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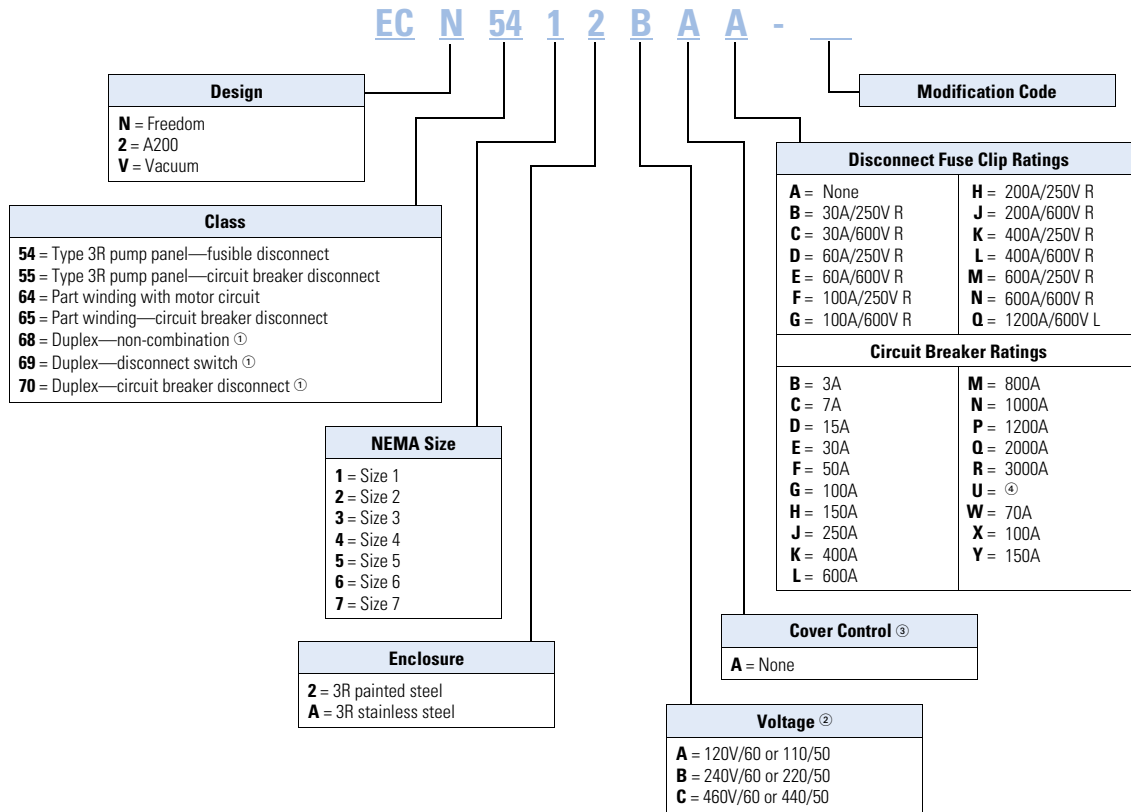
Pump Panels

Industrial Pump Panels

Catalog Number Selection

Pump Panel

6



Notes

- ① More information on Type 1, 3R, 4X and 12 duplex pump panels is on **Page V10-T6-23**. Product Selection is on **Page V10-T6-26**.
- ② For other voltages and single-phase applications, consult your Eaton representative.
- ③ HOA selector switch and START pushbutton provided as standard.
- ④ Engineering determination depending on size, horsepower FLA, NEC or other considerations.

Accessories

Kits

Kits for Field Mounting

Description	Catalog Number Suffix	Catalog Number
Backspin timer—0.2 sec. to 3 min. (60 Hz)	B12	—
Control transformers 240/480V primary, 120V secondary		
Size 1	C1	—
Size 2	C1	—
Size 3	C1	—
Size 4	C1	—
Size 5	C1	—
Lightning arrester	L3	—
Control circuit fuse kit (600V)	C31	—
Electrical interlocks—Freedom line/vacuum		
NO	A27	—
NC	A28	C320KGS2
NO and NC	A29	C320KGS3
Time delay relay—3 minutes		
ON delay (unwired)	T6	—
OFF delay (unwired)	T7	—
24-hour programming clock	P44	—
Interchangeable hubs for enclosure. ^①		
Enclosure has removable top plate. If conduit hub is required, order:		
3/4 in conduit size	—	DS075H1
1-1/4 in conduit size	—	DS125H1
1-1/2 in conduit size	—	DS150H1
2 in conduit size	—	DS200H1
2-1/2 in conduit size	—	DS250H2
3 in conduit size	—	DS300H2
Power supply	C34	—

Note

^① Does not apply to reduced voltage controllers.

Overload Relays**Freedom Solid-State Overload Relays**

NEMA Size	Full Load Current Adjustment Range (A)	Three-Phase without Ground Fault Auto/Manual Reset Overload Selectable Class 10/20/30	Three-Phase with Ground Fault Auto/Manual Reset Overload Selectable Class 10/20/30
00	0.33–1.65 ^①	R63/A	R64/A
	1–5	R63/B	R64/B
	4–20	R63/C	R64/C
0 and 1	0.33–1.65 ^①	R63/A	R64/A
	1–5	R63/B	R64/B
	4–20	R63/C	R64/C
	9–45	R63/D	R64/D
2	9–45	R63/D	R64/D
3	20–100	R63/E	R64/E
4	28–135 ^{②③}	R63/F	R64/F
5	60–300 ^④	R63/G	R64/G
6	120–600 ^⑤	R63/H	R64/H

Notes

- ① Not UL Listed.
- ② NEMA Size 4 starter available with 30–150A panel mounted CTs and 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).
- ③ NEMA Size 4 direct mount contactor/overload (28–135A), available February 2012.
- ④ NEMA Size 5 starter available with 60–300A panel mounted CTs. Starter as an assembled unit with 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).
- ⑤ NEMA Size 6 starter available with 120–600A panel mounted CTs. Starter as an assembled unit with 1–5A C440 overload relay (C440A1A005SELAX or C440A2A005SELAX).

Freedom—Fusible Disconnect

Product Description

- Three-phase magnetic
- Interchangeable heater OLR

Standard ECN54 controllers have a HAND/OFF/AUTO selector switch and START and RESET pushbuttons mounted on the enclosure and are wired as illustrated on **Page V10-T6-8**.

Type 3R enclosure does not include top conduit hubs. Hubs are available in kit form—see **Page V10-T6-5**.

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.

Stainless steel enclosure may be ordered by changing the seventh digit to **A**. Type 3R rating will still apply.

Product Selection

Class ECN54—Combination Pump Panel—Fusible Disconnect

NEMA Size	Motor Voltage ①	Max. hp 50/60 Hz	Fuse Clip Rating ②		Narrow Width ③	Standard Width ③
			Amperes	Volts	Catalog Number	Catalog Number
1	230	7-1/2	30	250	ECN5412BAB-E14	ECN5412BAB
	460	10		600	ECN5412CAC-E14	ECN5412CAC
	—	—	Not installed	Not installed	ECN5412AAA-E14	ECN5412AAA
2	230	15	60	250	ECN5422BAD-E14	ECN5422BAD
	460	25		600	ECN5422CAE-E14	ECN5422CAE
	—	—	Not installed	Not installed	ECN5422AAA-E14	ECN5422AAA
3	230	30	100	250	—	ECN5432BAF
	460	50		600	—	ECN5432CAG
	—	—	Not installed	Not installed	—	ECN5432AAA
4	230	50	200	250	—	ECN5442BAH
	460	100		600	—	ECN5442CAJ
	—	—	Not installed	Not installed	—	ECN5442AAA
5	230	100	400	250	—	ECN5452BAK
	460	200		600	—	ECN5452CAL
6	230	200	600	250	—	ECN5462BAM
	460	400		600	—	ECN5462CAN
7	460	600	1200	600	—	ECN5472CAQ

Notes

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

Starters with electronic overload, see Modification Codes in **Tab 15**.

① Dual element fuse ratings.

② Class R fuse clips, except for Size 7 which uses Class L fuse clips. For starters with clips “Not Installed,” select fuse clip kit on **Page V10-T6-8**.

③ To order without the START pushbutton, add modification code **P6**.

For Other Volts and Hertz Applications

For other than listed volts and hertz, select required controller by catalog number and replace the magnet coil alpha designation, eighth digit in catalog number, with proper code suffix from the table below.

Example: For 600V 60 Hz coil, change ECN5412**B**AC to ECN5412**D**AC.

Coil Voltage

Coil Volts and Hertz	Suffix Code
120/60 or 110/50	A
240/60 or 220/50	B
480/60 or 440/50	C
600/60 or 550/50	D
208/60	E

Accessories

C351—Fuse Clip Selection—Three-Pole (Three Fuses)

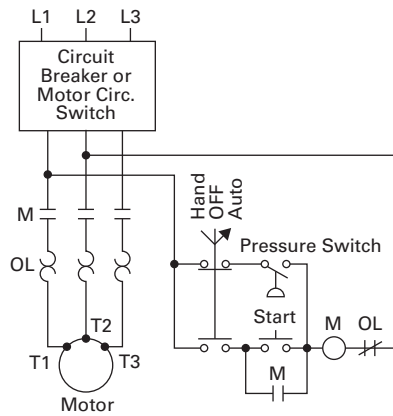
NEMA Size	Motor Voltage	Fuse Clip Rating Amperes	Volts	Fuse Clip Kit for Field Installation in Non-Fusible Starter	
				For Non-Rejection Type Fuses Catalog Number	For Use with "R" Rejection Type Fuses Catalog Number
1	200/230	30	250	C351KC21	C351KC21R
	460-575		600	C351KD22-61	C351KD22-61R
2	200	60	250	C351KD22-61	C351KD22-61R
	230		250	C351KD22-61	C351KD22-61R
	460-575		600	C351KD62	C351KD62R
3	200	100	250	C351KE23-63	C351KE23-63 ①
	230		250	C351KE23-63	C351KE23-63 ①
	460-575		600	C351KE23-63	C351KE23-63 ①
4	200	200	250	C351KF24-64	C351KF24-64 ①
	230		250	C351KF24-64	C351KF24-64 ①
	460-575		600	C351KF24-64	C351KF24-64 ①

Note

① Fuse clip "R" rejection members for use with Class R fuses are supplied loose both in fuse clip kits and when fuse clips are factory installed.

Wiring Diagram

Typical Wiring Diagram



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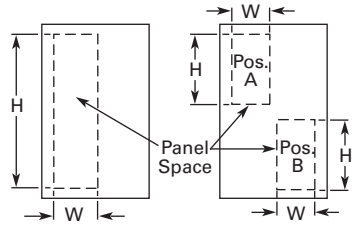
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Dimensions

Approximate Dimensions in Inches (mm)

Panel Space



NEMA Sizes 1-4

NEMA Size 5

Panel Size	NEMA Size	Position (see figure above)	Width W	Height H
Narrow ①	1-2	—	5.5 (140)	6.0 (152)
Standard	1-3	—	8.5 (216)	26.0 (660)
	4	—	8.5 (216)	39.0 (991)
	5	A	10.0 (254)	22.0 (559)
		B	15.0 (381)	12.0 (305)
Oversize	1-2	—	12.0 (318)	39.0 (991)
	3	—	11.0 (279)	39.0 (991)

Note

① Space is between disconnect switch or circuit breaker and starter.