS9722EAA	ECS9724EAA	ECS9728EAA	S611E361P3S
	230V	150		ECS9721BAA	ECS9722BAA	ECS9724BAA	ECS9728BAA	
	460V	300		ECS9721CAA	ECS9722CAA	ECS9724CAA	ECS9728CAA	
	575V	350		ECS9721DAA	ECS9722DAA	ECS9724DAA	ECS9728DAA	
Frame F								
414A	200V	150	120 Vac	ECS9731EAA	ECS9732EAA	ECS9734EAA	ECS9738EAA	S611F414P3S
	230V	150		ECS9731BAA	ECS9732BAA	ECS9734BAA	ECS9738BAA	
	460V	350		ECS9731CAA	ECS9732CAA	ECS9734CAA	ECS9738CAA	
	575V	450		ECS9731DAA	ECS9732DAA	ECS9734DAA	ECS9738DAA	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS9724EAA. 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 12**.

Class ECS97—Combination Reduced Voltage Soft Starter—Disconnect Switch (Fusible)—S611

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame A								
52A	200V	15	120 Vac	ECS97R1EAG	ECS97R2EAG	ECS97R4EAG	ECS97R8EAG	S611A052P3S
	230V	15		ECS97R1BAG	ECS97R2BAG	ECS97R4BAG	ECS97R8BAG	
	460V	40		ECS97R1CAG	ECS97R2CAG	ECS97R4CAG	ECS97R8CAG	
	575V	50		ECS97R1DAG	ECS97R2DAG	ECS97R4DAG	ECS97R8DAG	
65A	200V	20	120 Vac	ECS97S1EAG	ECS97S2EAG	ECS97S4EAG	ECS97S8EAG	S611A065P3S
	230V	20		ECS97S1BAG	ECS97S2BAG	ECS97S4BAG	ECS97S8BAG	
	460V	50		ECS97S1CAG	ECS97S2CAG	ECS97S4CAG	ECS97S8CAG	
	575V	60		ECS97S1DAG	ECS97S2DAG	ECS97S4DAG	ECS97S8DAG	
77A	200V	25	120 Vac	ECS97T1EAG	ECS97T2EAG	ECS97T4EAG	ECS97T8EAG	S611A077P3S
	230V	25		ECS97T1BAG	ECS97T2BAG	ECS97T4BAG	ECS97T8BAG	
	460V	60		ECS97T1CAG	ECS97T2CAG	ECS97T4CAG	ECS97T8CAG	
	575V	75		ECS97T1DAG	ECS97T2DAG	ECS97T4DAG	ECS97T8DAG	
Frame B								
99A	200V	30	120 Vac	ECS97V1EAJ	ECS97V2EAJ	ECS97V4EAJ	ECS97V8EAJ	S611B099P3S
	230V	30		ECS97V1BAJ	ECS97V2BAJ	ECS97V4BAJ	ECS97V8BAJ	
	460V	75		ECS97V1CAJ	ECS97V2CAJ	ECS97V4CAJ	ECS97V8CAJ	
	575V	100		ECS97V1DAJ	ECS97V2DAJ	ECS97V4DAJ	ECS97V8DAJ	
125A	200V	40	120 Vac	ECS97W1EAJ	ECS97W2EAJ	ECS97W4EAJ	ECS97W8EAJ	S611B125P3S
	230V	40		ECS97W1BAJ	ECS97W2BAJ	ECS97W4BAJ	ECS97W8BAJ	
	460V	100		ECS97W1CAJ	ECS97W2CAJ	ECS97W4CAJ	ECS97W8CAJ	
	575V	125		ECS97W1DAJ	ECS97W2DAJ	ECS97W4DAJ	ECS97W8DAJ	
Frame C								
156A	200V	50	120 Vac	ECS97X1EAL	ECS97X2EAL	ECS97X4EAL	ECS97X8EAL	S611C156P3S
	230V	60		ECS97X1BAL	ECS97X2BAL	ECS97X4BAL	ECS97X8BAL	
	460V	125		ECS97X1CAL	ECS97X2CAL	ECS97X4CAL	ECS97X8CAL	
	575V	150		ECS97X1DAL	ECS97X2DAL	ECS97X4DAL	ECS97X8DAL	
180A	200V	60	120 Vac	ECS97Y1EAL	ECS97Y2EAL	ECS97Y4EAL	ECS97Y8EAL	S611C180P3S
	230V	60		ECS97Y1BAL	ECS97Y2BAL	ECS97Y4BAL	ECS97Y8BAL	
	460V	150		ECS97Y1CAL	ECS97Y2CAL	ECS97Y4CAL	ECS97Y8CAL	
	575V	150		ECS97Y1DAL	ECS97Y2DAL	ECS97Y4DAL	ECS97Y8DAL	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS97R4EAA. 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 12**.

5.1

Reduced Voltage Starter

S611 Solid-State Soft Starter

5

Class ECS97—Combination Reduced Voltage Soft Starter—Disconnect Switch (Fusible)—S611, continued

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame D								
242A	200V	75	120 Vac	ECS9721EAL	ECS9722EAL	ECS9724EAL	ECS9728EAL	S611D242P3S
	230V	75		ECS9721BAL	ECS9722BAL	ECS9724BAL	ECS9728BAL	
	460V	200		ECS9721CAL	ECS9722CAL	ECS9724CAL	ECS9728CAL	
	575V	250		ECS9721DAL	ECS9722DAL	ECS9724DAL	ECS9728DAL	
Frame E								
302A	200V	100	120 Vac	ECS9711EAN	ECS9712EAN	ECS9714EAN	ECS9718EAN	S611E302P3S
	230V	100		ECS9711BAN	ECS9712BAN	ECS9714BAN	ECS9718BAN	
	460V	250		ECS9711CAN	ECS9712CAN	ECS9714CAN	ECS9718CAN	
	575V	300		ECS9711DAN	ECS9712DAN	ECS9714DAN	ECS9718DAN	
361A	200V	125	120 Vac	ECS9721EAN	ECS9722EAN	ECS9724EAN	ECS9728EAN	S611E361P3S
	230V	150		ECS9721BAN	ECS9722BAN	ECS9724BAN	ECS9728BAN	
	460V	300		ECS9721CAN	ECS9722CAN	ECS9724CAN	ECS9728CAN	
	575V	350		ECS9721DAN	ECS9722DAN	ECS9724DAN	ECS9728DAN	
Frame F								
414A	200V	150	120 Vac	ECS9731EAN	ECS9732EAN	ECS9734EAN	ECS9738EAN	S611F414P3S
	230V	150		ECS9731BAN	ECS9732BAN	ECS9734BAN	ECS9738BAN	
	460V	350		ECS9731CAN	ECS9732CAN	ECS9734CAN	ECS9738CAN	
	575V	450		ECS9731DAN	ECS9732DAN	ECS9734DAN	ECS9738DAN	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS9724EAA. 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 12**.

Combination—Circuit Breaker

Class ECS98—Combination Reduced Voltage Soft Starter—Circuit Breaker—S611

Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame A								
52A	200V	15	120 Vac	ECS98R1EAW	ECS98R2EAW	ECS98R4EAW	ECS98R8EAW	S611A052P3S
	230V	15		ECS98R1BAW	ECS98R2BAW	ECS98R4BAW	ECS98R8BAW	
	460V	40		ECS98R1CAW	ECS98R2CAW	ECS98R4CAW	ECS98R8CAW	
	575V	50		ECS98R1DAW	ECS98R2DAW	ECS98R4DAW	ECS98R8DAW	
65A	200V	20	120 Vac	ECS98S1EAG	ECS98S2EAG	ECS98S4EAG	ECS98S8EAG	S611A065P3S
	230V	20		ECS98S1BAG	ECS98S2BAG	ECS98S4BAG	ECS98S8BAG	
	460V	50		ECS98S1CAG	ECS98S2CAG	ECS98S4CAG	ECS98S8CAG	
	575V	60		ECS98S1DAG	ECS98S2DAG	ECS98S4DAG	ECS98S8DAG	
77A	200V	25	120 Vac	ECS98T1EAG	ECS98T2EAG	ECS98T4EAG	ECS98T8EAG	S611A077P3S
	230V	25		ECS98T1BAG	ECS98T2BAG	ECS98T4BAG	ECS98T8BAG	
	460V	60		ECS98T1CAG	ECS98T2CAG	ECS98T4CAG	ECS98T8CAG	
	575V	75		ECS98T1DAG	ECS98T2DAG	ECS98T4DAG	ECS98T8DAG	
Frame B								
99A	200V	30	120 Vac	ECS98V1EAH	ECS98V2EAH	ECS98V4EAH	ECS98V8EAH	S611B099P3S
	230V	30		ECS98V1BAH	ECS98V2BAH	ECS98V4BAH	ECS98V8BAH	
	460V	75		ECS98V1CAH	ECS98V2CAH	ECS98V4CAH	ECS98V8CAH	
	575V	100		ECS98V1DAH	ECS98V2DAH	ECS98V4DAH	ECS98V8DAH	
125A	200V	40	120 Vac	ECS98W1EAH	ECS98W2EAH	ECS98W4EAH	ECS98W8EAH	S611B125P3S
	230V	40		ECS98W1BAH	ECS98W2BAH	ECS98W4BAH	ECS98W8BAH	
	460V	100		ECS98W1CAH	ECS98W2CAH	ECS98W4CAH	ECS98W8CAH	
	575V	125		ECS98W1DAH	ECS98W2DAH	ECS98W4DAH	ECS98W8DAH	
Frame C								
156A	200V	50	120 Vac	ECS98X1EAJ	ECS98X2EAJ	ECS98X4EAJ	ECS98X8EAJ	S611C156P3S
	230V	60		ECS98X1BAJ	ECS98X2BAJ	ECS98X4BAJ	ECS98X8BAJ	
	460V	125		ECS98X1CAJ	ECS98X2CAJ	ECS98X4CAJ	ECS98X8CAJ	
	575V	150		ECS98X1DAJ	ECS98X2DAJ	ECS98X4DAJ	ECS98X8DAJ	
180A	200V	60	120 Vac	ECS98Y1EAJ	ECS98Y2EAJ	ECS98Y4EAJ	ECS98Y8EAJ	S611C180P3S
	230V	60		ECS98Y1BAJ	ECS98Y2BAJ	ECS98Y4BAJ	ECS98Y8BAJ	
	460V	150		ECS98Y1CAJ	ECS98Y2CAJ	ECS98Y4CAJ	ECS98Y8CAJ	
	575V	150		ECS98Y1DAJ	ECS98Y2DAJ	ECS98Y4DAJ	ECS98Y8DAJ	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS98R4EAA. 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 12**.

5.1

Reduced Voltage Starter

S611 Solid-State Soft Starter

5

Class ECS98—Combination Reduced Voltage Soft Starter—Circuit Breaker—S611, continued

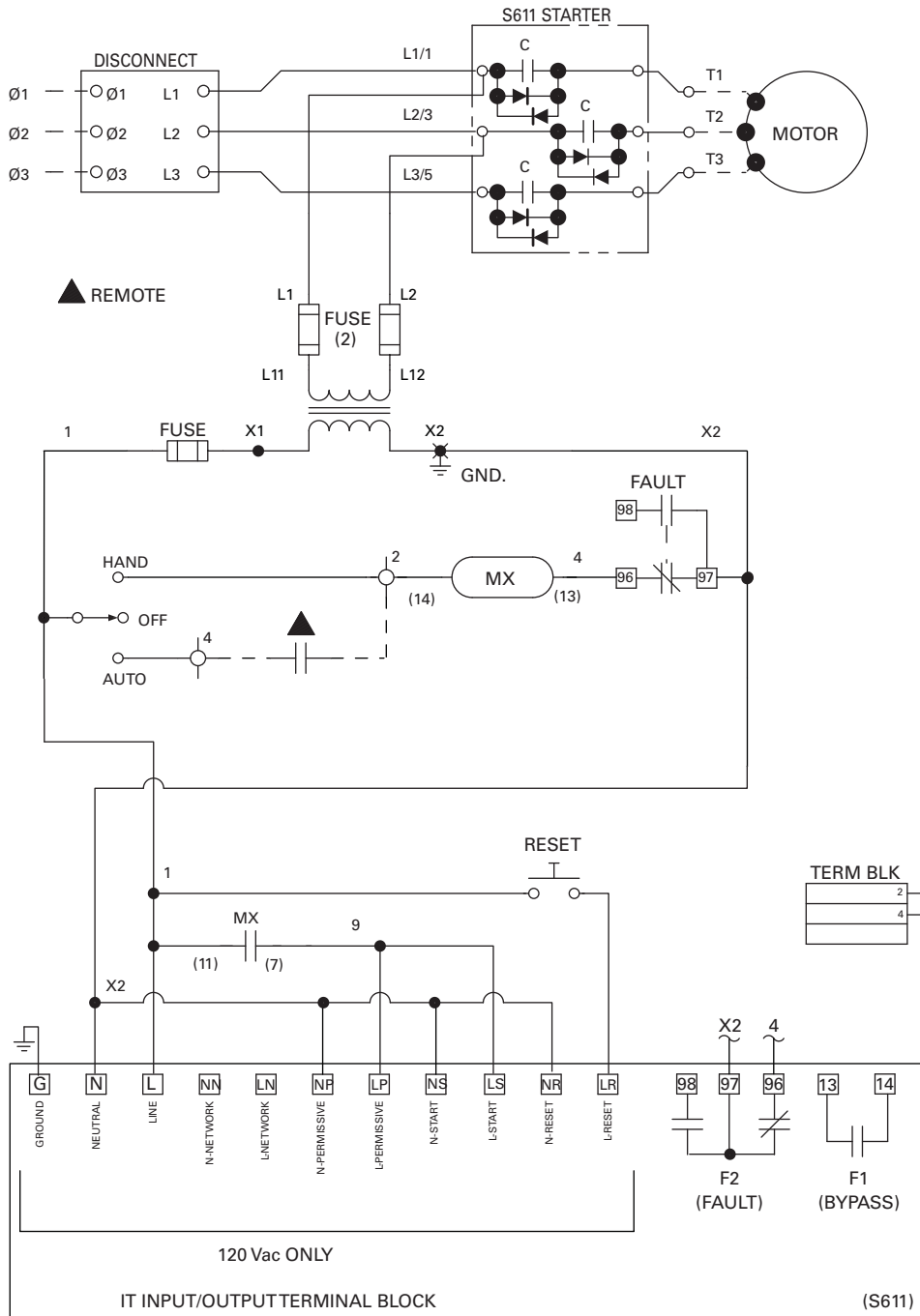
Amps	Motor Voltage	hp ^①	Coil Voltage	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^② Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame D								
242A	200V	75	120 Vac	ECS98Z1EAK	ECS98Z2EAK	ECS98Z4EAK	ECS98Z8EAK	S611D242P3S
	230V	75		ECS98Z1BAK	ECS98Z2BAK	ECS98Z4BAK	ECS98Z8BAK	
	460V	200		ECS98Z1CAK	ECS98Z2CAK	ECS98Z4CAK	ECS98Z8CAK	
	575V	250		ECS98Z1DAK	ECS98Z2DAK	ECS98Z4DAK	ECS98Z8DAK	
Frame E								
302A	200V	100	120 Vac	ECS9811EAK	ECS9812EAK	ECS9814EAK	ECS9818EAK	S611E302P3S
	230V	100		ECS9811BAK	ECS9812BAK	ECS9814BAK	ECS9818BAK	
	460V	250		ECS9811CAK	ECS9812CAK	ECS9814CAK	ECS9818CAK	
	575V	300		ECS9811DAK	ECS9812DAK	ECS9814DAK	ECS9818DAK	
361A	200V	125	120 Vac	ECS9821EAL	ECS9822EAL	ECS9824EAL	ECS9828EAL	S611E361P3S
	230V	150		ECS9821BAL	ECS9822BAL	ECS9824BAL	ECS9828BAL	
	460V	300		ECS9821CAL	ECS9822CAL	ECS9824CAL	ECS9828CAL	
	575V	350		ECS9821DAL	ECS9822DAL	ECS9824DAL	ECS9828DAL	
Frame F								
414A	200V	150	120 Vac	ECS9831EAL	ECS9832EAL	ECS9834EAL	ECS9838EAL	S611F414P3S
	230V	150		ECS9831BAL	ECS9832BAL	ECS9834BAL	ECS9838BAL	
	460V	350		ECS9831CAL	ECS9832CAL	ECS9834CAL	ECS9838CAL	
	575V	450		ECS9831DAL	ECS9832DAL	ECS9834DAL	ECS9838DAL	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 15 seconds ramp time, and 115% continuous. Consult Eaton for other ratings.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS98Z4EAA. 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 12**.

Wiring Diagram

Sample—S611 with CPT and HOA Selector Switch



5.1

Reduced Voltage Starter

S611 Solid-State Soft Starter

Dimensions

See **Tab 14** for box dimensions for Type 1, 3R, 4X and 12.

Minimum Enclosure Box Numbers

Rating	SSRV	Non-Combination Box No. ①	Combination with Disconnect Switch Box No. ①	Combination with Circuit Breaker Box No. ①
52A	S611	D	D	D
65A	S611	D	D	D
77A	S611	D	D	D
99A	S611	D	D	D
125A	S611	D	D	D
156A	S611	E	F1E	E
180A	S611	E	F1E	E
242A	S611	E	F1E	E
302A	S611	F1E	F2E	F1E
361A	S611	F1E	F2E	F1E
414A	S611	F1E	F2E	F1E

Lug Kits

Description	S611 Current Rating	Accessory Kit Part Number
Lug kit—mechanical	52–77A	S611-LUG-M01
	99–125A	S611-LUG-M02
	156–242A	S611-LUG-M03
	302–414A	S611-LUG-M04

Note

① Enclosure space will also accommodate two four-pole relays, CPT, and terminal blocks.

Reduced Voltage Starter



Product Description

Eaton's revolutionary design for soft starters is shown in the S801+ and S811+ soft starter products that are members of the Intelligent Technologies (*IT*) family of products. These reduced voltage soft starters are the most compact, multi-functional, easy-to-install products on the market. Their superiority begins with the control package, which features 24 Vdc control, onboard Digital Signal Processor (DSP), and use of a low impedance run contactor, all of which contribute to the *IT* soft starter's safety, advanced functionality and compact size.

Designed to control acceleration and deceleration of three-phase motors, products are available from 11 to 1000 amps and are suitable for mounting in a variety of enclosures including Type 1, 12, 3R, 4, 4X and 7/9.

- Built-in overload protection
 - Adjustable trip class 5, 10, 20, 30
 - Programmable, 31–100% FLA (3.2:1)
 - Selectable phase loss protection
- Selectable current limit or ramp start
- Adjustable ramp times
 - 0–180 seconds standard
 - Extended ramps available
- Adjustable torque control
- Adjustable kick start control
- Soft stop control
 - 0–60 seconds standard
 - Extended times available
- Built-in low impedance contactor
- Six SCR control in all units
- Selectable phase reversal protection
- Digital interface module

Contents

Description	Page
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Product Selection	
Non-Combination	V10-T5-19
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Combination—Circuit Breaker	V10-T5-27
Wiring Diagrams	V10-T5-31
Dimensions	V10-T5-33

Features and Benefits

- Mechanical stress on system
 - Reduced wear on belts, gears, chains, clutches, shafts and bearings. You can get up to 2–6 times the life on standard belts by switching to a soft starter
 - Elimination of water-hammer in pumping applications extends component life and helps limit leakage in system
 - Lower shock to product on conveyor lines and material handling gear
 - Able to catch motors and fans on the fly and control their acceleration
- Electrical system improvements
 - Limits the peak inrush current as required by many local codes
 - Helps to eliminate sags on the plant electrical grid when starting large loads, thus avoiding brownout conditions
- 24 Vdc advantages
 - Offers improved personnel safety by eliminating the need for 120 Vac in the enclosure
 - Soft starter able to ride through 50% voltage conditions indefinitely due to 24 Vdc power supply and 0% for up to 100 mS
 - 690V option available on 180A ratings and larger

Digital Interface Module

The S811+ has an easy to use Digital Interface Module (DIM) that allows the user to configure the device and to read system parameters. The DIM includes an LCD display and keypad to scroll through the various menus. The DIM allows the user to modify control parameters, enable or disable protections, set communication variables, monitor system parameters such as line voltages and currents, and access the fault queue.

The DIM can be removed from the S811+ and remote mounted. Kits are available to door mount the DIM, enabling users to safely configure, commission, monitor and troubleshoot the system at the electrical panel without opening the enclosure door.

Additional Reference

Cover Control	V10-T5-18
Dimensions	Tab 14
Accessories and Modifications	Tab 15
Technical Data and Specifications	Tab 17

Options

LCD Display

- 2 line x 20 character LED back-lit LCD display
- NEMA 4 rated
- Parameters
 - Voltage L-L (AB, BC, AC)
 - Phase current
 - Average current
 - Overload current setting
 - Pole temperature
 - Relay trip class
 - Thermal pile
 - Average line current as % of FLA
 - DC control voltage
 - Start count
 - Fault history
- English or Spanish version

Options

Description	Modification Code
Pump control option	P42
Door mount keypad	K5
Extended ramp	R1

Pump Control Option

- Designed to reduce “water-hammer” during start-up and stopping sequences
- Stop ramp extended to 120 seconds to help control larger motors and systems with long piping runs

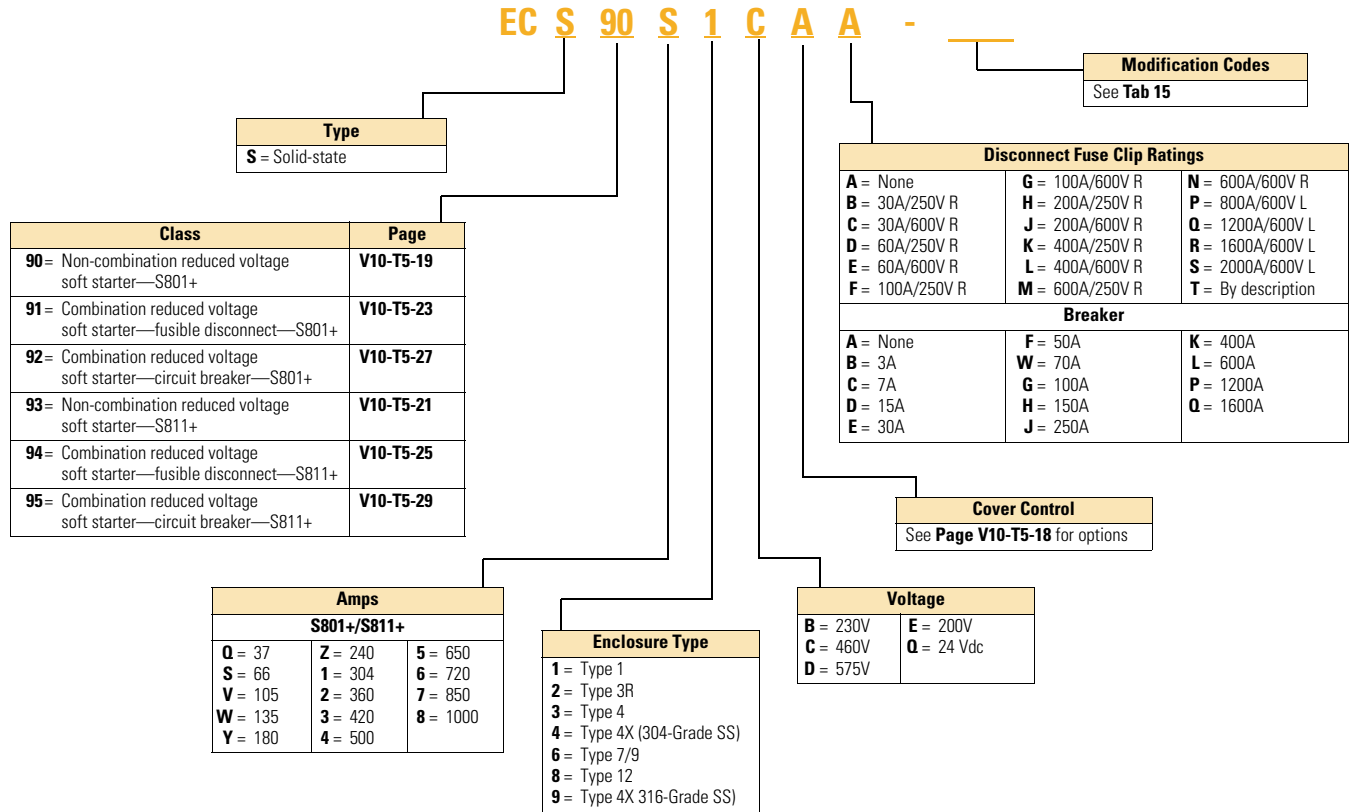
Standards and Certifications

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

- UL Listed
- IEC 947-4-2
- EN 60947.2 (for motor controller)
- cUL (indicates appropriate CSA Standard investigation)
- ABS Type Approved
- OSHPD Certified (OSP-0015-10)

Catalog Number Selection

IT. Solid-State Soft Starters



Cover Control

Flange Control Kits

For on-the-job conversion of Type 1, 3R, 4, 4X and 12 enclosed starters. Knockouts are provided on the Type 1 flange. Type 3R, 4, 4X and 12 have prepunched holes with removable hole plugs.

Factory Installed Pilot Devices

To order factory installed pilot devices, change the ninth character of the catalog number to the alpha shown in the table below. Example: To order an **ECS90J4CAA** with START/STOP pushbuttons and a red pilot light, change the **A** to a **C**, that is, **ECS90J4CCA**.

10250T Cover Control Kits



Non-Reversing Pilot Devices

Description	Factory Installed Flange Control Position 9 Alpha	Field Installation Kits Catalog Number
No cover mounted pilot devices	A	—
START/STOP pushbuttons	B	C400T1
With red RUN pilot light	C	—
With red RUN/green OFF lights	D	—
ON/OFF pushbuttons	E	C400T2
With red RUN pilot light	F	—
With red RUN/green OFF lights	G	—
HAND/OFF/AUTO selector switch	H	C400T12
With red RUN pilot light	J	—
With red RUN/green OFF lights	K	—
START pushbutton	L	C400T3
ON pushbutton	M	C400T4
OFF pushbutton	N	C400T5
Red RUN pilot light	P	C400T9 ①
Green OFF	Q	C400T10 ①
Red RUN/green OFF pilot lights	R	C400T11 ①
START/STOP selector switch	S	C400T13
With red RUN pilot light	T	—
With red RUN/green OFF lights	U	—
ON/OFF selector switch	V	C400T14
With red RUN pilot light	W	—
With red RUN/green OFF lights	X	—

Note

① 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
120V 60 Hz	A	240V 60 Hz	B	480V 60 Hz	C
208V 60 Hz	E	380V 50 Hz	L	600V 60 Hz	D

Product Selection

Non-Combination

Class ECS90—Non-Combination Reduced Voltage Soft Starter—S801+

Amps	Motor Voltage	hp ^{①②}	Coil Voltage ^③	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^④ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—65 mm									
37A	200V	10	24 Vdc	ECS90Q1EAA	ECS90Q2EAA	ECS90Q4EAA	ECS90Q6EAA	ECS90Q8EAA	S801+N37N3S
	230V	10		ECS90Q1BAA	ECS90Q2BAA	ECS90Q4BAA	ECS90Q6BAA	ECS90Q8BAA	
	460V	20		ECS90Q1CAA	ECS90Q2CAA	ECS90Q4CAA	ECS90Q6CAA	ECS90Q8CAA	
	575V	30		ECS90Q1DAA	ECS90Q2DAA	ECS90Q4DAA	ECS90Q6DAA	ECS90Q8DAA	
66A	200V	15	24 Vdc	ECS90S1EAA	ECS90S2EAA	ECS90S4EAA	ECS90S6EAA	ECS90S8EAA	S801+N66N3S
	230V	20		ECS90S1BAA	ECS90S2BAA	ECS90S4BAA	ECS90S6BAA	ECS90S8BAA	
	460V	40		ECS90S1CAA	ECS90S2CAA	ECS90S4CAA	ECS90S6CAA	ECS90S8CAA	
	575V	50		ECS90S1DAA	ECS90S2DAA	ECS90S4DAA	ECS90S6DAA	ECS90S8DAA	
Frame Size—110 mm									
105A	200V	25	24 Vdc	ECS90V1EAA	ECS90V2EAA	ECS90V4EAA	ECS90V6EAA	ECS90V8EAA	S801+R10N3S
	230V	30		ECS90V1BAA	ECS90V2BAA	ECS90V4BAA	ECS90V6BAA	ECS90V8BAA	
	460V	60		ECS90V1CAA	ECS90V2CAA	ECS90V4CAA	ECS90V6CAA	ECS90V8CAA	
	575V	75		ECS90V1DAA	ECS90V2DAA	ECS90V4DAA	ECS90V6DAA	ECS90V8DAA	
135A	200V	30	24 Vdc	ECS90W1EAA	ECS90W2EAA	ECS90W4EAA	ECS90W6EAA	ECS90W8EAA	S801+R13N3S
	230V	40		ECS90W1BAA	ECS90W2BAA	ECS90W4BAA	ECS90W6BAA	ECS90W8BAA	
	460V	75		ECS90W1CAA	ECS90W2CAA	ECS90W4CAA	ECS90W6CAA	ECS90W8CAA	
	575V	100		ECS90W1DAA	ECS90W2DAA	ECS90W4DAA	ECS90W6DAA	ECS90W8DAA	
Frame Size—200 mm									
180A	200V	50	24 Vdc	ECS90Y1EAA	ECS90Y2EAA	ECS90Y4EAA	ECS90Y6EAA	ECS90Y8EAA	S801+T18N3S
	230V	60		ECS90Y1BAA	ECS90Y2BAA	ECS90Y4BAA	ECS90Y6BAA	ECS90Y8BAA	
	460V	125		ECS90Y1CAA	ECS90Y2CAA	ECS90Y4CAA	ECS90Y6CAA	ECS90Y8CAA	
	575V	150		ECS90Y1DAA	ECS90Y2DAA	ECS90Y4DAA	ECS90Y6DAA	ECS90Y8DAA	
240A	200V	60	24 Vdc	ECS90Z1EAA	ECS90Z2EAA	ECS90Z4EAA	ECS90Z6EAA	ECS90Z8EAA	S801+T24N3S
	230V	75		ECS90Z1BAA	ECS90Z2BAA	ECS90Z4BAA	ECS90Z6BAA	ECS90Z8BAA	
	460V	150		ECS90Z1CAA	ECS90Z2CAA	ECS90Z4CAA	ECS90Z6CAA	ECS90Z8CAA	
	575V	200		ECS90Z1DAA	ECS90Z2DAA	ECS90Z4DAA	ECS90Z6DAA	ECS90Z8DAA	
304A	200V	75	24 Vdc	ECS9011EAA	ECS9012EAA	ECS9014EAA	ECS9016EAA	ECS9018EAA	S801+T30N3S
	230V	100		ECS9011BAA	ECS9012BAA	ECS9014BAA	ECS9016BAA	ECS9018BAA	
	460V	200		ECS9011CAA	ECS9012CAA	ECS9014CAA	ECS9016CAA	ECS9018CAA	
	575V	250		ECS9011DAA	ECS9012DAA	ECS9014DAA	ECS9016DAA	ECS9018DAA	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ② Based on 1.15 service factor.
- ③ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code C35 and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ④ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS90S4EAA. 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**.

Class ECS90—Non-Combination Reduced Voltage Soft Starter—S801+, continued

Amps	Motor Voltage	hp ^{①②}	Coil Voltage ^③	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^④ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—290 mm									
360A	200V	100	24 Vdc	ECS9021EAA	ECS9022EAA	ECS9024EAA	ECS9026EAA	ECS9028EAA	S801+V36N3S
	230V	125		ECS9021BAA	ECS9022BAA	ECS9024BAA	ECS9026BAA	ECS9028BAA	
	460V	250		ECS9021CAA	ECS9022CAA	ECS9024CAA	ECS9026CAA	ECS9028CAA	
	575V	300		ECS9021DAA	ECS9022DAA	ECS9024DAA	ECS9026DAA	ECS9028DAA	
420A	200V	125	24 Vdc	ECS9031EAA	ECS9032EAA	ECS9034EAA	ECS9036EAA	ECS9038EAA	S801+V42N3S
	230V	150		ECS9031BAA	ECS9032BAA	ECS9034BAA	ECS9036BAA	ECS9038BAA	
	460V	300		ECS9031CAA	ECS9032CAA	ECS9034CAA	ECS9036CAA	ECS9038CAA	
	575V	350		ECS9031DAA	ECS9032DAA	ECS9034DAA	ECS9036DAA	ECS9038DAA	
500A	200V	150	24 Vdc	ECS9041EAA	ECS9042EAA	ECS9044EAA	ECS9046EAA	ECS9048EAA	S801+V50N3S
	230V	150		ECS9041BAA	ECS9042BAA	ECS9044BAA	ECS9046BAA	ECS9048BAA	
	460V	350		ECS9041CAA	ECS9042CAA	ECS9044CAA	ECS9046CAA	ECS9048CAA	
	575V	450		ECS9041DAA	ECS9042DAA	ECS9044DAA	ECS9046DAA	ECS9048DAA	
650A	200V	200	24 Vdc	ECS9051EAA	ECS9052EAA	ECS9054EAA	ECS9056EAA	ECS9058EAA	S801+V65N3S
	230V	200		ECS9051BAA	ECS9052BAA	ECS9054BAA	ECS9056BAA	ECS9058BAA	
	460V	450		ECS9051CAA	ECS9052CAA	ECS9054CAA	ECS9056CAA	ECS9058CAA	
	575V	500		ECS9051DAA	ECS9052DAA	ECS9054DAA	ECS9056DAA	ECS9058DAA	
720A	230V	250	24 Vdc	ECS9061BAA	ECS9062BAA	ECS9064BAA	ECS9066BAA	ECS9068BAA	S801+V72N3S
	460V	500		ECS9061CAA	ECS9062CAA	ECS9064CAA	ECS9066CAA	ECS9068CAA	
	575V	600		ECS9061DAA	ECS9062DAA	ECS9064DAA	ECS9066DAA	ECS9068DAA	
850A	230V	300	24 Vdc	ECS9071BAA	ECS9072BAA	ECS9074BAA	ECS9076BAA	ECS9078BAA	S801+V85N3S
	460V	600		ECS9071CAA	ECS9072CAA	ECS9074CAA	ECS9076CAA	ECS9078CAA	
	575V	700		ECS9071DAA	ECS9072DAA	ECS9074DAA	ECS9076DAA	ECS9078DAA	
1000A	230V	350	24 Vdc	ECS9081BAA	ECS9082BAA	ECS9084BAA	ECS9086BAA	ECS9088BAA	S801+V10N3S
	460V	700		ECS9081CAA	ECS9082CAA	ECS9084CAA	ECS9086CAA	ECS9088CAA	
	575V	800		ECS9081DAA	ECS9082DAA	ECS9084DAA	ECS9086DAA	ECS9088DAA	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ② Based on 1.15 service factor.
- ③ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ④ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS90S4EAA. 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**.

Class ECS93—Non-Combination Reduced Voltage Soft Starter—S811+ ①

Amps	Motor Voltage	hp ②③	Coil Voltage ④	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ⑤ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—65 mm									
37A	200V	10	24 Vdc	ECS93Q1EAA	ECS93Q2EAA	ECS93Q4EAA	ECS93Q6EAA	ECS93Q8EAA	S811+N37N3S
	230V	10		ECS93Q1BAA	ECS93Q2BAA	ECS93Q4BAA	ECS93Q6BAA	ECS93Q8BAA	
	460V	20		ECS93Q1CAA	ECS93Q2CAA	ECS93Q4CAA	ECS93Q6CAA	ECS93Q8CAA	
	575V	30		ECS93Q1DAA	ECS93Q2DAA	ECS93Q4DAA	ECS93Q6DAA	ECS93Q8DAA	
66A	200V	15	24 Vdc	ECS93S1EAA	ECS93S2EAA	ECS93S4EAA	ECS93S6EAA	ECS93S8EAA	S811+N66N3S
	230V	20		ECS93S1BAA	ECS93S2BAA	ECS93S4BAA	ECS93S6BAA	ECS93S8BAA	
	460V	40		ECS93S1CAA	ECS93S2CAA	ECS93S4CAA	ECS93S6CAA	ECS93S8CAA	
	575V	50		ECS93S1DAA	ECS93S2DAA	ECS93S4DAA	ECS93S6DAA	ECS93S8DAA	
Frame Size—110 mm									
105A	200V	25	24 Vdc	ECS93V1EAA	ECS93V2EAA	ECS93V4EAA	ECS93V6EAA	ECS93V8EAA	S811+R10N3S
	230V	30		ECS93V1BAA	ECS93V2BAA	ECS93V4BAA	ECS93V6BAA	ECS93V8BAA	
	460V	60		ECS93V1CAA	ECS93V2CAA	ECS93V4CAA	ECS93V6CAA	ECS93V8CAA	
	575V	75		ECS93V1DAA	ECS93V2DAA	ECS93V4DAA	ECS93V6DAA	ECS93V8DAA	
135A	200V	30	24 Vdc	ECS93W1EAA	ECS93W2EAA	ECS93W4EAA	ECS93W6EAA	ECS93W8EAA	S811+R13N3S
	230V	40		ECS93W1BAA	ECS93W2BAA	ECS93W4BAA	ECS93W6BAA	ECS93W8BAA	
	460V	75		ECS93W1CAA	ECS93W2CAA	ECS93W4CAA	ECS93W6CAA	ECS93W8CAA	
	575V	100		ECS93W1DAA	ECS93W2DAA	ECS93W4DAA	ECS93W6DAA	ECS93W8DAA	
Frame Size—200 mm									
180A	200V	50	24 Vdc	ECS93Y1EAA	ECS93Y2EAA	ECS93Y4EAA	ECS93Y6EAA	ECS93Y8EAA	S811+T18N3S
	230V	60		ECS93Y1BAA	ECS93Y2BAA	ECS93Y4BAA	ECS93Y6BAA	ECS93Y8BAA	
	460V	125		ECS93Y1CAA	ECS93Y2CAA	ECS93Y4CAA	ECS93Y6CAA	ECS93Y8CAA	
	575V	150		ECS93Y1DAA	ECS93Y2DAA	ECS93Y4DAA	ECS93Y6DAA	ECS93Y8DAA	
240A	200V	60	24 Vdc	ECS93Z1EAA	ECS93Z2EAA	ECS93Z4EAA	ECS93Z6EAA	ECS93Z8EAA	S811+T24N3S
	230V	75		ECS93Z1BAA	ECS93Z2BAA	ECS93Z4BAA	ECS93Z6BAA	ECS93Z8BAA	
	460V	150		ECS93Z1CAA	ECS93Z2CAA	ECS93Z4CAA	ECS93Z6CAA	ECS93Z8CAA	
	575V	200		ECS93Z1DAA	ECS93Z2DAA	ECS93Z4DAA	ECS93Z6DAA	ECS93Z8DAA	
304A	200V	75	24 Vdc	ECS9311EAA	ECS9312EAA	ECS9314EAA	ECS9316EAA	ECS9318EAA	S811+T30N3S
	230V	100		ECS9311BAA	ECS9312BAA	ECS9314BAA	ECS9316BAA	ECS9318BAA	
	460V	200		ECS9311CAA	ECS9312CAA	ECS9314CAA	ECS9316CAA	ECS9318CAA	
	575V	250		ECS9311DAA	ECS9312DAA	ECS9314DAA	ECS9316DAA	ECS9318DAA	

Notes

- ① Digital Interface Module (DIM) is mounted on door as option.
- ② Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ③ Based on 1.15 service factor.
- ④ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ⑤ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS93S4EAA. 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**.

Class ECS93—Non-Combination Reduced Voltage Soft Starter—S811+, continued ①

Amps	Motor Voltage	hp ②③	Coil Voltage ④	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ⑤ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—290 mm									
360A	200V	100	24 Vdc	ECS9321EAA	ECS9322EAA	ECS9324EAA	ECS9326EAA	ECS9328EAA	S811+V36N3S
	230V	125		ECS9321BAA	ECS9322BAA	ECS9324BAA	ECS9326BAA	ECS9328BAA	
	460V	250		ECS9321CAA	ECS9322CAA	ECS9324CAA	ECS9326CAA	ECS9328CAA	
	575V	300		ECS9321DAA	ECS9322DAA	ECS9324DAA	ECS9326DAA	ECS9328DAA	
420A	200V	125	24 Vdc	ECS9331EAA	ECS9332EAA	ECS9334EAA	ECS9336EAA	ECS9338EAA	S811+V42N3S
	230V	150		ECS9331BAA	ECS9332BAA	ECS9334BAA	ECS9336BAA	ECS9338BAA	
	460V	300		ECS9331CAA	ECS9332CAA	ECS9334CAA	ECS9336CAA	ECS9338CAA	
	575V	350		ECS9331DAA	ECS9332DAA	ECS9334DAA	ECS9336DAA	ECS9338DAA	
500A	200V	150	24 Vdc	ECS9341EAA	ECS9342EAA	ECS9344EAA	ECS9346EAA	ECS9348EAA	S811+V50N3S
	230V	150		ECS9341BAA	ECS9342BAA	ECS9344BAA	ECS9346BAA	ECS9348BAA	
	460V	350		ECS9341CAA	ECS9342CAA	ECS9344CAA	ECS9346CAA	ECS9348CAA	
	575V	450		ECS9341DAA	ECS9342DAA	ECS9344DAA	ECS9346DAA	ECS9348DAA	
650A	200V	200	24 Vdc	ECS9351EAA	ECS9352EAA	ECS9354EAA	ECS9356EAA	ECS9358EAA	S811+V65N3S
	230V	200		ECS9351BAA	ECS9352BAA	ECS9354BAA	ECS9356BAA	ECS9358BAA	
	460V	450		ECS9351CAA	ECS9352CAA	ECS9354CAA	ECS9356CAA	ECS9358CAA	
	575V	500		ECS9351DAA	ECS9352DAA	ECS9354DAA	ECS9356DAA	ECS9358DAA	
720A	230V	250	24 Vdc	ECS9361BAA	ECS9362BAA	ECS9364BAA	ECS9366BAA	ECS9368BAA	S811+V72N3S
	460V	500		ECS9361CAA	ECS9362CAA	ECS9364CAA	ECS9366CAA	ECS9368CAA	
	575V	600		ECS9361DAA	ECS9362DAA	ECS9364DAA	ECS9366DAA	ECS9368DAA	
850A	230V	300	24 Vdc	ECS9371BAA	ECS9372BAA	ECS9374BAA	ECS9376BAA	ECS9378BAA	S811+V85N3S
	460V	600		ECS9371CAA	ECS9372CAA	ECS9374CAA	ECS9376CAA	ECS9378CAA	
	575V	700		ECS9371DAA	ECS9372DAA	ECS9374DAA	ECS9376DAA	ECS9378DAA	
1000A	230V	350	24 Vdc	ECS9381BAA	ECS9382BAA	ECS9384BAA	ECS9386BAA	ECS9388BAA	S811+V10N3S
	460V	700		ECS9381CAA	ECS9382CAA	ECS9384CAA	ECS9386CAA	ECS9388CAA	
	575V	800		ECS9381DAA	ECS9382DAA	ECS9384DAA	ECS9386DAA	ECS9388DAA	

Notes

- ① Digital Interface Module (DIM) is mounted on door as option.
- ② Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ③ Based on 1.15 service factor.
- ④ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ⑤ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS93S4EAA. 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**.

Combination—Fusible Disconnect

Class ECS91—Combination Reduced Voltage Soft Starter—Fusible Disconnect—S801+

Amps	Motor Voltage	hp ^{①②}	Coil Voltage ^③	Switch Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^④ Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—65 mm									
37A	200V	3	24 Vdc	30A	ECS91Q1EAB	ECS91Q2EAB	ECS91Q4EAB	ECS91Q8EAB	S801+N37N3S
		10			ECS91Q1EAD	ECS91Q2EAD	ECS91Q4EAD	ECS91Q8EAD	
	230V	7-1/2	30A	ECS91Q1BAB	ECS91Q2BAB	ECS91Q4BAB	ECS91Q8BAB	S801+N37N3S	
		10		ECS91Q1BAD	ECS91Q2BAD	ECS91Q4BAD	ECS91Q8BAD		
	460V	15	30A	ECS91Q1CAC	ECS91Q2CAC	ECS91Q4CAC	ECS91Q8CAC	S801+N37N3S	
		20		ECS91Q1CAE	ECS91Q2CAE	ECS91Q4CAE	ECS91Q8CAE		
575V	20	30A	ECS91Q1DAC	ECS91Q2DAC	ECS91Q4DAC	ECS91Q8DAC	S801+N37N3S		
	30		ECS91Q1DAE	ECS91Q2DAE	ECS91Q4DAE	ECS91Q8DAE			
66A	200V	15	24 Vdc	100A	ECS91S1EAF	ECS91S2EAF	ECS91S4EAF	ECS91S8EAF	S801+N66N3S
	230V	15		60A	ECS91S1BAD	ECS91S2BAD	ECS91S4BAD	ECS91S8BAD	S801+N66N3S
		20	100A	ECS91S1BAF	ECS91S2BAF	ECS91S4BAF	ECS91S8BAF		
	460V	40		ECS91S1CAG	ECS91S2CAG	ECS91S4CAG	ECS91S8CAG	S801+N66N3S	
	575V	50		ECS91S1DAG	ECS91S2DAG	ECS91S4DAG	ECS91S8DAG	S801+N66N3S	
Frame Size—110 mm									
105A	200V	25	24 Vdc	200A	ECS91V1EAH	ECS91V2EAH	ECS91V4EAH	ECS91V8EAH	S801+R10N3S
	230V	30			ECS91V1BAH	ECS91V2BAH	ECS91V4BAH	ECS91V8BAH	
	460V	60			ECS91V1CAJ	ECS91V2CAJ	ECS91V4CAJ	ECS91V8CAJ	
	575V	75			ECS91V1DAJ	ECS91V2DAJ	ECS91V4DAJ	ECS91V8DAJ	
135A	200V	30	24 Vdc	200A	ECS91W1EAH	ECS91W2EAH	ECS91W4EAH	ECS91W8EAH	S801+R13N3S
	230V	40			ECS91W1BAH	ECS91W2BAH	ECS91W4BAH	ECS91W8BAH	
	460V	75			ECS91W1CAJ	ECS91W2CAJ	ECS91W4CAJ	ECS91W8CAJ	
	575V	100			ECS91W1DAJ	ECS91W2DAJ	ECS91W4DAJ	ECS91W8DAJ	
Frame Size—200 mm									
180A	200V	50	24 Vdc	400A	ECS91Y1EAK	ECS91Y2EAK	ECS91Y4EAK	ECS91Y8EAK	S801+T18N3S
	230V	60			ECS91Y1BAK	ECS91Y2BAK	ECS91Y4BAK	ECS91Y8BAK	
	460V	125			ECS91Y1CAL	ECS91Y2CAL	ECS91Y4CAL	ECS91Y8CAL	
	575V	150			ECS91Y1DAL	ECS91Y2DAL	ECS91Y4DAL	ECS91Y8DAL	
240A	200V	60	24 Vdc	400A	ECS91Z1EAK	ECS91Z2EAK	ECS91Z4EAK	ECS91Z8EAK	S801+T24N3S
	230V	75			ECS91Z1BAK	ECS91Z2BAK	ECS91Z4BAK	ECS91Z8BAK	
	460V	150			ECS91Z1CAL	ECS91Z2CAL	ECS91Z4CAL	ECS91Z8CAL	
	575V	200			ECS91Z1DAL	ECS91Z2DAL	ECS91Z4DAL	ECS91Z8DAL	
304A	200V	75	24 Vdc	400A	ECS9111EAK	ECS9112EAK	ECS9114EAK	ECS9118EAK	S801+T30N3S
	230V	100			ECS9111BAK	ECS9112BAK	ECS9114BAK	ECS9118BAK	
	460V	200			ECS9111CAL	ECS9112CAL	ECS9114CAL	ECS9118CAL	
	575V	250			ECS9111DAL	ECS9112DAL	ECS9114DAL	ECS9118DAL	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ② Based on 1.15 service factor.
- ③ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ④ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS91S4EAA. 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**.

Class ECS91—Combination Reduced Voltage Soft Starter—Fusible Disconnect—S801+, continued

Amps	Motor Voltage	hp ^{①②}	Coil Voltage ^③	Switch Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^④ Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—290 mm									
360A	200V	100	24 Vdc	600A	ECS9121EAM	ECS9122EAM	ECS9124EAM	ECS9128EAM	S801+V36N3S
	230V	125			ECS9121BAM	ECS9122BAM	ECS9124BAM	ECS9128BAM	
	460V	250			ECS9121CAN	ECS9122CAN	ECS9124CAN	ECS9128CAN	
	575V	300			ECS9121DAN	ECS9122DAN	ECS9124DAN	ECS9128DAN	
420A	200V	125	24 Vdc	600A	ECS9131EAM	ECS9132EAM	ECS9134EAM	ECS9138EAM	S801+V42N3S
	230V	150			ECS9131BAM	ECS9132BAM	ECS9134BAM	ECS9138BAM	
	460V	300			ECS9131CAN	ECS9132CAN	ECS9134CAN	ECS9138CAN	
	575V	350			ECS9131DAN	ECS9132DAN	ECS9134DAN	ECS9138DAN	
500A	200V	150	24 Vdc	800A	ECS9141EAP	ECS9142EAP	ECS9144EAP	ECS9148EAP	S801+V50N3S
	230V	150			ECS9141BAP	ECS9142BAP	ECS9144BAP	ECS9148BAP	
	460V	350			ECS9141CAP	ECS9142CAP	ECS9144CAP	ECS9148CAP	
	575V	450			ECS9141DAP	ECS9142DAP	ECS9144DAP	ECS9148DAP	
650A	460V	450	24 Vdc	800A	ECS9151CAP	ECS9152CAP	ECS9154CAP	ECS9158CAP	S801+V65N3S
	575V	500			ECS9151DAP	ECS9152DAP	ECS9154DAP	ECS9158DAP	
720A	460V	500	24 Vdc	1200A	ECS9161CAQ	ECS9162CAQ	ECS9164CAQ	ECS9168CAQ	S801+V72N3S
	575V	600			ECS9161DAQ	ECS9162DAQ	ECS9164DAQ	ECS9168DAQ	
850A	460V	600	24 Vdc	1600A	ECS9171CAR	ECS9172CAR	ECS9174CAR	ECS9178CAR	S801+V85N3S
	575V	700			ECS9171DAR	ECS9172DAR	ECS9174DAR	ECS9178DAR	
1000A	230V	350	24 Vdc	⑤	ECS9181BA_⑤	ECS9182BA_⑤	ECS9184BA_⑤	ECS9188BA_⑤	S801+V10N3S
	460V	700			ECS9181CA_⑤	ECS9182CA_⑤	ECS9184CA_⑤	ECS9188CA_⑤	
	575V	800			ECS9181DA_⑤	ECS9182DA_⑤	ECS9184DA_⑤	ECS9188DA_⑤	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ② Based on 1.15 service factor.
- ③ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ④ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS91S4EAA. 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**.
- ⑤ Consult Eaton.

Class ECS94—Combination Reduced Voltage Soft Starter—Fusible Disconnect—S811+ ①

Amps	Motor Voltage	hp ②③	Coil Voltage ④	Switch Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ⑤ Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—65 mm									
37A	200V	3	24 Vdc	30A	ECS94Q1EAB	ECS94Q2EAB	ECS94Q4EAB	ECS94Q8EAB	S811+N37N3S
		10			ECS94Q1EAD	ECS94Q2EAD	ECS94Q4EAD	ECS94Q8EAD	
	230V	7-1/2		30A	ECS94Q1BAB	ECS94Q2BAB	ECS94Q4BAB	ECS94Q8BAB	S811+N37N3S
		10			ECS94Q1BAD	ECS94Q2BAD	ECS94Q4BAD	ECS94Q8BAD	
	460V	15		30A	ECS94Q1CAC	ECS94Q2CAC	ECS94Q4CAC	ECS94Q8CAC	S811+N37N3S
		20			ECS94Q1CAE	ECS94Q2CAE	ECS94Q4CAE	ECS94Q8CAE	
	575V	20		30A	ECS94Q1DAC	ECS94Q2DAC	ECS94Q4DAC	ECS94Q8DAC	S811+N37N3S
		30			ECS94Q1DAE	ECS94Q2DAE	ECS94Q4DAE	ECS94Q8DAE	
66A	200V	15	24 Vdc	100A	ECS94S1EAF	ECS94S2EAF	ECS94S4EAF	ECS94S8EAF	S811+N66N3S
	230V	15		60A	ECS94S1BAD	ECS94S2BAD	ECS94S4BAD	ECS94S8BAD	S811+N66N3S
		20		100A	ECS94S1BAF	ECS94S2BAF	ECS94S4BAF	ECS94S8BAF	S811+N66N3S
	460V	40		ECS94S1CAG	ECS94S2CAG	ECS94S4CAG	ECS94S8CAG	S811+N66N3S	
	575V	50		ECS94S1DAG	ECS94S2DAG	ECS94S4DAG	ECS94S8DAG	S811+N66N3S	
Frame Size—110 mm									
105A	200V	25	24 Vdc	200A	ECS94V1EAH	ECS94V2EAH	ECS94V4EAH	ECS94V8EAH	S811+R10N3S
		30			ECS94V1BAH	ECS94V2BAH	ECS94V4BAH	ECS94V8BAH	
		60			ECS94V1CAJ	ECS94V2CAJ	ECS94V4CAJ	ECS94V8CAJ	
		75			ECS94V1DAJ	ECS94V2DAJ	ECS94V4DAJ	ECS94V8DAJ	
135A	200V	30	24 Vdc	200A	ECS94W1EAH	ECS94W2EAH	ECS94W4EAH	ECS94W8EAH	S811+R13N3S
		40			ECS94W1BAH	ECS94W2BAH	ECS94W4BAH	ECS94W8BAH	
		75			ECS94W1CAJ	ECS94W2CAJ	ECS94W4CAJ	ECS94W8CAJ	
		100			ECS94W1DAJ	ECS94W2DAJ	ECS94W4DAJ	ECS94W8DAJ	
Frame Size—200 mm									
180A	200V	50	24 Vdc	400A	ECS94Y1EAK	ECS94Y2EAK	ECS94Y4EAK	ECS94Y8EAK	S811+T18N3S
		60			ECS94Y1BAK	ECS94Y2BAK	ECS94Y4BAK	ECS94Y8BAK	
		125			ECS94Y1CAL	ECS94Y2CAL	ECS94Y4CAL	ECS94Y8CAL	
		150			ECS94Y1DAL	ECS94Y2DAL	ECS94Y4DAL	ECS94Y8DAL	
240A	200V	60	24 Vdc	400A	ECS94Z1EAK	ECS94Z2EAK	ECS94Z4EAK	ECS94Z8EAK	S811+T24N3S
		75			ECS94Z1BAK	ECS94Z2BAK	ECS94Z4BAK	ECS94Z8BAK	
		150			ECS94Z1CAL	ECS94Z2CAL	ECS94Z4CAL	ECS94Z8CAL	
		200			ECS94Z1DAL	ECS94Z2DAL	ECS94Z4DAL	ECS94Z8DAL	
304A	200V	75	24 Vdc	400A	ECS9411EAK	ECS9412EAK	ECS9414EAK	ECS9418EAK	S811+T30N3S
		100			ECS9411BAK	ECS9412BAK	ECS9414BAK	ECS9418BAK	
		200			ECS9411CAL	ECS9412CAL	ECS9414CAL	ECS9418CAL	
		250			ECS9411DAL	ECS9412DAL	ECS9414DAL	ECS9418DAL	

Notes

- ① Digital Interface Module (DIM) is mounted on door as option.
- ② Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ③ Based on 1.15 service factor.
- ④ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **0** (that is, ECS90S1EAA becomes ECS90S10AA-C35).
- ⑤ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS94S4EAA. 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**.

Class ECS94—Combination Reduced Voltage Soft Starter—Fusible Disconnect—S811+, continued ①

Amps	Motor Voltage	hp ②③	Coil Voltage ④	Switch Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ⑤ Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—290 mm									
360A	200V	100	24 Vdc	600A	ECS9421EAM	ECS9422EAM	ECS9424EAM	ECS9428EAM	S811+V36N3S
	230V	125			ECS9421BAM	ECS9422BAM	ECS9424BAM	ECS9428BAM	
	460V	250			ECS9421CAN	ECS9422CAN	ECS9424CAN	ECS9428CAN	
	575V	300			ECS9421DAN	ECS9422DAN	ECS9424DAN	ECS9428DAN	
420A	200V	125	24 Vdc	600A	ECS9431EAM	ECS9432EAM	ECS9434EAM	ECS9438EAM	S811+V42N3S
	230V	150			ECS9431BAM	ECS9432BAM	ECS9434BAM	ECS9438BAM	
	460V	300			ECS9431CAN	ECS9432CAN	ECS9434CAN	ECS9438CAN	
	575V	350			ECS9431DAN	ECS9432DAN	ECS9434DAN	ECS9438DAN	
500A	200V	150	24 Vdc	800A	ECS9441EAP	ECS9442EAP	ECS9444EAP	ECS9448EAP	S811+V50N3S
	230V	150			ECS9441BAP	ECS9442BAP	ECS9444BAP	ECS9448BAP	
	460V	350			ECS9441CAP	ECS9442CAP	ECS9444CAP	ECS9448CAP	
	575V	450			ECS9441DAP	ECS9442DAP	ECS9444DAP	ECS9448DAP	
650A	460V	450	24 Vdc	800A	ECS9451CAP	ECS9452CAP	ECS9454CAP	ECS9458CAP	S811+V65N3S
	575V	500			ECS9451DAP	ECS9452DAP	ECS9454DAP	ECS9458DAP	
720A	460V	500	24 Vdc	1200A	ECS9461CAQ	ECS9462CAQ	ECS9464CAQ	ECS9468CAQ	S811+V72N3S
	575V	600			ECS9461DAQ	ECS9462DAQ	ECS9464DAQ	ECS9468DAQ	
850A	460V	600	24 Vdc	1600A	ECS9471CAR	ECS9472CAR	ECS9474CAR	ECS9478CAR	S811+V85N3S
	575V	700			ECS9471DAR	ECS9472DAR	ECS9474DAR	ECS9478DAR	
1000A	230V	350	24 Vdc	⑥	ECS9481BA_⑥	ECS9482BA_⑥	ECS9484BA_⑥	ECS9488BA_⑥	S811+V10N3S
	460V	700			ECS9481CA_⑥	ECS9482CA_⑥	ECS9484CA_⑥	ECS9488CA_⑥	
	575V	800			ECS9481DA_⑥	ECS9482DA_⑥	ECS9484DA_⑥	ECS9488DA_⑥	

Notes

- ① Digital Interface Module (DIM) is mounted on door as option.
- ② Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ③ Based on 1.15 service factor.
- ④ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ⑤ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS94S4EAA. 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**.
- ⑥ Consult Eaton.

Combination—Circuit Breaker

Class ECS92—Combination Reduced Voltage Soft Starter—Circuit Breaker—S801+

Amps	Motor Voltage	hp ^{①②}	Coil Voltage ^③	Circuit Breaker Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^④ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number	
Frame Size—65 mm											
37A	200V	1/2	24 Vdc	7A	ECS92Q1EAC	ECS92Q2EAC	ECS92Q4EAC	ECS92Q6EAC	ECS92Q8EAC	S801+N37N3S	
		1		15A	ECS92Q1EAD	ECS92Q2EAD	ECS92Q4EAD	ECS92Q6EAD	ECS92Q8EAD		
		3		30A	ECS92Q1EAE	ECS92Q2EAE	ECS92Q4EAE	ECS92Q6EAE	ECS92Q8EAE		
		10		50A	ECS92Q1EAF	ECS92Q2EAF	ECS92Q4EAF	ECS92Q6EAF	ECS92Q8EAF		
230V		1	24 Vdc	7A	ECS92Q1BAC	ECS92Q2BAC	ECS92Q4BAC	ECS92Q6BAC	ECS92Q8BAC	S801+N37N3S	
		2		15A	ECS92Q1BAD	ECS92Q2BAD	ECS92Q4BAD	ECS92Q6BAD	ECS92Q8BAD		
		3		30A	ECS92Q1BAE	ECS92Q2BAE	ECS92Q4BAE	ECS92Q6BAE	ECS92Q8BAE		
		10		50A	ECS92Q1BAF	ECS92Q2BAF	ECS92Q4BAF	ECS92Q6BAF	ECS92Q8BAF		
460V		3/4	24 Vdc	3A	ECS92Q1CAB	ECS92Q2CAB	ECS92Q4CAB	ECS92Q6CAB	ECS92Q8CAB	S801+N37N3S	
		2		7A	ECS92Q1CAC	ECS92Q2CAC	ECS92Q4CAC	ECS92Q6CAC	ECS92Q8CAC		
		5		15A	ECS92Q1CAD	ECS92Q2CAD	ECS92Q4CAD	ECS92Q6CAD	ECS92Q8CAD		
		10		30A	ECS92Q1CAE	ECS92Q2CAE	ECS92Q4CAE	ECS92Q6CAE	ECS92Q8CAE		
		20		50A	ECS92Q1CAF	ECS92Q2CAF	ECS92Q4CAF	ECS92Q6CAF	ECS92Q8CAF		
575V		1	24 Vdc	3A	ECS92Q1DAB	ECS92Q2DAB	ECS92Q4DAB	ECS92Q6DAB	ECS92Q8DAB	S801+N37N3S	
		3		7A	ECS92Q1DAC	ECS92Q2DAC	ECS92Q4DAC	ECS92Q6DAC	ECS92Q8DAC		
		7-1/2		15A	ECS92Q1DAD	ECS92Q2DAD	ECS92Q4DAD	ECS92Q6DAD	ECS92Q8DAD		
		15		30A	ECS92Q1DAE	ECS92Q2DAE	ECS92Q4DAE	ECS92Q6DAE	ECS92Q8DAE		
		30		50A	ECS92Q1DAF	ECS92Q2DAF	ECS92Q4DAF	ECS92Q6DAF	ECS92Q8DAF		
66A	200V	15	24 Vdc	100A	ECS92S1EAG	ECS92S2EAG	ECS92S4EAG	ECS92S6EAG	ECS92S8EAG	S801+N66N3S	
	230V	15		70A	ECS92S1BAW	ECS92S2BAW	ECS92S4BAW	ECS92S6BAW	ECS92S8BAW		
		20		100A	ECS92S1BAG	ECS92S2BAG	ECS92S4BAG	ECS92S6BAG	ECS92S8BAG		
	460V	40		100A	ECS92S1CAG	ECS92S2CAG	ECS92S4CAG	ECS92S6CAG	ECS92S8CAG	S801+N66N3S	
	575V	50			ECS92S1DAG	ECS92S2DAG	ECS92S4DAG	ECS92S6DAG	ECS92S8DAG	S801+N66N3S	
Frame Size—110 mm											
105A	200V	25	24 Vdc	150A	ECS92V1EAH	ECS92V2EAH	ECS92V4EAH	ECS92V6EAH	ECS92V8EAH	S801+R10N3S	
		230V			30	ECS92V1BAH	ECS92V2BAH	ECS92V4BAH	ECS92V6BAH	ECS92V8BAH	S801+R10N3S
		460V			60	ECS92V1CAH	ECS92V2CAH	ECS92V4CAH	ECS92V6CAH	ECS92V8CAH	S801+R10N3S
		575V			75	ECS92V1DAH	ECS92V2DAH	ECS92V4DAH	ECS92V6DAH	ECS92V8DAH	S801+R10N3S
135A	200V	30	24 Vdc	250A	ECS92W1EAJ	ECS92W2EAJ	ECS92W4EAJ	ECS92W6EAJ	ECS92W8EAJ	S801+R13N3S	
		230V		40	150A	ECS92W1BAH	ECS92W2BAH	ECS92W4BAH	ECS92W6BAH	ECS92W8BAH	
		460V		75	ECS92W1CAH	ECS92W2CAH	ECS92W4CAH	ECS92W6CAH	ECS92W8CAH		
		575V		100	ECS92W1DAH	ECS92W2DAH	ECS92W4DAH	ECS92W6DAH	ECS92W8DAH		

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ② Based on 1.15 service factor.
- ③ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ④ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS92S4EAA. 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**.

5.2

Reduced Voltage Starter

S801+/S811+ *IT*. Solid-State Soft Starters

5

Class ECS92—Combination Reduced Voltage Soft Starter—Circuit Breaker—S801+, continued

Amps	Motor Voltage	hp ^{①②}	Coil Voltage ^③	Circuit Breaker Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ^④ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—200 mm										
180A	200V	50	24 Vdc	250A	ECS92Y1EAJ	ECS92Y2EAJ	ECS92Y4EAJ	ECS92Y6EAJ	ECS92Y8EAJ	S801+T18N3S
	230V	60			ECS92Y1BAJ	ECS92Y2BAJ	ECS92Y4BAJ	ECS92Y6BAJ	ECS92Y8BAJ	
	460V	125			ECS92Y1CAJ	ECS92Y2CAJ	ECS92Y4CAJ	ECS92Y6CAJ	ECS92Y8CAJ	
	575V	150			ECS92Y1DAJ	ECS92Y2DAJ	ECS92Y4DAJ	ECS92Y6DAJ	ECS92Y8DAJ	
240A	200V	60	24 Vdc	400A	ECS92Z1EAK	ECS92Z2EAK	ECS92Z4EAK	ECS92Z6EAK	ECS92Z8EAK	S801+T24N3S
	230V	75			ECS92Z1BAK	ECS92Z2BAK	ECS92Z4BAK	ECS92Z6BAK	ECS92Z8BAK	
	460V	150		250A	ECS92Z1CAJ	ECS92Z2CAJ	ECS92Z4CAJ	ECS92Z6CAJ	ECS92Z8CAJ	
	575V	200			ECS92Z1DAJ	ECS92Z2DAJ	ECS92Z4DAJ	ECS92Z6DAJ	ECS92Z8DAJ	
304A	200V	75	24 Vdc	400A	ECS9211EAK	ECS9212EAK	ECS9214EAK	ECS9216EAK	ECS9218EAK	S801+T30N3S
	230V	100			ECS9211BAK	ECS9212BAK	ECS9214BAK	ECS9216BAK	ECS9218BAK	
	460V	200			ECS9211CAK	ECS9212CAK	ECS9214CAK	ECS9216CAK	ECS9218CAK	
	575V	250			ECS9211DAK	ECS9212DAK	ECS9214DAK	ECS9216DAK	ECS9218DAK	
Frame Size—290 mm										
360A	200V	100	24 Vdc	600A	ECS9221EAL	ECS9222EAL	ECS9224EAL	—	ECS9228EAL	S801+V36N3S
	230V	125		400A	ECS9221BAK	ECS9222BAK	ECS9224BAK	—	ECS9228BAK	
	460V	250		600A	ECS9221CAL	ECS9222CAL	ECS9224CAL	—	ECS9228CAL	
	575V	300		400A	ECS9221DAK	ECS9222DAK	ECS9224DAK	—	ECS9228DAK	
420A	200V	125	24 Vdc	600A	ECS9231EAL	ECS9232EAL	ECS9234EAL	—	ECS9238EAL	S801+V42N3S
	230V	150			ECS9231BAL	ECS9232BAL	ECS9234BAL	—	ECS9238BAL	
	460V	300			ECS9231CAL	ECS9232CAL	ECS9234CAL	—	ECS9238CAL	
	575V	350			ECS9231DAL	ECS9232DAL	ECS9234DAL	—	ECS9238DAL	
500A	230V	150	24 Vdc	600A	ECS9241BAL	ECS9242BAL	ECS9244BAL	—	ECS9248BAL	S801+V50N3S
	460V	350			ECS9241CAL	ECS9242CAL	ECS9244CAL	—	ECS9248CAL	
	575V	450			ECS9241DAL	ECS9242DAL	ECS9244DAL	—	ECS9248DAL	
650A	200V	200	24 Vdc	1200A	ECS9251EAP	ECS9252EAP	ECS9254EAP	—	ECS9258EAP	S801+V65N3S
	230V	200			ECS9251BAP	ECS9252BAP	ECS9254BAP	—	ECS9258BAP	
	460V	450			ECS9251CAP	ECS9252CAP	ECS9254CAP	—	ECS9258CAP	
	575V	500			ECS9251DAP	ECS9252DAP	ECS9254DAP	—	ECS9258DAP	
720A	230V	250	24 Vdc	1200A	ECS9261BAP	ECS9262BAP	ECS9264BAP	—	ECS9268BAP	S801+V72N3S
	460V	500			ECS9261CAP	ECS9262CAP	ECS9264CAP	—	ECS9268CAP	
	575V	600			ECS9261DAP	ECS9262DAP	ECS9264DAP	—	ECS9268DAP	
850A	460V	600	24 Vdc	1200A	ECS9271CAP	ECS9272CAP	ECS9274CAP	—	ECS9278CAP	S801+V85N3S
	575V	700			ECS9271DAP	ECS9272DAP	ECS9274DAP	—	ECS9278DAP	
1000A	230V	350	24 Vdc	1600A	ECS9281BAQ	ECS9282BAQ	ECS9284BAQ	—	ECS9288BAQ	S801+V10N3S
	460V	700			ECS9281CAQ	ECS9282CAQ	ECS9284CAQ	—	ECS9288CAQ	
	575V	800			ECS9281DAQ	ECS9282DAQ	ECS9284DAQ	—	ECS9288DAQ	

Notes

- ① Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ② Based on 1.15 service factor.
- ③ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ④ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS92S4EAA. 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**.

Class ECS95—Combination Reduced Voltage Soft Starter—Circuit Breaker—S811+ ①

Amps	Motor Voltage	hp ②③	Coil Voltage ④	Circuit Breaker Rating	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ⑤ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—65 mm										
37A	200V	1/2	24 Vdc	7A	ECS95Q1EAC	ECS95Q2EAC	ECS95Q4EAC	ECS95Q6EAC	ECS95Q8EAC	S811+N37N3S
		1		15A	ECS95Q1EAD	ECS95Q2EAD	ECS95Q4EAD	ECS95Q6EAD	ECS95Q8EAD	
		3		30A	ECS95Q1EAE	ECS95Q2EAE	ECS95Q4EAE	ECS95Q6EAE	ECS95Q8EAE	
		10		50A	ECS95Q1EAF	ECS95Q2EAF	ECS95Q4EAF	ECS95Q6EAF	ECS95Q8EAF	
230V	24 Vdc	1	7A	ECS95Q1BAC	ECS95Q2BAC	ECS95Q4BAC	ECS95Q6BAC	ECS95Q8BAC	S811+N37N3S	
		2	15A	ECS95Q1BAD	ECS95Q2BAD	ECS95Q4BAD	ECS95Q6BAD	ECS95Q8BAD		
		3	30A	ECS95Q1BAE	ECS95Q2BAE	ECS95Q4BAE	ECS95Q6BAE	ECS95Q8BAE		
		10	50A	ECS95Q1BAF	ECS95Q2BAF	ECS95Q4BAF	ECS95Q6BAF	ECS95Q8BAF		
460V	24 Vdc	3/4	3A	ECS95Q1CAB	ECS95Q2CAB	ECS95Q4CAB	ECS95Q6CAB	ECS95Q8CAB	S811+N37N3S	
		2	7A	ECS95Q1CAC	ECS95Q2CAC	ECS95Q4CAC	ECS95Q6CAC	ECS95Q8CAC		
		5	15A	ECS95Q1CAD	ECS95Q2CAD	ECS95Q4CAD	ECS95Q6CAD	ECS95Q8CAD		
		10	30A	ECS95Q1CAE	ECS95Q2CAE	ECS95Q4CAE	ECS95Q6CAE	ECS95Q8CAE		
		20	50A	ECS95Q1CAF	ECS95Q2CAF	ECS95Q4CAF	ECS95Q6CAF	ECS95Q8CAF		
575V	24 Vdc	1	3A	ECS95Q1DAB	ECS95Q2DAB	ECS95Q4DAB	ECS95Q6DAB	ECS95Q8DAB	S811+N37N3S	
		3	7A	ECS95Q1DAC	ECS95Q2DAC	ECS95Q4DAC	ECS95Q6DAC	ECS95Q8DAC		
		7-1/2	15A	ECS95Q1DAD	ECS95Q2DAD	ECS95Q4DAD	ECS95Q6DAD	ECS95Q8DAD		
		15	30A	ECS95Q1DAE	ECS95Q2DAE	ECS95Q4DAE	ECS95Q6DAE	ECS95Q8DAE		
		30	50A	ECS95Q1DAF	ECS95Q2DAF	ECS95Q4DAF	ECS95Q6DAF	ECS95Q8DAF		
66A	24 Vdc	15	100A	ECS95S1EAG	ECS95S2EAG	ECS95S4EAG	ECS95S6EAG	ECS95S8EAG	S811+N66N3S	
		230V	15	70A	ECS95S1BAW	ECS95S2BAW	ECS95S4BAW	ECS95S6BAW		ECS95S8BAW
			20	100A	ECS95S1BAG	ECS95S2BAG	ECS95S4BAG	ECS95S6BAG		ECS95S8BAG
		460V	40	ECS95S1CAG	ECS95S2CAG	ECS95S4CAG	ECS95S6CAG	ECS95S8CAG		S811+N66N3S
		575V	50	ECS95S1DAG	ECS95S2DAG	ECS95S4DAG	ECS95S6DAG	ECS95S8DAG		S811+N66N3S
Frame Size—110 mm										
105A	24 Vdc	25	150A	ECS95V1EAH	ECS95V2EAH	ECS95V4EAH	ECS95V6EAH	ECS95V8EAH	S811+R10N3S	
		30		ECS95V1BAH	ECS95V2BAH	ECS95V4BAH	ECS95V6BAH	ECS95V8BAH		
		60		ECS95V1CAH	ECS95V2CAH	ECS95V4CAH	ECS95V6CAH	ECS95V8CAH		
		75		ECS95V1DAH	ECS95V2DAH	ECS95V4DAH	ECS95V6DAH	ECS95V8DAH		
135A	24 Vdc	30	250A	ECS95W1EAJ	ECS95W2EAJ	ECS95W4EAJ	ECS95W6EAJ	ECS95W8EAJ	S811+R13N3S	
		40		150A	ECS95W1BAH	ECS95W2BAH	ECS95W4BAH	ECS95W6BAH		ECS95W8BAH
		75	ECS95W1CAH	ECS95W2CAH	ECS95W4CAH	ECS95W6CAH	ECS95W8CAH			
		100	ECS95W1DAH	ECS95W2DAH	ECS95W4DAH	ECS95W6DAH	ECS95W8DAH			

Notes

- ① Digital Interface Module (DIM) is mounted on door as option.
- ② Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ③ Based on 1.15 service factor.
- ④ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ⑤ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS95S4EAA. 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**.

5.2

Reduced Voltage Starter

S801+/S811+ *IT*. Solid-State Soft Starters

Class ECS95—Combination Reduced Voltage Soft Starter—Circuit Breaker—S811+, continued ①

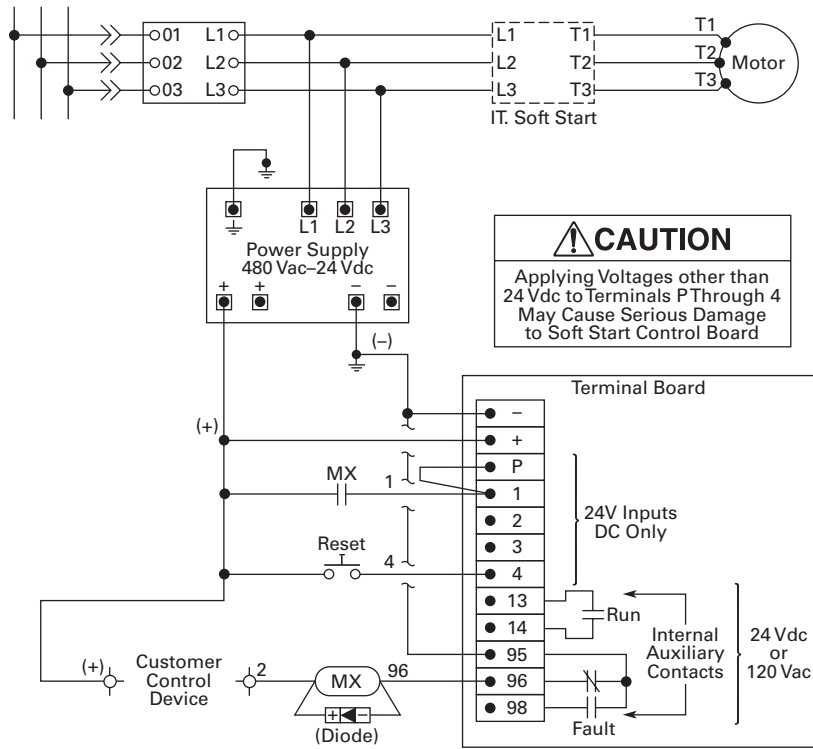
Amps	Motor Voltage	hp ②③	Coil Voltage ④	Circuit Breaker Type	Type 1 Catalog Number	Type 3R Catalog Number	Type 4X ⑤ Catalog Number	Type 7/9 Catalog Number	Type 12 Catalog Number	Component Soft Starter (Open) Catalog Number
Frame Size—200 mm										
180A	200V	50	24 Vdc	250A	ECS95Y1EAJ	ECS95Y2EAJ	ECS95Y4EAJ	ECS95Y6EAJ	ECS95Y8EAJ	S811+T18N3S
	230V	60			ECS95Y1BAJ	ECS95Y2BAJ	ECS95Y4BAJ	ECS95Y6BAJ	ECS95Y8BAJ	
	460V	125			ECS95Y1CAJ	ECS95Y2CAJ	ECS95Y4CAJ	ECS95Y6CAJ	ECS95Y8CAJ	
	575V	150			ECS95Y1DAJ	ECS95Y2DAJ	ECS95Y4DAJ	ECS95Y6DAJ	ECS95Y8DAJ	
240A	200V	60	24 Vdc	400A	ECS95Z1EAK	ECS95Z2EAK	ECS95Z4EAK	ECS95Z6EAK	ECS95Z8EAK	S811+T24N3S
	230V	75			ECS95Z1BAK	ECS95Z2BAK	ECS95Z4BAK	ECS95Z6BAK	ECS95Z8BAK	
	460V	150		250A	ECS95Z1CAJ	ECS95Z2CAJ	ECS95Z4CAJ	ECS95Z6CAJ	ECS95Z8CAJ	
	575V	200			ECS95Z1DAJ	ECS95Z2DAJ	ECS95Z4DAJ	ECS95Z6DAJ	ECS95Z8DAJ	
304A	200V	75	24 Vdc	400A	ECS9511EAK	ECS9512EAK	ECS9514EAK	ECS9516EAK	ECS9518EAK	S811+T30N3S
	230V	100			ECS9511BAK	ECS9512BAK	ECS9514BAK	ECS9516BAK	ECS9518BAK	
	460V	200			ECS9511CAK	ECS9512CAK	ECS9514CAK	ECS9516CAK	ECS9518CAK	
	575V	250			ECS9511DAK	ECS9512DAK	ECS9514DAK	ECS9516DAK	ECS9518DAK	
Frame Size—290 mm										
360A	200V	100	24 Vdc	600A	ECS9521EAL	ECS9522EAL	ECS9524EAL	—	ECS9528EAL	S811+V36N3S
	230V	125		400A	ECS9521BAK	ECS9522BAK	ECS9524BAK	—	ECS9528BAK	
	460V	250		600A	ECS9521CAL	ECS9522CAL	ECS9524CAL	—	ECS9528CAL	
	575V	300		400A	ECS9521DAK	ECS9522DAK	ECS9524DAK	—	ECS9528DAK	
420A	200V	125	24 Vdc	600A	ECS9531EAL	ECS9532EAL	ECS9534EAL	—	ECS9538EAL	S811+V42N3S
	230V	150			ECS9531BAL	ECS9532BAL	ECS9534BAL	—	ECS9538BAL	
	460V	300			ECS9531CAL	ECS9532CAL	ECS9534CAL	—	ECS9538CAL	
	575V	350			ECS9531DAL	ECS9532DAL	ECS9534DAL	—	ECS9538DAL	
500A	230V	150	24 Vdc	600A	ECS9541BAL	ECS9542BAL	ECS9544BAL	—	ECS9548BAL	S811+V50N3S
	460V	350			ECS9541CAL	ECS9542CAL	ECS9544CAL	—	ECS9548CAL	
	575V	450			ECS9541DAL	ECS9542DAL	ECS9544DAL	—	ECS9548DAL	
650A	200V	200	24 Vdc	1200A	ECS9551EAP	ECS9552EAP	ECS9554EAP	—	ECS9558EAP	S811+V65N3S
	230V	200			ECS9551BAP	ECS9552BAP	ECS9554BAP	—	ECS9558BAP	
	460V	450			ECS9551CAP	ECS9552CAP	ECS9554CAP	—	ECS9558CAP	
	575V	500			ECS9551DAP	ECS9552DAP	ECS9554DAP	—	ECS9558DAP	
720A	230V	250	24 Vdc	1200A	ECS9561BAP	ECS9562BAP	ECS9564BAP	—	ECS9568BAP	S811+V72N3S
	460V	500			ECS9561CAP	ECS9562CAP	ECS9564CAP	—	ECS9568CAP	
	575V	600			ECS9561DAP	ECS9562DAP	ECS9564DAP	—	ECS9568DAP	
850A	460V	600	24 Vdc	1200A	ECS9571CAP	ECS9572CAP	ECS9574CAP	—	ECS9578CAP	S811+V85N3S
	575V	700			ECS9571DAP	ECS9572DAP	ECS9574DAP	—	ECS9578DAP	
1000A	230V	350	24 Vdc	1600A	ECS9581BAQ	ECS9582BAQ	ECS9584BAQ	—	ECS9588BAQ	S811+V10N3S
	460V	700			ECS9581CAQ	ECS9582CAQ	ECS9584CAQ	—	ECS9588CAQ	
	575V	800			ECS9581DAQ	ECS9582DAQ	ECS9584DAQ	—	ECS9588DAQ	

Notes

- ① Digital Interface Module (DIM) is mounted on door as option.
- ② Standard duty horsepower ratings are for 300% ramp current, 30 seconds ramp time, and three starts per hour. Consult Eaton for other ratings.
- ③ Based on 1.15 service factor.
- ④ All *IT* soft starters are furnished with 24 Vdc coils and control power supplies. For 24 Vdc separate control, use modification code **C35** and change the eighth digit to **Q** (that is, ECS90S1EAA becomes ECS90S1QAA-C35).
- ⑤ The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECS95S4EAA. 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**.

Wiring Diagrams

S801+/S811+

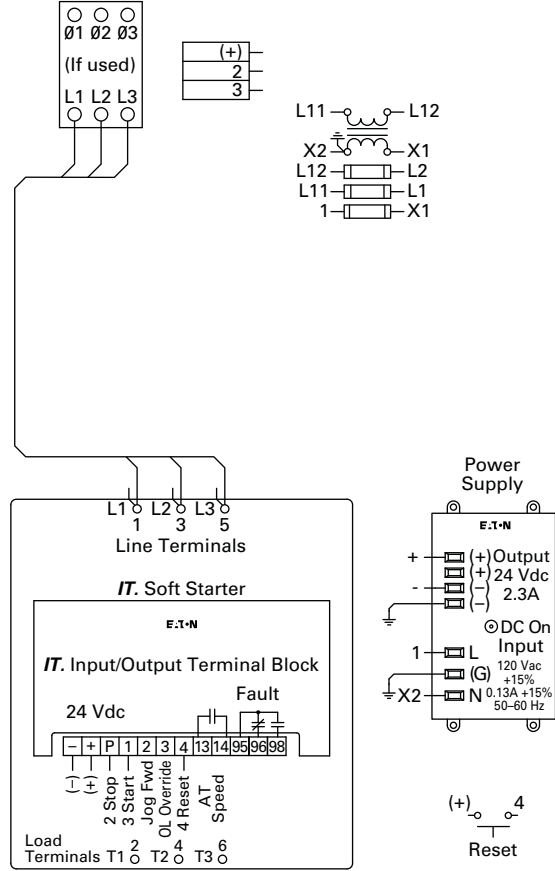
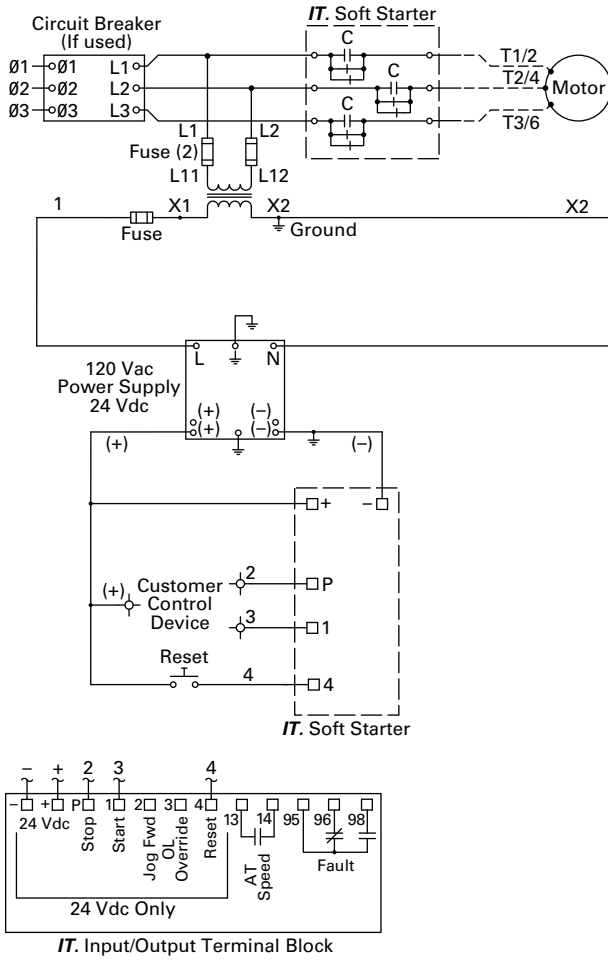


5.2

Reduced Voltage Starter

S801+/S811+ *IT*. Solid-State Soft Starters

S801+/S811+ with CPT and Power Supply



5

Dimensions

See **Tab 14** for box dimensions for Type 1, 3R, 4X and 12.
See **Tab 9** for box dimensions for Type 7/9.

Minimum Enclosure Box Numbers

Rating	SSRV	Non-Combination Box No. ①	Combination with Fuses Box No. ①	Combination with HMCP Box No. ①
37A	S801+/S811+	7A	B1	A1 ②
66A	S801+/S811+	7A	C	A1 ②
105A	S801+/S811+	7A	D	B1
135A	S801+/S811+	B1	D	C
180A	S801+/S811+	C	E	E
240A	S801+/S811+	G1	F1E	E
304A	S801+/S811+	G1	F1E	E
360A	S801+/S811+	G1	F1E	E
420A	S801+/S811+	10	F1E	E
500A	S801+/S811+	10	F1E	E
650A	S801+/S811+	10	F1E	F1E
720A	S801+/S811+	10	F1E	F1E
850A	S801+/S811+	10	F1E	F1E
1000A	S801+/S811+	10	F1E	F1E

Notes

- ① Enclosure space will also accommodate an *IT* power supply, two four-pole relays, CPT, and terminal blocks. Also includes space for a DNA module or MOV.
- ② Same as footnote ①, but CPT is not included. Upsize to B1 enclosure to include space for a CPT and a full voltage bypass contactor.

Contents

<i>Description</i>	<i>Page</i>
Freedom Three-Phase Magnetic Starters	
Catalog Number Selection	V10-T5-35
Cover Control	V10-T5-36
Product Selection	
Autotransformer	V10-T5-37
Part Winding	V10-T5-45
Wye Delta	V10-T5-51
Part Winding Pump Control	V10-T5-80
Wiring Diagrams	V10-T5-81

Product Description

Eaton's expanded reduced voltage starter solutions include autotransformer, part winding, and wye delta.

Features

- Autotransformer
 - High torque per amp
 - Three starting torques through taps
 - Optimal for slow starts
- Part Winding
 - Small physical size
 - Limits motor torque and current to 50% at start-up
- Wye Delta
 - Optimal for slow starts and high inertia load
 - High torque efficiency
 - Inrush restrictions at start-up

Standards and Certifications

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

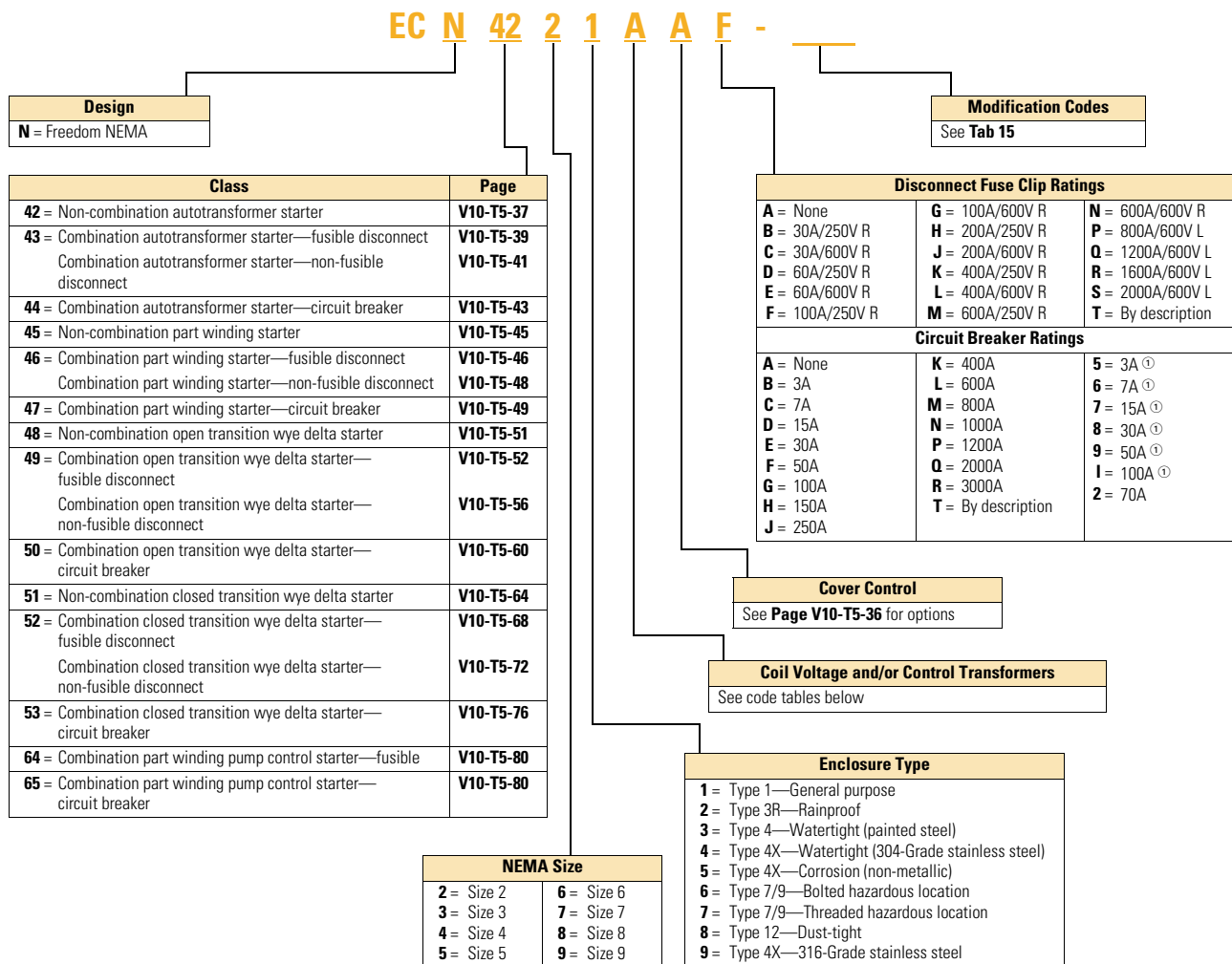
- UL Listed
- cUL (indicates appropriate CSA standard investigation)
- OSHPD Certified (OSP-0015-10)

Additional Reference

Other Magnet Coils	V10-T5-35
Cover Control	V10-T5-36
Dimensions	Tab 14
Accessories and Modifications	Tab 15
Technical Data and Specifications	Tab 17

Catalog Number Selection

Freedom Three-Phase Magnetic Starters



Magnetic Coil Codes (System Voltage) ②

Code	Magnet Coil	Code	Magnet Coil	Code	Magnet Coil
A	120/60110/50	K	240/50	U	24/50
B	240/60220/50	L	380/50	V	32/50
C	460/60440/50	M	415/50	W	48/60
D	575/60550/50	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		

Control Power Transformer Codes (System Voltage)

Code	Primary	Secondary
B	240/480–220/440 wired for 240V	120/60–110/50
C	240/480–220/440 wired for 480V	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 240V	24
S	240/480–220/440 wired for 480V	24
T	600/60	24
U	277/60	24
V	380/50	24
W	415/50	24
X	240/480/600 wired for 480V	120
Y	240/480/600 wired for 480V	24
Z	By description	—

Notes

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

Cover Control

Non-Reversing

Flange Control Kits

For on-the-job conversion of Type 1, 3R, 4X and 12 enclosed starters. Knockouts are provided on the Type 1 flange. Type 3R, 4X and 12 have prepunched holes with removable hole plugs.

Factory Installed Cover Control

To order factory installed pilot devices, change the ninth character of the catalog number to the alpha shown in the table below. Example: To order an **ECN0514CAA** with START/STOP pushbuttons and a red pilot light, change the **A** to a **C**, that is, **ECN0514CCA**.

Type 1 Non-Combination



All Others



Non-Reversing Cover Control

Description	Factory Installed Flange Control			Field Installation Kits	
	Position 9 Alpha	Type 1 Non-Combination ①	All Others ②	Type 1 Non-Combination ①	All Others ②
				Catalog Number	Catalog Number
No cover mounted pilot devices	A	■	■	C400GK0	—
START/STOP pushbuttons	B	■	■	C400GK1	C400T1
With red RUN pilot light	C	■	■	C400GK12 ③	—
With red RUN/green OFF lights	D	■	■	C400GK16 ③	—
ON/OFF pushbuttons	E	—	■	—	C400T2
With red RUN pilot light	F	—	■	—	—
With red RUN/green OFF lights	G	—	■	—	—
HAND/OFF/AUTO selector switch	H	■	■	C400GK3	C400T12
With red RUN pilot light	J	■	■	C400GK32 ③	—
With red RUN/green OFF lights	K	■	■	C400GK36 ③	—
START pushbutton	L	—	■	—	C400T3
ON pushbutton	M	—	■	—	C400T4
OFF pushbutton	N	—	■	—	C400T5
Red RUN pilot light	P	■	■	C400GK42 ③	C400T9 ③
Green OFF	Q	■	■	C400GK41 ③	C400T10 ③
Red RUN/green OFF pilot lights	R	■	■	C400GK46 ③	C400T11 ③
START/STOP selector switch	S	—	■	—	C400T13
With red RUN pilot light	T	—	■	—	—
With red RUN/green OFF lights	U	—	■	—	—
ON/OFF selector switch	V	—	■	—	C400T14
With red RUN pilot light	W	—	■	—	—
With red RUN/green OFF lights	X	—	■	—	—

Notes

- ① Type 1, NEMA Sizes 00–4 non-combination ONLY.
- ② Type 1, NEMA Sizes 5–9 non-combination PLUS all Type 3R, 4X, 12 non-combination PLUS all combination—NEMA sizes only.
- ③ 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
120V 60 Hz	A	240V 60 Hz	B	480V 60 Hz	C
208V 60 Hz	E	380V 50 Hz	L	600V 60 Hz	D

Product Selection

Autotransformer

Features

- Non-combination and combination designs
- Three-phase magnetic, three-pole
- Interchangeable heater OLR
- 600V maximum

Class ECN42—Non-Combination Autotransformer Starter

NEMA Size	Motor Voltage	hp Rating	Magnet Coil Voltage ①	Type 1	Type 3R	Type 4	Type 12	
				General Purpose	Rainproof	Water and Dust-Tight Painted Steel	Dust-Tight Industrial External Reset ②	
				Catalog Number	Catalog Number	Catalog Number	Catalog Number	
2 (45A)	200	10	120	ECN4221EAA-A8/B1	ECN4222EAA-A8/B1	ECN4223EAA-A8/B1	ECN4228EAA-A8/B1	
		15		ECN4221BAA-A8/B2	ECN4222BAA-A8/B2	ECN4223BAA-A8/B2	ECN4228BAA-A8/B2	
		15		ECN4221BAA-A8/B7	ECN4222BAA-A8/B7	ECN4223BAA-A8/B7	ECN4228BAA-A8/B7	
	460	10		ECN4221CAA-A8/B4	ECN4222CAA-A8/B4	ECN4223CAA-A8/B4	ECN4228CAA-A8/B4	
		15		ECN4221CAA-A8/B9	ECN4222CAA-A8/B9	ECN4223CAA-A8/B9	ECN4228CAA-A8/B9	
		20		ECN4221CAA-A8/B14	ECN4222CAA-A8/B14	ECN4223CAA-A8/B14	ECN4228CAA-A8/B14	
	575	25		10	ECN4221CAA-A8/B19	ECN4222CAA-A8/B19	ECN4223CAA-A8/B19	ECN4228CAA-A8/B19
				15	ECN4221DAA-A8/B5	ECN4222DAA-A8/B5	ECN4223DAA-A8/B5	ECN4228DAA-A8/B5
				15	ECN4221DAA-A8/B10	ECN4222DAA-A8/B10	ECN4223DAA-A8/B10	ECN4228DAA-A8/B10
		20		15	ECN4221DAA-A8/B15	ECN4222DAA-A8/B15	ECN4223DAA-A8/B15	ECN4228DAA-A8/B15
				20	ECN4221DAA-A8/B20	ECN4222DAA-A8/B20	ECN4223DAA-A8/B20	ECN4228DAA-A8/B20
				25	ECN4221DAA-A8/B20	ECN4222DAA-A8/B20	ECN4223DAA-A8/B20	ECN4228DAA-A8/B20
3 (90A)	200	15	ECN4231EAA-A8/B6	ECN4232EAA-A8/B6	ECN4233EAA-A8/B6	ECN4238EAA-A8/B6		
		20	ECN4231EAA-A8/B11	ECN4232EAA-A8/B11	ECN4233EAA-A8/B11	ECN4238EAA-A8/B11		
		25	ECN4231EAA-A8/B16	ECN4232EAA-A8/B16	ECN4233EAA-A8/B16	ECN4238EAA-A8/B16		
	230	20	ECN4231BAA-A8/B12	ECN4232BAA-A8/B12	ECN4233BAA-A8/B12	ECN4238BAA-A8/B12		
		25	ECN4231BAA-A8/B17	ECN4232BAA-A8/B17	ECN4233BAA-A8/B17	ECN4238BAA-A8/B17		
		30	ECN4231BAA-A8/B22	ECN4232BAA-A8/B22	ECN4233BAA-A8/B22	ECN4238BAA-A8/B22		
	460	30	ECN4231CAA-A8/B24	ECN4232CAA-A8/B24	ECN4233CAA-A8/B24	ECN4238CAA-A8/B24		
		40	ECN4231CAA-A8/B29	ECN4232CAA-A8/B29	ECN4233CAA-A8/B29	ECN4238CAA-A8/B29		
		50	ECN4231CAA-A8/B34	ECN4232CAA-A8/B34	ECN4233CAA-A8/B34	ECN4238CAA-A8/B34		
	575	30	ECN4231DAA-A8/B25	ECN4232DAA-A8/B25	ECN4233DAA-A8/B25	ECN4238DAA-A8/B25		
		40	ECN4231DAA-A8/B30	ECN4232DAA-A8/B30	ECN4233DAA-A8/B30	ECN4238DAA-A8/B30		
		50	ECN4231DAA-A8/B35	ECN4232DAA-A8/B35	ECN4233DAA-A8/B35	ECN4238DAA-A8/B35		
	4 (135A)	200	30	ECN4241EAA-A8/B21	ECN4242EAA-A8/B21	ECN4243EAA-A8/B21	ECN4248EAA-A8/B21	
			40	ECN4241EAA-A8/B26	ECN4242EAA-A8/B26	ECN4243EAA-A8/B26	ECN4248EAA-A8/B26	
		230	40	ECN4241BAA-A8/B27	ECN4242BAA-A8/B27	ECN4243BAA-A8/B27	ECN4248BAA-A8/B27	
50			ECN4241BAA-A8/B32	ECN4242BAA-A8/B32	ECN4243BAA-A8/B32	ECN4248BAA-A8/B32		
460		75	ECN4241CAA-A8/B39	ECN4242CAA-A8/B39	ECN4243CAA-A8/B39	ECN4248CAA-A8/B39		
		100	ECN4241CAA-A8/B44	ECN4242CAA-A8/B44	ECN4243CAA-A8/B44	ECN4248CAA-A8/B44		
575		75	ECN4241DAA-A8/B40	ECN4242DAA-A8/B40	ECN4243DAA-A8/B40	ECN4248DAA-A8/B40		
		100	ECN4241DAA-A8/B45	ECN4242DAA-A8/B45	ECN4243DAA-A8/B45	ECN4248DAA-A8/B45		

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

Notes

① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.

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

5.3

Reduced Voltage Starter

Freedom Three-Phase Magnetic Starters

Class ECN42—Non-Combination Autotransformer Starter, continued

NEMA Size	Motor Voltage	hp Rating	Magnet Coil Voltage ①	Type 1	Type 3R	Type 4	Type 12	
				General Purpose	Rainproof	Water and Dust-Tight Painted Steel	Dust-Tight Industrial External Reset ②	
				Catalog Number	Catalog Number	Catalog Number	Catalog Number	
5 (270A)	200	50	120	ECN4251EAA-A8/B31	ECN4252EAA-A8/B31	ECN4253EAA-A8/B31	ECN4258EAA-A8/B31	
		75		ECN4251EAA-A8/B36	ECN4252EAA-A8/B36	ECN4253EAA-A8/B36	ECN4258EAA-A8/B36	
	230	75	ECN4251BAA-A8/B37	ECN4252BAA-A8/B37	ECN4253BAA-A8/B37	ECN4258BAA-A8/B37		
		100	ECN4251BAA-A8/B42	ECN4252BAA-A8/B42	ECN4253BAA-A8/B42	ECN4258BAA-A8/B42		
	460	125	ECN4251CAA-A8/B49	ECN4252CAA-A8/B49	ECN4253CAA-A8/B49	ECN4258CAA-A8/B49		
		150	ECN4251CAA-A8/B54	ECN4252CAA-A8/B54	ECN4253CAA-A8/B54	ECN4258CAA-A8/B54		
		200	ECN4251CAA-A8/B59	ECN4252CAA-A8/B59	ECN4253CAA-A8/B59	ECN4258CAA-A8/B59		
	575	125	ECN4251DAA-A8/B50	ECN4252DAA-A8/B50	ECN4253DAA-A8/B50	ECN4258DAA-A8/B50		
		150	ECN4251DAA-A8/B55	ECN4252DAA-A8/B55	ECN4253DAA-A8/B55	ECN4258DAA-A8/B55		
		200	ECN4251DAA-A8/B60	ECN4252DAA-A8/B60	ECN4253DAA-A8/B60	ECN4258DAA-A8/B60		
	6 (540A)	200	100	120	ECN4261EAA-A8/B41	ECN4262EAA-A8/B41	ECN4263EAA-A8/B41	ECN4268EAA-A8/B41
			125		ECN4261EAA-A8/B46	ECN4262EAA-A8/B46	ECN4263EAA-A8/B46	ECN4268EAA-A8/B46
150			ECN4261EAA-A8/B51		ECN4262EAA-A8/B51	ECN4263EAA-A8/B51	ECN4268EAA-A8/B51	
230		125	ECN4261BAA-A8/B47	ECN4262BAA-A8/B47	ECN4263BAA-A8/B47	ECN4268BAA-A8/B47		
		150	ECN4261BAA-A8/B52	ECN4262BAA-A8/B52	ECN4263BAA-A8/B52	ECN4268BAA-A8/B52		
		200	ECN4261BAA-A8/B57	ECN4262BAA-A8/B57	ECN4263BAA-A8/B57	ECN4268BAA-A8/B57		
460		250	ECN4261CAA-A8/B64	ECN4262CAA-A8/B64	ECN4263CAA-A8/B64	ECN4268CAA-A8/B64		
		300	ECN4261CAA-A8/B69	ECN4262CAA-A8/B69	ECN4263CAA-A8/B69	ECN4268CAA-A8/B69		
		400	ECN4261CAA-A8/B74	ECN4262CAA-A8/B74	ECN4263CAA-A8/B74	ECN4268CAA-A8/B74		
575		250	ECN4261DAA-A8/B65	ECN4262DAA-A8/B65	ECN4263DAA-A8/B65	ECN4268DAA-A8/B65		
		300	ECN4261DAA-A8/B70	ECN4262DAA-A8/B70	ECN4263DAA-A8/B70	ECN4268DAA-A8/B70		
		400	ECN4261DAA-A8/B75	ECN4262DAA-A8/B75	ECN4263DAA-A8/B75	ECN4268DAA-A8/B75		
7 (810A)		230	250	120	ECN4271BAA-A8/B62	ECN4272BAA-A8/B62	ECN4273BAA-A8/B62	ECN4278BAA-A8/B62
			300		ECN4271BAA-A8/B67	ECN4272BAA-A8/B67	ECN4273BAA-A8/B67	ECN4278BAA-A8/B67
		460	450	ECN4271CAA-A8/B78	ECN4272CAA-A8/B78	ECN4273CAA-A8/B78	ECN4278CAA-A8/B78	
	500		ECN4271CAA-A8/B81	ECN4272CAA-A8/B81	ECN4273CAA-A8/B81	ECN4278CAA-A8/B81		
	600		ECN4271CAA-A8/B84	ECN4272CAA-A8/B84	ECN4273CAA-A8/B84	ECN4278CAA-A8/B84		
	575	450	ECN4271DAA-A8/B79	ECN4272DAA-A8/B79	ECN4273DAA-A8/B79	ECN4278DAA-A8/B79		
		500	ECN4271DAA-A8/B82	ECN4272DAA-A8/B82	ECN4273DAA-A8/B82	ECN4278DAA-A8/B82		
		600	ECN4271DAA-A8/B85	ECN4272DAA-A8/B85	ECN4273DAA-A8/B85	ECN4278DAA-A8/B85		
	8 (1215A)	230	400	120	ECN4281BAA-A8/B72	ECN4282BAA-A8/B72	ECN4283BAA-A8/B72	ECN4288BAA-A8/B72
450			ECN4281BAA-A8/B76		ECN4282BAA-A8/B76	ECN4283BAA-A8/B76	ECN4288BAA-A8/B76	
460		700	ECN4281CAA-A8/B87	ECN4282CAA-A8/B87	ECN4283CAA-A8/B87	ECN4288CAA-A8/B87		
		800	ECN4281CAA-A8/B91	ECN4282CAA-A8/B91	ECN4283CAA-A8/B91	ECN4288CAA-A8/B91		
		900	ECN4281CAA-A8/B94	ECN4282CAA-A8/B94	ECN4283CAA-A8/B94	ECN4288CAA-A8/B94		
575		700	ECN4281DAA-A8/B88	ECN4282DAA-A8/B88	ECN4283DAA-A8/B88	ECN4288DAA-A8/B88		
		800	ECN4281DAA-A8/B92	ECN4282DAA-A8/B92	ECN4283DAA-A8/B92	ECN4288DAA-A8/B92		
		900	ECN4281DAA-A8/B95	ECN4282DAA-A8/B95	ECN4283DAA-A8/B95	ECN4288DAA-A8/B95		
9 (2250A)		230	800	120	ECN4291BAA-A8/B89	ECN4292BAA-A8/B89	ECN4293BAA-A8/B89	ECN4298BAA-A8/B89
	460	1600	ECN4291CAA-A8/B96		ECN4292CAA-A8/B96	ECN4293CAA-A8/B96	ECN4298CAA-A8/B96	
	575	1600	ECN4291DAA-A8/B97		ECN4292DAA-A8/B97	ECN4293DAA-A8/B97	ECN4298DAA-A8/B97	

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.

Class ECN43—Non-Combination Autotransformer Starter—Fusible Disconnect

Motor Voltage	hp Rating	Magnet Coil Voltage ①	Fuse Clip Amp.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4 Water and Dust-Tight Painted Steel Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number
NEMA Size 2 (45A)							
200	10	120	60A	ECN4321EAD-A8/B1	ECN4322EAD-A8/B1	ECN4323EAD-A8/B1	ECN4328EAD-A8/B1
230	10			ECN4321BAD-A8/B2	ECN4322BAD-A8/B2	ECN4323BAD-A8/B2	ECN4328BAD-A8/B2
	15			ECN4321BAD-A8/B7	ECN4322BAD-A8/B7	ECN4323BAD-A8/B7	ECN4328BAD-A8/B7
	15			ECN4321CAE-A8/B4	ECN4322CAE-A8/B4	ECN4323CAE-A8/B4	ECN4328CAE-A8/B4
460	10			ECN4321CAE-A8/B9	ECN4322CAE-A8/B9	ECN4323CAE-A8/B9	ECN4328CAE-A8/B9
	15			ECN4321CAE-A8/B14	ECN4322CAE-A8/B14	ECN4323CAE-A8/B14	ECN4328CAE-A8/B14
	20			ECN4321CAE-A8/B19	ECN4322CAE-A8/B19	ECN4323CAE-A8/B19	ECN4328CAE-A8/B19
	25			ECN4321DAE-A8/B5	ECN4322DAE-A8/B5	ECN4323DAE-A8/B5	ECN4328DAE-A8/B5
575	10			ECN4321DAE-A8/B10	ECN4322DAE-A8/B10	ECN4323DAE-A8/B10	ECN4328DAE-A8/B10
	15			ECN4321DAE-A8/B15	ECN4322DAE-A8/B15	ECN4323DAE-A8/B15	ECN4328DAE-A8/B15
	20			ECN4321DAE-A8/B20	ECN4322DAE-A8/B20	ECN4323DAE-A8/B20	ECN4328DAE-A8/B20
	25						
NEMA Size 3 (90A)							
200	15	120	100A	ECN4331EAF-A8/B6	ECN4332EAF-A8/B6	ECN4333EAF-A8/B6	ECN4338EAF-A8/B6
	20			ECN4331EAF-A8/B11	ECN4332EAF-A8/B11	ECN4333EAF-A8/B11	ECN4338EAF-A8/B11
	25			ECN4331EAF-A8/B16	ECN4332EAF-A8/B16	ECN4333EAF-A8/B16	ECN4338EAF-A8/B16
230	20			ECN4331BAF-A8/B12	ECN4332BAF-A8/B12	ECN4333BAF-A8/B12	ECN4338BAF-A8/B12
	25			ECN4331BAF-A8/B17	ECN4332BAF-A8/B17	ECN4333BAF-A8/B17	ECN4338BAF-A8/B17
	30			ECN4331BAF-A8/B22	ECN4332BAF-A8/B22	ECN4333BAF-A8/B22	ECN4338BAF-A8/B22
460	30			ECN4331CAG-A8/B24	ECN4332CAG-A8/B24	ECN4333CAG-A8/B24	ECN4338CAG-A8/B24
	40			ECN4331CAG-A8/B29	ECN4332CAG-A8/B29	ECN4333CAG-A8/B29	ECN4338CAG-A8/B29
	50			ECN4331CAG-A8/B34	ECN4332CAG-A8/B34	ECN4333CAG-A8/B34	ECN4338CAG-A8/B34
575	30			ECN4331DAG-A8/B25	ECN4332DAG-A8/B25	ECN4333DAG-A8/B25	ECN4338DAG-A8/B25
	40			ECN4331DAG-A8/B30	ECN4332DAG-A8/B30	ECN4333DAG-A8/B30	ECN4338DAG-A8/B30
	50			ECN4331DAG-A8/B35	ECN4332DAG-A8/B35	ECN4333DAG-A8/B35	ECN4338DAG-A8/B35
NEMA Size 4 (135A)							
200	30	120	200A	ECN4341EAH-A8/B21	ECN4342EAH-A8/B21	ECN4343EAH-A8/B21	ECN4348EAH-A8/B21
	40			ECN4341EAH-A8/B26	ECN4342EAH-A8/B26	ECN4343EAH-A8/B26	ECN4348EAH-A8/B26
230	40			ECN4341BAH-A8/B27	ECN4342BAH-A8/B27	ECN4343BAH-A8/B27	ECN4348BAH-A8/B27
	50			ECN4341BAH-A8/B32	ECN4342BAH-A8/B32	ECN4343BAH-A8/B32	ECN4348BAH-A8/B32
460	75			ECN4341CAJ-A8/B39	ECN4342CAJ-A8/B39	ECN4343CAJ-A8/B39	ECN4348CAJ-A8/B39
	100			ECN4341CAJ-A8/B44	ECN4342CAJ-A8/B44	ECN4343CAJ-A8/B44	ECN4348CAJ-A8/B44
575	75			ECN4341DAJ-A8/B40	ECN4342DAJ-A8/B40	ECN4343DAJ-A8/B40	ECN4348DAJ-A8/B40
	100			ECN4341DAJ-A8/B45	ECN4342DAJ-A8/B45	ECN4343DAJ-A8/B45	ECN4348DAJ-A8/B45
NEMA Size 5 (270A)							
200	50	120	400A	ECN4351EAK-A8/B31	ECN4352EAK-A8/B31	ECN4353EAK-A8/B31	ECN4358EAK-A8/B31
	75			ECN4351EAK-A8/B36	ECN4352EAK-A8/B36	ECN4353EAK-A8/B36	ECN4358EAK-A8/B36
230	75			ECN4351BAK-A8/B37	ECN4352BAK-A8/B37	ECN4353BAK-A8/B37	ECN4358BAK-A8/B37
	100			ECN4351BAK-A8/B42	ECN4352BAK-A8/B42	ECN4353BAK-A8/B42	ECN4358BAK-A8/B42
460	125			ECN4351CAL-A8/B49	ECN4352CAL-A8/B49	ECN4353CAL-A8/B49	ECN4358CAL-A8/B49
	150			ECN4351CAL-A8/B54	ECN4352CAL-A8/B54	ECN4353CAL-A8/B54	ECN4358CAL-A8/B54
	200			ECN4351CAL-A8/B59	ECN4352CAL-A8/B59	ECN4353CAL-A8/B59	ECN4358CAL-A8/B59
575	125			ECN4351DAL-A8/B50	ECN4352DAL-A8/B50	ECN4353DAL-A8/B50	ECN4358DAL-A8/B50
	150			ECN4351DAL-A8/B55	ECN4352DAL-A8/B55	ECN4353DAL-A8/B55	ECN4358DAL-A8/B55
	200			ECN4351DAL-A8/B60	ECN4352DAL-A8/B60	ECN4353DAL-A8/B60	ECN4358DAL-A8/B60

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- 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 lock.

Class ECN43—Non-Combination Autotransformer Starter—Fusible Disconnect, continued

Motor Voltage	hp Rating	Magnet Coil Voltage ①	Fuse Clip Amp.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4 Water and Dust-Tight Painted Steel Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number
NEMA Size 6 (540A)							
200	100	120	600A	ECN4361EAM-A8/B41	ECN4362EAM-A8/B41	ECN4363EAM-A8/B41	ECN4368EAM-A8/B41
	125			ECN4361EAM-A8/B46	ECN4362EAM-A8/B46	ECN4363EAM-A8/B46	ECN4368EAM-A8/B46
	150			ECN4361EAM-A8/B51	ECN4362EAM-A8/B51	ECN4363EAM-A8/B51	ECN4368EAM-A8/B51
230	125			ECN4361BAM-A8/B47	ECN4362BAM-A8/B47	ECN4363BAM-A8/B47	ECN4368BAM-A8/B47
	150			ECN4361BAM-A8/B52	ECN4362BAM-A8/B52	ECN4363BAM-A8/B52	ECN4368BAM-A8/B52
	200			ECN4361BAM-A8/B57	ECN4362BAM-A8/B57	ECN4363BAM-A8/B57	ECN4368BAM-A8/B57
460	250			ECN4361CAN-A8/B64	ECN4362CAN-A8/B64	ECN4363CAN-A8/B64	ECN4368CAN-A8/B64
	300			ECN4361CAN-A8/B69	ECN4362CAN-A8/B69	ECN4363CAN-A8/B69	ECN4368CAN-A8/B69
	400			ECN4361CAN-A8/B74	ECN4362CAN-A8/B74	ECN4363CAN-A8/B74	ECN4368CAN-A8/B74
575	250			ECN4361DAN-A8/B65	ECN4362DAN-A8/B65	ECN4363DAN-A8/B65	ECN4368DAN-A8/B65
	300			ECN4361DAN-A8/B70	ECN4362DAN-A8/B70	ECN4363DAN-A8/B70	ECN4368DAN-A8/B70
	400			ECN4361DAN-A8/B75	ECN4362DAN-A8/B75	ECN4363DAN-A8/B75	ECN4368DAN-A8/B75
NEMA Size 7 (810A)							
230	250	120	④	ECN4371BAU-A8/B62	ECN4372BAU-A8/B62	ECN4373BAU-A8/B62	ECN4378BAU-A8/B62
	300			ECN4371BAU-A8/B67	ECN4372BAU-A8/B67	ECN4373BAU-A8/B67	ECN4378BAU-A8/B67
460	450			ECN4371CAU-A8/B78	ECN4372CAU-A8/B78	ECN4373CAU-A8/B78	ECN4378CAU-A8/B78
	500			ECN4371CAU-A8/B81	ECN4372CAU-A8/B81	ECN4373CAU-A8/B81	ECN4378CAU-A8/B81
	600			ECN4371CAU-A8/B84	ECN4372CAU-A8/B84	ECN4373CAU-A8/B84	ECN4378CAU-A8/B84
575	450			ECN4371DAU-A8/B79	ECN4372DAU-A8/B79	ECN4373DAU-A8/B79	ECN4378DAU-A8/B79
	500			ECN4371DAU-A8/B82	ECN4372DAU-A8/B82	ECN4373DAU-A8/B82	ECN4378DAU-A8/B82
	600			ECN4371DAU-A8/B85	ECN4372DAU-A8/B85	ECN4373DAU-A8/B85	ECN4378DAU-A8/B85
NEMA Size 8 (1215A)							
230	400	120	④	ECN4381BAU-A8/B72	ECN4382BAU-A8/B72	ECN4383BAU-A8/B72	ECN4388BAU-A8/B72
	450			ECN4381BAU-A8/B76	ECN4382BAU-A8/B76	ECN4383BAU-A8/B76	ECN4388BAU-A8/B76
460	700			ECN4381CAU-A8/B87	ECN4382CAU-A8/B87	ECN4383CAU-A8/B87	ECN4388CAU-A8/B87
	800			ECN4381CAU-A8/B91	ECN4382CAU-A8/B91	ECN4383CAU-A8/B91	ECN4388CAU-A8/B91
	900			ECN4381CAU-A8/B94	ECN4382CAU-A8/B94	ECN4383CAU-A8/B94	ECN4388CAU-A8/B94
575	700			ECN4381DAU-A8/B88	ECN4382DAU-A8/B88	ECN4383DAU-A8/B88	ECN4388DAU-A8/B88
	800			ECN4381DAU-A8/B92	ECN4382DAU-A8/B92	ECN4383DAU-A8/B92	ECN4388DAU-A8/B92
	900			ECN4381DAU-A8/B95	ECN4382DAU-A8/B95	ECN4383DAU-A8/B95	ECN4388DAU-A8/B95
NEMA Size 9 (2250A)							
230	800	120	④	ECN4391BAU-A8/B89	ECN4392BAU-A8/B89	ECN4393BAU-A8/B89	ECN4398BAU-A8/B89
460	1600			ECN4391CAU-A8/B96	ECN4392CAU-A8/B96	ECN4393CAU-A8/B96	ECN4398CAU-A8/B96
575	1600			ECN4391DAU-A8/B97	ECN4392DAU-A8/B97	ECN4393DAU-A8/B97	ECN4398DAU-A8/B97

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- 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 lock.
- ④ Supply hp, voltage, FLA and whether motor is design E or not when ordering the starter.

Class ECN43—Combination Autotransformer Starter—Non-Fusible Disconnect

Motor Voltage	hp Rating	Magnet Coil Voltage ①	Fuse Clip Amp.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4 Water and Dust-Tight Painted Steel Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number
NEMA Size 2 (45A)							
200	10	120	60A	ECN4321EAA-A8/B1	ECN4322EAA-A8/B1	ECN4323EAA-A8/B1	ECN4328EAA-A8/B1
230	10			ECN4321BAA-A8/B2	ECN4322BAA-A8/B2	ECN4323BAA-A8/B2	ECN4328BAA-A8/B2
	15			ECN4321BAA-A8/B7	ECN4322BAA-A8/B7	ECN4323BAA-A8/B7	ECN4328BAA-A8/B7
460	10			ECN4321CAA-A8/B4	ECN4322CAA-A8/B4	ECN4323CAA-A8/B4	ECN4328CAA-A8/B4
	15			ECN4321CAA-A8/B9	ECN4322CAA-A8/B9	ECN4323CAA-A8/B9	ECN4328CAA-A8/B9
	20			ECN4321CAA-A8/B14	ECN4322CAA-A8/B14	ECN4323CAA-A8/B14	ECN4328CAA-A8/B14
	25			ECN4321CAA-A8/B19	ECN4322CAA-A8/B19	ECN4323CAA-A8/B19	ECN4328CAA-A8/B19
575	10			ECN4321DAA-A8/B5	ECN4322DAA-A8/B5	ECN4323DAA-A8/B5	ECN4328DAA-A8/B5
	15			ECN4321DAA-A8/B10	ECN4322DAA-A8/B10	ECN4323DAA-A8/B10	ECN4328DAA-A8/B10
	20			ECN4321DAA-A8/B15	ECN4322DAA-A8/B15	ECN4323DAA-A8/B15	ECN4328DAA-A8/B15
	25			ECN4321DAA-A8/B20	ECN4322DAA-A8/B20	ECN4323DAA-A8/B20	ECN4328DAA-A8/B20
NEMA Size 3 (90A)							
200	15	120	100A	ECN4331EAA-A8/B6	ECN4332EAA-A8/B6	ECN4333EAA-A8/B6	ECN4338EAA-A8/B6
	20			ECN4331EAA-A8/B11	ECN4332EAA-A8/B11	ECN4333EAA-A8/B11	ECN4338EAA-A8/B11
	25			ECN4331EAA-A8/B16	ECN4332EAA-A8/B16	ECN4333EAA-A8/B16	ECN4338EAA-A8/B16
230	20			ECN4331BAA-A8/B12	ECN4332BAA-A8/B12	ECN4333BAA-A8/B12	ECN4338BAA-A8/B12
	25			ECN4331BAA-A8/B17	ECN4332BAA-A8/B17	ECN4333BAA-A8/B17	ECN4338BAA-A8/B17
	30			ECN4331BAA-A8/B22	ECN4332BAA-A8/B22	ECN4333BAA-A8/B22	ECN4338BAA-A8/B22
460	30			ECN4331CAA-A8/B24	ECN4332CAA-A8/B24	ECN4333CAA-A8/B24	ECN4338CAA-A8/B24
	40			ECN4331CAA-A8/B29	ECN4332CAA-A8/B29	ECN4333CAA-A8/B29	ECN4338CAA-A8/B29
	50			ECN4331CAA-A8/B34	ECN4332CAA-A8/B34	ECN4333CAA-A8/B34	ECN4338CAA-A8/B34
575	30			ECN4331DAA-A8/B25	ECN4332DAA-A8/B25	ECN4333DAA-A8/B25	ECN4338DAA-A8/B25
	40			ECN4331DAA-A8/B30	ECN4332DAA-A8/B30	ECN4333DAA-A8/B30	ECN4338DAA-A8/B30
	50			ECN4331DAA-A8/B35	ECN4332DAA-A8/B35	ECN4333DAA-A8/B35	ECN4338DAA-A8/B35
NEMA Size 4 (135A)							
200	30	120	200A	ECN4341EAA-A8/B21	ECN4342EAA-A8/B21	ECN4343EAA-A8/B21	ECN4348EAA-A8/B21
	40			ECN4341EAA-A8/B26	ECN4342EAA-A8/B26	ECN4343EAA-A8/B26	ECN4348EAA-A8/B26
230	40			ECN4341BAA-A8/B27	ECN4342BAA-A8/B27	ECN4343BAA-A8/B27	ECN4348BAA-A8/B27
	50			ECN4341BAA-A8/B32	ECN4342BAA-A8/B32	ECN4343BAA-A8/B32	ECN4348BAA-A8/B32
460	75			ECN4341CAA-A8/B39	ECN4342CAA-A8/B39	ECN4343CAA-A8/B39	ECN4348CAA-A8/B39
	100			ECN4341CAA-A8/B44	ECN4342CAA-A8/B44	ECN4343CAA-A8/B44	ECN4348CAA-A8/B44
575	75			ECN4341DAA-A8/B40	ECN4342DAA-A8/B40	ECN4343DAA-A8/B40	ECN4348DAA-A8/B40
	100			ECN4341DAA-A8/B45	ECN4342DAA-A8/B45	ECN4343DAA-A8/B45	ECN4348DAA-A8/B45
NEMA Size 5 (270A)							
200	50	120	400A	ECN4351EAA-A8/B31	ECN4352EAA-A8/B31	ECN4353EAA-A8/B31	ECN4358EAA-A8/B31
	75			ECN4351EAA-A8/B36	ECN4352EAA-A8/B36	ECN4353EAA-A8/B36	ECN4358EAA-A8/B36
230	75			ECN4351BAA-A8/B37	ECN4352BAA-A8/B37	ECN4353BAA-A8/B37	ECN4358BAA-A8/B37
	100			ECN4351BAA-A8/B42	ECN4352BAA-A8/B42	ECN4353BAA-A8/B42	ECN4358BAA-A8/B42
460	125			ECN4351CAA-A8/B49	ECN4352CAA-A8/B49	ECN4353CAA-A8/B49	ECN4358CAA-A8/B49
	150			ECN4351CAA-A8/B54	ECN4352CAA-A8/B54	ECN4353CAA-A8/B54	ECN4358CAA-A8/B54
	200			ECN4351CAA-A8/B59	ECN4352CAA-A8/B59	ECN4353CAA-A8/B59	ECN4358CAA-A8/B59
575	125			ECN4351DAA-A8/B50	ECN4352DAA-A8/B50	ECN4353DAA-A8/B50	ECN4358DAA-A8/B50
	150			ECN4351DAA-A8/B55	ECN4352DAA-A8/B55	ECN4353DAA-A8/B55	ECN4358DAA-A8/B55
	200			ECN4351DAA-A8/B60	ECN4352DAA-A8/B60	ECN4353DAA-A8/B60	ECN4358DAA-A8/B60

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- 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 lock.

Class ECN43—Non-Combination Autotransformer Starter—Fusible Disconnect, continued

Motor Voltage	hp Rating	Magnet Coil Voltage ①	Fuse Clip Amp.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4 Water and Dust-Tight Painted Steel Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number
NEMA Size 6 (540A)							
200	100	120	600A	ECN4361EAA-A8/B41	ECN4362EAA-A8/B41	ECN4363EAA-A8/B41	ECN4368EAA-A8/B41
	125			ECN4361EAA-A8/B46	ECN4362EAA-A8/B46	ECN4363EAA-A8/B46	ECN4368EAA-A8/B46
	150			ECN4361EAA-A8/B51	ECN4362EAA-A8/B51	ECN4363EAA-A8/B51	ECN4368EAA-A8/B51
230	125			ECN4361BAA-A8/B47	ECN4362BAA-A8/B47	ECN4363BAA-A8/B47	ECN4368BAA-A8/B47
	150			ECN4361BAA-A8/B52	ECN4362BAA-A8/B52	ECN4363BAA-A8/B52	ECN4368BAA-A8/B52
	200			ECN4361BAA-A8/B57	ECN4362BAA-A8/B57	ECN4363BAA-A8/B57	ECN4368BAA-A8/B57
460	250			ECN4361CAA-A8/B64	ECN4362CAA-A8/B64	ECN4363CAA-A8/B64	ECN4368CAA-A8/B64
	300			ECN4361CAA-A8/B69	ECN4362CAA-A8/B69	ECN4363CAA-A8/B69	ECN4368CAA-A8/B69
	400			ECN4361CAA-A8/B74	ECN4362CAA-A8/B74	ECN4363CAA-A8/B74	ECN4368CAA-A8/B74
575	250			ECN4361DAA-A8/B65	ECN4362DAA-A8/B65	ECN4363DAA-A8/B65	ECN4368DAA-A8/B65
	300			ECN4361DAA-A8/B70	ECN4362DAA-A8/B70	ECN4363DAA-A8/B70	ECN4368DAA-A8/B70
	400			ECN4361DAA-A8/B75	ECN4362DAA-A8/B75	ECN4363DAA-A8/B75	ECN4368DAA-A8/B75
NEMA Size 7 (810A)							
230	250	120	④	ECN4371BAA-A8/B62	ECN4372BAA-A8/B62	ECN4373BAA-A8/B62	ECN4378BAA-A8/B62
	300			ECN4371BAA-A8/B67	ECN4372BAA-A8/B67	ECN4373BAA-A8/B67	ECN4378BAA-A8/B67
	460			450	ECN4371CAA-A8/B78	ECN4372CAA-A8/B78	ECN4373CAA-A8/B78
	500			ECN4371CAA-A8/B81	ECN4372CAA-A8/B81	ECN4373CAA-A8/B81	ECN4378CAA-A8/B81
	600			ECN4371CAA-A8/B84	ECN4372CAA-A8/B84	ECN4373CAA-A8/B84	ECN4378CAA-A8/B84
	575			450	ECN4371DAA-A8/B79	ECN4372DAA-A8/B79	ECN4373DAA-A8/B79
	500			ECN4371DAA-A8/B82	ECN4372DAA-A8/B82	ECN4373DAA-A8/B82	ECN4378DAA-A8/B82
	600			ECN4371DAA-A8/B85	ECN4372DAA-A8/B85	ECN4373DAA-A8/B85	ECN4378DAA-A8/B85
	NEMA Size 8 (1215A)						
230	400	120	④	ECN4381BAA-A8/B72	ECN4382BAA-A8/B72	ECN4383BAA-A8/B72	ECN4388BAA-A8/B72
	450			ECN4381BAA-A8/B76	ECN4382BAA-A8/B76	ECN4383BAA-A8/B76	ECN4388BAA-A8/B76
	460			700	ECN4381CAA-A8/B87	ECN4382CAA-A8/B87	ECN4383CAA-A8/B87
	800			ECN4381CAA-A8/B91	ECN4382CAA-A8/B91	ECN4383CAA-A8/B91	ECN4388CAA-A8/B91
	900			ECN4381CAA-A8/B94	ECN4382CAA-A8/B94	ECN4383CAA-A8/B94	ECN4388CAA-A8/B94
	575			700	ECN4381DAA-A8/B88	ECN4382DAA-A8/B88	ECN4383DAA-A8/B88
	800			ECN4381DAA-A8/B92	ECN4382DAA-A8/B92	ECN4383DAA-A8/B92	ECN4388DAA-A8/B92
	900			ECN4381DAA-A8/B95	ECN4382DAA-A8/B95	ECN4383DAA-A8/B95	ECN4388DAA-A8/B95
	NEMA Size 9 (2250A)						
230	800	120	④	ECN4391BAA-A8/B89	ECN4392BAA-A8/B89	ECN4393BAA-A8/B89	ECN4398BAA-A8/B89
460	1600			ECN4391CAA-A8/B96	ECN4392CAA-A8/B96	ECN4393CAA-A8/B96	ECN4398CAA-A8/B96
575	1600			ECN4391DAA-A8/B97	ECN4392DAA-A8/B97	ECN4393DAA-A8/B97	ECN4398DAA-A8/B97

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- 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 lock.
- ④ Supply hp, voltage, FLA and whether motor is design E or not when ordering the starter.

Class ECN44—Combination Autotransformer Starter—Circuit Breaker

Motor Voltage	hp Rating	Magnet Coil Voltage ①	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4 Water and Dust-Tight Painted Steel Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number
NEMA Size 2 (45A)							
200	10	120	50A	ECN4421EAF-A8/B1	ECN4422EAF-A8/B1	ECN4423EAF-A8/B1	ECN4428EAF-A8/B1
230	10			ECN4421BAF-A8/B2	ECN4422BAF-A8/B2	ECN4423BAF-A8/B2	ECN4428BAF-A8/B2
	15			ECN4421BAF-A8/B7	ECN4422BAF-A8/B7	ECN4423BAF-A8/B7	ECN4428BAF-A8/B7
460	10			ECN4421CAF-A8/B4	ECN4422CAF-A8/B4	ECN4423CAF-A8/B4	ECN4428CAF-A8/B4
	15			ECN4421CAF-A8/B9	ECN4422CAF-A8/B9	ECN4423CAF-A8/B9	ECN4428CAF-A8/B9
	20			ECN4421CAF-A8/B14	ECN4422CAF-A8/B14	ECN4423CAF-A8/B14	ECN4428CAF-A8/B14
	25			ECN4421CAF-A8/B19	ECN4422CAF-A8/B19	ECN4423CAF-A8/B19	ECN4428CAF-A8/B19
575	10			ECN4421DA9-A8/B5	ECN4422DA9-A8/B5	ECN4423DA9-A8/B5	ECN4428DA9-A8/B5
	15			ECN4421DA9-A8/B10	ECN4422DA9-A8/B10	ECN4423DA9-A8/B10	ECN4428DA9-A8/B10
	20			ECN4421DA9-A8/B15	ECN4422DA9-A8/B15	ECN4423DA9-A8/B15	ECN4428DA9-A8/B15
	25			ECN4421DA9-A8/B20	ECN4422DA9-A8/B20	ECN4423DA9-A8/B20	ECN4428DA9-A8/B20
NEMA Size 3 (90A)							
200	15	120	100A	ECN4431EAG-A8/B6	ECN4432EAG-A8/B6	ECN4433EAG-A8/B6	ECN4438EAG-A8/B6
	20			ECN4431EAG-A8/B11	ECN4432EAG-A8/B11	ECN4433EAG-A8/B11	ECN4438EAG-A8/B11
	25			ECN4431EAG-A8/B16	ECN4432EAG-A8/B16	ECN4433EAG-A8/B16	ECN4438EAG-A8/B16
230	20			ECN4431BAG-A8/B12	ECN4432BAG-A8/B12	ECN4433BAG-A8/B12	ECN4438BAG-A8/B12
	25			ECN4431BAG-A8/B17	ECN4432BAG-A8/B17	ECN4433BAG-A8/B17	ECN4438BAG-A8/B17
	30			ECN4431BAG-A8/B22	ECN4432BAG-A8/B22	ECN4433BAG-A8/B22	ECN4438BAG-A8/B22
460	30			ECN4431CAG-A8/B24	ECN4432CAG-A8/B24	ECN4433CAG-A8/B24	ECN4438CAG-A8/B24
	40			ECN4431CAG-A8/B29	ECN4432CAG-A8/B29	ECN4433CAG-A8/B29	ECN4438CAG-A8/B29
	50			ECN4431CAG-A8/B34	ECN4432CAG-A8/B34	ECN4433CAG-A8/B34	ECN4438CAG-A8/B34
575	30			ECN4431DAI-A8/B25	ECN4432DAI-A8/B25	ECN4433DAI-A8/B25	ECN4438DAI-A8/B25
	40			ECN4431DAI-A8/B30	ECN4432DAI-A8/B30	ECN4433DAI-A8/B30	ECN4438DAI-A8/B30
	50			ECN4431DAI-A8/B35	ECN4432DAI-A8/B35	ECN4433DAI-A8/B35	ECN4438DAI-A8/B35
NEMA Size 4 (135A)							
200	30	120	150A	ECN4441EAH-A8/B21	ECN4442EAH-A8/B21	ECN4443EAH-A8/B21	ECN4448EAH-A8/B21
	40			ECN4441EAH-A8/B26	ECN4442EAH-A8/B26	ECN4443EAH-A8/B26	ECN4448EAH-A8/B26
230	40			ECN4441BAH-A8/B27	ECN4442BAH-A8/B27	ECN4443BAH-A8/B27	ECN4448BAH-A8/B27
	50			ECN4441BAH-A8/B32	ECN4442BAH-A8/B32	ECN4443BAH-A8/B32	ECN4448BAH-A8/B32
460	75			ECN4441CAH-A8/B39	ECN4442CAH-A8/B39	ECN4443CAH-A8/B39	ECN4448CAH-A8/B39
	100			ECN4441CAH-A8/B44	ECN4442CAH-A8/B44	ECN4443CAH-A8/B44	ECN4448CAH-A8/B44
575	75			ECN4441DAH-A8/B40	ECN4442DAH-A8/B40	ECN4443DAH-A8/B40	ECN4448DAH-A8/B40
	100			ECN4441DAH-A8/B45	ECN4442DAH-A8/B45	ECN4443DAH-A8/B45	ECN4448DAH-A8/B45
NEMA Size 5 (270A)							
200	50	120	250A	ECN4451EAJ-A8/B31	ECN4452EAJ-A8/B31	ECN4453EAJ-A8/B31	ECN4458EAJ-A8/B31
	75		400A	ECN4451EAK-A8/B36	ECN4452EAK-A8/B36	ECN4453EAK-A8/B36	ECN4458EAK-A8/B36
230	75		250A	ECN4451BAJ-A8/B37	ECN4452BAJ-A8/B37	ECN4453BAJ-A8/B37	ECN4458BAJ-A8/B37
	100		400A	ECN4451BAK-A8/B42	ECN4452BAK-A8/B42	ECN4453BAK-A8/B42	ECN4458BAK-A8/B42
460	125		250A	ECN4451CAJ-A8/B49	ECN4452CAJ-A8/B49	ECN4453CAJ-A8/B49	ECN4458CAJ-A8/B49
	150			ECN4451CAJ-A8/B54	ECN4452CAJ-A8/B54	ECN4453CAJ-A8/B54	ECN4458CAJ-A8/B54
	200		400A	ECN4451CAK-A8/B59	ECN4452CAK-A8/B59	ECN4453CAK-A8/B59	ECN4458CAK-A8/B59
575	125		250A	ECN4451DAJ-A8/B50	ECN4452DAJ-A8/B50	ECN4453DAJ-A8/B50	ECN4458DAJ-A8/B50
	150			ECN4451DAJ-A8/B55	ECN4452DAJ-A8/B55	ECN4453DAJ-A8/B55	ECN4458DAJ-A8/B55
	200			ECN4451DAJ-A8/B60	ECN4452DAJ-A8/B60	ECN4453DAJ-A8/B60	ECN4458DAJ-A8/B60

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- 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 lock.

5.3

Reduced Voltage Starter

Freedom Three-Phase Magnetic Starters

Class ECN44—Combination Autotransformer Starter—Circuit Breaker, continued

Motor Voltage	hp Rating	Magnet Coil Voltage ①	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4 Water and Dust-Tight Painted Steel Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number
NEMA Size 6 (540A)							
200	100	120	600A	ECN4461EAL-A8/B41	ECN4462EAL-A8/B41	ECN4463EAL-A8/B41	ECN4468EAL-A8/B41
	125			ECN4461EAL-A8/B46	ECN4462EAL-A8/B46	ECN4463EAL-A8/B46	ECN4468EAL-A8/B46
	150			ECN4461EAL-A8/B51	ECN4462EAL-A8/B51	ECN4463EAL-A8/B51	ECN4468EAL-A8/B51
230	125			ECN4461BAL-A8/B47	ECN4462BAL-A8/B47	ECN4463BAL-A8/B47	ECN4468BAL-A8/B47
	150			ECN4461BAL-A8/B52	ECN4462BAL-A8/B52	ECN4463BAL-A8/B52	ECN4468BAL-A8/B52
	200			800A	ECN4461BAM-A8/B57	ECN4462BAM-A8/B57	ECN4463BAM-A8/B57
460	250		600A	ECN4461CAL-A8/B64	ECN4462CAL-A8/B64	ECN4463CAL-A8/B64	ECN4468CAL-A8/B64
	300			ECN4461CAL-A8/B69	ECN4462CAL-A8/B69	ECN4463CAL-A8/B69	ECN4468CAL-A8/B69
	400			800A	ECN4461CAM-A8/B74	ECN4462CAM-A8/B74	ECN4463CAM-A8/B74
575	250		600A	ECN4461DAL-A8/B65	ECN4462DAL-A8/B65	ECN4463DAL-A8/B65	ECN4468DAL-A8/B65
	300			ECN4461DAL-A8/B70	ECN4462DAL-A8/B70	ECN4463DAL-A8/B70	ECN4468DAL-A8/B70
	400			ECN4461DAM-A8/B75	ECN4462DAM-A8/B75	ECN4463DAM-A8/B75	ECN4468DAM-A8/B75
NEMA Size 7 (810A)							
230	250	120	④	ECN4471BAU-A8/B62	ECN4472BAU-A8/B62	ECN4473BAU-A8/B62	ECN4478BAU-A8/B62
	300			ECN4471BAU-A8/B67	ECN4472BAU-A8/B67	ECN4473BAU-A8/B67	ECN4478BAU-A8/B67
460	450			ECN4471CAU-A8/B78	ECN4472CAU-A8/B78	ECN4473CAU-A8/B78	ECN4478CAU-A8/B78
	500			ECN4471CAU-A8/B81	ECN4472CAU-A8/B81	ECN4473CAU-A8/B81	ECN4478CAU-A8/B81
	600			ECN4471CAU-A8/B84	ECN4472CAU-A8/B84	ECN4473CAU-A8/B84	ECN4478CAU-A8/B84
575	450			ECN4471DAU-A8/B79	ECN4472DAU-A8/B79	ECN4473DAU-A8/B79	ECN4478DAU-A8/B79
	500			ECN4471DAU-A8/B82	ECN4472DAU-A8/B82	ECN4473DAU-A8/B82	ECN4478DAU-A8/B82
	600			ECN4471DAU-A8/B85	ECN4472DAU-A8/B85	ECN4473DAU-A8/B85	ECN4478DAU-A8/B85
NEMA Size 8 (1215A)							
230	400	120	④	ECN4481BAU-A8/B72	ECN4482BAU-A8/B72	ECN4483BAU-A8/B72	ECN4488BAU-A8/B72
	450			ECN4481BAU-A8/B76	ECN4482BAU-A8/B76	ECN4483BAU-A8/B76	ECN4488BAU-A8/B76
460	700			ECN4481CAU-A8/B87	ECN4482CAU-A8/B87	ECN4483CAU-A8/B87	ECN4488CAU-A8/B87
	800			ECN4481CAU-A8/B91	ECN4482CAU-A8/B91	ECN4483CAU-A8/B91	ECN4488CAU-A8/B91
	900			ECN4481CAU-A8/B94	ECN4482CAU-A8/B94	ECN4483CAU-A8/B94	ECN4488CAU-A8/B94
575	700			ECN4481DAU-A8/B88	ECN4482DAU-A8/B88	ECN4483DAU-A8/B88	ECN4488DAU-A8/B88
	800			ECN4481DAU-A8/B92	ECN4482DAU-A8/B92	ECN4483DAU-A8/B92	ECN4488DAU-A8/B92
	900			ECN4481DAU-A8/B95	ECN4482DAU-A8/B95	ECN4483DAU-A8/B95	ECN4488DAU-A8/B95
NEMA Size 9 (2250A)							
230	800	120	④	ECN4491BAU-A8/B89	ECN4492BAU-A8/B89	ECN4493BAU-A8/B89	ECN4498BAU-A8/B89
460	1600			ECN4491CAU-A8/B96	ECN4492CAU-A8/B96	ECN4493CAU-A8/B96	ECN4498CAU-A8/B96
575	1600			ECN4491DAU-A8/B97	ECN4492DAU-A8/B97	ECN4493DAU-A8/B97	ECN4498DAU-A8/B97

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

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- 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 lock.
- ④ Supply hp, voltage, FLA and whether motor is design E or not when ordering the starter.

Part Winding

Features

- Non-combination and combination designs
- Three-phase magnetic, three-pole
- Interchangeable heater OLR
- 600V maximum

Class ECN45—Non-Combination Part Winding Starter

Motor Voltage	Max. hp Rating	Magnet Coil Voltage ①	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ② Catalog Number	Type 12 Dust-Tight Industrial External Reset ③ Catalog Number	Component Starter (Open) Catalog Number
NEMA Size 2PW							
200	20	120	ECN4521EAA	ECN4522EAA	ECN4524EAA	ECN4528EAA	AN16GN0AB
230	25		ECN4521BAA	ECN4522BAA	ECN4524BAA	ECN4528BAA	
460	40		ECN4521CAA	ECN4522CAA	ECN4524CAA	ECN4528CAA	
575	40		ECN4521DAA	ECN4522DAA	ECN4524DAA	ECN4528DAA	
NEMA Size 3PW							
200	40	120	ECN4531EAA	ECN4532EAA	ECN4534EAA	ECN4538EAA	AN16KN0AB
230	50		ECN4531BAA	ECN4532BAA	ECN4534BAA	ECN4538BAA	
460	75		ECN4531CAA	ECN4532CAA	ECN4534CAA	ECN4538CAA	
575	75		ECN4531DAA	ECN4532DAA	ECN4534DAA	ECN4538DAA	
NEMA Size 4PW							
200	75	120	ECN4541EAA	ECN4542EAA	ECN4544EAA	ECN4548EAA	AN16NN0AB
230	75		ECN4541BAA	ECN4542BAA	ECN4544BAA	ECN4548BAA	
460	150		ECN4541CAA	ECN4542CAA	ECN4544CAA	ECN4548CAA	
575	150		ECN4541DAA	ECN4542DAA	ECN4544DAA	ECN4548DAA	
NEMA Size 5PW							
200	150	120	ECN4551EAA	ECN4552EAA	ECN4554EAA	ECN4558EAA	AN16SN0AB
230	150		ECN4551BAA	ECN4552BAA	ECN4554BAA	ECN4558BAA	
460	350		ECN4551CAA	ECN4552CAA	ECN4554CAA	ECN4558CAA	
575	350		ECN4551DAA	ECN4552DAA	ECN4554DAA	ECN4558DAA	
NEMA Size 6PW							
230	300	120	ECN4561BAA	ECN4562BAA	ECN4563BAA ④	ECN4568BAA	AN16TN0AB
460	600		ECN4561CAA	ECN4562CAA	ECN4563CAA ④	ECN4568CAA	
575	600		ECN4561DAA	ECN4562DAA	ECN4563DAA ④	ECN4568DAA	
NEMA Size 7PW							
230	450	120	ECN4571BAA	ECN4572BAA	ECN4573BAA ④	ECN4578BAA	AN16UN0AB
460	900		ECN4571CAA	ECN4572CAA	ECN4573CAA ④	ECN4578CAA	
575	900		ECN4571DAA	ECN4572DAA	ECN4573DAA ④	ECN4578DAA	
NEMA Size 8PW							
230	700	120	ECN4581BAA	ECN4582BAA	ECN4583BAA ④	ECN4588BAA	AN16VN0AB
460	1400		ECN4581CAA	ECN4582CAA	ECN4583CAA ④	ECN4588CAA	
575	1400		ECN4581DAA	ECN4582DAA	ECN4583DAA ④	ECN4588DAA	

Starters do not include heater packs. Select two cartons of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4524EAA. 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**.
- ③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code R5.
- ④ Type 4 (painted steel) sizes 6–8PW.

Class ECN46—Combination Part Winding Starter—Fusible Disconnect

Motor Voltage	Max. hp Rating	Magnet Coil Voltage ①	Fuse Clip Amp.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ② Catalog Number	Type 12 Dust-Tight Industrial External Reset ③④ Catalog Number	Component Starter (Open) Catalog Number
NEMA Size 2PW								
200	20	120	100A	ECN4621EAF	ECN4622EAF	ECN4624EAF	ECN4628EAF	AN16GN0AB
230	15		60A	ECN4621BAD	ECN4622BAD	ECN4624BAD	ECN4628BAD	AN16GN0AB
	25		100A	ECN4621BAF	ECN4622BAF	ECN4624BAF	ECN4628BAF	
460	30		60A	ECN4621CAE	ECN4622CAE	ECN4624CAE	ECN4628CAE	AN16GN0AB
	40		100A	ECN4621CAG	ECN4622CAG	ECN4624CAG	ECN4628CAG	
575	20		30A	ECN4621DAC	ECN4622DAC	ECN4624DAC	ECN4628DAC	AN16GN0AB
	40		60A	ECN4621DAE	ECN4622DAE	ECN4624DAE	ECN4628DAE	
NEMA Size 3PW								
200	40	120	200A	ECN4631EAH	ECN4632EAH	ECN4634EAH	ECN4638EAH	AN16KN0AB
230	50			ECN4631BAH	ECN4632BAH	ECN4634BAH	ECN4638BAH	AN16KN0AB
460	50		100A	ECN4631CAG	ECN4632CAG	ECN4634CAG	ECN4638CAG	AN16KN0AB
	75		200A	ECN4631CAJ	ECN4632CAJ	ECN4634CAJ	ECN4638CAJ	
575	60		100A	ECN4631DAG	ECN4632DAG	ECN4634DAG	ECN4638DAG	AN16KN0AB
	75		200A	ECN4631DAJ	ECN4632DAJ	ECN4634DAJ	ECN4638DAJ	
NEMA Size 4PW								
200	50	120	200A	ECN4641EAH	ECN4642EAH	ECN4644EAH	ECN4648EAH	AN16NN0AB
	75		400A	ECN4641EAK	ECN4642EAK	ECN4644EAK	ECN4648EAK	
230	75			ECN4641BAK	ECN4642BAK	ECN4644BAK	ECN4648BAK	AN16NN0AB
460	100		200A	ECN4641CAJ	ECN4642CAJ	ECN4644CAJ	ECN4648CAJ	AN16NN0AB
	150		400A	ECN4641CAL	ECN4642CAL	ECN4644CAL	ECN4648CAL	
575	150		200A	ECN4641DAJ	ECN4642DAJ	ECN4644DAJ	ECN4648DAJ	AN16NN0AB

Starters do not include heater packs. Select two cartons of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4624EAF. 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**.
- ③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.
- ④ Type 12 enclosure is without safety door interlock.

Class ECN46—Combination Part Winding Starter—Fusible Disconnect, continued

Motor Voltage	Max. hp Rating	Magnet Coil Voltage ①	Fuse Clip Amp.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ② Catalog Number	Type 12 Dust-Tight Industrial External Reset ③④ Catalog Number	Component Starter (Open) Catalog Number
NEMA Size 5PW								
200	100	120	200	ECN4651EAK	ECN4652EAK	ECN4654EAK	ECN4658EAK	AN16SN0AB
	150			ECN4651EAM	ECN4652EAM	ECN4654EAM	ECN4658EAM	
230	100		230	ECN4651BAK	ECN4652BAK	ECN4654BAK	ECN4658BAK	AN16SN0AB
	150			ECN4651BAM	ECN4652BAM	ECN4654BAM	ECN4658BAM	
460	200		460	ECN4651CAL	ECN4652CAL	ECN4654CAL	ECN4658CAL	AN16SN0AB
	350			ECN4651CAN	ECN4652CAN	ECN4654CAN	ECN4658CAN	
575	300		575	ECN4651DAL	ECN4652DAL	ECN4654DAL	ECN4658DAL	AN16SN0AB
	350			ECN4651DAN	ECN4652DAN	ECN4654DAN	ECN4658DAN	
NEMA Size 6PW								
230	300	120	⑤	ECN4661BAU	ECN4662BAU	ECN4663BAU ⑥	ECN4668BAU	AN16TN0AB
460	600			ECN4661CAU	ECN4662CAU	ECN4663CAU ⑥	ECN4668CAU	
575	600			ECN4661DAU	ECN4662DAU	ECN4663DAU ⑥	ECN4668DAU	
NEMA Size 7PW								
230	450	120	⑤	ECN4671BAU	ECN4672BAU	ECN4673BAU ⑥	ECN4678BAU	AN16UN0AB
460	900			ECN4671CAU	ECN4672CAU	ECN4673CAU ⑥	ECN4678CAU	
575	900			ECN4671DAU	ECN4672DAU	ECN4673DAU ⑥	ECN4678DAU	
NEMA Size 8PW								
230	700	120	⑤	ECN4681BAU	ECN4682BAU	ECN4683BAU ⑥	ECN4688BAU	AN16VN0AB
460	1400			ECN4681CAU	ECN4682CAU	ECN4683CAU ⑥	ECN4688CAU	
575	1400			ECN4681DAU	ECN4682DAU	ECN4683DAU ⑥	ECN4688DAU	

Starters do not include heater packs. Select two cartons of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4624EAF. 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**.
- ③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.
- ④ Type 12 enclosure is without safety door interlock.
- ⑤ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑥ Type 4 (painted steel) sizes 6–8PW.

Class ECN46—Combination Part Winding Starter—Non-Fusible Disconnect

Motor Voltage	Max. hp Rating	Magnet Coil Voltage ①	Disconnect Amperes	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ② Catalog Number	Type 12 Dust-Tight Industrial External Reset ③④ Catalog Number	Component Starter (Open) Catalog Number
NEMA Size 2PW								
200	20	120	60A	ECN4621EAA	ECN4622EAA	ECN4624EAA	ECN4628EAA	AN16GN0AB
230	25			ECN4621BAA	ECN4622BAA	ECN4624BAA	ECN4628BAA	
460	40			ECN4621CAA	ECN4622CAA	ECN4624CAA	ECN4628CAA	
575	40			ECN4621DAA	ECN4622DAA	ECN4624DAA	ECN4628DAA	
NEMA Size 3PW								
200	40	120	100A	ECN4631EAA	ECN4632EAA	ECN4634EAA	ECN4638EAA	AN16KN0AB
230	50			ECN4631BAA	ECN4632BAA	ECN4634BAA	ECN4638BAA	
460	75			ECN4631CAA	ECN4632CAA	ECN4634CAA	ECN4638CAA	
575	75			ECN4631DAA	ECN4632DAA	ECN4634DAA	ECN4638DAA	
NEMA Size 4PW								
200	75	120	200A	ECN4641EAA	ECN4642EAA	ECN4644EAA	ECN4648EAA	AN16NN0AB
230	75			ECN4641BAA	ECN4642BAA	ECN4644BAA	ECN4648BAA	
460	150			ECN4641CAA	ECN4642CAA	ECN4644CAA	ECN4648CAA	
575	150			ECN4641DAA	ECN4642DAA	ECN4644DAA	ECN4648DAA	
NEMA Size 5PW								
200	150	120	400A	ECN4651EAA	ECN4652EAA	ECN4654EAA	ECN4658EAA	AN16SN0AB
230	150			ECN4651BAA	ECN4652BAA	ECN4654BAA	ECN4658BAA	
460	350			ECN4651CAA	ECN4652CAA	ECN4654CAA	ECN4658CAA	
575	350			ECN4651DAA	ECN4652DAA	ECN4654DAA	ECN4658DAA	
NEMA Size 6PW								
230	300	120	600A	ECN4661BAA	ECN4662BAA	ECN4663BAA ⑤	ECN4668BAA	AN16TN0AB
460	600			ECN4661CAA	ECN4662CAA	ECN4663CAA ⑤	ECN4668CAA	
575	600			ECN4661DAA	ECN4662DAA	ECN4663DAA ⑤	ECN4668DAA	
NEMA Size 7PW								
230	450	120	⑥	ECN4671BAA	ECN4672BAA	ECN4673BAA ⑤	ECN4678BAA	AN16UN0AB
460	900			ECN4671CAA	ECN4672CAA	ECN4673CAA ⑤	ECN4678CAA	
575	900			ECN4671DAA	ECN4672DAA	ECN4673DAA ⑤	ECN4678DAA	
NEMA Size 8PW								
230	700	120	⑥	ECN4681BAA	ECN4682BAA	ECN4683BAA ⑤	ECN4688BAA	AN16VN0AB
460	1400			ECN4681CAA	ECN4682CAA	ECN4683CAA ⑤	ECN4688CAA	
575	1400			ECN4681DAA	ECN4682DAA	ECN4683DAA ⑤	ECN4688DAA	

Starters do not include heater packs. Select two cartons of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4624EAF. 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**.
- ③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.
- ④ Type 12 enclosure is without safety door interlock.
- ⑤ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑥ Type 4 (painted steel) sizes 6–8PW.

Class ECN47—Combination Part Winding Starter—Circuit Breaker

Motor Voltage	Max. hp Rating	Magnet Coil Voltage ①	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ② Catalog Number	Type 12 Dust-Tight Industrial External Reset ③④ Catalog Number	Component Starter (Open) Catalog Number
NEMA Size 2PW								
200	15	120	70A	ECN4721EAH	ECN4722EAH	ECN4724EAH	ECN4728EAH	AN16GN0AB
	20		100A	ECN4721EAK	ECN4722EAK	ECN4724EAK	ECN4728EAK	
230	15		70A	ECN4721BAH	ECN4722BAH	ECN4724BAH	ECN4728BAH	AN16GN0AB
	20		90A	ECN4721BAJ	ECN4722BAJ	ECN4724BAJ	ECN4728BAJ	
	25		100A	ECN4721BAK	ECN4722BAK	ECN4724BAK	ECN4728BAK	
460	20		40A	ECN4721CAE	ECN4722CAE	ECN4724CAE	ECN4728CAE	AN16GN0AB
	30		60A	ECN4721CAG	ECN4722CAG	ECN4724CAG	ECN4728CAG	
	40		90A	ECN4721CAJ	ECN4722CAJ	ECN4724CAJ	ECN4728CAJ	
575	25		40A	ECN4721DAE	ECN4722DAE	ECN4724DAE	ECN4728DAE	AN16GN0AB
	30		50A	ECN4721DAF	ECN4722DAF	ECN4724DAF	ECN4728DAF	
	40		60A	ECN4721DAG	ECN4722DAG	ECN4724DAG	ECN4728DAG	
NEMA Size 3PW								
200	40	120	125A	ECN4731EAL	ECN4732EAL	ECN4734EAL	ECN4738EAL	AN16KN0AB
230	40			ECN4731BAL	ECN4732BAL	ECN4734BAL	ECN4738BAL	AN16KN0AB
		50	150A	ECN4731BAM	ECN4732BAM	ECN4734BAM	ECN4738BAM	
460	50		100A	ECN4731CAK	ECN4732CAK	ECN4734CAK	ECN4738CAK	AN16KN0AB
	75		125A	ECN4731CAL	ECN4732CAL	ECN4734CAL	ECN4738CAL	
575	50		90A	ECN4731DAJ	ECN4732DAJ	ECN4734DAJ	ECN4738DAJ	AN16KN0AB
	60		100A	ECN4731DAK	ECN4732DAK	ECN4734DAK	ECN4738DAK	
	75		125A	ECN4731DAL	ECN4732DAL	ECN4734DAL	ECN4738DAL	
NEMA Size 4PW								
200	50	120	200A	ECN4741EAP	ECN4742EAP	ECN4744EAP	ECN4748EAP	AN16NN0AB
	60		225A	ECN4741EAQ	ECN4742EAQ	ECN4744EAQ	ECN4748EAQ	
	75		300A	ECN4741EAS	ECN4742EAS	ECN4744EAS	ECN4748EAS	
230	60		200A	ECN4741BAP	ECN4742BAP	ECN4744BAP	ECN4748BAP	AN16NN0AB
	75		250A	ECN4741BAR	ECN4742BAR	ECN4744BAR	ECN4748BAR	
460	100		150A	ECN4741CAM	ECN4742CAM	ECN4744CAM	ECN4748CAM	AN16NN0AB
	125		225A	ECN4741CAQ	ECN4742CAQ	ECN4744CAQ	ECN4748CAQ	
	150		250A	ECN4741CAR	ECN4742CAR	ECN4744CAR	ECN4748CAR	
575	100		125A	ECN4741DAL	ECN4742DAL	ECN4744DAL	ECN4748DAL	AN16NN0AB
	125		150A	ECN4741DAM	ECN4742DAM	ECN4744DAM	ECN4748DAM	
	150		200A	ECN4741DAP	ECN4742DAP	ECN4744DAP	ECN4748DAP	

Starters do not include heater packs. Select two cartons of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4624EAF. 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**.
- ③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.
- ④ Type 12 enclosure is without safety door interlock.

Class ECN47—Combination Part Winding Starter—Circuit Breaker, continued

Motor Voltage	Max. hp Rating	Magnet Coil Voltage ①	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ② Catalog Number	Type 12 Dust-Tight Industrial External Reset ③④ Catalog Number	Component Starter (Open) Catalog Number
NEMA Size 5PW								
200	100	120	350A	ECN4751EAV	ECN4752EAV	ECN4754EAV	ECN4758EAV	AN16SN0AB
	125		500A	ECN4751EAY	ECN4752EAY	ECN4754EAY	ECN4758EAY	
	150		600A	ECN4751EAZ	ECN4752EAZ	ECN4754EAZ	ECN4758EAZ	
230	100		350A	ECN4751BAV	ECN4752BAV	ECN4754BAV	ECN4758BAV	AN16SN0AB
	125		400A	ECN4751BAW	ECN4752BAW	ECN4754BAW	ECN4758BAW	
	150		500A	ECN4751BAY	ECN4752BAY	ECN4754BAY	ECN4758BAY	
460	200		350A	ECN4751CAV	ECN4752CAV	ECN4754CAV	ECN4758CAV	AN16SN0AB
	250		400A	ECN4751CAW	ECN4752CAW	ECN4754CAW	ECN4758CAW	
	300		500A	ECN4751CAY	ECN4752CAY	ECN4754CAY	ECN4758CAY	
	350		600A	ECN4751CAZ	ECN4752CAZ	ECN4754CAZ	ECN4758CAZ	
575	200		250A	ECN4751DAR	ECN4752DAR	ECN4754DAR	ECN4758DAR	AN16SN0AB
	300		350A	ECN4751DAV	ECN4752DAV	ECN4754DAV	ECN4758DAV	
	350		500A	ECN4751DAY	ECN4752DAY	ECN4754DAY	ECN4758DAY	
NEMA Size 6PW								
230	300	120	Ⓞ	ECN4761BAU	ECN4762BAU	ECN4763BAU ⑥	ECN4768BAU	AN16TN0AB
460	600			ECN4761CAU	ECN4762CAU	ECN4763CAU ⑥	ECN4768CAU	AN16TN0AB
575	600			ECN4761DAU	ECN4762DAU	ECN4763DAU ⑥	ECN4768DAU	AN16TN0AB
NEMA Size 7PW								
230	450	120	Ⓞ	ECN4771BAU	ECN4772BAU	ECN4773BAU ⑥	ECN4778BAU	AN16UN0AB
460	900			ECN4771CAU	ECN4772CAU	ECN4773CAU ⑥	ECN4778CAU	AN16UN0AB
575	900			ECN4771DAU	ECN4772DAU	ECN4773DAU ⑥	ECN4778DAU	AN16UN0AB
NEMA Size 8PW								
230	700	120	Ⓞ	ECN4781BAU	ECN4782BAU	ECN4783BAU ⑥	ECN4788BAU	AN16VN0AB
460	1400			ECN4781CAU	ECN4782CAU	ECN4783CAU ⑥	ECN4788CAU	AN16VN0AB
575	1400			ECN4781DAU	ECN4782DAU	ECN4783DAU ⑥	ECN4788DAU	AN16VN0AB

Starters do not include heater packs. Select two cartons of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4624EAF. 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**.
- ③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.
- ④ Type 12 enclosure is without safety door interlock.
- ⑤ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑥ Type 4 (painted steel) sizes 6–8PW.

Wye Delta

Features

- Open or closed transition
- Non-combination and combination designs
- Three-phase magnetic, three-pole
- Interchangeable heater OLR
- 600V maximum

Class ECN48—Non-Combination Open Transition Wye Delta Starter

NEMA Size	Motor Voltage	Max. hp Rating	Magnet Coil Voltage ^①	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ^② Catalog Number	Type 12 Dust-Tight Industrial External Reset ^③ Catalog Number	Component Starter (Open) ^④ Catalog Number
2YD	200	20	120	ECN4821EAA	ECN4822EAA	ECN4824EAA	ECN4828EAA	AN16GN0AB
3YD		40		ECN4831EAA	ECN4832EAA	ECN4834EAA	ECN4838EAA	AN16KN0AB
4YD		60		ECN4841EAA	ECN4842EAA	ECN4844EAA	ECN4848EAA	AN16NN0AB
5YD		150		ECN4851EAA	ECN4852EAA	ECN4854EAA	ECN4858EAA	AN16SN0AB
6YD		300		ECN4861EAA	ECN4862EAA	ECN4863EAA ^④	ECN4868EAA	AN16TN0AB
7YD		500		ECN4871EAA	ECN4872EAA	ECN4873EAA ^④	ECN4878EAA	AN16UN0AB
8YD		750		ECN4881EAA	ECN4882EAA	ECN4883EAA ^④	ECN4888EAA	AN16VN0AB
2YD	230	25	120	ECN4821BAA	ECN4822BAA	ECN4824BAA	ECN4828BAA	AN16GN0AB
3YD		50		ECN4831BAA	ECN4832BAA	ECN4834BAA	ECN4838BAA	AN16KN0AB
4YD		75		ECN4841BAA	ECN4842BAA	ECN4844BAA	ECN4848BAA	AN16NN0AB
5YD		150		ECN4851BAA	ECN4852BAA	ECN4854BAA	ECN4858BAA	AN16SN0AB
6YD		350		ECN4861BAA	ECN4862BAA	ECN4863BAA ^④	ECN4868BAA	AN16TN0AB
7YD		500		ECN4871BAA	ECN4872BAA	ECN4873BAA ^④	ECN4878BAA	AN16UN0AB
8YD		800		ECN4881BAA	ECN4882BAA	ECN4883BAA ^④	ECN4888BAA	AN16VN0AB
2YD	460	40	120	ECN4821CAA	ECN4822CAA	ECN4824CAA	ECN4828CAA	AN16GN0AB
3YD		75		ECN4831CAA	ECN4832CAA	ECN4834CAA	ECN4838CAA	AN16KN0AB
4YD		150		ECN4841CAA	ECN4842CAA	ECN4844CAA	ECN4848CAA	AN16NN0AB
5YD		300		ECN4851CAA	ECN4852CAA	ECN4854CAA	ECN4858CAA	AN16SN0AB
6YD		700		ECN4861CAA	ECN4862CAA	ECN4863CAA ^④	ECN4868CAA	AN16TN0AB
7YD		1000		ECN4871CAA	ECN4872CAA	ECN4873CAA ^④	ECN4878CAA	AN16UN0AB
8YD		1500		ECN4881CAA	ECN4882CAA	ECN4883CAA ^④	ECN4888CAA	AN16VN0AB
2YD	575	40	120	ECN4821DAA	ECN4822DAA	ECN4824DAA	ECN4828DAA	AN16GN0AB
3YD		75		ECN4831DAA	ECN4832DAA	ECN4834DAA	ECN4838DAA	AN16KN0AB
4YD		150		ECN4841DAA	ECN4842DAA	ECN4844DAA	ECN4848DAA	AN16NN0AB
5YD		300		ECN4851DAA	ECN4852DAA	ECN4854DAA	ECN4858DAA	AN16SN0AB
6YD		700		ECN4861DAA	ECN4862DAA	ECN4863DAA ^④	ECN4868DAA	AN16TN0AB
7YD		1000		ECN4871DAA	ECN4872DAA	ECN4873DAA ^④	ECN4878DAA	AN16UN0AB
8YD		1500		ECN4881DAA	ECN4882DAA	ECN4883DAA ^④	ECN4888DAA	AN16VN0AB

Starters do not include heater packs. Select one carton of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- ^① All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ^② The catalog numbers listed in the Type 4X column are for Type 4X 304-Grade stainless steel, as indicated by the **seventh** digit. Example: ECN4624EAF. 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**.
- ^③ All Type 12 enclosures are standardized with external reset. For internal reset, order modification code **R5**.
- ^④ Also requires matching contactor with mechanical interlock.
- ^⑤ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Fusible Disconnect

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN4921EAD-W10/G1	ECN4922EAD-W10/G1	ECN4924EAD-W10/G1	ECN4928EAD-W10/G1	AN16GN0AB
	20	100A	ECN4921EAF-W10/G3	ECN4922EAF-W10/G3	ECN4924EAF-W10/G3	ECN4928EAF-W10/G3	
3YD	25	100A	ECN4931EAF-W10/G8	ECN4932EAF-W10/G8	ECN4934EAF-W10/G8	ECN4938EAF-W10/G8	AN16KN0AB
	30	200A	ECN4931EAH-W10/G13	ECN4932EAH-W10/G13	ECN4934EAH-W10/G13	ECN4938EAH-W10/G13	
	40		ECN4931EAH-W10/G18	ECN4932EAH-W10/G18	ECN4934EAH-W10/G18	ECN4938EAH-W10/G18	
4YD	50	200A	ECN4941EAH-W10/G23	ECN4942EAH-W10/G23	ECN4944EAH-W10/G23	ECN4948EAH-W10/G23	AN16NN0AB
	60	400A	ECN4941EAK-W10/G28	ECN4942EAK-W10/G28	ECN4944EAK-W10/G28	ECN4948EAK-W10/G28	
5YD	75	400A	ECN4951EAK-W10/G33	ECN4952EAK-W10/G33	ECN4954EAK-W10/G33	ECN4958EAK-W10/G33	AN16SN0AB
	100		ECN4951EAK-W10/G38	ECN4952EAK-W10/G38	ECN4954EAK-W10/G38	ECN4958EAK-W10/G38	
	125	600A	ECN4951EAM-W10/G43	ECN4952EAM-W10/G43	ECN4954EAM-W10/G43	ECN4958EAM-W10/G43	
	150		ECN4951EAM-W10/G48	ECN4952EAM-W10/G48	ECN4954EAM-W10/G48	ECN4958EAM-W10/G48	
6YD	200	⑥	ECN4961EAU-W10/G53	ECN4962EAU-W10/G53	ECN4963EAU-W10/G53 ⑦	ECN4968EAU-W10/G53	AN16TN0AB
	250		ECN4961EAU-W10/G58	ECN4962EAU-W10/G58	ECN4963EAU-W10/G58 ⑦	ECN4968EAU-W10/G58	
	300		ECN4961EAU-W10/G63	ECN4962EAU-W10/G63	ECN4963EAU-W10/G63 ⑦	ECN4968EAU-W10/G63	
7YD	350	⑥	ECN4971EAU-W10/G68	ECN4972EAU-W10/G68	ECN4973EAU-W10/G68 ⑦	ECN4978EAU-W10/G68	AN16UN0AB
	400		ECN4971EAU-W10/G73	ECN4972EAU-W10/G73	ECN4973EAU-W10/G73 ⑦	ECN4978EAU-W10/G73	
	450		ECN4971EAU-W10/G78	ECN4972EAU-W10/G78	ECN4973EAU-W10/G78 ⑦	ECN4978EAU-W10/G78	
	500		ECN4971EAU-W10/G83	ECN4972EAU-W10/G83	ECN4973EAU-W10/G83 ⑦	ECN4978EAU-W10/G83	
8YD	600	⑥	ECN4981EAU-W10/G88	ECN4982EAU-W10/G88	ECN4983EAU-W10/G88 ⑦	ECN4988EAU-W10/G88	AN16VN0AB
	700		ECN4981EAU-W10/G93	ECN4982EAU-W10/G93	ECN4983EAU-W10/G93 ⑦	ECN4988EAU-W10/G93	
	750		ECN4981EAU-W10/G98	ECN4982EAU-W10/G98	ECN4983EAU-W10/G98 ⑦	ECN4988EAU-W10/G98	

Starters do not include heater packs. Select one carton of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN4921BAD-W10/G2	ECN4922BAD-W10/G2	ECN4924BAD-W10/G2	ECN4928BAD-W10/G2	AN16GN0AB
	20	100A	ECN4921BAF-W10/G4	ECN4922BAF-W10/G4	ECN4924BAF-W10/G4	ECN4928BAF-W10/G4	
	25		ECN4921BAF-W10/G9	ECN4922BAF-W10/G9	ECN4924BAF-W10/G9	ECN4928BAF-W10/G9	
3YD	30	100A	ECN4931BAF-W10/G14	ECN4932BAF-W10/G14	ECN4934BAF-W10/G14	ECN4938BAF-W10/G14	AN16KN0AB
	40	200A	ECN4931BAH-W10/G19	ECN4932BAH-W10/G19	ECN4934BAH-W10/G19	ECN4938BAH-W10/G19	
	50		ECN4931BAH-W10/G24	ECN4932BAH-W10/G24	ECN4934BAH-W10/G24	ECN4938BAH-W10/G24	
4YD	60	200A	ECN4941BAH-W10/G29	ECN4942BAH-W10/G29	ECN4944BAH-W10/G29	ECN4948BAH-W10/G29	AN16NN0AB
	75	400A	ECN4941BAK-W10/G34	ECN4942BAK-W10/G34	ECN4944BAK-W10/G34	ECN4948BAK-W10/G34	
5YD	100	400A	ECN4951BAK-W10/G39	ECN4952BAK-W10/G39	ECN4954BAK-W10/G39	ECN4958BAK-W10/G39	AN16SN0AB
	125		ECN4951BAK-W10/G44	ECN4952BAK-W10/G44	ECN4954BAK-W10/G44	ECN4958BAK-W10/G44	
	150	600A	ECN4951BAM-W10/G49	ECN4952BAM-W10/G49	ECN4954BAM-W10/G49	ECN4958BAM-W10/G49	
6YD	200	600A	ECN4961BAM-W10/G54	ECN4962BAM-W10/G54	ECN4963BAM-W10/G54 ⑦	ECN4968BAM-W10/G54	AN16TN0AB
	250	⑥	ECN4961BAU-W10/G59	ECN4962BAU-W10/G59	ECN4963BAU-W10/G59 ⑦	ECN4968BAU-W10/G59	
	300		ECN4961BAU-W10/G64	ECN4962BAU-W10/G64	ECN4963BAU-W10/G64 ⑦	ECN4968BAU-W10/G64	
	350		ECN4961BAU-W10/G69	ECN4962BAU-W10/G69	ECN4963BAU-W10/G69 ⑦	ECN4968BAU-W10/G69	
7YD	400	⑥	ECN4971BAU-W10/G74	ECN4972BAU-W10/G74	ECN4973BAU-W10/G74 ⑦	ECN4978BAU-W10/G74	AN16UN0AB
	450		ECN4971BAU-W10/G79	ECN4972BAU-W10/G79	ECN4973BAU-W10/G79 ⑦	ECN4978BAU-W10/G79	
	500		ECN4971BAU-W10/G84	ECN4972BAU-W10/G84	ECN4973BAU-W10/G84 ⑦	ECN4978BAU-W10/G84	
8YD	600	⑥	ECN4981BAU-W10/G89	ECN4982BAU-W10/G89	ECN4983BAU-W10/G89 ⑦	ECN4988BAU-W10/G89	AN16VN0AB
	700		ECN4981BAU-W10/G94	ECN4982BAU-W10/G94	ECN4983BAU-W10/G94 ⑦	ECN4988BAU-W10/G94	
	750		ECN4981BAU-W10/G99	ECN4982BAU-W10/G99	ECN4983BAU-W10/G99 ⑦	ECN4988BAU-W10/G99	
	800		ECN4981BAU-W10/G103	ECN4982BAU-W10/G103	ECN4983BAU-W10/G103 ⑦	ECN4988BAU-W10/G103	

Starters do not include heater packs. Select one carton of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 460/Magnet Coil Voltage 120 ⑤							
2YD	20	60A	ECN4921CAE-W10/G6	ECN4922CAE-W10/G6	ECN4924CAE-W10/G6	ECN4928CAE-W10/G6	AN16GN0AB
	25		ECN4921CAE-W10/G11	ECN4922CAE-W10/G11	ECN4924CAE-W10/G11	ECN4928CAE-W10/G11	
	30		ECN4921CAE-W10/G16	ECN4922CAE-W10/G16	ECN4924CAE-W10/G16	ECN4928CAE-W10/G16	
	40		ECN4921CAE-W10/G21	ECN4922CAE-W10/G21	ECN4924CAE-W10/G21	ECN4928CAE-W10/G21	
3YD	50	100A	ECN4931CAG-W10/G26	ECN4932CAG-W10/G26	ECN4934CAG-W10/G26	ECN4938CAG-W10/G26	AN16KN0AB
	60		ECN4931CAG-W10/G31	ECN4932CAG-W10/G31	ECN4934CAG-W10/G31	ECN4938CAG-W10/G31	
	75	200A	ECN4931CAJ-W10/G36	ECN4932CAJ-W10/G36	ECN4934CAJ-W10/G36	ECN4938CAJ-W10/G36	
4YD	100	200A	ECN4941CAJ-W10/G41	ECN4942CAJ-W10/G41	ECN4944CAJ-W10/G41	ECN4948CAJ-W10/G41	AN16NN0AB
	125		ECN4941CAJ-W10/G46	ECN4942CAJ-W10/G46	ECN4944CAJ-W10/G46	ECN4948CAJ-W10/G46	
	150	400A	ECN4941CAL-W10/G51	ECN4942CAL-W10/G51	ECN4944CAL-W10/G51	ECN4948CAL-W10/G51	
5YD	200	400A	ECN4951CAL-W10/G56	ECN4952CAL-W10/G56	ECN4954CAL-W10/G56	ECN4958CAL-W10/G56	AN16SN0AB
	250		ECN4951CAL-W10/G61	ECN4952CAL-W10/G61	ECN4954CAL-W10/G61	ECN4958CAL-W10/G61	
	300	600A	ECN4951CAN-W10/G66	ECN4952CAN-W10/G66	ECN4954CAN-W10/G66	ECN4958CAN-W10/G66	
6YD	350	600A	ECN4961CAN-W10/G71	ECN4962CAN-W10/G71	ECN4963CAN-W10/G71 ⑦	ECN4968CAN-W10/G71	AN16TN0AB
	400		ECN4961CAN-W10/G76	ECN4962CAN-W10/G76	ECN4963CAN-W10/G76 ⑦	ECN4968CAN-W10/G76	
	450		ECN4961CAN-W10/G81	ECN4962CAN-W10/G81	ECN4963CAN-W10/G81 ⑦	ECN4968CAN-W10/G81	
	500	800A	ECN4961CAP-W10/G86	ECN4962CAP-W10/G86	ECN4963CAP-W10/G86 ⑦	ECN4968CAP-W10/G86	
	600	1200A	ECN4961CAQ-W10/G91	ECN4962CAQ-W10/G91	ECN4963CAQ-W10/G91 ⑦	ECN4968CAQ-W10/G91	
	700	ECN4961CAQ-W10/G96	ECN4962CAQ-W10/G96	ECN4963CAQ-W10/G96 ⑦	ECN4968CAQ-W10/G96		
7YD	750	1200A	ECN4971CAQ-W10/G101	ECN4972CAQ-W10/G101	ECN4973CAQ-W10/G101 ⑦	ECN4978CAQ-W10/G101	AN16UN0AB
	800	⑥	ECN4971CAU-W10/G105	ECN4972CAU-W10/G105	ECN4973CAU-W10/G105 ⑦	ECN4978CAU-W10/G105	
	900	ECN4971CAU-W10/G108	ECN4972CAU-W10/G108	ECN4973CAU-W10/G108 ⑦	ECN4978CAU-W10/G108		
	1000	ECN4971CAU-W10/G111	ECN4972CAU-W10/G111	ECN4973CAU-W10/G111 ⑦	ECN4978CAU-W10/G111		
8YD	1250	⑥	ECN4981CAU-W10/G114	ECN4982CAU-W10/G114	ECN4983CAU-W10/G114 ⑦	ECN4988CAU-W10/G114	AN16VN0AB
	1500	ECN4981CAU-W10/G117	ECN4982CAU-W10/G117	ECN4983CAU-W10/G117 ⑦	ECN4988CAU-W10/G117		

Starters do not include heater packs. Select one carton of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ^① Catalog Number	Type 12 Dust-Tight Industrial External Reset ^{②③} Catalog Number	Component Starter (Open) ^④ Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ^⑤							
2YD	20	30A	ECN4921DAC-W10/G7	ECN4922DAC-W10/G7	ECN4924DAC-W10/G7	ECN4928DAC-W10/G7	AN16GN0AB
	25	60A	ECN4921DAE-W10/G12	ECN4922DAE-W10/G12	ECN4924DAE-W10/G12	ECN4928DAE-W10/G12	
	30		ECN4921DAE-W10/G17	ECN4922DAE-W10/G17	ECN4924DAE-W10/G17	ECN4928DAE-W10/G17	
	40		ECN4921DAE-W10/G22	ECN4922DAE-W10/G22	ECN4924DAE-W10/G22	ECN4928DAE-W10/G22	
3YD	50	100A	ECN4931DAG-W10/G27	ECN4932DAG-W10/G27	ECN4934DAG-W10/G27	ECN4938DAG-W10/G27	AN16KN0AB
	60		ECN4931DAG-W10/G32	ECN4932DAG-W10/G32	ECN4934DAG-W10/G32	ECN4938DAG-W10/G32	
	75		ECN4931DAG-W10/G37	ECN4932DAG-W10/G37	ECN4934DAG-W10/G37	ECN4938DAG-W10/G37	
4YD	100	200A	ECN4941DAJ-W10/G42	ECN4942DAJ-W10/G42	ECN4944DAJ-W10/G42	ECN4948DAJ-W10/G42	AN16NN0AB
	125		ECN4941DAJ-W10/G47	ECN4942DAJ-W10/G47	ECN4944DAJ-W10/G47	ECN4948DAJ-W10/G47	
	150		ECN4941DAJ-W10/G52	ECN4942DAJ-W10/G52	ECN4944DAJ-W10/G52	ECN4948DAJ-W10/G52	
5YD	200	400A	ECN4951DAL-W10/G57	ECN4952DAL-W10/G57	ECN4954DAL-W10/G57	ECN4958DAL-W10/G57	AN16SN0AB
	250		ECN4951DAL-W10/G62	ECN4952DAL-W10/G62	ECN4954DAL-W10/G62	ECN4958DAL-W10/G62	
	300		ECN4951DAL-W10/G67	ECN4952DAL-W10/G67	ECN4954DAL-W10/G67	ECN4958DAL-W10/G67	
6YD	350	400A	ECN4961DAL-W10/G72	ECN4962DAL-W10/G72	ECN4963DAL-W10/G72 ^⑦	ECN4968DAL-W10/G72	AN16TN0AB
	400	600A	ECN4961DAN-W10/G77	ECN4962DAN-W10/G77	ECN4963DAN-W10/G77 ^⑦	ECN4968DAN-W10/G77	
	450		ECN4961DAN-W10/G82	ECN4962DAN-W10/G82	ECN4963DAN-W10/G82 ^⑦	ECN4968DAN-W10/G82	
	500		ECN4961DAN-W10/G87	ECN4962DAN-W10/G87	ECN4963DAN-W10/G87 ^⑦	ECN4968DAN-W10/G87	
	600	800A	ECN4961DAP-W10/G92	ECN4962DAP-W10/G92	ECN4963DAP-W10/G92 ^⑦	ECN4968DAP-W10/G92	
	700		ECN4961DAP-W10/G97	ECN4962DAP-W10/G97	ECN4963DAP-W10/G97 ^⑦	ECN4968DAP-W10/G97	
7YD	750	⑥	ECN4971DAU-W10/G102	ECN4972DAU-W10/G102	ECN4973DAU-W10/G102 ^⑦	ECN4978DAU-W10/G102	AN16UN0AB
	800		ECN4971DAU-W10/G106	ECN4972DAU-W10/G106	ECN4973DAU-W10/G106 ^⑦	ECN4978DAU-W10/G106	
	900		ECN4971DAU-W10/G109	ECN4972DAU-W10/G109	ECN4973DAU-W10/G109 ^⑦	ECN4978DAU-W10/G109	
	1000		ECN4971DAU-W10/G112	ECN4972DAU-W10/G112	ECN4973DAU-W10/G112 ^⑦	ECN4978DAU-W10/G112	
8YD	1250	⑥	ECN4981DAU-W10/G115	ECN4982DAU-W10/G115	ECN4983DAU-W10/G115 ^⑦	ECN4988DAU-W10/G115	AN16VN0AB
	1500		ECN4981DAU-W10/G118	ECN4982DAU-W10/G118	ECN4983DAU-W10/G118 ^⑦	ECN4988DAU-W10/G118	

Starters do not include heater packs. Select one carton of three heater packs (two overload relays—one for each winding). Heater pack selection, **Tab 15**.

Notes

- 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: ECN462**4**EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Non-Fusible Disconnect

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN4921EAA-W10/G1	ECN4922EAA-W10/G1	ECN4924EAA-W10/G1	ECN4928EAA-W10/G1	AN16GN0AB
	20	100A	ECN4921EAA-W10/G3	ECN4922EAA-W10/G3	ECN4924EAA-W10/G3	ECN4928EAA-W10/G3	
3YD	25	100A	ECN4931EAA-W10/G8	ECN4932EAA-W10/G8	ECN4934EAA-W10/G8	ECN4938EAA-W10/G8	AN16KN0AB
	30	200A	ECN4931EAA-W10/G13	ECN4932EAA-W10/G13	ECN4934EAA-W10/G13	ECN4938EAA-W10/G13	
	40		ECN4931EAA-W10/G18	ECN4932EAA-W10/G18	ECN4934EAA-W10/G18	ECN4938EAA-W10/G18	
4YD	50	200A	ECN4941EAA-W10/G23	ECN4942EAA-W10/G23	ECN4944EAA-W10/G23	ECN4948EAA-W10/G23	AN16NN0AB
	60	400A	ECN4941EAA-W10/G28	ECN4942EAA-W10/G28	ECN4944EAA-W10/G28	ECN4948EAA-W10/G28	
5YD	75	400A	ECN4951EAA-W10/G33	ECN4952EAA-W10/G33	ECN4954EAA-W10/G33	ECN4958EAA-W10/G33	AN16SN0AB
	100		ECN4951EAA-W10/G38	ECN4952EAA-W10/G38	ECN4954EAA-W10/G38	ECN4958EAA-W10/G38	
	125	600A	ECN4951EAA-W10/G43	ECN4952EAA-W10/G43	ECN4954EAA-W10/G43	ECN4958EAA-W10/G43	
	150		ECN4951EAA-W10/G48	ECN4952EAA-W10/G48	ECN4954EAA-W10/G48	ECN4958EAA-W10/G48	
6YD	200	⑥	ECN4961EAA-W10/G53	ECN4962EAA-W10/G53	ECN4963EAA-W10/G53 ⑦	ECN4968EAA-W10/G33	AN16TN0AB
	250		ECN4961EAA-W10/G58	ECN4962EAA-W10/G58	ECN4963EAA-W10/G58 ⑦	ECN4968EAA-W10/G58	
	300		ECN4961EAA-W10/G63	ECN4962EAA-W10/G63	ECN4963EAA-W10/G63 ⑦	ECN4968EAA-W10/G63	
7YD	350	⑥	ECN4971EAA-W10/G68	ECN4972EAA-W10/G68	ECN4973EAA-W10/G68 ⑦	ECN4978EAA-W10/G68	AN16UN0AB
	400		ECN4971EAA-W10/G73	ECN4972EAA-W10/G73	ECN4973EAA-W10/G73 ⑦	ECN4978EAA-W10/G73	
	450		ECN4971EAA-W10/G78	ECN4972EAA-W10/G78	ECN4973EAA-W10/G78 ⑦	ECN4978EAA-W10/G78	
	500		ECN4971EAA-W10/G83	ECN4972EAA-W10/G83	ECN4973EAA-W10/G83 ⑦	ECN4978EAA-W10/G83	
8YD	600	⑥	ECN4981EAA-W10/G88	ECN4982EAA-W10/G88	ECN4983EAA-W10/G88 ⑦	ECN4988EAA-W10/G88	AN16VN0AB
	700		ECN4981EAA-W10/G93	ECN4982EAA-W10/G93	ECN4983EAA-W10/G93 ⑦	ECN4988EAA-W10/G93	
	750		ECN4981EAA-W10/G98	ECN4982EAA-W10/G98	ECN4983EAA-W10/G98 ⑦	ECN4988EAA-W10/G98	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Non-Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN4921BAA-W10/G2	ECN4922BAA-W10/G2	ECN4924BAA-W10/G2	ECN4928BAA-W10/G2	AN16GN0AB
	20	100A	ECN4921BAA-W10/G4	ECN4922BAA-W10/G4	ECN4924BAA-W10/G4	ECN4928BAA-W10/G4	
	25		ECN4921BAA-W10/G9	ECN4922BAA-W10/G9	ECN4924BAA-W10/G9	ECN4928BAA-W10/G9	
3YD	30	100A	ECN4931BAA-W10/G14	ECN4932BAA-W10/G14	ECN4934BAA-W10/G14	ECN4938BAA-W10/G14	AN16KN0AB
	40	200A	ECN4931BAA-W10/G19	ECN4932BAA-W10/G19	ECN4934BAA-W10/G19	ECN4938BAA-W10/G19	
	50		ECN4931BAA-W10/G24	ECN4932BAA-W10/G24	ECN4934BAA-W10/G24	ECN4938BAA-W10/G24	
4YD	60	200A	ECN4941BAA-W10/G29	ECN4942BAA-W10/G29	ECN4944BAA-W10/G29	ECN4948BAA-W10/G29	AN16NN0AB
	75	400A	ECN4941BAA-W10/G34	ECN4942BAA-W10/G34	ECN4944BAA-W10/G34	ECN4948BAA-W10/G34	
5YD	100	400A	ECN4951BAA-W10/G39	ECN4952BAA-W10/G39	ECN4954BAA-W10/G39	ECN4958BAA-W10/G39	AN16SN0AB
	125		ECN4951BAA-W10/G44	ECN4952BAA-W10/G44	ECN4954BAA-W10/G44	ECN4958BAA-W10/G44	
	150	600A	ECN4951BAA-W10/G49	ECN4952BAA-W10/G49	ECN4954BAA-W10/G49	ECN4958BAA-W10/G49	
6YD	200	600A	ECN4961BAA-W10/G54	ECN4962BAA-W10/G54	ECN4963BAA-W10/G54 ⑦	ECN4968BAA-W10/G54	AN16TN0AB
	250	⑥	ECN4961BAA-W10/G59	ECN4962BAA-W10/G59	ECN4963BAA-W10/G59 ⑦	ECN4968BAA-W10/G59	
	300		ECN4961BAA-W10/G64	ECN4962BAA-W10/G64	ECN4963BAA-W10/G64 ⑦	ECN4968BAA-W10/G64	
	350		ECN4961BAA-W10/G69	ECN4962BAA-W10/G69	ECN4963BAA-W10/G69 ⑦	ECN4968BAA-W10/G69	
7YD	400	⑥	ECN4971BAA-W10/G74	ECN4972BAA-W10/G74	ECN4973BAA-W10/G74 ⑦	ECN4978BAA-W10/G74	AN16UN0AB
	450		ECN4971BAA-W10/G79	ECN4972BAA-W10/G79	ECN4973BAA-W10/G79 ⑦	ECN4978BAA-W10/G79	
	500		ECN4971BAA-W10/G84	ECN4972BAA-W10/G84	ECN4973BAA-W10/G84 ⑦	ECN4978BAA-W10/G84	
8YD	600	⑥	ECN4981BAA-W10/G89	ECN4982BAA-W10/G89	ECN4983BAA-W10/G89 ⑦	ECN4988BAA-W10/G89	AN16VN0AB
	700		ECN4981BAA-W10/G94	ECN4982BAA-W10/G94	ECN4983BAA-W10/G94 ⑦	ECN4988BAA-W10/G94	
	750		ECN4981BAA-W10/G99	ECN4982BAA-W10/G99	ECN4983BAA-W10/G99 ⑦	ECN4988BAA-W10/G99	
	800		ECN4981BAA-W10/G103	ECN4982BAA-W10/G103	ECN4983BAA-W10/G103 ⑦	ECN4988BAA-W10/G103	

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

Notes

- 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: ECN462**4**EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Non-Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number	
Motor Volts 460/Magnet Coil Voltage 120 ⑤								
2YD	20	60A	ECN4921CAA-W10/G6	ECN4922CAA-W10/G6	ECN4924CAA-W10/G6	ECN4928CAA-W10/G6	AN16GN0AB	
	25		ECN4921CAA-W10/G11	ECN4922CAA-W10/G11	ECN4924CAA-W10/G11	ECN4928CAA-W10/G11		
	30		ECN4921CAA-W10/G16	ECN4922CAA-W10/G16	ECN4924CAA-W10/G16	ECN4928CAA-W10/G16		
	40		ECN4921CAA-W10/G21	ECN4922CAA-W10/G21	ECN4924CAA-W10/G21	ECN4928CAA-W10/G21		
3YD	50	100A	ECN4931CAA-W10/G26	ECN4932CAA-W10/G26	ECN4934CAA-W10/G26	ECN4938CAA-W10/G26	AN16KN0AB	
	60		ECN4931CAA-W10/G31	ECN4932CAA-W10/G31	ECN4934CAA-W10/G31	ECN4938CAA-W10/G31		
	75		200A	ECN4931CAA-W10/G36	ECN4932CAA-W10/G36	ECN4934CAA-W10/G36		ECN4938CAA-W10/G36
4YD	100	200A	ECN4941CAA-W10/G41	ECN4942CAA-W10/G41	ECN4944CAA-W10/G41	ECN4948CAA-W10/G41	AN16NN0AB	
	125		ECN4941CAA-W10/G46	ECN4942CAA-W10/G46	ECN4944CAA-W10/G46	ECN4948CAA-W10/G46		
	150		400A	ECN4941CAA-W10/G51	ECN4942CAA-W10/G51	ECN4944CAA-W10/G51		ECN4948CAA-W10/G51
5YD	200	400A	ECN4951CAA-W10/G56	ECN4952CAA-W10/G56	ECN4954CAA-W10/G56	ECN4958CAA-W10/G56	AN16SN0AB	
	250		ECN4951CAA-W10/G61	ECN4952CAA-W10/G61	ECN4954CAA-W10/G61	ECN4958CAA-W10/G61		
	300		600A	ECN4951CAA-W10/G66	ECN4952CAA-W10/G66	ECN4954CAA-W10/G66		ECN4958CAA-W10/G66
6YD	350	600A	ECN4961CAA-W10/G71	ECN4962CAA-W10/G71	ECN4963CAA-W10/G71 ⑦	ECN4968CAA-W10/G71	AN16TN0AB	
	400		ECN4961CAA-W10/G76	ECN4962CAA-W10/G76	ECN4963CAA-W10/G76 ⑦	ECN4968CAA-W10/G76		
	450		ECN4961CAA-W10/G81	ECN4962CAA-W10/G81	ECN4963CAA-W10/G81 ⑦	ECN4968CAA-W10/G81		
	500		800A	ECN4961CAA-W10/G86	ECN4962CAA-W10/G86	ECN4963CAA-W10/G86 ⑦		ECN4968CAA-W10/G86
	600		1200A	ECN4961CAA-W10/G91	ECN4962CAA-W10/G91	ECN4963CAA-W10/G91 ⑦		ECN4968CAA-W10/G91
	700		ECN4961CAA-W10/G96	ECN4962CAA-W10/G96	ECN4963CAA-W10/G96 ⑦	ECN4968CAA-W10/G96		
7YD	750	1200A	ECN4971CAA-W10/G101	ECN4972CAA-W10/G101	ECN4973CAA-W10/G101 ⑦	ECN4978CAA-W10/G101	AN16UN0AB	
	800		⑥	ECN4971CAA-W10/G105	ECN4972CAA-W10/G105	ECN4973CAA-W10/G105 ⑦		ECN4978CAA-W10/G105
	900		ECN4971CAA-W10/G108	ECN4972CAA-W10/G108	ECN4973CAA-W10/G108 ⑦	ECN4978CAA-W10/G108		
	1000		ECN4971CAA-W10/G111	ECN4972CAA-W10/G111	ECN4973CAA-W10/G111 ⑦	ECN4978CAA-W10/G111		
8YD	1250	⑥	ECN4981CAA-W10/G114	ECN4982CAA-W10/G114	ECN4983CAA-W10/G114 ⑦	ECN4988CAA-W10/G114	AN16VN0AB	
	1500		ECN4981CAA-W10/G117	ECN4982CAA-W10/G117	ECN4983CAA-W10/G117 ⑦	ECN4988CAA-W10/G117		

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN49—Combination Open Transition Wye Delta Starter—Non-Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ^① Catalog Number	Type 12 Dust-Tight Industrial External Reset ^{②③} Catalog Number	Component Starter (Open) ^④ Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ^⑤							
2YD	20	30A	ECN4921DAA-W10/G7	ECN4922DAA-W10/G7	ECN4924DAA-W10/G7	ECN4928DAA-W10/G7	AN16GN0AB
	25	60A	ECN4921DAA-W10/G12	ECN4922DAA-W10/G12	ECN4924DAA-W10/G12	ECN4928DAA-W10/G12	
	30		ECN4921DAA-W10/G17	ECN4922DAA-W10/G17	ECN4924DAA-W10/G17	ECN4928DAA-W10/G17	
	40		ECN4921DAA-W10/G22	ECN4922DAA-W10/G22	ECN4924DAA-W10/G22	ECN4928DAA-W10/G22	
3YD	50	100A	ECN4931DAA-W10/G27	ECN4932DAA-W10/G27	ECN4934DAA-W10/G27	ECN4938DAA-W10/G27	AN16KN0AB
	60		ECN4931DAA-W10/G32	ECN4932DAA-W10/G32	ECN4934DAA-W10/G32	ECN4938DAA-W10/G32	
	75		ECN4931DAA-W10/G37	ECN4932DAA-W10/G37	ECN4934DAA-W10/G37	ECN4938DAA-W10/G37	
4YD	100	200A	ECN4941DAA-W10/G42	ECN4942DAA-W10/G42	ECN4944DAA-W10/G42	ECN4948DAA-W10/G42	AN16NN0AB
	125		ECN4941DAA-W10/G47	ECN4942DAA-W10/G47	ECN4944DAA-W10/G47	ECN4948DAA-W10/G47	
	150		ECN4941DAA-W10/G52	ECN4942DAA-W10/G52	ECN4944DAA-W10/G52	ECN4948DAA-W10/G52	
5YD	200	400A	ECN4951DAA-W10/G57	ECN4952DAA-W10/G57	ECN4954DAA-W10/G57	ECN4958DAA-W10/G57	AN16SN0AB
	250		ECN4951DAA-W10/G62	ECN4952DAA-W10/G62	ECN4954DAA-W10/G62	ECN4958DAA-W10/G62	
	300		ECN4951DAA-W10/G67	ECN4952DAA-W10/G67	ECN4954DAA-W10/G67	ECN4958DAA-W10/G67	
6YD	350	400A	ECN4961DAA-W10/G72	ECN4962DAA-W10/G72	ECN4963DAA-W10/G72 ^⑦	ECN4968DAA-W10/G72	AN16TN0AB
	400	600A	ECN4961DAA-W10/G77	ECN4962DAA-W10/G77	ECN4963DAA-W10/G77 ^⑦	ECN4968DAA-W10/G77	
	450		ECN4961DAA-W10/G82	ECN4962DAA-W10/G82	ECN4963DAA-W10/G82 ^⑦	ECN4968DAA-W10/G82	
	500		ECN4961DAA-W10/G87	ECN4962DAA-W10/G87	ECN4963DAA-W10/G87 ^⑦	ECN4968DAA-W10/G87	
	600	800A	ECN4961DAA-W10/G92	ECN4962DAA-W10/G92	ECN4963DAA-W10/G92 ^⑦	ECN4968DAA-W10/G92	
	700		ECN4961DAA-W10/G97	ECN4962DAA-W10/G97	ECN4963DAA-W10/G97 ^⑦	ECN4968DAA-W10/G97	
7YD	750	⑥	ECN4971DAA-W10/G102	ECN4972DAA-W10/G102	ECN4973DAA-W10/G102 ^⑦	ECN4978DAA-W10/G102	AN16UN0AB
	800		ECN4971DAA-W10/G106	ECN4972DAA-W10/G106	ECN4973DAA-W10/G106 ^⑦	ECN4978DAA-W10/G106	
	900		ECN4971DAA-W10/G109	ECN4972DAA-W10/G109	ECN4973DAA-W10/G109 ^⑦	ECN4978DAA-W10/G109	
	1000		ECN4971DAA-W10/G112	ECN4972DAA-W10/G112	ECN4973DAA-W10/G112 ^⑦	ECN4978DAA-W10/G112	
8YD	1250	⑥	ECN4981DAA-W10/G115	ECN4982DAA-W10/G115	ECN4983DAA-W10/G115 ^⑦	ECN4988DAA-W10/G115	AN16VN0AB
	1500		ECN4981DAA-W10/G118	ECN4982DAA-W10/G118	ECN4983DAA-W10/G118 ^⑦	ECN4988DAA-W10/G118	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN50—Combination Open Transition Wye Delta Starter—Circuit Breaker

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ⑤							
2YD	15	70A	ECN5021EAH-W10/G1	ECN5022EAH-W10/G1	ECN5024EAH-W10/G1	ECN5028EAH-W10/G1	AN16GN0AB
	20	90A	ECN5021EAJ-W10/G3	ECN5022EAJ-W10/G3	ECN5024EAJ-W10/G3	ECN5028EAJ-W10/G3	
3YD	25	100A	ECN5031EAK-W10/G8	ECN5032EAK-W10/G8	ECN5034EAK-W10/G8	ECN5038EAK-W10/G8	AN16KN0AB
	30	125A	ECN5031EAL-W10/G13	ECN5032EAL-W10/G13	ECN5034EAL-W10/G13	ECN5038EAL-W10/G13	
	40	175A	ECN5031EAN-W10/G18	ECN5032EAN-W10/G18	ECN5034EAN-W10/G18	ECN5038EAN-W10/G18	
4YD	50	200A	ECN5041EAP-W10/G23	ECN5042EAP-W10/G23	ECN5044EAP-W10/G23	ECN5048EAP-W10/G23	AN16NN0AB
	60	225A	ECN5041EAQ-W10/G28	ECN5042EAQ-W10/G28	ECN5044EAQ-W10/G28	ECN5048EAQ-W10/G28	
5YD	75	300A	ECN5051EAS-W10/G33	ECN5052EAS-W10/G33	ECN5054EAS-W10/G33	ECN5058EAS-W10/G33	AN16SN0AB
	100	350A	ECN5051EAV-W10/G38	ECN5052EAV-W10/G38	ECN5054EAV-W10/G38	ECN5058EAV-W10/G38	
	125	450A	ECN5051EAX-W10/G43	ECN5052EAX-W10/G43	ECN5054EAX-W10/G43	ECN5058EAX-W10/G43	
	150	500A	ECN5051EAY-W10/G48	ECN5052EAY-W10/G48	ECN5054EAY-W10/G48	ECN5058EAY-W10/G48	
6YD	200	800A	ECN5061EA2-W10/G53	ECN5062EA2-W10/G53	ECN5063EA2-W10/G53 ⑦	ECN5068EA2-W10/G53	AN16TN0AB
	250	1000A	ECN5061EA3-W10/G58	ECN5062EA3-W10/G58	ECN5063EA3-W10/G58 ⑦	ECN5068EA3-W10/G58	
	300	1200A	ECN5061EA4-W10/G63	ECN5062EA4-W10/G63	ECN5063EA4-W10/G63 ⑦	ECN5068EA4-W10/G63	
7YD	350	⑥	ECN5071EAU-W10/G68	ECN5072EAU-W10/G68	ECN5073EAU-W10/G68 ⑦	ECN5078EAU-W10/G68	AN16UN0AB
	400		ECN5071EAU-W10/G73	ECN5072EAU-W10/G73	ECN5073EAU-W10/G73 ⑦	ECN5078EAU-W10/G73	
	450		ECN5071EAU-W10/G78	ECN5072EAU-W10/G78	ECN5073EAU-W10/G78 ⑦	ECN5078EAU-W10/G78	
	500		ECN5071EAU-W10/G83	ECN5072EAU-W10/G83	ECN5073EAU-W10/G83 ⑦	ECN5078EAU-W10/G83	
8YD	600	⑥	ECN5081EAU-W10/G88	ECN5082EAU-W10/G88	ECN5083EAU-W10/G88 ⑦	ECN5088EAU-W10/G88	AN16VN0AB
	700		ECN5081EAU-W10/G93	ECN5082EAU-W10/G93	ECN5083EAU-W10/G93 ⑦	ECN5088EAU-W10/G93	
	750		ECN5081EAU-W10/G98	ECN5082EAU-W10/G98	ECN5083EAU-W10/G98 ⑦	ECN5088EAU-W10/G98	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN50—Combination Open Transition Wye Delta Starter—Circuit Breaker, continued

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1	Type 3R	Type 4X	Type 12	Component Starter (Open) ④
			General Purpose	Rainproof	Water and Dust-Tight Stainless Steel ①	Dust-Tight Industrial External Reset ②③	
			Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN5021BAG-W10/G2	ECN5022BAG-W10/G2	ECN5024BAG-W10/G2	ECN5028BAG-W10/G2	AN16GN0AB
	20	70A	ECN5021BAH-W10/G4	ECN5022BAH-W10/G4	ECN5024BAH-W10/G4	ECN5028BAH-W10/G4	
	25	90A	ECN5021BAJ-W10/G9	ECN5022BAJ-W10/G9	ECN5024BAJ-W10/G9	ECN5028BAJ-W10/G9	
3YD	30	125A	ECN5031BAL-W10/G14	ECN5032BAL-W10/G14	ECN5034BAL-W10/G14	ECN5038BAL-W10/G14	AN16KN0AB
	40	150A	ECN5031BAM-W10/G19	ECN5032BAM-W10/G19	ECN5034BAM-W10/G19	ECN5038BAM-W10/G19	
	50	175A	ECN5031BAN-W10/G24	ECN5032BAN-W10/G24	ECN5034BAN-W10/G24	ECN5038BAN-W10/G24	
4YD	60	200A	ECN5041BAP-W10/G29	ECN5042BAP-W10/G29	ECN5044BAP-W10/G29	ECN5048BAP-W10/G29	AN16NN0AB
	75	250A	ECN5041BAR-W10/G34	ECN5042BAR-W10/G34	ECN5044BAR-W10/G34	ECN5048BAR-W10/G34	
5YD	100	350A	ECN5051BAV-W10/G39	ECN5052BAV-W10/G39	ECN5054BAV-W10/G39	ECN5058BAV-W10/G39	AN16SN0AB
	125	400A	ECN5051BAW-W10/G44	ECN5052BAW-W10/G44	ECN5054BAW-W10/G44	ECN5058BAW-W10/G44	
	150	500A	ECN5051BAY-W10/G49	ECN5052BAY-W10/G49	ECN5054BAY-W10/G49	ECN5058BAY-W10/G49	
6YD	200	600A	ECN5061BAZ-W10/G54	ECN5062BAZ-W10/G54	ECN5063BAZ-W10/G54 ⑦	ECN5068BAZ-W10/G54	AN16TN0AB
	250	800A	ECN5061BA2-W10/G59	ECN5062BA2-W10/G59	ECN5063BA2-W10/G59 ⑦	ECN5068BA2-W10/G59	
	300	1000A	ECN5061BA3-W10/G64	ECN5062BA3-W10/G64	ECN5063BA3-W10/G64 ⑦	ECN5068BA3-W10/G64	
	350	1200A	ECN5061BA4-W10/G69	ECN5062BA4-W10/G69	ECN5063BA4-W10/G69 ⑦	ECN5068BA4-W10/G69	
7YD	400	⑥	ECN5071BAU-W10/G74	ECN5072BAU-W10/G74	ECN5073BAU-W10/G74 ⑦	ECN5078BAU-W10/G74	AN16UN0AB
	450		ECN5071BAU-W10/G79	ECN5072BAU-W10/G79	ECN5073BAU-W10/G79 ⑦	ECN5078BAU-W10/G79	
	500		ECN5071BAU-W10/G84	ECN5072BAU-W10/G84	ECN5073BAU-W10/G84 ⑦	ECN5078BAU-W10/G84	
8YD	600	⑥	ECN5081BAU-W10/G89	ECN5082BAU-W10/G89	ECN5083BAU-W10/G89 ⑦	ECN5088BAU-W10/G89	AN16VN0AB
	700		ECN5081BAU-W10/G94	ECN5082BAU-W10/G94	ECN5083BAU-W10/G94 ⑦	ECN5088BAU-W10/G94	
	750		ECN5081BAU-W10/G99	ECN5082BAU-W10/G99	ECN5083BAU-W10/G99 ⑦	ECN5088BAU-W10/G99	
	800		ECN5081BAU-W10/G103	ECN5082BAU-W10/G103	ECN5083BAU-W10/G103 ⑦	ECN5088BAU-W10/G103	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN50—Combination Open Transition Wye Delta Starter—Circuit Breaker, continued

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 460/Magnet Coil Voltage 120 ⑤							
2YD	20	40A	ECN5021CAE-W10/G6	ECN5022CAE-W10/G6	ECN5024CAE-W10/G6	ECN5028CAE-W10/G6	AN16GN0AB
	25	50A	ECN5021CAF-W10/G11	ECN5022CAF-W10/G11	ECN5024CAF-W10/G11	ECN5028CAF-W10/G11	
	30	60A	ECN5021CAG-W10/G16	ECN5022CAG-W10/G16	ECN5024CAG-W10/G16	ECN5028CAG-W10/G16	
	40	70A	ECN5021CAH-W10/G21	ECN5022CAH-W10/G21	ECN5024CAH-W10/G21	ECN5028CAH-W10/G21	
3YD	50	90A	ECN5031CAJ-W10/G26	ECN5032CAJ-W10/G26	ECN5034CAJ-W10/G26	ECN5038CAJ-W10/G26	AN16KN0AB
	60	100A	ECN5031CAK-W10/G31	ECN5032CAK-W10/G31	ECN5034CAK-W10/G31	ECN5038CAK-W10/G31	
	75	125A	ECN5031CAL-W10/G36	ECN5032CAL-W10/G36	ECN5034CAL-W10/G36	ECN5038CAL-W10/G36	
4YD	100	175A	ECN5041CAN-W10/G41	ECN5042CAN-W10/G41	ECN5044CAN-W10/G41	ECN5048CAN-W10/G41	AN16NN0AB
	125	225A	ECN5041CAQ-W10/G46	ECN5042CAQ-W10/G46	ECN5044CAQ-W10/G46	ECN5048CAQ-W10/G46	
	150	250A	ECN5041CAR-W10/G51	ECN5042CAR-W10/G51	ECN5044CAR-W10/G51	ECN5048CAR-W10/G51	
5YD	200	350A	ECN5051CAV-W10/G56	ECN5052CAV-W10/G56	ECN5054CAV-W10/G56	ECN5058CAV-W10/G56	AN16SN0AB
	250	400A	ECN5051CAW-W10/G61	ECN5052CAW-W10/G61	ECN5054CAW-W10/G61	ECN5058CAW-W10/G61	
	300	500A	ECN5051CAY-W10/G66	ECN5052CAY-W10/G66	ECN5054CAY-W10/G66	ECN5058CAY-W10/G66	
6YD	350	600A	ECN5061CAZ-W10/G71	ECN5062CAZ-W10/G71	ECN5063CAZ-W10/G71 ⑦	ECN5068CAZ-W10/G71	AN16TN0AB
	400		ECN5061CAZ-W10/G76	ECN5062CAZ-W10/G76	ECN5063CAZ-W10/G76 ⑦	ECN5068CAZ-W10/G76	
	450	700A	ECN5061CA1-W10/G81	ECN5062CA1-W10/G81	ECN5063CA1-W10/G81 ⑦	ECN5068CA1-W10/G81	
	500	800A	ECN5061CA2-W10/G86	ECN5062CA2-W10/G86	ECN5063CA2-W10/G86 ⑦	ECN5068CA2-W10/G86	
	600	1000A	ECN5061CA3-W10/G91	ECN5062CA3-W10/G91	ECN5063CA3-W10/G91 ⑦	ECN5068CA3-W10/G91	
	700	1200A	ECN5061CA4-W10/G96	ECN5062CA4-W10/G96	ECN5063CA4-W10/G96 ⑦	ECN5068CA4-W10/G96	
7YD	750	⑥	ECN5071CAU-W10/G101	ECN5072CAU-W10/G101	ECN5073CAU-W10/G101 ⑦	ECN5078CAU-W10/G101	AN16UN0AB
	800		ECN5071CAU-W10/G105	ECN5072CAU-W10/G105	ECN5073CAU-W10/G105 ⑦	ECN5078CAU-W10/G105	
	900		ECN5071CAU-W10/G108	ECN5072CAU-W10/G108	ECN5073CAU-W10/G108 ⑦	ECN5078CAU-W10/G108	
	1000		ECN5071CAU-W10/G111	ECN5072CAU-W10/G111	ECN5073CAU-W10/G111 ⑦	ECN5078CAU-W10/G111	
8YD	1250	⑥	ECN5081CAU-W10/G114	ECN5082CAU-W10/G114	ECN5083CAU-W10/G114 ⑦	ECN5088CAU-W10/G114	AN16VN0AB
	1500		ECN5081CAU-W10/G117	ECN5082CAU-W10/G117	ECN5083CAU-W10/G117 ⑦	ECN5088CAU-W10/G117	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN50—Combination Open Transition Wye Delta Starter—Circuit Breaker, continued

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1	Type 3R	Type 4X	Type 12	Component Starter (Open) ④
			General Purpose	Rainproof	Water and Dust-Tight Stainless Steel ①	Dust-Tight Industrial External Reset ②③	
			Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ⑤							
2YD	20	30A	ECN5021DAD-W10/G7	ECN5022DAD-W10/G7	ECN5024DAD-W10/G7	ECN5028DAD-W10/G7	AN16GN0AB
	25	40A	ECN5021DAE-W10/G12	ECN5022DAE-W10/G12	ECN5024DAE-W10/G12	ECN5028DAE-W10/G12	
	30	50A	ECN5021DAF-W10/G17	ECN5022DAF-W10/G17	ECN5024DAF-W10/G17	ECN5028DAF-W10/G17	
	40	60A	ECN5021DAG-W10/G22	ECN5022DAG-W10/G22	ECN5024DAG-W10/G22	ECN5028DAG-W10/G22	
3YD	50	70A	ECN5031DAH-W10/G27	ECN5032DAH-W10/G27	ECN5034DAH-W10/G27	ECN5038DAH-W10/G27	AN16KN0AB
	60	90A	ECN5031DAJ-W10/G32	ECN5032DAJ-W10/G32	ECN5034DAJ-W10/G32	ECN5038DAJ-W10/G32	
	75	100A	ECN5031DAK-W10/G37	ECN5032DAK-W10/G37	ECN5034DAK-W10/G37	ECN5038DAK-W10/G37	
4YD	100	125A	ECN5041DAL-W10/G42	ECN5042DAL-W10/G42	ECN5044DAL-W10/G42	ECN5048DAL-W10/G42	AN16NN0AB
	125	175A	ECN5041DAN-W10/G47	ECN5042DAN-W10/G47	ECN5044DAN-W10/G47	ECN5048DAN-W10/G47	
	150	200A	ECN5041DAP-W10/G52	ECN5042DAP-W10/G52	ECN5044DAP-W10/G52	ECN5048DAP-W10/G52	
5YD	200	250A	ECN5051DAR-W10/G57	ECN5052DAR-W10/G57	ECN5054DAR-W10/G57	ECN5058DAR-W10/G57	AN16SN0AB
	250	350A	ECN5051DAV-W10/G62	ECN5052DAV-W10/G62	ECN5054DAV-W10/G62	ECN5058DAV-W10/G62	
	300		ECN5051DAV-W10/G67	ECN5052DAV-W10/G67	ECN5054DAV-W10/G67	ECN5058DAV-W10/G67	
6YD	350	500A	ECN5061DAY-W10/G72	ECN5062DAY-W10/G72	ECN5063DAY-W10/G72 ⑦	ECN5068DAY-W10/G72	AN16TN0AB
	400		ECN5061DAY-W10/G77	ECN5062DAY-W10/G77	ECN5063DAY-W10/G77 ⑦	ECN5068DAY-W10/G77	
	450	600A	ECN5061DAZ-W10/G82	ECN5062DAZ-W10/G82	ECN5063DAZ-W10/G82 ⑦	ECN5068DAZ-W10/G82	
	500		ECN5061DAZ-W10/G87	ECN5062DAZ-W10/G87	ECN5063DAZ-W10/G87 4⑦	ECN5068DAZ-W10/G87	
	600	800A	ECN5061DA2-W10/G92	ECN5062DA2-W10/G92	ECN5063DA2-W10/G92 ⑦	ECN5068DA2-W10/G92	
	700	1000A	ECN5061DA3-W10/G97	ECN5062DA3-W10/G97	ECN5063DA3-W10/G97 ⑦	ECN5068DA3-W10/G97	
7YD	750	⑥	ECN5071DAU-W10/G102	ECN5072DAU-W10/G102	ECN5073DAU-W10/G102 ⑦	ECN5078DAU-W10/G102	AN16UN0AB
	800		ECN5071DAU-W10/G106	ECN5072DAU-W10/G106	ECN5073DAU-W10/G106 ⑦	ECN5078DAU-W10/G106	
	900		ECN5071DAU-W10/G109	ECN5072DAU-W10/G109	ECN5073DAU-W10/G109 ⑦	ECN5078DAU-W10/G109	
	1000		ECN5071DAU-W10/G112	ECN5072DAU-W10/G112	ECN5073DAU-W10/G112 ⑦	ECN5078DAU-W10/G112	
8YD	1250	⑥	ECN5081DAU-W10/G115	ECN5082DAU-W10/G115	ECN5083DAU-W10/G115 ⑦	ECN5088DAU-W10/G115	AN16VN0AB
	1500		ECN5081DAU-W10/G118	ECN5082DAU-W10/G118	ECN5083DAU-W10/G118 ⑦	ECN5088DAU-W10/G118	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN51—Non-Combination Closed Transition Wye Delta Starter

NEMA Size	Max. hp Rating	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ② Catalog Number	Component Starter (Open) ③ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ④						
2YD	15	ECN5121EAA-W10/G1	ECN5122EAA-W10/G1	ECN5124EAA-W10/G1	ECN5128EAA-W10/G1	AN16GN0AB
	20	ECN5121EAA-W10/G3	ECN5122EAA-W10/G3	ECN5124EAA-W10/G3	ECN5128EAA-W10/G3	
3YD	25	ECN5131EAA-W10/G8	ECN5132EAA-W10/G8	ECN5134EAA-W10/G8	ECN5138EAA-W10/G8	AN16KN0AB
	30	ECN5131EAA-W10/G13	ECN5132EAA-W10/G13	ECN5134EAA-W10/G13	ECN5138EAA-W10/G13	
	40	ECN5131EAA-W10/G18	ECN5132EAA-W10/G18	ECN5134EAA-W10/G18	ECN5138EAA-W10/G18	
4YD	50	ECN5141EAA-W10/G23	ECN5142EAA-W10/G23	ECN5144EAA-W10/G23	ECN5148EAA-W10/G23	AN16NN0AB
	60	ECN5141EAA-W10/G28	ECN5142EAA-W10/G28	ECN5144EAA-W10/G28	ECN5148EAA-W10/G28	
5YD	75	ECN5151EAA-W10/G33	ECN5152EAA-W10/G33	ECN5154EAA-W10/G33	ECN5158EAA-W10/G33	AN16SN0AB
	100	ECN5151EAA-W10/G38	ECN5152EAA-W10/G38	ECN5154EAA-W10/G38	ECN5158EAA-W10/G38	
	125	ECN5151EAA-W10/G43	ECN5152EAA-W10/G43	ECN5154EAA-W10/G43	ECN5158EAA-W10/G43	
	150	ECN5151EAA-W10/G48	ECN5152EAA-W10/G48	ECN5154EAA-W10/G48	ECN5158EAA-W10/G48	
6YD	200	ECN5161EAA-W10/G53	ECN5162EAA-W10/G53	ECN5163EAA-W10/G53 ⑤	ECN5168EAA-W10/G33	AN16TN0AB
	250	ECN5161EAA-W10/G58	ECN5162EAA-W10/G58	ECN5163EAA-W10/G58 ⑤	ECN5168EAA-W10/G58	
	300	ECN5161EAA-W10/G63	ECN5162EAA-W10/G63	ECN5163EAA-W10/G63 ⑤	ECN5168EAA-W10/G63	
7YD	350	ECN5171EAA-W10/G68	ECN5172EAA-W10/G68	ECN5173EAA-W10/G68 ⑤	ECN5178EAA-W10/G68	AN16UN0AB
	400	ECN5171EAA-W10/G73	ECN5172EAA-W10/G73	ECN5173EAA-W10/G73 ⑤	ECN5178EAA-W10/G73	
	450	ECN5171EAA-W10/G78	ECN5172EAA-W10/G78	ECN5173EAA-W10/G78 ⑤	ECN5178EAA-W10/G78	
	500	ECN5171EAA-W10/G83	ECN5172EAA-W10/G83	ECN5173EAA-W10/G83 ⑤	ECN5178EAA-W10/G83	
8YD	600	ECN5181EAA-W10/G88	ECN5182EAA-W10/G88	ECN5183EAA-W10/G88 ⑤	ECN5188EAA-W10/G88	AN16VN0AB
	700	ECN5181EAA-W10/G93	ECN5182EAA-W10/G93	ECN5183EAA-W10/G93 ⑤	ECN5188EAA-W10/G93	
	750	ECN5181EAA-W10/G98	ECN5182EAA-W10/G98	ECN5183EAA-W10/G98 ⑤	ECN5188EAA-W10/G98	

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

Notes

- 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: ECN4624EAF. 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 Also requires matching contactor with mechanical interlock.
- ④ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑤ Type 4 (painted steel) sizes 6–8YD.

Class ECN51 – Non-Combination Closed Transition Wye Delta Starter, continued

NEMA Size	Max. hp Rating	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ② Catalog Number	Component Starter (Open) ③ Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ④						
2YD	15	ECN5121BAA-W10/G2	ECN5122BAA-W10/G2	ECN5124BAA-W10/G2	ECN5128BAA-W10/G2	AN16GN0AB
	20	ECN5121BAA-W10/G4	ECN5122BAA-W10/G4	ECN5124BAA-W10/G4	ECN5128BAA-W10/G4	
	25	ECN5121BAA-W10/G9	ECN5122BAA-W10/G9	ECN5124BAA-W10/G9	ECN5128BAA-W10/G9	
3YD	30	ECN5131BAA-W10/G14	ECN5132BAA-W10/G14	ECN5134BAA-W10/G14	ECN5138BAA-W10/G14	AN16KN0AB
	40	ECN5131BAA-W10/G19	ECN5132BAA-W10/G19	ECN5134BAA-W10/G19	ECN5138BAA-W10/G19	
	50	ECN5131BAA-W10/G24	ECN5132BAA-W10/G24	ECN5134BAA-W10/G24	ECN5138BAA-W10/G24	
4YD	60	ECN5141BAA-W10/G29	ECN5142BAA-W10/G29	ECN5144BAA-W10/G29	ECN5148BAA-W10/G29	AN16NN0AB
	75	ECN5141BAA-W10/G34	ECN5142BAA-W10/G34	ECN5144BAA-W10/G34	ECN5148BAA-W10/G34	
5YD	100	ECN5151BAA-W10/G39	ECN5152BAA-W10/G39	ECN5154BAA-W10/G39	ECN5158BAA-W10/G39	AN16SN0AB
	125	ECN5151BAA-W10/G44	ECN5152BAA-W10/G44	ECN5154BAA-W10/G44	ECN5158BAA-W10/G44	
	150	ECN5151BAA-W10/G49	ECN5152BAA-W10/G49	ECN5154BAA-W10/G49	ECN5158BAA-W10/G49	
6YD	200	ECN5161BAA-W10/G54	ECN5162BAA-W10/G54	ECN5163BAA-W10/G54 ⑤	ECN5168BAA-W10/G54	AN16TN0AB
	250	ECN5161BAA-W10/G59	ECN5162BAA-W10/G59	ECN5163BAA-W10/G59 ⑤	ECN5168BAA-W10/G59	
	300	ECN5161BAA-W10/G64	ECN5162BAA-W10/G64	ECN5163BAA-W10/G64 ⑤	ECN5168BAA-W10/G64	
	350	ECN5161BAA-W10/G69	ECN5162BAA-W10/G69	ECN5163BAA-W10/G69 ⑤	ECN5168BAA-W10/G69	
7YD	400	ECN5171BAA-W10/G74	ECN5172BAA-W10/G74	ECN5173BAA-W10/G74 ⑤	ECN5178BAA-W10/G74	AN16UN0AB
	450	ECN5171BAA-W10/G79	ECN5172BAA-W10/G79	ECN5173BAA-W10/G79 ⑤	ECN5178BAA-W10/G79	
	500	ECN5171BAA-W10/G84	ECN5172BAA-W10/G84	ECN5173BAA-W10/G84 ⑤	ECN5178BAA-W10/G84	
8YD	600	ECN5181BAA-W10/G89	ECN5182BAA-W10/G89	ECN5183BAA-W10/G89 ⑤	ECN5188BAA-W10/G89	AN16VN0AB
	700	ECN5181BAA-W10/G94	ECN5182BAA-W10/G94	ECN5183BAA-W10/G94 ⑤	ECN5188BAA-W10/G94	
	750	ECN5181BAA-W10/G99	ECN5182BAA-W10/G99	ECN5183BAA-W10/G99 ⑤	ECN5188BAA-W10/G99	
	800	ECN5181BAA-W10/G103	ECN5182BAA-W10/G103	ECN5183BAA-W10/G103 ⑤	ECN5188BAA-W10/G103	

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

Notes

- 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: ECN462**4**EAF. 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 Also requires matching contactor with mechanical interlock.
- ④ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑤ Type 4 (painted steel) sizes 6–8YD.

Class ECN51—Non-Combination Closed Transition Wye Delta Starter, continued

NEMA Size	Max. hp Rating	Type 1	Type 3R	Type 4X	Type 12	Component Starter (Open) ^③
		General Purpose	Rainproof	Water and Dust-Tight Stainless Steel ^①	Dust-Tight Industrial External Reset ^②	
		Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Motor Volts 460/Magnet Coil Voltage 120 ^④						
2YD	20	ECN5121CAA-W10/G6	ECN5122CAA-W10/G6	ECN5124CAA-W10/G6	ECN5128CAA-W10/G6	AN16GN0AB
	25	ECN5121CAA-W10/G11	ECN5122CAA-W10/G11	ECN5124CAA-W10/G11	ECN5128CAA-W10/G11	
	30	ECN5121CAA-W10/G16	ECN5122CAA-W10/G16	ECN5124CAA-W10/G16	ECN5128CAA-W10/G16	
	40	ECN5121CAA-W10/G21	ECN5122CAA-W10/G21	ECN5124CAA-W10/G21	ECN5128CAA-W10/G21	
3YD	50	ECN5131CAA-W10/G26	ECN5132CAA-W10/G26	ECN5134CAA-W10/G26	ECN5138CAA-W10/G26	AN16KN0AB
	60	ECN5131CAA-W10/G31	ECN5132CAA-W10/G31	ECN5134CAA-W10/G31	ECN5138CAA-W10/G31	
	75	ECN5131CAA-W10/G36	ECN5132CAA-W10/G36	ECN5134CAA-W10/G36	ECN5138CAA-W10/G36	
4YD	100	ECN5141CAA-W10/G41	ECN5142CAA-W10/G41	ECN5144CAA-W10/G41	ECN5148CAA-W10/G41	AN16NN0AB
	125	ECN5141CAA-W10/G46	ECN5142CAA-W10/G46	ECN5144CAA-W10/G46	ECN5148CAA-W10/G46	
	150	ECN5141CAA-W10/G51	ECN5142CAA-W10/G51	ECN5144CAA-W10/G51	ECN5148CAA-W10/G51	
5YD	200	ECN5151CAA-W10/G56	ECN5152CAA-W10/G56	ECN5154CAA-W10/G56	ECN5158CAA-W10/G56	AN16SN0AB
	250	ECN5151CAA-W10/G61	ECN5152CAA-W10/G61	ECN5154CAA-W10/G61	ECN5158CAA-W10/G61	
	300	ECN5151CAA-W10/G66	ECN5152CAA-W10/G66	ECN5154CAA-W10/G66	ECN5158CAA-W10/G66	
6YD	350	ECN5161CAA-W10/G71	ECN5162CAA-W10/G71	ECN5163CAA-W10/G71 ^⑤	ECN5168CAA-W10/G71	AN16TN0AB
	400	ECN5161CAA-W10/G76	ECN5162CAA-W10/G76	ECN5163CAA-W10/G76 ^⑤	ECN5168CAA-W10/G76	
	450	ECN5161CAA-W10/G81	ECN5162CAA-W10/G81	ECN5163CAA-W10/G81 ^⑤	ECN5168CAA-W10/G81	
	500	ECN5161CAA-W10/G86	ECN5162CAA-W10/G86	ECN5163CAA-W10/G86 ^⑤	ECN5168CAA-W10/G86	
	600	ECN5161CAA-W10/G91	ECN5162CAA-W10/G91	ECN5163CAA-W10/G91 ^⑤	ECN5168CAA-W10/G91	
	650	ECN5161CAA-W10/G96	ECN5162CAA-W10/G96	ECN5163CAA-W10/G96 ^⑤	ECN5168CAA-W10/G96	
	700	ECN5161CAA-W10/G96	ECN5162CAA-W10/G96	ECN5163CAA-W10/G96 ^⑤	ECN5168CAA-W10/G96	
7YD	750	ECN5171CAA-W10/G101	ECN5172CAA-W10/G101	ECN5173CAA-W10/G101 ^⑤	ECN5178CAA-W10/G101	AN16UN0AB
	800	ECN5171CAA-W10/G105	ECN5172CAA-W10/G105	ECN5173CAA-W10/G105 ^⑤	ECN5178CAA-W10/G105	
	900	ECN5171CAA-W10/G108	ECN5172CAA-W10/G108	ECN5173CAA-W10/G108 ^⑤	ECN5178CAA-W10/G108	
	1000	ECN5171CAA-W10/G111	ECN5172CAA-W10/G111	ECN5173CAA-W10/G111 ^⑤	ECN5178CAA-W10/G111	
8YD	1250	ECN5181CAA-W10/G114	ECN5182CAA-W10/G114	ECN5183CAA-W10/G114 ^⑤	ECN5188CAA-W10/G114	AN16VN0AB
	1500	ECN5181CAA-W10/G117	ECN5182CAA-W10/G117	ECN5183CAA-W10/G117 ^⑤	ECN5188CAA-W10/G117	

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

Notes

- 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: ECN4624EAF. 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 Also requires matching contactor with mechanical interlock.
- ④ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑤ Type 4 (painted steel) sizes 6–8YD.

Class ECN51 – Non-Combination Closed Transition Wye Delta Starter, continued

NEMA Size	Max. hp Rating	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ② Catalog Number	Component Starter (Open) ③ Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ④						
2YD	20	ECN5121DAA-W10/G7	ECN5122DAA-W10/G7	ECN5124DAA-W10/G7	ECN5128DAA-W10/G7	AN16GN0AB
	25	ECN5121DAA-W10/G12	ECN5122DAA-W10/G12	ECN5124DAA-W10/G12	ECN5128DAA-W10/G12	
	30	ECN5121DAA-W10/G17	ECN5122DAA-W10/G17	ECN5124DAA-W10/G17	ECN5128DAA-W10/G17	
	40	ECN5121DAA-W10/G22	ECN5122DAA-W10/G22	ECN5124DAA-W10/G22	ECN5128DAA-W10/G22	
3YD	50	ECN5131DAA-W10/G27	ECN5132DAA-W10/G27	ECN5134DAA-W10/G27	ECN5138DAA-W10/G27	AN16KN0AB
	60	ECN5131DAA-W10/G32	ECN5132DAA-W10/G32	ECN5134DAA-W10/G32	ECN5138DAA-W10/G32	
	75	ECN5131DAA-W10/G37	ECN5132DAA-W10/G37	ECN5134DAA-W10/G37	ECN5138DAA-W10/G37	
4YD	100	ECN5141DAA-W10/G42	ECN5142DAA-W10/G42	ECN5144DAA-W10/G42	ECN5148DAA-W10/G42	AN16NN0AB
	125	ECN5141DAA-W10/G47	ECN5142DAA-W10/G47	ECN5144DAA-W10/G47	ECN5148DAA-W10/G47	
	150	ECN5141DAA-W10/G52	ECN5142DAA-W10/G52	ECN5144DAA-W10/G52	ECN5148DAA-W10/G52	
5YD	200	ECN5151DAA-W10/G57	ECN5152DAA-W10/G57	ECN5154DAA-W10/G57	ECN5158DAA-W10/G57	AN16SN0AB
	250	ECN5151DAA-W10/G62	ECN5152DAA-W10/G62	ECN5154DAA-W10/G62	ECN5158DAA-W10/G62	
	300	ECN5151DAA-W10/G67	ECN5152DAA-W10/G67	ECN5154DAA-W10/G67	ECN5158DAA-W10/G67	
6YD	350	ECN5161DAA-W10/G72	ECN5162DAA-W10/G72	ECN5163DAA-W10/G72 ⑤	ECN5168DAA-W10/G72	AN16TN0AB
	400	ECN5161DAA-W10/G77	ECN5162DAA-W10/G77	ECN5163DAA-W10/G77 ⑤	ECN5168DAA-W10/G77	
	450	ECN5161DAA-W10/G82	ECN5162DAA-W10/G82	ECN5163DAA-W10/G82 ⑤	ECN5168DAA-W10/G82	
	500	ECN5161DAA-W10/G87	ECN5162DAA-W10/G87	ECN5163DAA-W10/G87 ⑤	ECN5168DAA-W10/G87	
	600	ECN5161DAA-W10/G92	ECN5162DAA-W10/G92	ECN5163DAA-W10/G92 ⑤	ECN5168DAA-W10/G92	
	700	ECN5161DAA-W10/G97	ECN5162DAA-W10/G97	ECN5163DAA-W10/G97 ⑤	ECN5168DAA-W10/G97	
7YD	750	ECN5171DAA-W10/G102	ECN5172DAA-W10/G102	ECN5173DAA-W10/G102 ⑤	ECN5178DAA-W10/G102	AN16UN0AB
	800	ECN5171DAA-W10/G106	ECN5172DAA-W10/G106	ECN5173DAA-W10/G106 ⑤	ECN5178DAA-W10/G106	
	900	ECN5171DAA-W10/G109	ECN5172DAA-W10/G109	ECN5173DAA-W10/G109 ⑤	ECN5178DAA-W10/G109	
	1000	ECN5171DAA-W10/G112	ECN5172DAA-W10/G112	ECN5173DAA-W10/G112 ⑤	ECN5178DAA-W10/G112	
8YD	1250	ECN5181DAA-W10/G115	ECN5182DAA-W10/G115	ECN5183DAA-W10/G115 ⑤	ECN5188DAA-W10/G115	AN16VN0AB
	1500	ECN5181DAA-W10/G118	ECN5182DAA-W10/G118	ECN5183DAA-W10/G118 ⑤	ECN5188DAA-W10/G118	

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

Notes

- 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: ECN4624EAF. 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 Also requires matching contactor with mechanical interlock.
- ④ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑤ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Fusible Disconnect

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN5221EAD-W10/G1	ECN5222EAD-W10/G1	ECN5224EAD-W10/G1	ECN5228EAD-W10/G1	AN16GN0AB
	20	100A	ECN5221EAF-W10/G3	ECN5222EAF-W10/G3	ECN5224EAF-W10/G3	ECN5228EAF-W10/G3	
3YD	25	100A	ECN5231EAF-W10/G8	ECN5232EAF-W10/G8	ECN5234EAF-W10/G8	ECN5238EAF-W10/G8	AN16KN0AB
	30	200A	ECN5231EAH-W10/G13	ECN5232EAH-W10/G13	ECN5234EAH-W10/G13	ECN5238EAH-W10/G13	
	40		ECN5231EAH-W10/G18	ECN5232EAH-W10/G18	ECN5234EAH-W10/G18	ECN5238EAH-W10/G18	
4YD	50	200A	ECN5241EAH-W10/G23	ECN5242EAH-W10/G23	ECN5244EAH-W10/G23	ECN5248EAH-W10/G23	AN16NN0AB
	60	400A	ECN5241EAK-W10/G28	ECN5242EAK-W10/G28	ECN5244EAK-W10/G28	ECN5248EAK-W10/G28	
5YD	75	400A	ECN5251EAK-W10/G33	ECN5252EAK-W10/G33	ECN5254EAK-W10/G33	ECN5258EAK-W10/G33	AN16SN0AB
	100		ECN5251EAK-W10/G38	ECN5252EAK-W10/G38	ECN5254EAK-W10/G38	ECN5258EAK-W10/G38	
	125	600A	ECN5251EAM-W10/G43	ECN5252EAM-W10/G43	ECN5254EAM-W10/G43	ECN5258EAM-W10/G43	
	150		ECN5251EAM-W10/G48	ECN5252EAM-W10/G48	ECN5254EAM-W10/G48	ECN5258EAM-W10/G48	
6YD	200	⑥	ECN5261EAU-W10/G53	ECN5262EAU-W10/G53	ECN5263EAU-W10/G53 ⑦	ECN5268EAU-W10/G53	AN16TN0AB
	250		ECN5261EAU-W10/G58	ECN5262EAU-W10/G58	ECN5263EAU-W10/G58 ⑦	ECN5268EAU-W10/G58	
	300		ECN5261EAU-W10/G63	ECN5262EAU-W10/G63	ECN5263EAU-W10/G63 ⑦	ECN5268EAU-W10/G63	
7YD	350	⑥	ECN5271EAU-W10/G68	ECN5272EAU-W10/G68	ECN5273EAU-W10/G68 ⑦	ECN5278EAU-W10/G68	AN16UN0AB
	400		ECN5271EAU-W10/G73	ECN5272EAU-W10/G73	ECN5273EAU-W10/G73 ⑦	ECN5278EAU-W10/G73	
	450		ECN5271EAU-W10/G78	ECN5272EAU-W10/G78	ECN5273EAU-W10/G78 ⑦	ECN5278EAU-W10/G78	
	500		ECN5271EAU-W10/G83	ECN5272EAU-W10/G83	ECN5273EAU-W10/G83 ⑦	ECN5278EAU-W10/G83	
8YD	600	⑥	ECN5281EAU-W10/G88	ECN5282EAU-W10/G88	ECN5283EAU-W10/G88 ⑦	ECN5288EAU-W10/G88	AN16VN0AB
	700		ECN5281EAU-W10/G93	ECN5282EAU-W10/G93	ECN5283EAU-W10/G93 ⑦	ECN5288EAU-W10/G93	
	750		ECN5281EAU-W10/G98	ECN5282EAU-W10/G98	ECN5283EAU-W10/G98 ⑦	ECN5288EAU-W10/G98	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ^① Catalog Number	Type 12 Dust-Tight Industrial External Reset ^{②③} Catalog Number	Component Starter (Open) ^④ Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ^⑤							
2YD	15	60A	ECN5221BAD-W10/G2	ECN5222BAD-W10/G2	ECN5224BAD-W10/G2	ECN5228BAD-W10/G2	AN16GN0AB
	20	100A	ECN5221BAF-W10/G4	ECN5222BAF-W10/G4	ECN5224BAF-W10/G4	ECN5228BAF-W10/G4	
	25		ECN5221BAF-W10/G9	ECN5222BAF-W10/G9	ECN5224BAF-W10/G9	ECN5228BAF-W10/G9	
3YD	30	100A	ECN5231BAF-W10/G14	ECN5232BAF-W10/G14	ECN5234BAF-W10/G14	ECN5238BAF-W10/G14	AN16KN0AB
	40	200A	ECN5231BAH-W10/G19	ECN5232BAH-W10/G19	ECN5234BAH-W10/G19	ECN5238BAH-W10/G19	
	50		ECN5231BAH-W10/G24	ECN5232BAH-W10/G24	ECN5234BAH-W10/G24	ECN5238BAH-W10/G24	
4YD	60	200A	ECN5241BAH-W10/G29	ECN5242BAH-W10/G29	ECN5244BAH-W10/G29	ECN5248BAH-W10/G29	AN16NN0AB
	75	400A	ECN5241BAK-W10/G34	ECN5242BAK-W10/G34	ECN5244BAK-W10/G34	ECN5248BAK-W10/G34	
5YD	100	400A	ECN5251BAK-W10/G39	ECN5252BAK-W10/G39	ECN5254BAK-W10/G39	ECN5258BAK-W10/G39	AN16SN0AB
	125		ECN5251BAK-W10/G44	ECN5252BAK-W10/G44	ECN5254BAK-W10/G44	ECN5258BAK-W10/G44	
	150	600A	ECN5251BAM-W10/G49	ECN5252BAM-W10/G49	ECN5254BAM-W10/G49	ECN5258BAM-W10/G49	
6YD	200	600A ^⑥	ECN5261BAM-W10/G54	ECN5262BAM-W10/G54	ECN5263BAM-W10/G54 ^⑦	ECN5268BAM-W10/G54	AN16TN0AB
	250		ECN5261BAU-W10/G59	ECN5262BAU-W10/G59	ECN5263BAU-W10/G59 ^⑦	ECN5268BAU-W10/G59	
	300		ECN5261BAU-W10/G64	ECN5262BAU-W10/G64	ECN5263BAU-W10/G64 ^⑦	ECN5268BAU-W10/G64	
	350		ECN5261BAU-W10/G69	ECN5262BAU-W10/G69	ECN5263BAU-W10/G69 ^⑦	ECN5268BAU-W10/G69	
7YD	400	^⑥	ECN5271BAU-W10/G74	ECN5272BAU-W10/G74	ECN5273BAU-W10/G74 ^⑦	ECN5278BAU-W10/G74	AN16UN0AB
	450		ECN5271BAU-W10/G79	ECN5272BAU-W10/G79	ECN5273BAU-W10/G79 ^⑦	ECN5278BAU-W10/G79	
	500		ECN5271BAU-W10/G84	ECN5272BAU-W10/G84	ECN5273BAU-W10/G84 ^⑦	ECN5278BAU-W10/G84	
8YD	600	^⑥	ECN5281BAU-W10/G89	ECN5282BAU-W10/G89	ECN5283BAU-W10/G89 ^⑦	ECN5288BAU-W10/G89	AN16VN0AB
	700		ECN5281BAU-W10/G94	ECN5282BAU-W10/G94	ECN5283BAU-W10/G94 ^⑦	ECN5288BAU-W10/G94	
	750		ECN5281BAU-W10/G99	ECN5282BAU-W10/G99	ECN5283BAU-W10/G99 ^⑦	ECN5288BAU-W10/G99	
	800		ECN5281BAU-W10/G103	ECN5282BAU-W10/G103	ECN5283BAU-W10/G103 ^⑦	ECN5288BAU-W10/G103	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 460/Magnet Coil Voltage 120 ⑤							
2YD	20	60A	ECN5221CAE-W10/G6	ECN5222CAE-W10/G6	ECN5224CAE-W10/G6	ECN5228CAE-W10/G6	AN16GN0AB
	25		ECN5221CAE-W10/G11	ECN5222CAE-W10/G11	ECN5224CAE-W10/G11	ECN5228CAE-W10/G11	
	30		ECN5221CAE-W10/G16	ECN5222CAE-W10/G16	ECN5224CAE-W10/G16	ECN5228CAE-W10/G16	
	40		ECN5221CAE-W10/G21	ECN5222CAE-W10/G21	ECN5224CAE-W10/G21	ECN5228CAE-W10/G21	
3YD	50	100A	ECN5231CAG-W10/G26	ECN5232CAG-W10/G26	ECN5234CAG-W10/G26	ECN5238CAG-W10/G26	AN16KN0AB
	60		ECN5231CAG-W10/G31	ECN5232CAG-W10/G31	ECN5234CAG-W10/G31	ECN5238CAG-W10/G31	
	75	200A	ECN5231CAJ-W10/G36	ECN5232CAJ-W10/G36	ECN5234CAJ-W10/G36	ECN5238CAJ-W10/G36	
4YD	100	200A	ECN5241CAJ-W10/G41	ECN5242CAJ-W10/G41	ECN5244CAJ-W10/G41	ECN5248CAJ-W10/G41	AN16NN0AB
	125		ECN5241CAJ-W10/G46	ECN5242CAJ-W10/G46	ECN5244CAJ-W10/G46	ECN5248CAJ-W10/G46	
	150	400A	ECN5241CAL-W10/G51	ECN5242CAL-W10/G51	ECN5244CAL-W10/G51	ECN5248CAL-W10/G51	
5YD	200	400A	ECN5251CAL-W10/G56	ECN5252CAL-W10/G56	ECN5254CAL-W10/G56	ECN5258CAL-W10/G56	AN16SN0AB
	250		ECN5251CAL-W10/G61	ECN5252CAL-W10/G61	ECN5254CAL-W10/G61	ECN5258CAL-W10/G61	
	300	600A	ECN5251CAN-W10/G66	ECN5252CAN-W10/G66	ECN5254CAN-W10/G66	ECN5258CAN-W10/G66	
6YD	350	600A	ECN5261CAN-W10/G71	ECN5262CAN-W10/G71	ECN5263CAN-W10/G71 ⑦	ECN5268CAN-W10/G71	AN16TN0AB
	400		ECN5261CAN-W10/G76	ECN5262CAN-W10/G76	ECN5263CAN-W10/G76 ⑦	ECN5268CAN-W10/G76	
	450		ECN5261CAN-W10/G81	ECN5262CAN-W10/G81	ECN5263CAN-W10/G81 ⑦	ECN5268CAN-W10/G81	
	500	800A	ECN5261CAP-W10/G86	ECN5262CAP-W10/G86	ECN5263CAP-W10/G86 ⑦	ECN5268CAP-W10/G86	
	600	1200A	ECN5261CAQ-W10/G91	ECN5262CAQ-W10/G91	ECN5263CAQ-W10/G91 ⑦	ECN5268CAQ-W10/G91	
	700	ECN5261CAQ-W10/G96	ECN5262CAQ-W10/G96	ECN5263CAQ-W10/G96 ⑦	ECN5268CAQ-W10/G96		
7YD	750	1200A ⑥	ECN5271CAQ-W10/G101	ECN5272CAQ-W10/G101	ECN5273CAQ-W10/G101 ⑦	ECN5278CAQ-W10/G101	AN16UN0AB
	800		ECN5271CAU-W10/G105	ECN5272CAU-W10/G105	ECN5273CAU-W10/G105 ⑦	ECN5278CAU-W10/G105	
	900		ECN5271CAU-W10/G108	ECN5272CAU-W10/G108	ECN5273CAU-W10/G108 ⑦	ECN5278CAU-W10/G108	
	1000		ECN5271CAU-W10/G111	ECN5272CAU-W10/G111	ECN5273CAU-W10/G111 ⑦	ECN5278CAU-W10/G111	
8YD	1250	⑥	ECN5281CAU-W10/G114	ECN5282CAU-W10/G114	ECN5283CAU-W10/G114 ⑦	ECN5288CAU-W10/G114	AN16VN0AB
	1500		ECN5281CAU-W10/G117	ECN5282CAU-W10/G117	ECN5283CAU-W10/G117 ⑦	ECN5288CAU-W10/G117	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Fuse Clip Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ⑤							
2YD	20	30A	ECN5221DAC-W10/G7	ECN5222DAC-W10/G7	ECN5224DAC-W10/G7	ECN5228DAC-W10/G7	AN16GN0AB
	25	60A	ECN5221DAE-W10/G12	ECN5222DAE-W10/G12	ECN5224DAE-W10/G12	ECN5228DAE-W10/G12	
	30		ECN5221DAE-W10/G17	ECN5222DAE-W10/G17	ECN5224DAE-W10/G17	ECN5228DAE-W10/G17	
	40		ECN5221DAE-W10/G22	ECN5222DAE-W10/G22	ECN5224DAE-W10/G22	ECN5228DAE-W10/G22	
3YD	50	100A	ECN5231DAG-W10/G27	ECN5232DAG-W10/G27	ECN5234DAG-W10/G27	ECN5238DAG-W10/G27	AN16KN0AB
	60		ECN5231DAG-W10/G32	ECN5232DAG-W10/G32	ECN5234DAG-W10/G32	ECN5238DAG-W10/G32	
	75		ECN5231DAG-W10/G37	ECN5232DAG-W10/G37	ECN5234DAG-W10/G37	ECN5238DAG-W10/G37	
4YD	100	200A	ECN5241DAJ-W10/G42	ECN5242DAJ-W10/G42	ECN5244DAJ-W10/G42	ECN5248DAJ-W10/G42	AN16NN0AB
	125		ECN5241DAJ-W10/G47	ECN5242DAJ-W10/G47	ECN5244DAJ-W10/G47	ECN5248DAJ-W10/G47	
	150		ECN5241DAJ-W10/G52	ECN5242DAJ-W10/G52	ECN5244DAJ-W10/G52	ECN5248DAJ-W10/G52	
5YD	200	400A	ECN5251DAL-W10/G57	ECN5252DAL-W10/G57	ECN5254DAL-W10/G57	ECN5258DAL-W10/G57	AN16SN0AB
	250		ECN5251DAL-W10/G62	ECN5252DAL-W10/G62	ECN5254DAL-W10/G62	ECN5258DAL-W10/G62	
	300		ECN5251DAL-W10/G67	ECN5252DAL-W10/G67	ECN5254DAL-W10/G67	ECN5258DAL-W10/G67	
6YD	350	400A	ECN5261DAL-W10/G72	ECN5262DAL-W10/G72	ECN5263DAL-W10/G72 ⑦	ECN5268DAL-W10/G72	AN16TN0AB
	400	600A	ECN5261DAN-W10/G77	ECN5262DAN-W10/G77	ECN5263DAN-W10/G77 ⑦	ECN5268DAN-W10/G77	
	450		ECN5261DAN-W10/G82	ECN5262DAN-W10/G82	ECN5263DAN-W10/G82 ⑦	ECN5268DAN-W10/G82	
	500		ECN5261DAN-W10/G87	ECN5262DAN-W10/G87	ECN5263DAN-W10/G87 ⑦	ECN5268DAN-W10/G87	
	600	800A	ECN5261DAP-W10/G92	ECN5262DAP-W10/G92	ECN5263DAP-W10/G92 ⑦	ECN5268DAP-W10/G92	
	700		ECN5261DAP-W10/G97	ECN5262DAP-W10/G97	ECN5263DAP-W10/G97 ⑦	ECN5268DAP-W10/G97	
7YD	750	⑥	ECN5271DAU-W10/G102	ECN5272DAU-W10/G102	ECN5273DAU-W10/G102 ⑦	ECN5278DAU-W10/G102	AN16UN0AB
	800		ECN5271DAU-W10/G106	ECN5272DAU-W10/G106	ECN5273DAU-W10/G106 ⑦	ECN5278DAU-W10/G106	
	900		ECN5271DAU-W10/G109	ECN5272DAU-W10/G109	ECN5273DAU-W10/G109 ⑦	ECN5278DAU-W10/G109	
	1000		ECN5271DAU-W10/G112	ECN5272DAU-W10/G112	ECN5273DAU-W10/G112 ⑦	ECN5278DAU-W10/G112	
8YD	1250	⑥	ECN5281DAU-W10/G115	ECN5282DAU-W10/G115	ECN5283DAU-W10/G115 ⑦	ECN5288DAU-W10/G115	AN16VN0AB
	1500		ECN5281DAU-W10/G118	ECN5282DAU-W10/G118	ECN5283DAU-W10/G118 ⑦	ECN5288DAU-W10/G118	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Non-Fusible Disconnect

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN5221EAA-W10/G1	ECN5222EAA-W10/G1	ECN5224EAA-W10/G1	ECN5228EAA-W10/G1	AN16GN0AB
	20	100A	ECN5221EAA-W10/G3	ECN5222EAA-W10/G3	ECN5224EAA-W10/G3	ECN5228EAA-W10/G3	
3YD	25	100A	ECN5231EAA-W10/G8	ECN5232EAA-W10/G8	ECN5234EAA-W10/G8	ECN5238EAA-W10/G8	AN16KN0AB
	30	200A	ECN5231EAA-W10/G13	ECN5232EAA-W10/G13	ECN5234EAA-W10/G13	ECN5238EAA-W10/G13	
	40		ECN5231EAA-W10/G18	ECN5232EAA-W10/G18	ECN5234EAA-W10/G18	ECN5238EAA-W10/G18	
4YD	50	200A	ECN5241EAA-W10/G23	ECN5242EAA-W10/G23	ECN5244EAA-W10/G23	ECN5248EAA-W10/G23	AN16NN0AB
	60	400A	ECN5241EAA-W10/G28	ECN5242EAA-W10/G28	ECN5244EAA-W10/G28	ECN5248EAA-W10/G28	
5YD	75	400A	ECN5251EAA-W10/G33	ECN5252EAA-W10/G33	ECN5254EAA-W10/G33	ECN5258EAA-W10/G33	AN16SN0AB
	100		ECN5251EAA-W10/G38	ECN5252EAA-W10/G38	ECN5254EAA-W10/G38	ECN5258EAA-W10/G38	
	125	600A	ECN5251EAA-W10/G43	ECN5252EAA-W10/G43	ECN5254EAA-W10/G43	ECN5258EAA-W10/G43	
	150		ECN5251EAA-W10/G48	ECN5252EAA-W10/G48	ECN5254EAA-W10/G48	ECN5258EAA-W10/G48	
6YD	200	⑥	ECN5261EAA-W10/G53	ECN5262EAA-W10/G53	ECN5263EAA-W10/G53 ⑦	ECN5268EAA-W10/G33	AN16TN0AB
	250		ECN5261EAA-W10/G58	ECN5262EAA-W10/G58	ECN5263EAA-W10/G58 ⑦	ECN5268EAA-W10/G58	
	300		ECN5261EAA-W10/G63	ECN5262EAA-W10/G63	ECN5263EAA-W10/G63 ⑦	ECN5268EAA-W10/G63	
7YD	350	⑥	ECN5271EAA-W10/G68	ECN5272EAA-W10/G68	ECN5273EAA-W10/G68 ⑦	ECN5278EAA-W10/G68	AN16UN0AB
	400		ECN5271EAA-W10/G73	ECN5272EAA-W10/G73	ECN5273EAA-W10/G73 ⑦	ECN5278EAA-W10/G73	
	450		ECN5271EAA-W10/G78	ECN5272EAA-W10/G78	ECN5273EAA-W10/G78 ⑦	ECN5278EAA-W10/G78	
	500		ECN5271EAA-W10/G83	ECN5272EAA-W10/G83	ECN5273EAA-W10/G83 ⑦	ECN5278EAA-W10/G83	
8YD	600	⑥	ECN5281EAA-W10/G88	ECN5282EAA-W10/G88	ECN5283EAA-W10/G88 ⑦	ECN5288EAA-W10/G88	AN16VN0AB
	700		ECN5281EAA-W10/G93	ECN5282EAA-W10/G93	ECN5283EAA-W10/G93 ⑦	ECN5288EAA-W10/G93	
	750		ECN5281EAA-W10/G98	ECN5282EAA-W10/G98	ECN5283EAA-W10/G98 ⑦	ECN5288EAA-W10/G98	

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

Notes

- 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: ECN462**4**EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Non-Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN5221BAA-W10/G2	ECN5222BAA-W10/G2	ECN5224BAA-W10/G2	ECN5228BAA-W10/G2	AN16GN0AB
	20	100A	ECN5221BAA-W10/G4	ECN5222BAA-W10/G4	ECN5224BAA-W10/G4	ECN5228BAA-W10/G4	
	25		ECN5221BAA-W10/G9	ECN5222BAA-W10/G9	ECN5224BAA-W10/G9	ECN5228BAA-W10/G9	
3YD	30	100A	ECN5231BAA-W10/G14	ECN5232BAA-W10/G14	ECN5234BAA-W10/G14	ECN5238BAA-W10/G14	AN16KN0AB
	40	200A	ECN5231BAA-W10/G19	ECN5232BAA-W10/G19	ECN5234BAA-W10/G19	ECN5238BAA-W10/G19	
	50		ECN5231BAA-W10/G24	ECN5232BAA-W10/G24	ECN5234BAA-W10/G24	ECN5238BAA-W10/G24	
4YD	60	200A	ECN5241BAA-W10/G29	ECN5242BAA-W10/G29	ECN5244BAA-W10/G29	ECN5248BAA-W10/G29	AN16NN0AB
	75	400A	ECN5241BAA-W10/G34	ECN5242BAA-W10/G34	ECN5244BAA-W10/G34	ECN5248BAA-W10/G34	
5YD	100	400A	ECN5251BAA-W10/G39	ECN5252BAA-W10/G39	ECN5254BAA-W10/G39	ECN5258BAA-W10/G39	AN16SN0AB
	125		ECN5251BAA-W10/G44	ECN5252BAA-W10/G44	ECN5254BAA-W10/G44	ECN5258BAA-W10/G44	
	150	600A	ECN5251BAA-W10/G49	ECN5252BAA-W10/G49	ECN5254BAA-W10/G49	ECN5258BAA-W10/G49	
6YD	200	600A	ECN5261BAA-W10/G54	ECN5262BAA-W10/G54	ECN5263BAA-W10/G54 ⑦	ECN5268BAA-W10/G54	AN16TN0AB
	250	⑥	ECN5261BAA-W10/G59	ECN5262BAA-W10/G59	ECN5263BAA-W10/G59 ⑦	ECN5268BAA-W10/G59	
	300		ECN5261BAA-W10/G64	ECN5262BAA-W10/G64	ECN5263BAA-W10/G64 ⑦	ECN5268BAA-W10/G64	
	350		ECN5261BAA-W10/G69	ECN5262BAA-W10/G69	ECN5263BAA-W10/G69 ⑦	ECN5268BAA-W10/G69	
7YD	400	⑥	ECN5271BAA-W10/G74	ECN5272BAA-W10/G74	ECN5273BAA-W10/G74 ⑦	ECN5278BAA-W10/G74	AN16UN0AB
	450		ECN5271BAA-W10/G79	ECN5272BAA-W10/G79	ECN5273BAA-W10/G79 ⑦	ECN5278BAA-W10/G79	
	500		ECN5271BAA-W10/G84	ECN5272BAA-W10/G84	ECN5273BAA-W10/G84 ⑦	ECN5278BAA-W10/G84	
8YD	600	⑥	ECN5281BAA-W10/G89	ECN5282BAA-W10/G89	ECN5283BAA-W10/G89 ⑦	ECN5288BAA-W10/G89	AN16VN0AB
	700		ECN5281BAA-W10/G94	ECN5282BAA-W10/G94	ECN5283BAA-W10/G94 ⑦	ECN5288BAA-W10/G94	
	750		ECN5281BAA-W10/G99	ECN5282BAA-W10/G99	ECN5283BAA-W10/G99 ⑦	ECN5288BAA-W10/G99	
	800		ECN5281BAA-W10/G103	ECN5282BAA-W10/G103	ECN5283BAA-W10/G103 ⑦	ECN5288BAA-W10/G103	

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

Notes

- 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: ECN462**4**EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Non-Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number	
Motor Volts 460/Magnet Coil Voltage 120 ⑤								
2YD	20	60A	ECN5221CAA-W10/G6	ECN5222CAA-W10/G6	ECN5224CAA-W10/G6	ECN5228CAA-W10/G6	AN16GN0AB	
	25		ECN5221CAA-W10/G11	ECN5222CAA-W10/G11	ECN5224CAA-W10/G11	ECN5228CAA-W10/G11		
	30		ECN5221CAA-W10/G16	ECN5222CAA-W10/G16	ECN5224CAA-W10/G16	ECN5228CAA-W10/G16		
	40		ECN5221CAA-W10/G21	ECN5222CAA-W10/G21	ECN5224CAA-W10/G21	ECN5228CAA-W10/G21		
3YD	50	100A	ECN5231CAA-W10/G26	ECN5232CAA-W10/G26	ECN5234CAA-W10/G26	ECN5238CAA-W10/G26	AN16KN0AB	
	60		ECN5231CAA-W10/G31	ECN5232CAA-W10/G31	ECN5234CAA-W10/G31	ECN5238CAA-W10/G31		
	75		200A	ECN5231CAA-W10/G36	ECN5232CAA-W10/G36	ECN5234CAA-W10/G36		ECN5238CAA-W10/G36
4YD	100	200A	ECN5241CAA-W10/G41	ECN5242CAA-W10/G41	ECN5244CAA-W10/G41	ECN5248CAA-W10/G41	AN16NN0AB	
	125		ECN5241CAA-W10/G46	ECN5242CAA-W10/G46	ECN5244CAA-W10/G46	ECN5248CAA-W10/G46		
	150		400A	ECN5241CAA-W10/G51	ECN5242CAA-W10/G51	ECN5244CAA-W10/G51		ECN5248CAA-W10/G51
5YD	200	400A	ECN5251CAA-W10/G56	ECN5252CAA-W10/G56	ECN5254CAA-W10/G56	ECN5258CAA-W10/G56	AN16SN0AB	
	250		ECN5251CAA-W10/G61	ECN5252CAA-W10/G61	ECN5254CAA-W10/G61	ECN5258CAA-W10/G61		
	300		600A	ECN5251CAA-W10/G66	ECN5252CAA-W10/G66	ECN5254CAA-W10/G66		ECN5258CAA-W10/G66
6YD	350	600A	ECN5261CAA-W10/G71	ECN5262CAA-W10/G71	ECN5263CAA-W10/G71 ⑦	ECN5268CAA-W10/G71	AN16TN0AB	
	400		ECN5261CAA-W10/G76	ECN5262CAA-W10/G76	ECN5263CAA-W10/G76 ⑦	ECN5268CAA-W10/G76		
	450		ECN5261CAA-W10/G81	ECN5262CAA-W10/G81	ECN5263CAA-W10/G81 ⑦	ECN5268CAA-W10/G81		
	500		800A	ECN5261CAA-W10/G86	ECN5262CAA-W10/G86	ECN5263CAA-W10/G86 ⑦		ECN5268CAA-W10/G86
	600		1200A	ECN5261CAA-W10/G91	ECN5262CAA-W10/G91	ECN5263CAA-W10/G91 ⑦		ECN5268CAA-W10/G91
	700		ECN5261CAA-W10/G96	ECN5262CAA-W10/G96	ECN5263CAA-W10/G96 ⑦	ECN5268CAA-W10/G96		
	7YD		750	1200A	ECN5271CAA-W10/G101	ECN5272CAA-W10/G101		ECN5273CAA-W10/G101 ⑦
	800	⑥	ECN5271CAA-W10/G105	ECN5272CAA-W10/G105	ECN5273CAA-W10/G105 ⑦	ECN5278CAA-W10/G105		
	900		ECN5271CAA-W10/G108	ECN5272CAA-W10/G108	ECN5273CAA-W10/G108 ⑦	ECN5278CAA-W10/G108		
	1000		ECN5271CAA-W10/G111	ECN5272CAA-W10/G111	ECN5273CAA-W10/G111 ⑦	ECN5278CAA-W10/G111		
8YD	1250	⑥	ECN5281CAA-W10/G114	ECN5282CAA-W10/G114	ECN5283CAA-W10/G114 ⑦	ECN5288CAA-W10/G114	AN16VN0AB	
	1500		ECN5281CAA-W10/G117	ECN5282CAA-W10/G117	ECN5283CAA-W10/G117 ⑦	ECN5288CAA-W10/G117		

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN52—Combination Closed Transition Wye Delta Starter—Non-Fusible Disconnect, continued

NEMA Size	Max. hp Rating	Disconnect Amps.	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ^① Catalog Number	Type 12 Dust-Tight Industrial External Reset ^{②③} Catalog Number	Component Starter (Open) ^④ Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ^⑤							
2YD	20	30A	ECN5221DAA-W10/G7	ECN5222DAA-W10/G7	ECN5224DAA-W10/G7	ECN5228DAA-W10/G7	AN16GN0AB
	25	60A	ECN5221DAA-W10/G12	ECN5222DAA-W10/G12	ECN5224DAA-W10/G12	ECN5228DAA-W10/G12	
	30		ECN5221DAA-W10/G17	ECN5222DAA-W10/G17	ECN5224DAA-W10/G17	ECN5228DAA-W10/G17	
	40		ECN5221DAA-W10/G22	ECN5222DAA-W10/G22	ECN5224DAA-W10/G22	ECN5228DAA-W10/G22	
3YD	50	100A	ECN5231DAA-W10/G27	ECN5232DAA-W10/G27	ECN5234DAA-W10/G27	ECN5238DAA-W10/G27	AN16KN0AB
	60		ECN5231DAA-W10/G32	ECN5232DAA-W10/G32	ECN5234DAA-W10/G32	ECN5238DAA-W10/G32	
	75		ECN5231DAA-W10/G37	ECN5232DAA-W10/G37	ECN5234DAA-W10/G37	ECN5238DAA-W10/G37	
4YD	100	200A	ECN5241DAA-W10/G42	ECN5242DAA-W10/G42	ECN5244DAA-W10/G42	ECN5248DAA-W10/G42	AN16NN0AB
	125		ECN5241DAA-W10/G47	ECN5242DAA-W10/G47	ECN5244DAA-W10/G47	ECN5248DAA-W10/G47	
	150		ECN5241DAA-W10/G52	ECN5242DAA-W10/G52	ECN5244DAA-W10/G52	ECN5248DAA-W10/G52	
5YD	200	400A	ECN5251DAA-W10/G57	ECN5252DAA-W10/G57	ECN5254DAA-W10/G57	ECN5258DAA-W10/G57	AN16SN0AB
	250		ECN5251DAA-W10/G62	ECN5252DAA-W10/G62	ECN5254DAA-W10/G62	ECN5258DAA-W10/G62	
	300		ECN5251DAA-W10/G67	ECN5252DAA-W10/G67	ECN5254DAA-W10/G67	ECN5258DAA-W10/G67	
6YD	350	400A	ECN5261DAA-W10/G72	ECN5262DAA-W10/G72	ECN5263DAA-W10/G72 ^⑦	ECN5268DAA-W10/G72	AN16TN0AB
	400	600A	ECN5261DAA-W10/G77	ECN5262DAA-W10/G77	ECN5263DAA-W10/G77 ^⑦	ECN5268DAA-W10/G77	
	450		ECN5261DAA-W10/G82	ECN5262DAA-W10/G82	ECN5263DAA-W10/G82 ^⑦	ECN5268DAA-W10/G82	
	500		ECN5261DAA-W10/G87	ECN5262DAA-W10/G87	ECN5263DAA-W10/G87 ^⑦	ECN5268DAA-W10/G87	
	600	800A	ECN5261DAA-W10/G92	ECN5262DAA-W10/G92	ECN5263DAA-W10/G92 ^⑦	ECN5268DAA-W10/G92	
	700		ECN5261DAA-W10/G97	ECN5262DAA-W10/G97	ECN5263DAA-W10/G97 ^⑦	ECN5268DAA-W10/G97	
7YD	750	⑥	ECN5271DAA-W10/G102	ECN5272DAA-W10/G102	ECN5273DAA-W10/G102 ^⑦	ECN5278DAA-W10/G102	AN16UN0AB
	800		ECN5271DAA-W10/G106	ECN5272DAA-W10/G106	ECN5273DAA-W10/G106 ^⑦	ECN5278DAA-W10/G106	
	900		ECN5271DAA-W10/G109	ECN5272DAA-W10/G109	ECN5273DAA-W10/G109 ^⑦	ECN5278DAA-W10/G109	
	1000		ECN5271DAA-W10/G112	ECN5272DAA-W10/G112	ECN5273DAA-W10/G112 ^⑦	ECN5278DAA-W10/G112	
8YD	1250	⑥	ECN5281DAA-W10/G115	ECN5282DAA-W10/G115	ECN5283DAA-W10/G115 ^⑦	ECN5288DAA-W10/G115	AN16VN0AB
	1500		ECN5281DAA-W10/G118	ECN5282DAA-W10/G118	ECN5283DAA-W10/G118 ^⑦	ECN5288DAA-W10/G118	

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

Notes

- 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: ECN462**4**EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary. If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN53—Combination Closed Transition Wye Delta Starter—Circuit Breaker

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 200/Magnet Coil Voltage 120 ⑤							
2YD	15	70A	ECN5321EAH-W10/G1	ECN5322EAH-W10/G1	ECN5324EAH-W10/G1	ECN5328EAH-W10/G1	AN16GN0AB
	20	90A	ECN5321EAJ-W10/G3	ECN5322EAJ-W10/G3	ECN5324EAJ-W10/G3	ECN5328EAJ-W10/G3	
3YD	25	100A	ECN5331EAK-W10/G8	ECN5332EAK-W10/G8	ECN5334EAK-W10/G8	ECN5338EAK-W10/G8	AN16KN0AB
	30	125A	ECN5331EAL-W10/G13	ECN5332EAL-W10/G13	ECN5334EAL-W10/G13	ECN5338EAL-W10/G13	
	40	175A	ECN5331EAN-W10/G18	ECN5332EAN-W10/G18	ECN5334EAN-W10/G18	ECN5338EAN-W10/G18	
4YD	50	200A	ECN5341EAP-W10/G23	ECN5342EAP-W10/G23	ECN5344EAP-W10/G23	ECN5348EAP-W10/G23	AN16NN0AB
	60	225A	ECN5341EAQ-W10/G28	ECN5342EAQ-W10/G28	ECN5344EAQ-W10/G28	ECN5348EAQ-W10/G28	
5YD	75	300A	ECN5351EAS-W10/G33	ECN5352EAS-W10/G33	ECN5354EAS-W10/G33	ECN5358EAS-W10/G33	AN16SN0AB
	100	350A	ECN5351EAV-W10/G38	ECN5352EAV-W10/G38	ECN5354EAV-W10/G38	ECN5358EAV-W10/G38	
	125	450A	ECN5351EAX-W10/G43	ECN5352EAX-W10/G43	ECN5354EAX-W10/G43	ECN5358EAX-W10/G43	
	150	500A	ECN5351EAY-W10/G48	ECN5352EAY-W10/G48	ECN5354EAY-W10/G48	ECN5358EAY-W10/G48	
6YD	200	800A	ECN5361EA2-W10/G53	ECN5362EA2-W10/G53	ECN5363EA2-W10/G53 ⑦	ECN5368EA2-W10/G53	AN16TN0AB
	250	1000A	ECN5361EA3-W10/G58	ECN5362EA3-W10/G58	ECN5363EA3-W10/G58 ⑦	ECN5368EA3-W10/G58	
	300	1200A	ECN5361EA4-W10/G63	ECN5362EA4-W10/G63	ECN5363EA4-W10/G63 ⑦	ECN5368EA4-W10/G63	
7YD	350	⑥	ECN5371EAU-W10/G68	ECN5372EAU-W10/G68	ECN5373EAU-W10/G68 ⑦	ECN5378EAU-W10/G68	AN16UN0AB
	400		ECN5371EAU-W10/G73	ECN5372EAU-W10/G73	ECN5373EAU-W10/G73 ⑦	ECN5378EAU-W10/G73	
	450		ECN5371EAU-W10/G78	ECN5372EAU-W10/G78	ECN5373EAU-W10/G78 ⑦	ECN5378EAU-W10/G78	
	500		ECN5371EAU-W10/G83	ECN5372EAU-W10/G83	ECN5373EAU-W10/G83 ⑦	ECN5378EAU-W10/G83	
8YD	600	⑥	ECN5381EAU-W10/G88	ECN5382EAU-W10/G88	ECN5383EAU-W10/G88 ⑦	ECN5388EAU-W10/G88	AN16VN0AB
	700		ECN5381EAU-W10/G93	ECN5382EAU-W10/G93	ECN5383EAU-W10/G93 ⑦	ECN5388EAU-W10/G93	
	750		ECN5381EAU-W10/G98	ECN5382EAU-W10/G98	ECN5383EAU-W10/G98 ⑦	ECN5388EAU-W10/G98	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN53—Combination Closed Transition Wye Delta Starter—Circuit Breaker, continued

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1	Type 3R	Type 4X	Type 12	Component Starter (Open) ④
			General Purpose	Rainproof	Water and Dust-Tight Stainless Steel ①	Dust-Tight Industrial External Reset ②③	
			Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Motor Volts 230/Magnet Coil Voltage 120 ⑤							
2YD	15	60A	ECN5321BAG-W10/G2	ECN5322BAG-W10/G2	ECN5324BAG-W10/G2	ECN5328BAG-W10/G2	AN16GN0AB
	20	70A	ECN5321BAH-W10/G4	ECN5322BAH-W10/G4	ECN5324BAH-W10/G4	ECN5328BAH-W10/G4	
	25	90A	ECN5321BAJ-W10/G9	ECN5322BAJ-W10/G9	ECN5324BAJ-W10/G9	ECN5328BAJ-W10/G9	
3YD	30	125A	ECN5331BAL-W10/G14	ECN5332BAL-W10/G14	ECN5334BAL-W10/G14	ECN5338BAL-W10/G14	AN16KN0AB
	40	150A	ECN5331BAM-W10/G19	ECN5332BAM-W10/G19	ECN5334BAM-W10/G19	ECN5338BAM-W10/G19	
	50	175A	ECN5331BAN-W10/G24	ECN5332BAN-W10/G24	ECN5334BAN-W10/G24	ECN5338BAN-W10/G24	
4YD	60	200A	ECN5341BAP-W10/G29	ECN5342BAP-W10/G29	ECN5344BAP-W10/G29	ECN5348BAP-W10/G29	AN16NN0AB
	75	250A	ECN5341BAR-W10/G34	ECN5342BAR-W10/G34	ECN5344BAR-W10/G34	ECN5348BAR-W10/G34	
5YD	100	350A	ECN5351BAV-W10/G39	ECN5352BAV-W10/G39	ECN5354BAV-W10/G39	ECN5358BAV-W10/G39	AN16SN0AB
	125	400A	ECN5351BAW-W10/G44	ECN5352BAW-W10/G44	ECN5354BAW-W10/G44	ECN5358BAW-W10/G44	
	150	500A	ECN5351BAY-W10/G49	ECN5352BAY-W10/G49	ECN5354BAY-W10/G49	ECN5358BAY-W10/G49	
6YD	200	600A	ECN5361BAZ-W10/G54	ECN5362BAZ-W10/G54	ECN5363BAZ-W10/G54 ⑦	ECN5368BAZ-W10/G54	AN16TN0AB
	250	800A	ECN5361BA2-W10/G59	ECN5362BA2-W10/G59	ECN5363BA2-W10/G59 ⑦	ECN5368BA2-W10/G59	
	300	1000A	ECN5361BA3-W10/G64	ECN5362BA3-W10/G64	ECN5363BA3-W10/G64 ⑦	ECN5368BA3-W10/G64	
	350	1200A	ECN5361BA4-W10/G69	ECN5362BA4-W10/G69	ECN5363BA4-W10/G69 ⑦	ECN5368BA4-W10/G69	
7YD	400	⑥	ECN5371BAU-W10/G74	ECN5372BAU-W10/G74	ECN5373BAU-W10/G74 ⑦	ECN5378BAU-W10/G74	AN16UN0AB
	450		ECN5371BAU-W10/G79	ECN5372BAU-W10/G79	ECN5373BAU-W10/G79 ⑦	ECN5378BAU-W10/G79	
	500		ECN5371BAU-W10/G84	ECN5372BAU-W10/G84	ECN5373BAU-W10/G84 ⑦	ECN5378BAU-W10/G84	
8YD	600	⑥	ECN5381BAU-W10/G89	ECN5382BAU-W10/G89	ECN5383BAU-W10/G89 ⑦	ECN5388BAU-W10/G89	AN16VN0AB
	700		ECN5381BAU-W10/G94	ECN5382BAU-W10/G94	ECN5383BAU-W10/G94 ⑦	ECN5388BAU-W10/G94	
	750		ECN5381BAU-W10/G99	ECN5382BAU-W10/G99	ECN5383BAU-W10/G99 ⑦	ECN5388BAU-W10/G99	
	800		ECN5381BAU-W10/G103	ECN5382BAU-W10/G103	ECN5383BAU-W10/G103 ⑦	ECN5388BAU-W10/G103	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN53—Combination Closed Transition Wye Delta Starter—Circuit Breaker, continued

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1 General Purpose Catalog Number	Type 3R Rainproof Catalog Number	Type 4X Water and Dust-Tight Stainless Steel ① Catalog Number	Type 12 Dust-Tight Industrial External Reset ②③ Catalog Number	Component Starter (Open) ④ Catalog Number
Motor Volts 460/Magnet Coil Voltage 120 ⑤							
2YD	20	40A	ECN5321CAE-W10/G6	ECN5322CAE-W10/G6	ECN5324CAE-W10/G6	ECN5328CAE-W10/G6	AN16GN0AB
	25	50A	ECN5321CAF-W10/G11	ECN5322CAF-W10/G11	ECN5324CAF-W10/G11	ECN5328CAF-W10/G11	
	30	60A	ECN5321CAG-W10/G16	ECN5322CAG-W10/G16	ECN5324CAG-W10/G16	ECN5328CAG-W10/G16	
	40	70A	ECN5321CAH-W10/G21	ECN5322CAH-W10/G21	ECN5324CAH-W10/G21	ECN5328CAH-W10/G21	
3YD	50	90A	ECN5331CAJ-W10/G26	ECN5332CAJ-W10/G26	ECN5334CAJ-W10/G26	ECN5338CAJ-W10/G26	AN16KN0AB
	60	100A	ECN5331CAK-W10/G31	ECN5332CAK-W10/G31	ECN5334CAK-W10/G31	ECN5338CAK-W10/G31	
	75	125A	ECN5331CAL-W10/G36	ECN5332CAL-W10/G36	ECN5334CAL-W10/G36	ECN5338CAL-W10/G36	
4YD	100	175A	ECN5341CAN-W10/G41	ECN5342CAN-W10/G41	ECN5344CAN-W10/G41	ECN5348CAN-W10/G41	AN16NN0AB
	125	225A	ECN5341CAO-W10/G46	ECN5342CAO-W10/G46	ECN5344CAO-W10/G46	ECN5348CAO-W10/G46	
	150	250A	ECN5341CAR-W10/G51	ECN5342CAR-W10/G51	ECN5344CAR-W10/G51	ECN5348CAR-W10/G51	
5YD	200	350A	ECN5351CAV-W10/G56	ECN5352CAV-W10/G56	ECN5354CAV-W10/G56	ECN5358CAV-W10/G56	AN16SN0AB
	250	400A	ECN5351CAW-W10/G61	ECN5352CAW-W10/G61	ECN5354CAW-W10/G61	ECN5358CAW-W10/G61	
	300	500A	ECN5351CAY-W10/G66	ECN5352CAY-W10/G66	ECN5354CAY-W10/G66	ECN5358CAY-W10/G66	
6YD	350	600A	ECN5361CAZ-W10/G71	ECN5362CAZ-W10/G71	ECN5363CAZ-W10/G71 ⑦	ECN5368CAZ-W10/G71	AN16TN0AB
	400		ECN5361CAZ-W10/G76	ECN5362CAZ-W10/G76	ECN5363CAZ-W10/G76 ⑦	ECN5368CAZ-W10/G76	
	450	700A	ECN5361CA1-W10/G81	ECN5362CA1-W10/G81	ECN5363CA1-W10/G81 ⑦	ECN5368CA1-W10/G81	
	500	800A	ECN5361CA2-W10/G86	ECN5362CA2-W10/G86	ECN5363CA2-W10/G86 ⑦	ECN5368CA2-W10/G86	
	600	1000A	ECN5361CA3-W10/G91	ECN5362CA3-W10/G91	ECN5363CA3-W10/G91 ⑦	ECN5368CA3-W10/G91	
	700	1200A	ECN5361CA4-W10/G96	ECN5362CA4-W10/G96	ECN5363CA4-W10/G96 ⑦	ECN5368CA4-W10/G96	
7YD	750	⑥	ECN5371CAU-W10/G101	ECN5372CAU-W10/G101	ECN5373CAU-W10/G101 ⑦	ECN5378CAU-W10/G101	AN16UN0AB
	800		ECN5371CAU-W10/G105	ECN5372CAU-W10/G105	ECN5373CAU-W10/G105 ⑦	ECN5378CAU-W10/G105	
	900		ECN5371CAU-W10/G108	ECN5372CAU-W10/G108	ECN5373CAU-W10/G108 ⑦	ECN5378CAU-W10/G108	
	1000		ECN5371CAU-W10/G111	ECN5372CAU-W10/G111	ECN5373CAU-W10/G111 ⑦	ECN5378CAU-W10/G111	
8YD	1250	⑥	ECN5381CAU-W10/G114	ECN5382CAU-W10/G114	ECN5383CAU-W10/G114 ⑦	ECN5388CAU-W10/G114	AN16VN0AB
	1500		ECN5381CAU-W10/G117	ECN5382CAU-W10/G117	ECN5383CAU-W10/G117 ⑦	ECN5388CAU-W10/G117	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

Class ECN53—Combination Closed Transition Wye Delta Starter—Circuit Breaker, continued

NEMA Size	Max. hp Rating	Circuit Breaker Size	Type 1	Type 3R	Type 4X	Type 12	Component Starter (Open) ④
			General Purpose	Rainproof	Water and Dust-Tight Stainless Steel ①	Dust-Tight Industrial External Reset ②③	
			Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Motor Volts 575/Magnet Coil Voltage 120 ⑤							
2YD	20	30A	ECN5321DAD-W10/G7	ECN5322DAD-W10/G7	ECN5324DAD-W10/G7	ECN5328DAD-W10/G7	AN16GN0AB
	25	40A	ECN5321DAE-W10/G12	ECN5322DAE-W10/G12	ECN5324DAE-W10/G12	ECN5328DAE-W10/G12	
	30	50A	ECN5321DAF-W10/G17	ECN5322DAF-W10/G17	ECN5324DAF-W10/G17	ECN5328DAF-W10/G17	
	40	60A	ECN5321DAG-W10/G22	ECN5322DAG-W10/G22	ECN5324DAG-W10/G22	ECN5328DAG-W10/G22	
3YD	50	70A	ECN5331DAH-W10/G27	ECN5332DAH-W10/G27	ECN5334DAH-W10/G27	ECN5338DAH-W10/G27	AN16KN0AB
	60	90A	ECN5331DAJ-W10/G32	ECN5332DAJ-W10/G32	ECN5334DAJ-W10/G32	ECN5338DAJ-W10/G32	
	75	100A	ECN5331DAK-W10/G37	ECN5332DAK-W10/G37	ECN5334DAK-W10/G37	ECN5338DAK-W10/G37	
4YD	100	125A	ECN5341DAL-W10/G42	ECN5342DAL-W10/G42	ECN5344DAL-W10/G42	ECN5348DAL-W10/G42	AN16NN0AB
	125	175A	ECN5341DAN-W10/G47	ECN5342DAN-W10/G47	ECN5344DAN-W10/G47	ECN5348DAN-W10/G47	
	150	200A	ECN5341DAP-W10/G52	ECN5342DAP-W10/G52	ECN5344DAP-W10/G52	ECN5348DAP-W10/G52	
5YD	200	250A	ECN5351DAR-W10/G57	ECN5352DAR-W10/G57	ECN5354DAR-W10/G57	ECN5358DAR-W10/G57	AN16SN0AB
	250	350A	ECN5351DAV-W10/G62	ECN5352DAV-W10/G62	ECN5354DAV-W10/G62	ECN5358DAV-W10/G62	
	300		ECN5351DAV-W10/G67	ECN5352DAV-W10/G67	ECN5354DAV-W10/G67	ECN5358DAV-W10/G67	
6YD	350	500A	ECN5361DAY-W10/G72	ECN5362DAY-W10/G72	ECN5363DAY-W10/G72 ⑦	ECN5368DAY-W10/G72	AN16TN0AB
	400		ECN5361DAY-W10/G77	ECN5362DAY-W10/G77	ECN5363DAY-W10/G77 ⑦	ECN5368DAY-W10/G77	
	450	600A	ECN5361DAZ-W10/G82	ECN5362DAZ-W10/G82	ECN5363DAZ-W10/G82 ⑦	ECN5368DAZ-W10/G82	
	500		ECN5361DAZ-W10/G87	ECN5362DAZ-W10/G87	ECN5363DAZ-W10/G87 ⑦	ECN5368DAZ-W10/G87	
	600	800A	ECN5361DA2-W10/G92	ECN5362DA2-W10/G92	ECN5363DA2-W10/G92 ⑦	ECN5368DA2-W10/G92	
	700	1000A	ECN5361DA3-W10/G97	ECN5362DA3-W10/G97	ECN5363DA3-W10/G97 ⑦	ECN5368DA3-W10/G97	
7YD	750	⑥	ECN5371DAU-W10/G102	ECN5372DAU-W10/G102	ECN5373DAU-W10/G102 ⑦	ECN5378DAU-W10/G102	AN16UN0AB
	800		ECN5371DAU-W10/G106	ECN5372DAU-W10/G106	ECN5373DAU-W10/G106 ⑦	ECN5378DAU-W10/G106	
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	1000		ECN5371DAU-W10/G112	ECN5372DAU-W10/G112	ECN5373DAU-W10/G112 ⑦	ECN5378DAU-W10/G112	
8YD	1250	⑥	ECN5381DAU-W10/G115	ECN5382DAU-W10/G115	ECN5383DAU-W10/G115 ⑦	ECN5388DAU-W10/G115	AN16VN0AB
	1500		ECN5381DAU-W10/G118	ECN5382DAU-W10/G118	ECN5383DAU-W10/G118 ⑦	ECN5388DAU-W10/G118	

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

Notes

- 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: ECN4624EAF. 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.
- ④ Also requires matching contactor with mechanical interlock.
- ⑤ All reduced voltage starters are furnished with 120V coils and control transformer connected for 120V secondary.
If modification code **C35** separate control is specified, the control transformer is omitted.
- ⑥ Supply hp, voltage, FLA and whether motor is design E or not when ordering starter.
- ⑦ Type 4 (painted steel) sizes 6–8YD.

5.3

Reduced Voltage Starter

Freedom Three-Phase Magnetic Starters

Part Winding Pump Control

Product Description

Standard ECN64, 65 controllers have a HAND/OFF/AUTO selector switch and START pushbutton mounted on the

flange of the enclosure and are wired as illustrated on **Page V10-T5-83**.

Note: If branch circuit protective device is 45A or greater, C320FBR1 fuse kit (panel mounted) may be required for control circuit protection per NEC 430-72.

Features

- Three-phase magnetic
- Interchangeable heater OLR

Class ECN64—Combination Part Winding Pump Control Starter—Fusible

NEMA Size	Motor Voltage	Max. hp 50/60 Hz ^①	Fuse Clip Rating Amperes	Volts	Catalog Number
3PW	230	50	200	250	ECN6432BAH
		460	50	100	ECN6432CAG
			75	200	ECN6432CAJ
4PW	230	75	400	250	ECN6442BAK
		460	125	200	ECN6442CAJ
			150	400	ECN6442CAL
5PW	230	100	400	250	ECN6452BAK
		460	150	600	ECN6452BAM
			200	400	600
6PW	230	300	1200 ^②	250	ECN6462BAQ
		460	600	600	ECN6462CAQ

Class ECN65—Combination Part Winding Pump Control Starter—Circuit Breaker

NEMA Size	Motor Voltage	Max. hp 50/60 Hz ^①	Circuit Breaker Type	Catalog Number	
3PW	230	40	HFD 125	ECN6532BAL	
		50	HFD 150	ECN6532BAM	
		460	50	HFD 100	ECN6532CAK
			75	HFD 125	ECN6532CAL
4PW	230	60	JD 200	ECN6542BAP	
		75	JD 250	ECN6542BAR	
	460	100	HFD 150	ECN6542CAM	
		125	JD 225	ECN6542BAQ	
		150	JD 250	ECN6542CAR	
5PW	230	100	KD 350	ECN6552BAV	
		125	KD 400	ECN6552BAW	
		150	LD 500	ECN6552BAY	
		460	200	KD 350	ECN6552CAV
	250		KD 400	ECN6552CAW	
	300		LD 500	ECN6552CAY	
	350		LD 600	ECN6552CAZ	
	6PW	230	350	ND 1200	ECN6562BA4
460		600		ECN6562CA4	

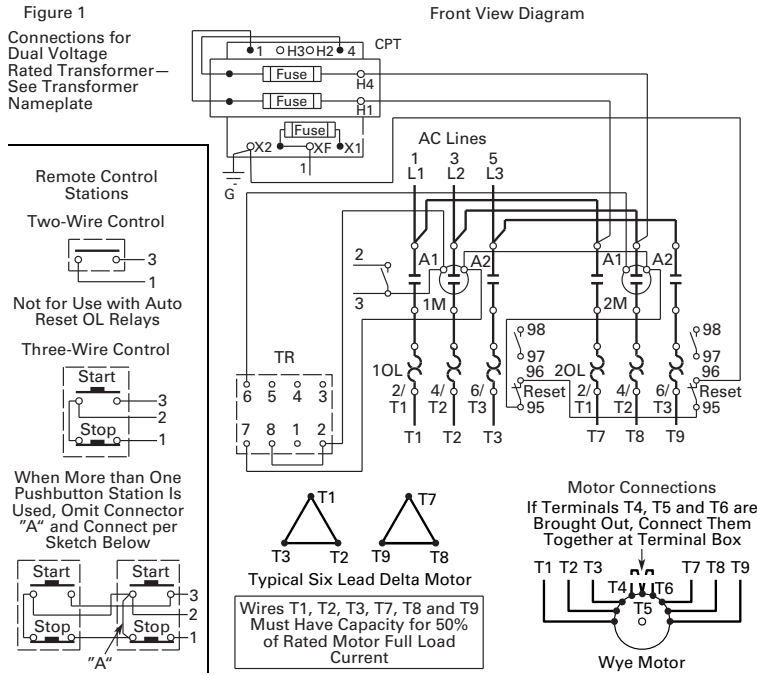
Starters do not include heater packs. Select one carton of three heater packs. Heater pack selection, **Tab 15**. Starters with electronic overload—see modification codes, **Tab 15**.

Notes

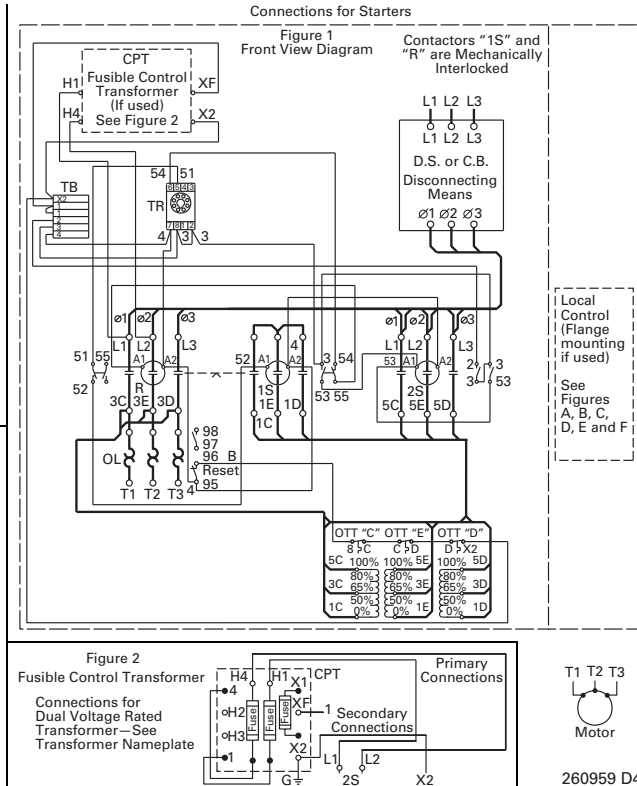
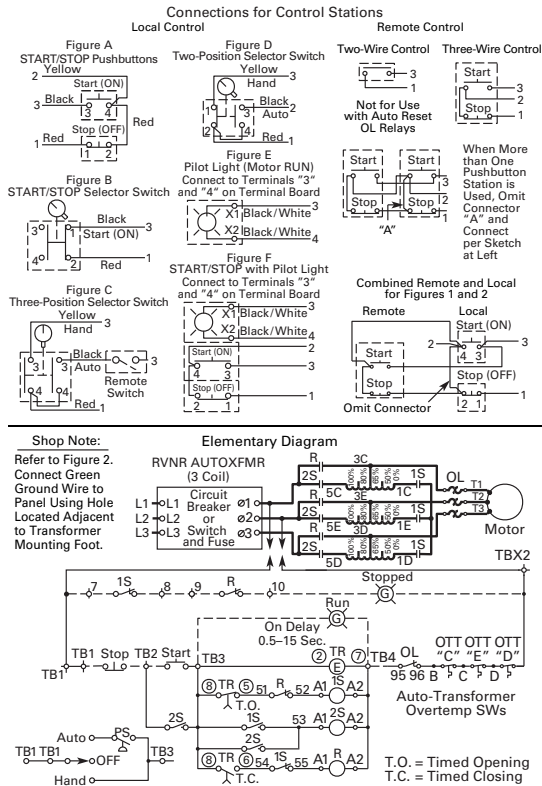
- ^① Horsepower ratings based on dual element fuses.
- ^② Class L fuse mounting.

Wiring Diagrams

Part Winding—Non-Combination



Autotransformer—Combination

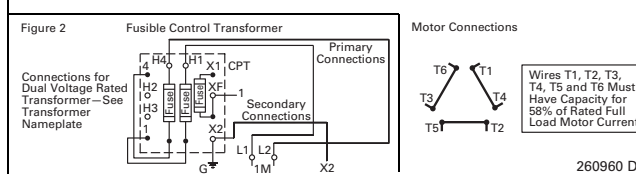
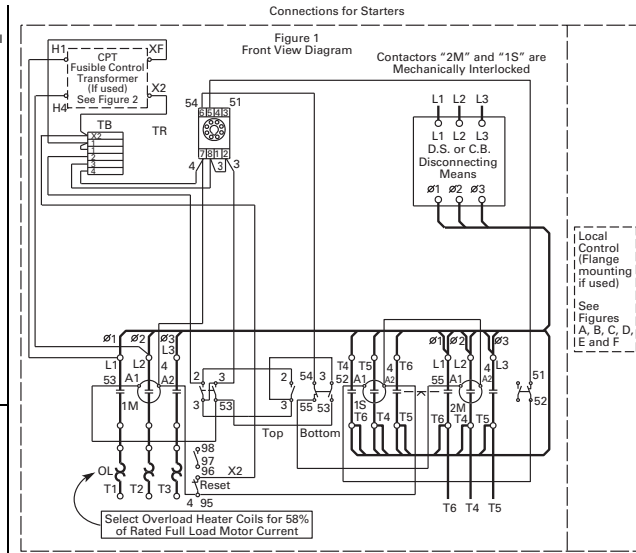
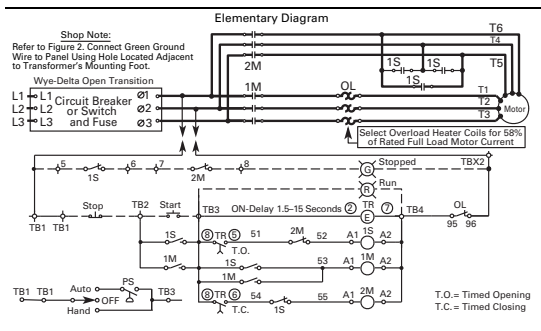
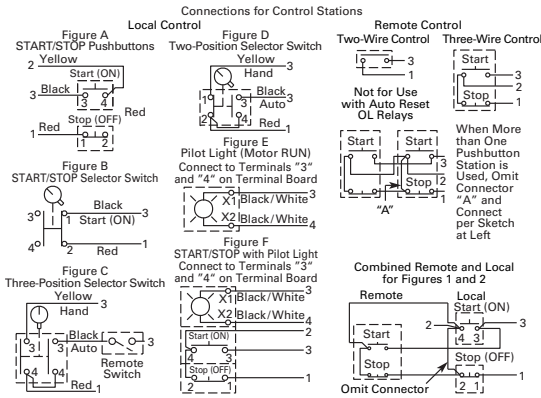


5.3

Reduced Voltage Starter

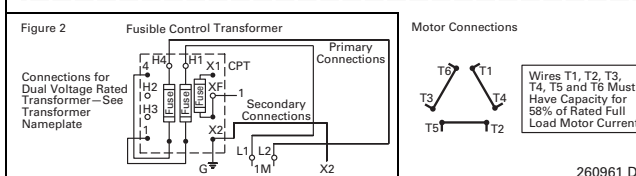
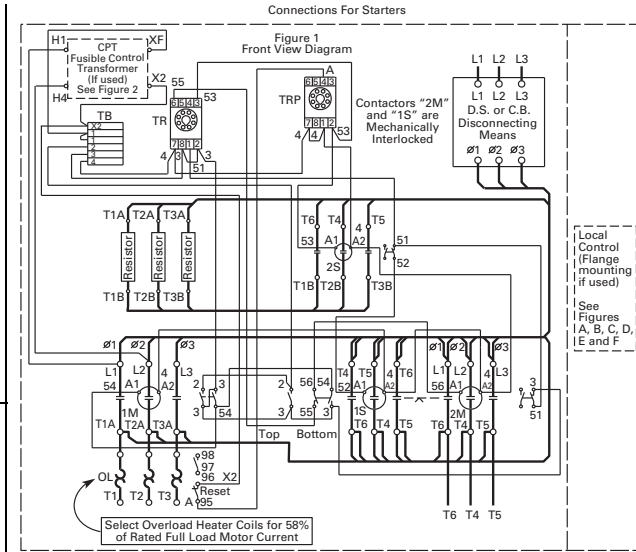
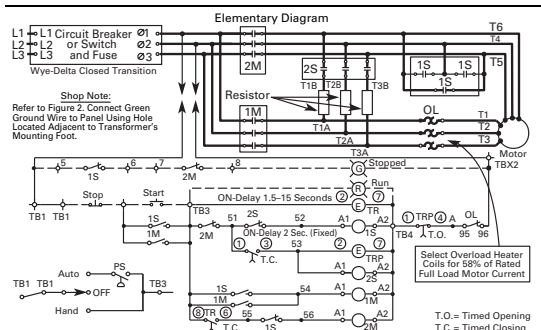
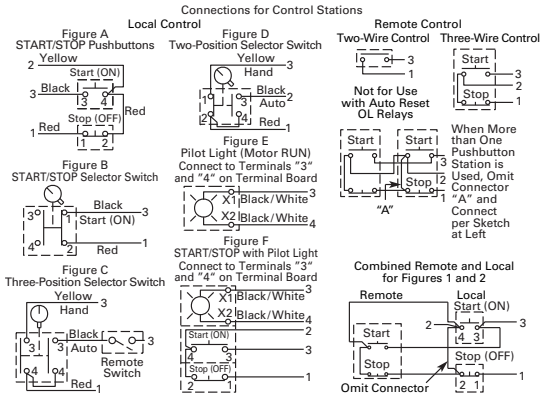
Freedom Three-Phase Magnetic Starters

Wye Delta—Open Transition Combination



260960 D4

Wye Delta—Closed Transition Combination



260961 D4

Typical Part Winding Pump Control Wiring Diagram

