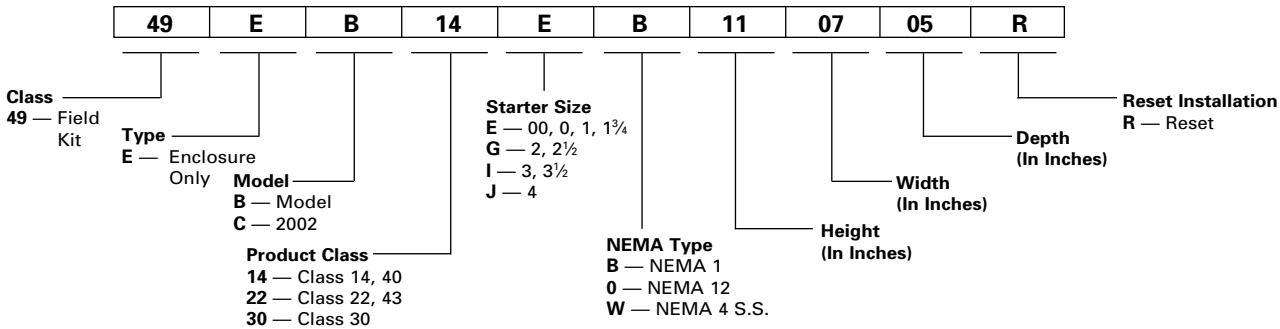


# Heavy Duty Control

## Non-Combination Enclosure Kits, Class 49

Selection



### Non-Reversing Starters & Contactors Class 14, 40

Size	NEMA 1 General Purpose (Clamshell)②④				NEMA 4/4X Stainless① Watertight, Dust-tight, Corrosion Resistant③⑥				NEMA 12/3/3R① Industrial Use, Weatherproof③⑤						
	Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)				
	Model C Enclosure	List Price \$	Model C Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$
00-1 1/4	49EC14EB110705R		49EC14IB201208R	200		49EB14EW130806R		49EB22EW131306R			49EB14E0130806R		49EB22E0131306R		
2, 2 1/2	49EC14GB140807R		49EC14IB201208R	200		49EB14GW160907R		49EB22GW161406R			49EB14G0160907R		49EB22G0161406R		
3, 3 1/2	49EC14IB201208R		49EC14IB201208R	100		49EB14JW261408R		49EB14JW261408R			49EB14J0261408R		49EB14J0261408R		
3, 3 1/2	—	—	49EC14JB251409R	250	—	—	—	—	—	—	—	—	—	—	—
4	49EC14JB251409R		49EC14JB251409R	300		49EB14JW261408R		49EB22JW302410R			49EB14J0261408R		49EB22J0302410R		

### Reversing Starters & Reversing Contactors Class 22, 43

Size	NEMA 1 General Purpose (Clamshell)②④				NEMA 4/4X Stainless① Watertight, Dust-tight, Corrosion Resistant③⑥				NEMA 12/3/3R① Industrial Use, Weatherproof③⑤						
	Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)				
	Model C Enclosure	List Price \$	Model C Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$
00-1 1/4	49EC14IB201208R		49EC14IB201208R	200		49EB22EW131306R		49EB22EW131306R			49EB22E0131306R		49EB22E0131306R		
2, 2 1/2	49EC14IB201208R		49EC14IB201208R	200		49EB22GW161406R		49EB22GW161406R			49EB22G0161406R		49EB22G0161406R		
3, 3 1/2	49EC14JB251409R		49EC14JB251409R	250		49EB22JW261808R		49EB22JW302410R			49EB22I0261808R		49EB22J0302410R		
4	49EC14JB251409R		49EC14JB251409R	300		49EB22JW302410R		49EB22JW302410R			49EB22J0302410R		49EB22J0302410R		

### Two-Speed Two-Winding Starters Class 30

Size	NEMA 1 General Purpose (Clamshell)②④				NEMA 4/4X Stainless① Watertight, Dust-tight, Corrosion Resistant③⑥				NEMA 12/3/3R① Industrial Use, Weatherproof③⑤						
	Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)				
	Model C Enclosure	List Price \$	Model C Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$
0-1 1/4	49EC14IB201208R②		49EC14JB251409R②	200		49EB30EW131306R		49EB30GW161808R			49EB30E0131306R		49EB30G0161808R		
2, 2 1/2	49EC14IB201208R②		49EC14JB251409R②	200		49EB30GW161406R		49EB30GW161808R			49EB30G0161406R		49EB30G0161808R		
3, 3 1/2	49EC14JB251409R②		49EB22JB302410R③	300		49EB30IW261808R		49EB22JW302410R			49EB30I0261808R		49EB22J0302410R		
4	49EC14JB251409R②		49EB22JB302410R③	300		49EB22JW302410R		49EB22JW302410R			49EB22J0302410R		49EB22J0302410R		

### Two-Speed One-Winding Starters Class 30

Size	NEMA 1 General Purpose (Clamshell)②④				NEMA 4/4X Stainless① Watertight, Dust-tight, Corrosion Resistant③⑥				NEMA 12/3/3R① Industrial Use, Weatherproof③⑤						
	Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)		Without CPT		With CPT (Extra Wide)				
	Model C Enclosure	List Price \$	Model C Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$	Model B Enclosure	List Price \$	Model B Enclosure	Max CPT VA	List Price \$
0-1 1/4	49EC14IB201208R②		49EC14JB251409R②	200		49EB30EW131306R		49EB30GW161808R			49EB30E0131306R		49EB30G0161808R		
2, 2 1/2	49EB30GB161808R③		49EB22JB302410R③	300		49EB30GW161808R		49EB22IW261808R			49EB30G0161808R		49EB22I0261808R		
3, 3 1/2	49EB30IB192208R③		49EB22JB302410R③	300		49EB22JW302410R		49EB22JW302410R			49EB22J0302410R		49EB22J0302410R		
4	49EB22JB302410R③		49EB22JB302410R③	300		49EB22JW302410R		49EB22JW302410R			49EB22J0302410R		49EB22J0302410R		

**Note:** Dimensions...See appropriate Product Class Outline Drawing beginning on page 17-129.

- ① For conduit hubs and conversion instructions, see page 17-99.
- ② Clamshell enclosure suitable for one operating device and two pilot lights. See Field Mods page 17-93.

- ③ Hinged cover enclosure suitable for one or more class 52 operating devices and one or more class 52 pilot lights. See Field Mods page 17-93.
- ④ Install NEMA 1 hole plug cat. no. 3SB1902-0AR (included) when the cover OL reset is not needed.
- ⑤ Install NEMA 12 hole plug cat. no. 52ABH6 (not included) when the cover OL reset is not needed.

- ⑥ Install NEMA 4X stainless steel hole plug cat. no. 52ABHS (not included) when the cover OL reset is not needed.

# Heavy Duty Control

## Lighting Enclosure Tables

*Selection*

### Lighting & Heating Contactors Class LE

Size	Pole	NEMA 1 General Purpose (Clamshell)②④					NEMA 4/4X Stainless① Watertight, Corrosion Resistant③⑥					NEMA 12/3/3R① Industrial Use③⑤				
		Without CPT		With CPT (Extra Wide)			Without CPT		With CPT (Extra Wide)			Without CPT		With CPT (Extra Wide)		
		Model C Enclosure		Model C Enclosure			Model B Enclosure		Model B Enclosure			Model B Enclosure		Model B Enclosure		
		Catalog Number	List Price \$	Catalog Number	Max CPT	List Price \$	Catalog Number	List Price \$	Catalog Number	Max CPT	List Price \$	Catalog Number	List Price \$	Catalog Number	Max CPT	List Price \$
20A	2-12	49EC14EB110705R		49EC14IB201208R	200VA		49EB22GW161406R		49EB22GW161406R	—		49EB22G0161406R		49EB22G0161406R	—	
30A	3	49EC14EB110705R		49EC14IB201208R	200VA		49EB22GW161406R		49EB22GW161406R	—		49EB22G0161406R		49EB22G0161406R	—	
30A	6-9	49EC14IB201208R		49EC14IB201208R	200VA		49EB14JW261408R		49EB14JW261408R	—		49EB14J0261408R		49EB14J0261408R	—	
30A	12	49EC14IB201208R		49EC14JB251409R	250VA		49EB14JW261408R		49EB14JW261408R	—		49EB14J0261408R		49EB14J0261408R	—	
60A	3	49EC14EB110705R		49EC14IB201208R	200VA		49EB22GW161406R		49EB22GW161406R	—		49EB22G0161406R		49EB22G0161406R	—	
60A	6-9	49EC14IB201208R		49EC14IB201208R	200VA		49EB14JW261408R		49EB14JW261408R	—		49EB14J0261408R		49EB14J0261408R	—	
60A	12	49EC14IB201208R		49EC14JB251409R	250VA		49EB14JW261408R		—	—		49EB14J0261408R		—	—	
100A	3	49EC14IB201208R		49EC14IB201208R	200VA		49EB14JW261408R		49EB14JW261408R	—		49EB14J0261408R		49EB14J0261408R	—	

### Lighting & Heating Contactors Class CLM

Size	Pole	NEMA 1 General Purpose (Clamshell)②④					NEMA 4/4X Stainless① Watertight, Corrosion Resistant③⑥					NEMA 12/3/3R① Industrial Use③⑤				
		Without CPT		With CPT (Extra Wide)			Without CPT		With CPT (Extra Wide)			Without CPT		With CPT (Extra Wide)		
		Model C/B Enclosure		Model C/B Enclosure			Model B Enclosure		Model B Enclosure			Model B Enclosure		Model B Enclosure		
		Catalog Number	List Price \$	Catalog Number	Max CPT	List Price \$	Catalog Number	List Price \$	Catalog Number	Max CPT	List Price \$	Catalog Number	List Price \$	Catalog Number	Max CPT	List Price \$
20A	2-12	49EC14GB140807R		49EC14IB201208R	200VA		49EB22GW161406R		49EB22GW161406R	—		49EB22G0161406R		49EB22G0161406R	—	
30A	2-5	49EC14EB110705R		49EC14IB201208R	200VA		49EB22GW161406R		49EB22GW161406R	—		49EB22G0161406R		49EB22G0161406R	—	
30A	6-12	49EB30GB161808R		49EB30GB161808R	200VA		49EB30GW161808R		49EB30GW161808R	—		49EB30G0161808R		49EB30G0161808R	—	
60A	2-5	49EC14GB140807R		49EC14IB201208R	200VA		—	—	—	—		—	—	—	—	
60A	6-12	49EB30IB192208R		49EB30IB192208R	250VA		—	—	—	—		—	—	—	—	
100A	2-5	49EC14IB201208R		49EC14IB201208R	200VA		—	—	—	—		—	—	—	—	

**Note:** Dimensions...See appropriate Product Class Outline Drawing on page 17-142.

- ① For conduit hubs and conversion instructions, see page 17-99.
- ② Clamshell enclosure suitable for one operating device and two pilot lights. See Field Mods page 17-93.

- ③ Hinged cover enclosure suitable for one or more class 52 operating devices and one or more class 52 pilot lights. See Field Mods page 17-93.
- ④ Install NEMA 1 hole plug cat. no. **3SB1902-0AR** (included) when the cover OL reset is not needed.
- ⑤ Install NEMA 12 hole plug cat. no. **52ABH6** (not included) when the cover OL reset is not needed.

- ⑥ Install NEMA 4X stainless steel hole plug cat. no. **52ABHS** (not included) when the cover OL reset is not needed.

# Combination Starter Enclosure Kits

## Features and Benefits

### Features

- Manufactured with a cold forming "TOX" process
- 100kA short circuit rating when protected with class R fuses to 600V or MCP to 480V and when installing listed components from the instruction guide
- Enclosure types available, Nema 1, 12, 3/3R and painted NEMA 4. Nema 12 field convertible to 3/3R/4 with the appropriate conduit hub and drain hole
- Pre-Drilled mounting panels
- Heavy duty quarter turns
- Industrial type disconnect handle

### Disconnect Type Enclosure Kit

- Used to assemble both non-fusible and fusible combination starters
- Accommodates Class 14 full voltage non-reversing (FVNR) NEMA starters 00 – 4 including Siemens exclusive half sizes
- Handle mechanism, power wire, mounting panel, reset assembly, and instruction guide included. Hardware for panel mounted devices and disconnect switch are not included

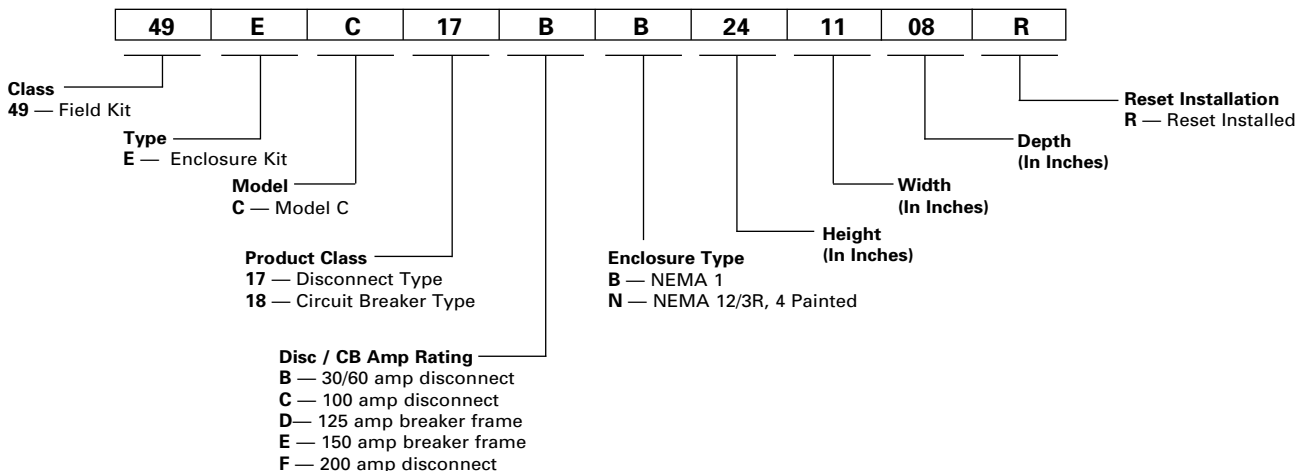
### MCP Type Enclosure Kit

- Used to assemble combination starters with circuit breakers
- Accommodates Class 14 full voltage non-reversing (FVRN) NEMA starters 00 – 4 including Siemens exclusive half sizes
- Handle mechanism, power wire, mounting panel, reset assembly and instruction guide included. Circuit breaker not included however, mounting hardware for the circuit breaker is

### How to Select the Required Kits to Assemble a Combination Starter

- From the catalog, select a class 14 open type starter with the required starter size and overload relay type.
- Based on the starter size, select the enclosure kit from table 1a for fusible or non-fusible combination starters or select from table 1b for combination starters with an MCP.
- For a non-fusible combination starter, select the disconnect switch kit from table 2a. For a fusible combination starter, select the appropriate disconnect switch, fuse clip kit, and class R rejection kit from table 2b (for H fusing, class R rejection kit not required). For combination starters with MCP, select the appropriate circuit breaker kit from table 3.

### Nomenclature for Combination Enclosure Kits



# Combination Starter Enclosure Kits

*Selection*

**Table 1a - FVNR Combination Starter Kits for use with Disconnect Devices**

Starter Size	Disc. Amp Rating	NEMA 1 General Purpose		NEMA 12, 3/3R, 4 Painted <sup>①</sup> Industrial Use, Weatherproof, Watertight, Dust-tight		NEMA 4/4X Stainless Steel Watertight, Dust-tight, Corrosion Resistant	
		Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
0 - 2	60	49EC17BB241108R		49EC17BN241108R		49EC17BW241108R	
2 ½ - 3	100	49EC17CB242008R		49EC17CN242008R		49EC17CW242008R	
3 ½ - 4	200	49EC17FB362408R		49EC17FN362408R		49EC17FW362408R	

**Table 1b. – FVNR Combination Starter Kits for use with MCP Devices**

Starter Size	Max MCP Amps	NEMA 1 General Purpose		NEMA 12, 3/3R, 4 Painted <sup>①</sup> Industrial Use, Weatherproof, Watertight, Dust-tight		NEMA 4/4X Stainless Steel Watertight, Dust-tight, Corrosion Resistant	
		Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
0 - 2	50	49EC18DB241108R		49EC18DN241108R		49EC18DW241108R	
2 ½ - 3	100	49EC18DB242008R		49EC18DN242008R		49EC18DW242008R	
3 ½	125	49EC18DB362408R		49EC18DN362408R		49EC18DW362408R	
4	150	49EC18EB362408R		49EC18EN362408R		49EC18EW362408R	

**Table 2a – Non-Fusible Disconnect Kits**

Disconnect Switch		
Switch Rating	Catalog Number	List Price \$
30A	HNB612	
60A	HNB623	
100A	HNB623	
200A	HNB64	



**Table 2b – Fusible Disconnect Kits**

Fuse Clip Ratings	Class	Disconnect Switch		Load Base for Fuse		Rejection Clips for Class R Fusing	
		Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
30A-250V	H	HFB21		HBB21		HR21	
30A-600V	H	HFB612		HBB612		HR612	
60A-250V	H	HFB22		HBB22		HR612	
60A-600V	H	HFB62		HBB62		HR62	
100A-250V	H	HFB63		HBB63		HR63	
100A-600V	H	HFB63		HBB63		HR63	
200A-250V	H	HFB64		HBB64		HR64	
200A-600V	H	HFB64		HBB64		HR64	

**Table 3 – Circuit Breaker Kits**


Starter Size	MCP Type Used with Solid State Overload Relay			MCP Type Used with Thermal Overload Relay	
	Overload Amp Range	Motor Circuit Interrupter Amps	Circuit Breaker Kit	Motor Circuit Interrupter Amps	Circuit Breaker Kit
0	0.75-3.4	3	ED63A003	3	ED63A003
	3-12	10	ED63A010	10	ED63A010
	5.5-22	25	ED63A025	25	ED63A025
1	0.75-3.4	3	ED63A003	3	ED63A003
	3-12	10	ED63A010	10	ED63A010
	5.5-22	25	ED63A025	25	ED63A025
	10-40	30	ED63A030	30	ED63A030
1 ½	10-40	40	ED63A040	40	ED63A040
2	13-52	50	ED63A050	50	ED63A050
2 ½	25-100	100	ED63A100	100	ED63A100
3	25-100	100	ED63A100	100	ED63A100
3 ½	50-200	125	ED63A125	125	ED63A125
4	50-200	150	FXD63A150L	150	FXD63A150L

<sup>①</sup> For conduit hubs and conversion instructions, see page 17-99.

# Heavy Duty Control

## Class 87 Pump Panel Enclosure Kits

*Selection*

	<b>Ordering Information</b> <ul style="list-style-type: none"> <li>▶ Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.</li> <li>▶ Refer to Class 87 section of catalog for pump panel ratings and other details.</li> <li>▶ Handle mechanism, power wire, mounting panel, reset assembly and instruction guide are included with the enclosure kit.</li> </ul>	<b>Coil Table</b>	
		60Hz Voltage	Letter
		24 Separate Control 120 Separate Control 110–120/220–240 200–208 220–240 220–240/440–480 277 440–480 550–600	J F A <sup>①</sup> D G C <sup>①</sup> L H E

### Pump Panels with Solid-State Overload Relay Class 87

To Field Assemble This Pump Panel:	Order these components						Enclosure List Price \$
	Enclosure Catalog Number	Starter with Solid-State Overload Relay	Disconnect Switch	Fuse Load Base	Class R Rejection Clips	Motor Circuit Interrupter	
87DUB6F*	49EB87GF242008	14DUB32A*	HFB612	HBB612	HR612	—	
87DUC6F*	49EB87GF242008	14DUC32A*	HFB612	HBB612	HR612	—	
87DUD6F*	49EB87GF242008	14DUD32A*	HFB612	HBB612	HR612	—	
87DUD60*	49EB87GF242008	14DUD32A*	HFB62	HBB62	HR62	—	
87EUE6F*	49EB87GF242008	14EUE32A*	HFB612	HBB612	HR612	—	
87EUE60*	49EB87GF242008	14EUE32A*	HFB62	HBB62	HR62	—	
87FUF6F*	49EB87GF242008	14FUF32A*	HFB62	HBB62	HR62	—	
87FUF60*	49EB87GF242008	14FUF32A*	HFB63	HBB63	HR63	—	
87GUG6F*	49EB87GF242008	14GUG32A*	HFB62	HBB62	HR62	—	
87GUG60*	49EB87GF242008	14GUG32A*	HFB63	HBB63	HR63	—	
87HUG6F*	49EB87JF362408	14HUG32A*	HFB63	HBB63	HR63	—	
87HUG60*	49EB87JM362408	14HUG32A*	HFB64	HBB64	HR64	—	
87IUH6F*	49EB87JM362408	14IUH32A*	HFB64	HBB64	HR64	—	
87JUH6F*	49EB87JM362408	14JUH32A*	HFB64	HBB64	HR64	—	
87DUC6L*	49EB87GF242008	14DUC32A*	HFB21	HBB21	HR21	—	
87DUD6L*	49EB87GF242008	14DUD32A*	HFB21	HBB21	HR21	—	
87DUE6L*	49EB87GF242008	14DUE32A*	HFB21	HBB21	HR21	—	
87DUE6P*	49EB87GF242008	14DUE32A*	HFB22	HBB22	HR612	—	
87EUE6L*	49EB87GF242008	14EUE32A*	HFB22	HBB22	HR612	—	
87FUF6L*	49EB87GF242008	14FUF32A*	HFB22	HBB22	HR612	—	
87FUF6P*	49EB87GF242008	14FUF32A*	HFB63	HBB63	HR63	—	
87GUG6L*	49EB87GF242008	14GUG32A*	HFB22	HBB22	HR612	—	
87GUG6P*	49EB87GF242008	14GUG32A*	HFB63	HBB63	HR63	—	
87HUG6L*	49EB87JF362408	14HUG32A*	HFB63	HBB63	HR63	—	
87HUG6P*	49EB87JM362408	14HUG32A*	HFB64	HBB64	HR64	—	
87IUH6L*	49EB87JM362408	14IUH32A*	HFB64	HBB64	HR64	—	
87JUH6L*	49EB87JM362408	14JUH32A*	HFB64	HBB64	HR64	—	
87DUB6M*	49EB87GB242008	14DUB32A*	—	—	—	ED63A003	
87DUC6M*	49EB87GB242008	14DUC32A*	—	—	—	ED63A010	
87DUD6M*	49EB87GB242008	14DUD32A*	—	—	—	ED63A025	
87DUE6M*	49EB87GB242008	14DUE32A*	—	—	—	ED63A030	
87EUE6M*	49EB87GB242008	14EUE32A*	—	—	—	ED63A040	
87FUF6M*	49EB87GB242008	14FUF32A*	—	—	—	ED63A050	
87GUG6M*	49EB87GB242008	14GUG32A*	—	—	—	ED63A100	
87HUG6M*	49EB87IB362408	14HUG32A*	—	—	—	ED63A100	
87IUH6M*	49EB87IB362408	14IUH32A*	—	—	—	ED63A125	
87JUH6M*	49EB87JB362408	14JUH32A*	—	—	—	FXD63A150L	

① Dual voltage coils not available in size 5-8 starters.


NEMA & General Purpose Control

CONTROL PRODUCTS 17

# Heavy Duty Control

## Class 87 Pump Panel Enclosure Kits

*Selection*

	<b>Ordering Information</b> <ul style="list-style-type: none"> <li>▶ Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.</li> <li>▶ Refer to Class 87 section of catalog for pump panel ratings and other details.</li> <li>▶ Handle mechanism, power wire, mounting panel, reset assembly and instruction guide are included with the enclosure kit.</li> </ul>	<b>Coil Table</b>	
		60Hz Voltage	Letter
	24 Separate Control	J	
	120 Separate Control	F	
	110–120/220–240	A <sup>①</sup>	
	200–208	D	
	220–240	G	
	220–240/440–480	C <sup>①</sup>	
	277	L	
	440–480	H	
	550–600	E	

### Pump Panels with Bimetal Overload Relay Class 87

To Field Assemble This Pump Panel:	Order these components						Enclosure List Price \$
	Enclosure Catalog Number	Starter with Bimetal Overload Relay	Disconnect Switch	Fuse Load Base	Class R Rejection Clips	Motor Circuit Interrupter	
87DAE6FC	49EB87GF242008	14DP32A*81	HFB612	HBB612	HR612	—	
87DAE60C	49EB87GF242008	14DP32A*81	HFB62	HBB62	HR62	—	
87EAF6FC	49EB87GF242008	14EP32A*81	HFB612	HBB612	HR612	—	
87EAF60C	49EB87GF242008	14EP32A*81	HFB62	HBB62	HR62	—	
87FAJ6FC	49EB87GF242008	14FP32A*81	HFB62	HBB62	HR62	—	
87FAJ60C	49EB87GF242008	14FP32A*81	HFB63	HBB63	HR63	—	
87GAK6FC	49EB87GF242008	14GP32A*81	HFB62	HBB62	HR62	—	
87GAK60C	49EB87GF242008	14GP32A*81	HFB63	HBB63	HR63	—	
87HAN6FC	49EB87JF362408	14HP32A*81	HFB63	HBB63	HR63	—	
87HAN60C	49EB87JM362408	14HP32A*81	HFB64	HBB64	HR64	—	
87IAP6FC	49EB87JM362408	14IP32A*81	HFB64	HBB64	HR64	—	
87JAR6FC	49EB87JM362408	14JG32A*81	HFB64	HBB64	HR64	—	
87DAE6LC	49EB87GF242008	14DP32A*81	HFB21	HBB21	HR21	—	
87DAE6PC	49EB87GF242008	14DP32A*81	HFB22	HBB22	HR612	—	
87EAG6LC	49EB87GF242008	14EP32A*81	HFB22	HBB22	HR612	—	
87FAJ6LC	49EB87GF242008	14FP32A*81	HFB22	HBB22	HR612	—	
87FAJ6PC	49EB87GF242008	14FP32A*81	HFB63	HBB63	HR63	—	
87GAL6LC	49EB87GF242008	14GP32A*81	HFB63	HBB63	HR63	—	
87HAN6LC	49EB87JF362408	14HP32A*81	HFB63	HBB63	HR63	—	
87HAN6PC	49EB87JM362408	14HP32A*81	HFB64	HBB64	HR64	—	
87IAP6LC	49EB87JM362408	14IP32A*81	HFB64	HBB64	HR64	—	
87JAR6LC	49EB87JM362408	14JG32A*81	HFB64	HBB64	HR64	—	
87DAA6MC	49EB87GB242008	14DP32A*81	—	—	—	ED63A003	
87DAB6MC	49EB87GB242008	14DP32A*81	—	—	—	ED63A010	
87DAD6MC	49EB87GB242008	14DP32A*81	—	—	—	ED63A025	
87DAE6MC	49EB87GB242008	14DP32A*81	—	—	—	ED63A030	
87EAF6MC	49EB87GB242008	14EP32A*81	—	—	—	ED63A040	
87EAG6MC	49EB87GB242008	14EP32A*81	—	—	—	ED63A050	
87FAH6MC	49EB87GB242008	14FP32A*81	—	—	—	ED63A040	
87FAJ6MC	49EB87GB242008	14FP32A*81	—	—	—	ED63A050	
87GAK6MC	49EB87GB242008	14GP32A*81	—	—	—	ED63A050	
87GAL6MC	49EB87GB242008	14GP32A*81	—	—	—	ED63A100	
87HAN6MC	49EB87IB362408	14HP32A*81	—	—	—	ED63A100	
87IAP6MC	49EB87IB362408	14IP32A*81	—	—	—	ED63A125	
87JAR6MC	49EB87JB362408	14JG32A*81	—	—	—	FXD63A150L	

① Dual voltage coils not available in size 5-8 starters.

NEMA & General Purpose Control

17 CONTROL PRODUCTS

# Factory Modifications

*Selection*

## Ordering Information

- All modifications will consist of Siemens standard components as available. Standard equipment dimensions and enclosure construction may not apply when certain modifications and special features are added.

## Pilot Devices

Description	Modification	Class	Enclosure Type	Suffix	List Price \$
Push Buttons	Start, Stop	14, 17, 18, 36, 37, 40, 83, 84, CLM, CM, LE	All	A1	⑤
	Forward, Reverse, Stop	22, 25, 26, 43	All	A2	
	High, Low, Stop	30, 32	All		
	E-Stop	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43	All	ES	
	Test Push Buttons	83, 84	All	K1	
Selector Switches	Hand-Off-Auto	14, 17, 18, 36, 37, 40, 83, 84, LE	All	A3	⑤
		CM, CLM	All	A3	
	For 24 volt HOA control, 20 Amp contactor only	CM, CLM	1	EM	
	Off-On	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, CLM, CM, LE	All	A4	⑤
	Auto-Off	14, 17, 18, 40, 83, 84, CM, CLM, LE	All	A6	⑤
	Forward-Off-Reverse	22, 25, 26, 43	All	A5	
	High-Off-Low	30, 32	All		
	Hand-Off-Auto (Keyed)	14, 17, 18, 36, 37, 40, 83, 84, LE, CLM, CM	All	A9	⑤
Auto-Off-Low-High	30, 32	All	A0		

## Pilot Lights

Class	Enclosure Type	Lens Color →	Red	Green	Red	Green	Red	Green	Amber	White	Red Push-To-Test	Green Push-To-Test	Green Push-To-Test	LED Bulb Upgrade
		Legend →	On For/Rev Low/High	On For/Rev Low/High	Run	Run	Off	Off	OL Tripped	Control Power On	On For/Rev Low/High	On For/Rev Low/High	Off	
		Suffix →	FA	FB	FC	FD	FJ	FK	FL <sup>④</sup>	FW	FS	FT	FU	FE <sup>①</sup>
14, 40, 17, 18, 36, 37, 87, 88, LE, CLM, CM	All													
22, 25, 26, 30, 32, 43, 83, 84	All				⑤	⑤								

## Coil Options

Class 14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>④</sup> , 84 <sup>④</sup> , 87, 88					
Volts 60 HZ	Volts 50 HZ	Coil Letter Change	Controller Size — List Price \$		
			00-2½	3, 3½	4
24 Separate Control	24	J			
120 Separate Control	110	F			
110-120/220-240	110/190-220	A			
200-208	—	D			
220-240	190-220	G			
277	240	L			
220-240/440-480	190-220/380-440	C			
440-480	380-440	H			
575-600	550	E			
DC Coil <sup>⑥</sup>	24V	S <sup>⑦</sup>			
	48V	U			
	125V	V			
	250V	W			

AC (50-60 HZ) or DC	Coil Letter Change	Controller Size 4 (Vacuum Only) Size 5 & 6 (ALL)
23-26V	J	
42-48V	U	
110-127V	F	
200-220V	D	
220-240V	G	
240-277V	L	
380-420V	K	
440-480V	H	
575-600V	E	

## Miscellaneous Options

	Class	Change the 92 to	List Price \$
Omit Alternator (deduct)	83, 84	95	

① Pilot lights are transformer type as standard. For LED type bulbs, order suffix FE in addition to the standard device suffix(es). For example, to order red "ON" and green "OFF" pilot lights with LED bulbs, order FA, FK and FE.

② DC coils include 1 NC, late break aux. contact. This aux. contact takes up one side of the starter (00-4 only).

③ Price x 2 for Classes 22, 25, 26, 30, 32, 43, 83, 84.

④ Bimetal OL - Size 00 - 2 1/2 available. Solid-state OL - Size 00 - 4, 7 & 8 available.

⑤ For Class 83, 84 two devices are provided. Price x 2.

⑥ For Class 83, 84 standard enclosure (92) alternating relay available in 24V or 120V control only.

⑦ S coil is not available for size 4 contactors or starters.

⑧ Class 83 and 84 only.

# Factory Modifications

• Revised •  
02/21/12

## Selection

Ordering Information	Transformer Table		
► Replace (*) with letter from Transformer Table.	Primary Volts	Secondary Volts	Letter
	120	24	B
	208	24	S
	208	120	T
	240	24	J
	240	120	F
	277	24	N
	277	120	P
	380	110	U
	415	100	W
	480	240	R
	480/240	24	D
	480/240	120	A
	600	24	E
	600	120	C

### Control Power Transformers<sup>②</sup>

Description	Catalog No Suffix	Product Class	Enclosure Type	20-60	100	—	200	300-400	—	—	← Lighting & Heating Ratings (Amps)
				0-2½	3	3½, 4	5	6	7	8	
Standard Capacity <sup>①</sup> with 1-Secondary Fuse	B*	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>③</sup> , 84 <sup>④</sup> , 87	1, 3, 4, 12 7 & 9		—	—	—	—	—	—	
Standard Capacity with 2-Primary and 1-Secondary Fuse	D*	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>③</sup> , 84 <sup>④</sup> , 87, LE, CLM, CM	1, 3, 4, 12 7 & 9								
100VA Extra Capacity with 2-Primary and 1-Secondary Fuse	C*	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>③</sup> , 84 <sup>④</sup> , 87, LE, CLM, CM	1, 3, 4, 12 7 & 9								
		36, 37, 88	All							—	—
150VA Extra Capacity with 2-Primary and 1-Secondary Fuse	C*1	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>③</sup> , 84 <sup>④</sup> , 87, LE, CLM, CM	1, 3, 4, 12								
		36, 37, 88	All								—

### Factory Assembled Fuse Clips—Class 25, 32, 84<sup>④</sup>

Fuse Clip Amps	Volts	Suffix	List Price \$
30	250	10	
30	600	11	
60	250	12	
60	600	13	
100	250	14	
100	600	15	
200	250	16	
200	600	17	
400	250	18	
400	600	19	
600	250	20	
600	600	21	
800	600	23	
1200	600	24	
1600	600	25	

**Note:** Factory will furnish the same voltage coils as transformer secondary voltage (except with class 36,37).

① The standard control transformer supplied for starter sizes 0 through 2½ will be rated 45VA and have the appropriate secondary fuse. Primary fuses will not be supplied as standard. For primary fuse option select appropriate suffix from table.

② For 24VAC control a minimum of 100VA CPT required.

③ Price x 2 Class 83 and 84.

④ Class 84 Duplex Controllers require two fusible disconnects thus multiply the price adder by two.



# Factory Modifications

Selection

## Additional Auxiliary Contacts

Class	NO Contacts	NC Contacts	Catalog Number Suffix	Controller Size — List Price \$			
				00-1 $\frac{3}{4}$	2-4	5-6	7-8
14, 17, 18, 40, 83 <sup>Ⓢ</sup> , 84 <sup>Ⓢ</sup>	—	1	G01			—	—
	—	2	G02			—	—
	1	—	G10			—	—
	1	1	G11			—	—
	1	2	G12			—	—
	2	—	G20			—	—
	2	1	G21			—	—
	2	2	G22			—	—
	2	3	G23			—	—
	3	1	G31			—	—
	3	2	G32			—	—
	3	3	G33		—	—	—
	4	—	G40			—	—
	4	1	G41			—	—
	4	2	G42		—	—	—
	4	4	G44		—	—	—
	5	—	G50			—	—
	5	1	G51			—	—
5	3	G53			—	—	
6	—	G60			—	—	
6	2	G62			—	—	
7	1	G71			—	—	
8	—	G80			—	—	
22, 25, 26, 43 & 30, 32 (2-winding)	—	2	G02 <sup>Ⓢ</sup>			—	—
	2	—	G20 <sup>Ⓢ</sup>			—	—
	2	2	G22 <sup>Ⓢ</sup>			—	—
	4	0	G40 <sup>Ⓢ</sup>			—	—
	4	4	G44 <sup>Ⓢ</sup>			—	—
	6	2	G62 <sup>Ⓢ</sup>			—	—
30, 32 (1-winding)	8	0	G80 <sup>Ⓢ</sup>			—	—
	0	2	G02 <sup>Ⓢ</sup>	—		—	—
	2	—	G20 <sup>Ⓢ</sup>	—		—	—
	2	2	G22 <sup>Ⓢ</sup>			—	—
	4	—	G40 <sup>Ⓢ</sup>			—	—
	4	4	G44 <sup>Ⓢ</sup>	—		—	—
LE, CLM, CM	1	1	G11		—	—	—
	0	2	G02 <sup>Ⓢ</sup>			—	—
	2	0	G20 <sup>Ⓢ</sup>			—	—
	2	2	G22 <sup>Ⓢ</sup>			—	—

NEMA & General Purpose Control

CONTROL PRODUCTS 17

## Overload Options

Class 14, 17, 18, 22, 25, 26, 30, 32, 36, 37								
Description	Trip Class	Phase	Contacts	Catalog Number Suffix	Controller Size—List Price \$			
					00-2 $\frac{1}{2}$	3-4	5, 6	7, 8
Ambient Compensated Bimetal	Class 10 or 20 (K or E heaters)	3-Phase or Single Phase	NO & NC, SPDT	91	Ⓢ	—	—	—
			NC	81	—	—	—	
ESP200	Class 5, 10, 20, 30 selectable	3-Phase or Single Phase	NO & NC	N/A	—	—	—	—
3RB200 (Sz 5-6)	Class 10	3-Phase	NO & NC	51	—	—	—	—
	Class 20	3-Phase	NO & NC	—	—	—	—	—

Description	Class	Suffix	Controller Size - Price Deduction \$					
			0, 1	1 $\frac{1}{4}$ - 2 $\frac{1}{2}$	3	3 $\frac{1}{2}$ , 4	5, 6	7, 8
Omit Overload Relay and Reset Button	17, 18, 25, 26	EX1						

Ⓢ Auxiliary contacts will be added evenly across contactors. (i.e. Class 22, G02 suffix will add 2 NC contacts (one per contactor)).

Ⓢ Double the price addition for Class 30 and 32.

Ⓢ For class 83 and 84 contactors will be added to both starters. Price x 2.

# Factory Modifications

• Revised •  
02/21/12

*Selection*

## Control Options

Description	Class	Enclosure Type	Catalog Number Suffix	List Price \$
Lighting Control Modules	CLM 20 Amp	All	2W, 3W, 3WS	
Surge Suppression for 120V AC Coil <sup>ⓐ</sup>	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 83, 84, 87, 88	All	SS	
Disconnect Switch Interlock 2 NO/2 NC	DPDT 17, 25, 32, 37, 84, CM, LE	1, 3, 4, 4X, 12	GY	
Motor Circuit Protector Interlock NO/NC	SPDT 18, 26, 32, 37, 84, CM, LE	All	GY	
Lightning Arrestor	All	All	L	
Circuit Breaker Shunt Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	All	L6	
Circuit Breaker Undervoltage Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	All	L7	
Circuit Breaker Alarm Switch Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	All	L8	
Ground Lug – 1 Conductor	All	All	L10	
Control Circuit Fuse and Holder (Transformer Primary Fusing)	All	All	F1 (1 fuse) F2 (2 fuses)	
Control Circuit Circuit Breaker Internally Operated	All	All	F4	
Space Heater (120V separate control)	All	All	SH	
Space Heater with Thermostat (120V separate control)	All	All	ST	
Surge Capacitor	87, 88	All	SC	
Alarm Package (includes horn, light, relay & push-button)	83, 84, 87, 88	All	M7	
Backspin Protection	87, 88	All	T5	
Minimum Run Timer 0.2 sec. - 3 mins.	87, 88	All	T6	
Blown Control Fuse Indicator Light	17, 25, 32, 37, 84, 87, 88, CM, LE	All	L11	
Single Phase 120VAC Combination Starter	17, 18, 25, 26	All	SP1	
Single Phase 240VAC Combination Starter	17, 18, 25, 26	All	SP2	

## Reversing Options

Description	Class	Catalog Number Suffix	Controller Size —List Price \$									
			0	1	1¼	2	2½	3	3½	4	5	
Reversing in one speed only 2 speed 1 winding	30, 32	R6										—
Reversing in one speed only 2 speed 2 winding		R7										—
Reversing in both speeds 2 speed 1 winding		R8										—
Reversing in both speeds 2 speed 2 winding		R9										—
Reversing for Reduced Voltage	36, 37	R										

## Enclosure Options Class 14, 17, 18

Class	Enclosure Type	Change the 7th Character of the Catalog Number with Bimetal Overload Relay to:	Change the 8th Character of the Catalog Number with Solid State Overload Relay to:	Controller Size – List Price Adder \$					
				00–1 3/4	2–2 1/2	3	3 1/2–4	5–8	
14	NEMA 4/4X (316 Stainless Steel)	X	X						—
14 (Extra Wide)	NEMA 4/4X (316 Stainless Steel)	X	X						—
17 & 18	NEMA 4/4X (316 Stainless Steel)	X	X						—

Note: Add price to the standard 304 stainless steel unit price.

## Motor Management with PROFIBUS DP Communications<sup>ⓐ</sup>

Description	Class	Enclosure Type	Suffix	List Price
SIMOCODE pro C With 0.3-3A Current Module	14,17,18,22,25,26	All	MC1	
SIMOCODE pro C With 2.4-25A Current Module			MC2	
SIMOCODE pro C With 10-100A Current Module			MC3	
SIMOCODE pro C With 20-200A Current Module			MC4	
SIMOCODE pro C With 63-630A Current Module			MC5	
SIMOCODE pro V With 0.3-3A Current/Voltage Module			MV1	
SIMOCODE pro V With 2.4-25A Current/Voltage Module			MV2	
SIMOCODE pro V With 10-100A Current/Voltage Module			MV3	
SIMOCODE pro V With 20-200A Current/Voltage Module			MV4	
SIMOCODE pro V With 63-630A Current/Voltage Module			MV5	
Factory Parameterization of SIMOCODE			MM0	

ⓐ Supplied as NEMA 12, field convertible to NEMA 3R.  
 ⓑ Surge Suppression for NEMA sizes 5 – 8 are supplied internal with the coil.

ⓐ A CPT must also be ordered to power the motor management device. Motor management may be ordered with other product classes as specials.

# Factory Modifications

*Selection*

## Control Relays

Description	Class	Enclosure Type	Suffix	List Price \$
Control Relay <sup>①</sup> 4-Poles Max	All	1, 3, 4, 7, 9, 12	R40	
			R22	
			R04	
Under/Over Voltage, Phase Failure, Phase Sequence, Phase Unbalance Ground Fault Relay	All	All	R1 <sup>②</sup>	
			R5	
Electronic On Delay Relay (.15s–100h) 24V/120V <sup>①</sup>	All	1, 3, 4, 7, 9, 12	T1	
Electronic On Delay Relay (.15s–100h) 24V/240V <sup>②③</sup>			T2	
Electronic Off Delay Relay (.15s–100s) 120V <sup>①</sup>			T3	
Electronic Off Delay Relay (.15s–100s) 240V <sup>②③</sup>			T4	
24 hour time clock 24 hour time clock with day omission 7 day time clock	LE, CLM, CM	All	T7 T8 T9	
Compelling Relay	30, 32	1, 4, 12	A6	
Acceleration Control			A7	
Deceleration Control			A8	

## Meters—Mounted on Enclosure

Description	Class	Enclosure Type	Suffix	List <sup>®</sup> Price \$
Ammeter (includes a C.T. if necessary)	14, 17, 18, 22, 25, 26, 30 <sup>②</sup> , 32 <sup>②</sup> , 36, 37, 40, 43, 83, 84, 87, 88	1, 3, 4, 4X, 12	M1	
Ammeter and Switch (3-Phase with 3 C.T.'s)			M2	
Voltmeter			M3	
Voltmeter and Switch (3-Phase)			M4	
Elapsed Time Meter <sup>④</sup>			M5	
Wattmeter			M6	

## Function Identification Plates

Description	Class	Suffix	List Price \$
Function identification plate, with marking as specified	All	N1	

## Terminal Blocks<sup>①</sup>

Description	Class	Suffix	List Price \$
3 Point Terminal	All	TC3 <sup>⑤</sup>	
6 Point Terminal		TC6 <sup>⑤</sup>	
9 Point Terminal		TC9 <sup>⑤</sup>	

## Special Ratings

Description	Class	Suffix	List Price \$
Service Entrance Rating	17, 18, 25, 26, 32, 37, 84, 87	N3	

## Drawings

Description	Class	Catalog Number	List Price \$
Approval/submittal and as-built drawings for factory modified product may be ordered. The drawing set includes an enclosure outline, a panel layout and a schematic. When entering the order, use the line item notes to reference a product and modifications or an existing order that the drawings are to be engineered for. Specify the contact information and an email address in the ship to address field. Attach any reference drawings to the order or forward to National Customer Support. Once completed, the drawing set will emailed.	All	CONTROLDRAWING	

① Supplied mounted and unwired.

② Not available on Class 36, 37.

③ Price x 2 Class 83 and 84.

④ ETM available with 120V coil only.

⑤ For terminal point more than 9 terminals use additional suffixes. Max 3 suffixes can be selected.

⑥ Available 3-Phase only.

⑦ Class 30 and 32 can be modified with only an elapsed time meter. No other meters apply to class 30 or 32.