

Overload Relay Heater Tables

Selection of Heater Elements for Overload Relays

General

Use only when motor full load current is not known. Motor amps will vary depending on the type and manufacturer of the motor. These average values, for motors with service factor of 1.15, are to be used only as a guide. The formulas at the bottom of the page may be used to obtain approximate amps for other motors.

Note: RPM shown for 60 cycle motors. For 50 cycle motors, multiply RPM by .83.

CAUTION: Actual motor amps may be higher or lower than the values listed below for a particular motor. For more reliable motor protection, select heater elements by using the full load motor nameplate amps.

Single Phase motor full load amps of the same horsepower, voltage and speed vary over wide ranges. The following table conforms with table 430.148 of the NEC.

1-Phase

Hp	Full Load Current (60Hz)	
	115 Volts	230 Volts
1/8	4.4	2.2
1/4	5.8	2.9
3/8	7.2	3.6
1/2	9.8	4.9
3/4	13.8	6.9
1	16	8
1 1/2	20	10
2	24	12
3	34	17
5	56	28
7 1/2	80	40
10	100	50

3-Phase

Hp	Syn Speed RPM	Full Load Current (60Hz)				50 Hz
		200 Volts	230 Volts	460 Volts	575 Volts	
1/4	1800	1.09	0.95	0.48	0.38	0.55
	1200	1.61	1.40	0.70	0.56	0.81
	900	1.84	1.60	0.80	0.64	0.93
1/3	1800	1.37	1.19	0.60	0.48	0.64
	1200	1.83	1.59	0.80	0.64	0.92
	900	2.07	1.80	0.90	0.72	1.04
1/2	1800	1.98	1.72	0.86	0.69	0.99
	1200	2.47	2.15	1.08	0.86	1.24
	900	2.74	2.38	1.19	0.95	1.38
3/4	1800	2.83	2.46	1.23	0.98	1.42
	1200	3.36	2.82	1.46	1.17	—
	900	3.75	3.26	1.63	1.30	1.88
1	3600	3.22	2.80	1.40	1.12	1.70
	1800	4.09	3.56	1.78	1.42	2.06
	1200	4.32	3.76	1.88	1.50	2.28
1 1/2	900	4.95	4.30	2.15	1.72	2.60
	3600	5.01	4.36	2.18	1.74	2.69
	1800	5.59	4.86	2.43	1.94	2.94
2	1200	6.07	5.28	2.64	2.11	3.20
	900	6.44	5.60	2.80	2.24	3.39
3	3600	6.44	5.60	2.80	2.24	3.39
	1800	7.36	6.40	3.20	2.56	3.84
	1200	7.87	6.84	3.42	2.74	4.14
5	900	9.09	7.90	3.95	3.16	4.77
	3600	9.59	8.34	4.17	3.34	5.02
	1800	10.8	9.40	4.70	3.76	5.70
7 1/2	1200	11.7	10.2	5.12	4.10	6.20
	900	13.1	11.4	5.70	4.55	6.80
10	3600	15.5	13.5	5.76	5.41	8.20
	1800	16.6	14.4	7.21	5.78	8.74
	1200	18.2	15.8	7.91	6.32	9.59
15	900	18.3	15.9	7.92	6.33	9.60
	3600	22.4	19.5	9.79	7.81	11.50
	1800	24.7	21.5	10.7	8.55	13.00
20	1200	25.1	21.8	10.9	8.70	13.20
	900	26.5	23.0	11.5	9.19	13.90
25	3600	29.2	25.4	12.7	10.1	15.40
	1800	30.8	25.8	13.4	10.7	16.30
	1200	32.2	28.0	14.0	11.2	16.90
30	900	35.1	30.5	15.2	12.2	18.50
	3600	41.9	36.4	18.2	14.5	22.00
	1800	45.1	39.2	19.6	15.7	23.70
40	1200	47.6	41.4	20.7	16.5	25.00
	900	51.2	44.5	22.2	17.8	26.90
50	3600	58.0	50.4	25.2	20.1	30.50
	1800	58.9	51.2	25.6	20.5	31.00
	1200	60.7	52.8	26.4	21.1	31.90
60	900	63.1	54.9	27.4	21.9	33.20

3-Phase

Hp	Syn Speed RPM	Full Load Current (60Hz)				50 Hz
		200 Volts	230 Volts	460 Volts	575 Volts	
25	3600	69.9	60.8	30.4	24.3	36.80
	1800	74.5	64.8	32.4	25.9	39.20
	1200	75.4	65.6	32.8	26.2	39.60
30	900	77.4	67.3	33.7	27.0	40.70
	3600	84.8	73.7	36.8	29.4	—
	1800	86.9	75.6	37.8	30.2	45.70
40	1200	90.6	78.8	39.4	31.5	47.60
	900	94.1	81.8	40.9	32.7	49.50
50	3600	111	96.4	48.2	38.5	—
	1800	116	101	50.4	40.3	61.00
	1200	117	102	50.6	40.4	61.20
60	900	121	105	52.2	41.7	63.20
	3600	138	120	60.1	48.2	—
	1800	143	124	62.2	49.7	75.20
75	1200	145	126	63.0	50.4	76.20
	900	150	130	65.0	52.0	78.50
100	3600	164	143	71.7	57.3	—
	1800	171	149	74.5	59.4	90.00
	1200	173	150	75.0	60.0	91.10
125	900	177	154	77.0	61.5	93.10
	3600	206	179	89.6	71.7	—
	1800	210	183	91.6	73.2	111.00
150	1200	212	184	92.0	73.5	112.00
	900	222	193	96.5	77.5	117.00
200	3600	266	231	115	92.2	—
	1800	271	236	118	94.8	144.00
	1200	275	239	120	95.6	145.00
250	900	290	252	126	101	153.00
	3600	—	292	146	116	—
	1800	—	293	147	117	177.00
300	1200	—	298	149	119	180.00
	900	—	305	153	122	186.00
400	3600	—	343	171	137	—
	1800	—	348	174	139	210.00
	1200	—	350	174	139	210.00
500	900	—	365	183	146	211.00
	3600	—	458	229	184	—
	1800	—	452	226	181	274.00
600	1200	—	460	230	184	276.00
	900	—	482	241	193	279.00
800	3600	—	559	279	223	—
	1800	—	568	284	227	343.00
	1200	—	573	287	229	345.00
1000	900	—	600	300	240	347.00
	3600	—	278	339	271	392.00
	1800	—	684	342	274	395.00
1200	1200	—	896	448	358	—

Formula—Approximate Full Load Amps for Other Motors

208 Volt Full Load Amp $\approx$ 230 Volt current $\times$ 110%
 2-Phase FLA $\approx$ 0.866 $\times$ the 3-Phase FLA
 2-Phase, 3-wire current in common wire $\approx$ 1.41 $\times$ that in the other 2 lines

25Hz 1500 RPM, amps $\approx$ amps of 60Hz, 3600 RPM
 25Hz 750 RPM, amps $\approx$ amps of 60Hz, 1800 RPM
 Service factor 1.0 $\approx$ amps $\times$ 0.9
 50°C–55°C motor $\approx$ amps $\times$ 0.9

Overload Relay Heater Tables

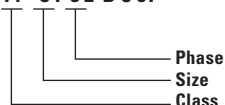
Selection of Heater Elements for Overload Relays

General

To Select Heater Catalog Number Use

- Product Class
- Controller Size
- Motor Amp
- Phase

Catalog No 14 C P 3 2 B C 81



1. Find heater table number below, using the Product Class, Controller Size and Phase. Heater table number is found in the column under the type of overload and phase.

2. Refer to the specified table and use the controller size and motor amps to select the heater catalog number.

a. If motor amps are not known, an approximate value may be found on the previous page. These values should be used with caution and only when motor amps are not available.

Heaters shown on the following pages provide a maximum trip rating of 125% of minimum motor amperes for 40°C motors (service factor 1.15). For other motors (service factor 1.0), select the next lower listed heater catalog number within the designated table which provides a maximum trip rating of approximately 115%.

Overload relays do not provide protection against short circuits. To ensure proper coordination with short circuit protective device, select heaters from the information packaged with the control device.

Class	Description	Size or Amperage	Controller Size Letter	Heater Table Number			
				Bimetal Standard Trip (Class 20)		Bimetal Quick Trip (Class 10)	
				Compensated E Heaters Green Reset		Compensated K Heaters Green Reset	
				1Ph	3Ph	1Ph	3Ph
SMF	Manual	All	—	See Page 17-124			
	Magnetic						
14, 22	Non-reversing, Reversing	00-4	B-J	213	233	313	332
17, 18 25, 26 30, 32 ^① 83, 84 87, 89	Combination Reversing Combination Multi Speed Pump Controllers Motor Control Centers	0-4	C-J	—	233	—	332
48	Panel Mounted Overload Relay	25-180A	D-J	216	238	316	335

NEMA & General Purpose Control

17 CONTROL PRODUCTS

ESP200 starters do not require heater elements.

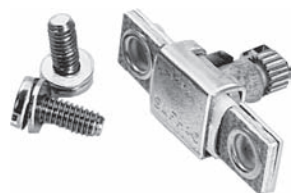
① **Overload Relay Selection Multi-Speed**

Each speed requires a separate set of overloads. The adjustment range must be selected on the basis of the full-load current for each particular speed.

Manual Control

Heater Elements, Class SMF

General



Heater Elements Class SMF

Ordering Information

- Determine number of heater elements required from Table A.
- Determine motor full load current and service factor.
NOTE: If motor amps are unknown, an approximate value may be found on page 17-122. These values should be used with caution and only when motor amps are not available.
- If the motor and controller are in the same ambient temperature:
 - For 1.15 to 1.25 service factor motors use 100% of motor full load current for heater element selection.
 - For 1.0 service factor motors use 90% of motor full load current for heater element selection.
 - Heater elements are class 20.
- If the motor and controller are in different ambient temperatures multiply motor full load current by the multiplier in Table B. Use the resultant full load current for heater element selection.
- Select proper heater element from table below.
- All tables are based on the operation of the motor and controller in the same ambient temperature, 40°C (104°F) or less. Always be certain the correct heater element is installed in the starter before operating the motor.

Heater Catalog Number	Motor Full-Load Current (Amps)	List Price \$
SMFH01	0.157–0.173	
SMFH02	0.174–0.192	
SMFH03	0.193–0.212	
SMFH04	0.213–0.235	
SMFH05	0.236–0.261	
SMFH06	0.262–0.289	
SMFH07	0.290–0.321	
SMFH08	0.322–0.355	
SMFH09	0.356–0.399	
SMFH10	0.41–0.44	
SMFH11	0.45–0.49	
SMFH12	0.50–0.53	
SMFH13	0.54–0.58	
SMFH14	0.59–0.65	
SMFH15	0.66–0.71	
SMFH16	0.72–0.78	
SMFH17	0.79–0.85	
SMFH18	0.86–0.96	
SMFH19	0.97–1.04	
SMFH20	1.05–1.16	
SMFH21	1.17–1.25	
SMFH22	1.30–1.39	
SMFH23	1.38–1.54	
SMFH24	1.48–1.63	
SMFH25	1.57–1.75	
SMFH26	1.66–1.86	

Heater Catalog Number	Motor Full-Load Current (Amps)	List Price \$
SMFH27	1.80–1.99	
SMFH28	1.96–2.15	
SMFH29	2.16–2.38	
SMFH30	2.39–2.75	
SMFH31	2.76–2.84	
SMFH32	2.85–3.06	
SMFH33	3.07–3.45	
SMFH34	3.46–3.70	
SMFH35	3.71–4.07	
SMFH36	4.08–4.32	
SMFH37	4.33–4.90	
SMFH38	4.91–5.35	
SMFH39	5.36–5.85	
SMFH40	5.86–6.41	
SMFH41	6.42–6.79	
SMFH42	6.80–7.57	
SMFH43	7.58–8.15	
SMFH44	8.16–8.98	
SMFH45	8.99–9.67	
SMFH46	9.68–9.95	
SMFH47	9.96–10.8	
SMFH48	10.9–12.1	
SMFH49	12.2–13.1	
SMFH50	13.2–13.9	
SMFH51	14.0–15.0	
SMFH52	15.1–16.0	

Table A
Number of Heater Elements

Device	Number of Heater Elements	Notes
SMFF*1 SMFF*2 SMFF*3 SMFF*4 SMFF*5 SMFF*6	1	All single pole and two pole SMF starters require only 1 Heater Element.
SMFF*22 SMFF*44	2	Duplex Unit. One Heater Element per starter.
SMFF*11 SMFF*22	2	Two Speed Starter. One Heater Element per speed.

Table B—Special Applications
Heater Element Selection

Continuous Duty Motor Service Factor	Ambient Temperature of Motor		
	Same as Controller Ambient	Constant 10°C (18°F) Higher Than Controller Ambient	Constant 10°C (18°F) Lower Than Controller Ambient
	Full Load Current Multiplier		
1.15 to 1.25	1.0	0.9	1.05
1.0	0.9	0.8	0.95

Overload Relay Heater Tables

Full Load Motor Amps, Single Phase, Trip Class 20 – Tables 213, 216

Selection
Table 213 for Class 14, 22 (1-Phase)

Full Load Amps			Heater Catalog No	List Price \$
Size 00, 0, 1	Size 1P	Size 2, 2½		
0.37–0.40	—	—	E3	
0.41–0.44	0.41–0.44	—	E4	
0.45–0.47	0.45–0.47	—	E5	
0.48–0.52	0.48–0.52	—	E6	
0.53–0.57	0.53–0.57	—	E7	
0.58–0.62	0.58–0.62	—	E8	
0.63–0.69	0.63–0.69	—	E9	
0.70–0.74	0.70–0.74	—	E11	
0.75–0.81	0.75–0.81	—	E12	
0.82–0.85	0.82–0.85	—	E13	
0.86–0.93	0.86–0.93	—	E14	
0.94–1.03	0.94–1.03	—	E16	
1.04–1.11	1.04–1.11	—	E17	
1.12–1.22	1.12–1.22	—	E18	
1.23–1.34	1.23–1.34	—	E23	
1.35–1.53	1.35–1.53	—	E24	
1.54–1.71	1.54–1.71	—	E26	
1.72–1.92	1.72–1.92	—	E27	
1.93–2.12	1.93–2.12	—	E28	
2.13–2.24	2.13–2.24	—	E29	
2.25–2.43	2.25–2.43	—	E31	
2.44–2.57	2.44–2.57	—	E32	
2.58–2.86	2.58–2.86	—	E33	
2.87–3.16	2.87–3.16	—	E34	
3.17–3.35	3.17–3.35	—	E36	
3.36–3.58	3.36–3.58	—	E37	
3.59–3.90	3.59–3.90	—	E38	
3.91–4.25	3.91–4.25	—	E39	
4.26–4.77	4.26–4.77	—	E41	
4.78–5.35	4.78–5.35	—	E42	
5.36–5.76	5.36–5.76	—	E44	
5.77–6.33	5.77–6.33	—	E46	
6.34–6.98	6.34–6.98	—	E47	
6.99–7.37	6.99–7.37	—	E48	
7.38–7.71	7.38–7.71	—	E49	
7.72–8.51	7.72–8.51	—	E50	
8.52–9.31	8.52–9.31	—	E51	
9.32–10.1	9.32–10.1	—	E52	
10.2–10.9	10.2–10.9	—	E53	
11.0–12.2	11.0–12.2	—	E54	
12.3–13.5	12.3–13.5	—	E55	
13.6–15.7	13.6–15.7	—	E56	
15.8–17.3	15.8–17.3	19.4–22.0	E57	
17.4–19.9	17.4–19.9	22.1–23.5	E60	
20.0–21.7	20.0–21.7	23.6–25.0	E61	
21.8–23.4	21.8–23.4	25.1–27.0	E62	
23.5–24.0	23.5–23.7	27.1–28.9	E65	
—	23.8–25.1	29.0–31.0	E66	
—	25.2–27.9	31.1–34.8	E67	
—	28.0–32.2	34.9–36.9	E69	
—	32.3–34.0	37.0–43.9	E70	
—	—	44.0–46.0	E72	
—	—	46.1–48.3	E73	
—	—	48.4–55.0	E74	
—	—	55.1–60.0	E76	

Table 216 for Class 48

Full Load Amps			Heater Catalog No	List Price \$
48DA, 48GA	48HA	48JA		
0.34–0.36	—	—	E3	
0.37–0.40	—	—	E4	
0.41–0.43	—	—	E5	
0.44–0.47	—	—	E6	
0.48–0.51	—	—	E7	
0.52–0.56	—	—	E8	
0.57–0.62	—	—	E9	
0.63–0.67	—	—	E11	
0.68–0.73	—	—	E12	
0.74–0.77	—	—	E13	
0.78–0.84	—	—	E14	
0.85–0.93	—	—	E16	
0.94–1.00	—	—	E17	
1.01–1.10	—	—	E18	
—	—	—	E19	
1.11–1.21	—	—	E23	
1.22–1.38	—	—	E24	
1.39–1.54	—	—	E26	
1.55–1.73	—	—	E27	
1.74–1.91	—	—	E28	
1.92–2.02	—	—	E29	
2.03–2.19	—	—	E31	
2.20–2.32	—	—	E32	
2.33–2.58	—	—	E33	
2.59–2.85	—	—	E34	
2.86–3.02	—	—	E36	
3.03–3.23	—	—	E37	
3.24–3.52	—	—	E38	
3.53–3.83	—	—	E39	
3.84–4.30	—	—	E41	
4.31–4.82	—	—	E42	
4.83–5.19	—	—	E44	
5.20–5.71	—	—	E46	
5.72–6.29	—	—	E47	
6.30–6.64	—	—	E48	
6.65–6.95	—	—	E49	
6.96–7.67	—	—	E50	
7.68–8.39	—	—	E51	
8.40–9.19	—	—	E52	
9.20–9.94	—	—	E53	
9.95–10.9	—	—	E54	
11.0–12.2	—	—	E55	
12.3–14.2	—	—	E56	
14.3–15.6	—	—	E57	
—	—	—	E59	
15.7–17.9	—	—	E60	
18.0–19.6	—	—	E61	
19.7–22.3	—	—	E62	
22.4–24.0	—	—	E65	
24.1–25.9	—	—	E66	
26.0–29.5	27.1–30.0	—	E67	
29.6–32.5	30.1–33.2	—	E69	
32.6–33.5	33.3–35.7	—	E70	
33.6–36.9	35.8–39.4	—	E71	
37.0–39.2	39.5–43.4	—	E72	
39.3–43.1	43.5–46.9	—	E73	
43.2–47.4	47.0–51.5	—	E74	
47.5–50.0	51.6–57.0	—	E76	
50.1–55.2	57.1–62.8	—	E77	
55.3–60.0	62.9–69.1	—	E78	
—	69.2–75.0	—	E79	
—	75.1–83.3	—	E80	
—	—	50.0–55.9	E88	
—	—	56.0–60.9	E89	
—	—	61.0–65.9	E91	
—	—	66.0–69.9	E92	
—	—	70.0–75.9	E93	
—	—	76.0–81.9	E94	
—	83.4–86.9	82.0–86.9	E96	
—	87.0–92.9	87.0–92.9	E97	
—	93.0–100.0	93.0–97.9	E98	
—	—	98.0–107.9	E99	
—	—	108.0–113.9	E101	
—	—	114.0–125.0	E102	
—	—	126.0–138.0	E103	
—	—	139.0–153.0	E104	
—	—	154.0–163.0	E106	
—	—	164.0–180.0	E107	

Overload Relay Heater Tables

Full Load Motor Amps, 3-Phase, Trip Class 20 – Tables 233, 238

Selection

Table 233 for Class 14, 17, 18, 22, 25, 26, 30, 32, 83, 84, 87 (3-Phase)

Full Load Amps					Heater Catalog No	List Price \$
Size 00, 0, 1	Size 1 1/4	Size 2, 2 1/2	Size 3, 3 1/2	Size 4		
0.38–0.40	—	—	—	—	E6	
0.41–0.43	—	—	—	—	E7	
0.44–0.48	—	—	—	—	E8	
0.49–0.53	—	—	—	—	E9	
0.54–0.57	—	—	—	—	E11	
0.58–0.62	—	—	—	—	E12	
0.63–0.66	—	—	—	—	E13	
0.67–0.72	—	—	—	—	E14	
0.73–0.80	—	—	—	—	E16	
0.81–0.85	—	—	—	—	E17	
0.86–0.92	—	—	—	—	E18	
0.93–0.99	—	—	—	—	E19	
1.00–1.08	—	—	—	—	E23	
1.09–1.23	—	—	—	—	E24	
1.24–1.37	—	—	—	—	E26	
1.38–1.54	—	—	—	—	E27	
1.55–1.69	—	—	—	—	E28	
1.70–1.80	—	—	—	—	E29	
1.81–1.94	—	—	—	—	E31	
1.95–2.07	—	—	—	—	E32	
2.08–2.26	—	—	—	—	E33	
2.27–2.54	2.27–2.54	—	—	—	E34	
2.55–2.69	2.55–2.69	—	—	—	E36	
2.70–2.88	2.70–2.88	—	—	—	E37	
2.89–3.14	2.89–3.14	—	—	—	E38	
3.15–3.40	3.15–3.40	—	—	—	E39	
3.41–3.81	3.41–3.81	—	—	—	E41	
3.82–4.26	3.82–4.25	—	—	—	E42	
4.27–4.62	4.26–4.62	—	—	—	E44	
4.63–5.09	4.63–5.09	—	—	—	E46	
5.10–5.61	5.10–5.61	—	—	—	E47	
5.62–5.91	5.62–5.91	—	—	—	E48	
5.92–6.15	5.92–6.15	—	—	—	E49	
6.16–6.70	6.16–6.70	—	—	—	E50	
6.71–7.54	6.71–7.54	—	—	—	E51	
7.55–8.29	7.55–8.29	—	—	—	E52	
8.30–8.99	8.30–8.99	—	—	—	E53	
9.00–9.85	9.00–9.85	—	—	—	E54	
9.86–10.4	9.86–10.4	—	—	—	E55	
10.5–12.0	10.5–12.0	10.5–12.0	—	—	E56	
12.1–13.6	12.1–13.6	12.1–13.6	—	—	E57	
13.7–15.6	13.7–15.6	13.7–15.6	—	—	E60	
15.7–17.0	15.7–17.0	15.7–17.1	—	—	E61	
17.1–18.4	17.1–19.4	17.2–19.4	—	—	E62	
18.5–19.4	19.5–20.9	19.5–20.9	—	—	E65	
19.5–21.3	21.0–22.2	21.0–22.2	—	—	E66	
21.4–24.4	22.3–25.3	22.3–25.3	—	—	E67	
24.5–25.9	25.4–26.9	25.4–26.9	30.0–33.5	—	E69	
26.0–27.0	27.0–30.2	27.0–30.2	33.6–36.4	—	E70	
—	—	—	36.5–39.6	—	E71	
—	30.3–33.3	30.3–33.3	—	—	E72	
—	33.4–36.0	33.4–35.3	39.7–43.6	—	E73	
—	—	—	43.7–46.5	—	E73A	
—	—	35.4–41.5	46.6–51.6	—	E74	
—	—	41.6–45.0	51.7–54.4	—	E76	
—	—	45.1–52.3	54.5–58.0	—	E77	
—	—	52.4–55.7	58.1–63.0	—	E78	
—	—	55.8–60.0	63.1–67.7	—	E79	
—	—	—	67.8–72.4	—	E80	
—	—	—	—	—	E88	
—	—	—	—	56.9–60.9	E89	
—	—	—	—	61.0–63.9	E91	
—	—	—	—	64.0–67.7	E92	
—	—	—	—	67.8–72.4	E93	
—	—	—	72.5–77.7	—	E94	
—	—	—	80.1–88.1	77.8–85.9	E96	
—	—	—	88.2–91.5	86.0–91.9	E97	
—	—	—	91.6–96.8	92.0–96.7	E98	
—	—	—	96.9–99.0	96.8–105	E99	
—	—	—	99.1–108.0	—	E101	
—	—	—	—	—	E102	
—	—	—	—	106–115	E103	
—	—	—	—	116–130	E104	

Table 238 for Class 48

Full Load Amps				Heater Catalog No	List Price \$
48DC	48GC	48HA	48JA		
0.30–0.32	—	—	—	E3	
0.33–0.35	—	—	—	E4	
0.36–0.38	—	—	—	E5	
0.39–0.41	—	—	—	E6	
0.42–0.44	—	—	—	E7	
0.45–0.49	—	—	—	E8	
0.50–0.54	—	—	—	E9	
0.55–0.58	—	—	—	E11	
0.59–0.63	—	—	—	E12	
0.64–0.67	—	—	—	E13	
0.68–0.73	—	—	—	E14	
0.74–0.81	—	—	—	E16	
0.82–0.87	—	—	—	E17	
0.88–0.94	—	—	—	E18	
0.95–1.00	—	—	—	E19	
1.01–1.10	—	—	—	E23	
1.11–1.26	—	—	—	E24	
1.27–1.40	—	—	—	E26	
1.41–1.58	—	—	—	E27	
1.59–1.74	—	—	—	E28	
1.75–1.85	—	—	—	E29	
1.86–1.99	—	—	—	E31	
2.00–2.11	—	—	—	E32	
2.12–2.31	—	—	—	E33	
2.32–2.59	—	—	—	E34	
2.60–2.75	—	—	—	E36	
2.76–2.95	—	—	—	E37	
2.96–3.21	—	—	—	E38	
3.22–3.48	—	—	—	E39	
3.49–3.89	—	—	—	E41	
3.90–4.35	—	—	—	E42	
4.36–4.73	—	—	—	E44	
4.74–5.21	—	—	—	E46	
5.22–5.74	—	—	—	E47	
5.75–6.05	—	—	—	E48	
6.06–6.46	—	—	—	E49	
6.47–6.95	—	—	—	E50	
6.96–8.09	—	—	—	E51	
8.10–9.29	—	—	—	E52	
9.30–10.4	—	—	—	E53	
—	—	—	—	E54	
10.5–10.9	—	—	—	E55	
11.0–12.0	—	—	—	E56	
12.1–14.5	—	—	—	E57	
14.6–16.8	—	—	—	E60	
16.9–18.4	16.9–18.4	—	—	E61	
18.5–20.9	18.5–20.9	—	—	E62	
21.0–22.5	21.0–22.5	—	—	E65	
22.6–24.3	22.6–24.7	—	—	E66	
24.4–27.2	24.8–27.2	27.1–30.0	—	E67	
27.3–29.2	27.3–29.2	30.1–33.2	—	E69	
29.3–30.0	29.3–32.0	33.3–35.7	—	E70	
—	32.1–34.9	35.8–39.4	—	E71	
—	—	39.5–43.4	—	E72	
—	35.0–37.8	43.5–46.9	—	E73	
—	37.9–41.7	—	—	E73A	
—	41.8–45.9	47.0–51.5	—	E74	
—	46.0–49.0	51.6–57.0	—	E76	
—	49.1–54.2	57.1–62.8	—	E77	
—	54.3–60.0	62.9–69.1	—	E78	
—	—	69.2–75.0	—	E79	
—	—	75.1–83.3	—	E80	
—	—	—	50.0–55.9	E88	
—	—	—	56.0–60.9	E89	
—	—	—	61.0–65.9	E91	
—	—	—	66.0–69.9	E92	
—	—	—	70.0–75.9	E93	
—	—	—	76.0–81.9	E94	
—	—	83.4–86.9	82.0–86.9	E96	
—	—	87.0–92.9	87.0–92.9	E97	
—	—	93.0–97.9	93.0–97.9	E98	
—	—	98.0–107.9	98.0–107.9	E99	
—	—	108–113.9	108–113.9	E101	
—	—	114–125.9	114–125.9	E102	
—	—	126–138.9	126–138.9	E103	
—	—	139–153.9	139–153.9	E104	
—	—	154–163.9	154–163.9	E106	
—	—	164–180.9	164–180.9	E107	

Overload Relay Heater Tables

Full Load Motor Amps, Single Phase, Trip Class 10 – Tables 313, 316

Selection
Table 313 for Class 14, 22 (1-Phase)

Full Load Amps			Heater	
Size 00, 0, 1	Size 1P	Size 2, 2½	Catalog No	List Price \$
1.85–2.05	1.85–2.05	—	K21	
2.06–2.35	2.06–2.35	—	K22	
2.36–2.64	2.36–2.64	—	K24	
2.65–2.96	2.65–2.96	—	K27	
2.97–3.31	2.97–3.31	—	K28	
3.32–3.51	3.32–3.51	—	K29	
3.52–3.87	3.52–3.87	—	K31	
3.88–4.31	3.88–4.31	—	K32	
4.32–4.79	4.32–4.79	—	K33	
4.80–5.21	4.80–5.21	—	K34	
5.22–5.75	5.22–5.75	—	K36	
5.76–6.11	5.76–6.11	—	K37	
6.12–6.95	6.12–6.95	—	K39	
6.96–7.73	6.96–7.73	—	K41	
7.74–8.47	7.74–8.47	—	K42	
8.48–9.52	8.48–9.52	—	K43	
9.53–10.4	9.53–10.4	—	K49	
10.5–11.1	10.5–11.1	—	K50	
11.2–12.4	11.2–12.4	—	K52	
12.5–13.5	12.5–13.5	—	K53	
13.6–15.1	13.6–15.1	—	K54	
15.2–16.6	15.2–16.6	—	K55	
16.7–17.6	16.7–17.6	—	K57	
17.7–18.8	17.7–18.8	18.7–19.7	K58	
18.9–21.6	18.9–21.6	19.8–21.3	K60	
21.7–22.7	21.7–22.7	21.4–22.8	K61	
22.8–25.3	22.8–25.3	22.9–24.2	K62	
—	25.4–26.6	24.3–26.5	K63	
—	26.7–30.1	26.6–29.3	K64	
—	30.2–33.0	29.4–32.0	K67	
—	33.1–34.1	32.1–35.6	K68	
—	—	35.7–37.9	K69	
—	—	38.0–40.3	K70	
—	—	40.4–44.3	K72	
—	—	44.4–49.5	K73	
—	—	49.6–52.1	K74	
—	—	52.2–53.7	K75	
—	—	53.8–60.0	K76	

Table 316 for Class 48

Full Load Amps				Heater	
48DA	48GA	48HA	48JA	Catalog No	List Price \$
1.69–1.88	—	—	—	K21	
1.89–2.05	—	—	—	K22	
2.06–2.21	—	—	—	K23	
2.22–2.44	—	—	—	K24	
2.45–2.70	—	—	—	K26	
2.71–2.92	—	—	—	K27	
2.93–3.27	—	—	—	K28	
3.28–3.56	—	—	—	K29	
3.57–3.83	—	—	—	K31	
3.84–4.23	—	—	—	K32	
4.24–4.57	—	—	—	K33	
4.58–4.97	—	—	—	K34	
4.98–5.67	—	—	—	K36	
5.68–6.11	—	—	—	K37	
6.12–6.91	—	—	—	K39	
6.92–7.65	—	—	—	K41	
7.66–8.4	—	—	—	K42	
8.5–8.9	—	—	—	K43	
9.0–10.1	9.12–9.6	—	—	K49	
10.2–11.2	9.7–10.4	—	—	K50	
11.3–12.3	10.5–11.4	—	—	K52	
12.4–13.3	11.5–12.1	—	—	K53	
13.4–14.1	12.2–12.9	—	—	K54	
14.2–15.0	13.0–13.7	—	—	K55	
15.1–16.2	13.8–14.8	—	—	K56	
16.3–17.5	14.9–16.4	—	—	K57	
17.6–18.6	16.5–18.2	—	—	K58	
18.7–19.9	18.3–19.5	—	—	K60	
20.0–21.3	19.6–20.9	—	—	K61	
21.4–22.8	21.0–22.8	23.2–25.1	—	K62	
22.9–25.1	22.9–24.7	25.2–27.3	—	K63	
25.2–27.6	24.8–27.6	27.4–30.4	—	K64	
27.7–30.0	27.7–30.5	30.5–33.3	—	K67	
—	30.6–33.9	33.4–36.5	—	K68	
—	34.0–37.3	36.6–39.3	—	K69	
—	37.4–40.2	39.4–43.5	—	K70	
—	40.3–41.9	43.6–46.6	43.0–46.5	K72	
—	42.0–45.9	46.7–51.1	46.6–50.9	K73	
—	46.0–50.9	51.2–56.3	51.0–55.9	K74	
—	51.0–52.9	56.4–61.1	56.0–59.1	K75	
—	53.0–57.7	61.2–64.9	59.2–68.7	K76	
—	57.8–60.0	65.0–71.9	—	K77	
—	—	72.0–80.7	68.8–80.7	K78	
—	—	80.8–92.7	80.8–92.7	K85	
—	—	92.8–100.0	92.8–103.9	K86	
—	—	—	104.0–113.5	K87	
—	—	—	113.6–127.9	K89	
—	—	—	128.0–143.9	K92	
—	—	—	144.0–163.9	K94	
—	—	—	164.0–180.0	K96	

Overload Relay Heater Tables

Full Load Motor Amps, 3-Phase, Trip Class 10 – Tables 332, 335

Selection

Table 332 for Class 14, 17, 18, 22, 25, 26, 30, 32, 83, 84, 87 (3-Phase)

Full Load Amps					Heater Catalog No	List Price \$
Size 00, 0, 1	Size 1½	Size 2, 2½	Size 3, 3½	Size 4		
1.52–1.65	1.52–1.65	—	—	—	K21	
1.66–1.79	1.66–1.79	—	—	—	K22	
1.80–1.94	1.80–1.94	—	—	—	K23	
1.95–2.15	1.95–2.15	—	—	—	K24	
2.16–2.37	2.16–2.37	—	—	—	K26	
2.38–2.56	2.38–2.56	—	—	—	K27	
2.57–2.87	2.57–2.87	—	—	—	K28	
2.88–3.13	2.88–3.13	—	—	—	K29	
3.14–3.37	3.14–3.37	—	—	—	K31	
3.38–3.72	3.38–3.72	—	—	—	K32	
3.73–4.00	3.73–4.00	—	—	—	K33	
4.01–4.35	4.01–4.35	—	—	—	K34	
4.36–4.99	4.36–4.99	—	—	—	K36	
5.00–5.38	5.00–5.38	—	—	—	K37	
5.39–5.79	5.39–5.79	—	—	—	K39	
5.80–6.43	5.80–6.43	—	—	—	K41	
6.44–6.83	6.44–6.83	—	—	—	K42	
6.84–7.83	6.84–7.83	—	—	—	K43	
7.84–8.23	7.84–8.23	—	—	—	K49	
8.24–9.59	8.24–9.59	—	—	—	K50	
9.60–9.90	9.60–9.90	—	—	—	K52	
10.0–10.7	10.0–10.7	—	—	—	K53	
10.8–11.6	10.8–11.6	12.1–12.7	—	—	K54	
11.7–12.3	11.7–12.3	12.8–13.5	—	—	K55	
12.4–13.4	12.4–13.4	13.6–14.6	—	—	K56	
13.5–14.2	13.5–14.2	14.7–15.9	—	—	K57	
14.3–15.1	14.3–15.1	16.0–16.9	—	—	K58	
15.2–17.5	15.2–17.5	17.0–18.2	—	—	K60	
17.6–18.7	17.6–18.7	18.3–19.5	—	—	K61	
18.8–20.0	18.8–20.0	19.6–20.9	—	—	K62	
20.1–21.5	20.1–21.5	21.0–23.1	—	—	K63	
21.6–23.9	21.6–23.9	23.2–25.4	—	—	K64	
24.0–25.8	24.0–25.8	25.5–27.9	—	—	K67	
—	25.9–29.5	—	—	—	K68	
—	—	28.0–30.5	—	—	K69	
—	29.6–32.7	30.6–33.5	36.8–40.0	—	K70	
—	32.8–36.0	33.6–37.2	40.1–42.4	—	K72	
—	—	37.3–40.7	42.5–46.3	—	K73	
—	—	40.8–43.0	46.4–49.6	—	K74	
—	—	43.1–47.9	49.7–52.3	49.7–52.3	K75	
—	—	48.0–52.7	52.4–57.5	52.4–57.5	K76	
—	—	52.8–58.3	57.6–63.9	57.6–63.9	K77	
—	—	58.4–60.0	64.0–67.9	63.1–68.1	K78	
—	—	—	68.0–74.3	68.2–74.3	K83	
—	—	—	74.4–77.9	74.4–79.9	K85	
—	—	—	78.0–83.1	80.0–87.4	K86	
—	—	—	83.2–91.4	87.5–90.0	K87	
—	—	—	91.5–99.9	90.1–100.0	K88	
—	—	—	100.0–108.0	100.1–108.0	K89	
—	—	—	—	108.1–119.0	K90	
—	—	—	—	119.1–130.0	K92	
—	—	—	—	—	K94	
—	—	—	—	—	K96	

Table 335 for Class 48

Full Load Amps				Heater Catalog No	List Price \$
48DC	48GC	48HA	48JA		
1.56–1.69	—	—	—	K21	
1.70–1.84	—	—	—	K22	
1.85–1.98	—	—	—	K23	
1.99–2.19	—	—	—	K24	
2.20–2.43	—	—	—	K26	
2.44–2.63	—	—	—	K27	
2.64–2.95	—	—	—	K28	
2.96–3.21	—	—	—	K29	
3.22–3.45	—	—	—	K31	
3.46–3.81	—	—	—	K32	
3.82–4.10	—	—	—	K33	
4.11–4.46	—	—	—	K34	
4.47–5.10	—	—	—	K36	
5.11–5.49	—	—	—	K37	
5.50–6.21	—	—	—	K39	
6.22–6.76	—	—	—	K41	
6.77–7.62	—	—	—	K42	
7.63–8.07	—	—	—	K43	
8.08–9.19	—	—	—	K49	
9.20–10.0	—	—	—	K50	
10.1–11.0	—	—	—	K52	
11.1–12.0	—	—	—	K53	
12.1–12.7	—	—	—	K54	
12.8–13.5	—	—	—	K55	
13.6–14.5	—	—	—	K56	
14.6–15.7	—	—	—	K57	
15.8–16.7	—	—	—	K58	
16.8–17.9	—	—	—	K60	
18.0–19.2	18.0–19.2	—	—	K61	
19.3–20.5	19.3–20.5	23.2–25.1	—	K62	
20.6–22.5	20.6–22.5	25.2–27.3	—	K63	
22.6–24.8	22.6–24.8	27.4–30.4	—	K64	
24.9–27.6	24.9–27.6	30.5–33.3	—	K67	
27.7–30.0	—	33.4–36.5	—	K68	
—	27.7–30.1	36.6–39.3	—	K69	
—	30.2–33.1	39.4–43.5	—	K70	
—	33.2–36.7	43.6–46.6	43.0–46.5	K72	
—	36.8–40.1	46.7–51.1	46.6–50.9	K73	
—	40.2–45.5	51.2–56.3	51.0–55.9	K74	
—	45.6–47.9	56.4–61.1	56.0–59.1	K75	
—	48.0–52.7	61.2–64.9	59.2–68.7	K76	
—	52.8–55.1	65.0–71.9	—	K77	
—	55.2–60.0	72.0–80.7	68.8–80.7	K78	
—	—	80.8–92.7	80.8–92.7	K85	
—	—	92.8–100.0	92.8–103.9	K86	
—	—	—	104.0–113.5	K87	
—	—	—	113.6–127.9	K89	
—	—	—	128.0–143.9	K92	
—	—	—	144.0–163.9	K94	
—	—	—	164.0–180.0	K96	

Replacement Parts

Starters and Contactors – AC Coils

• Revised •

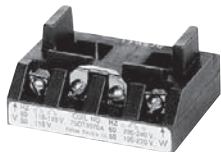
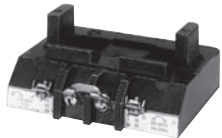
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Selection

Ordering Information

► 4th character of starter or contactor catalog number indicates model.

AC Coils — For Class 14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, 87, 88

	Size	Model	Volts		Catalog Number	List Price \$
			60Hz	50Hz		
	00-2½	P U (ESP200)	24 120 110-120/220-240 208 220-240 277 220-240/440-480 440-480 575-600	24 110 110/190-220 — 190-220 240 190-220/380-440 380-440 550	75D73070J 75D73070F 75D73070A 75D73070D 75D73070G 75D73070L 75D73070C 75D73070H 75D73070E	
	3, 3½	P U (ESP200)	24 120 110-120/220-240 208 220-240 277 220-240/440-480 440-480 575-600	24 110 110/190-220 — 190-220 240 190-220/380-440 380-440 550	75D73251J 75D73251F 75D73251A 75D73251D 75D73251G 75D73251L 75D73251C 75D73251H 75D73251E	
	4	G U (ESP200)	24 120 120/220-240 208 220-240 277 220-240/440-480 440-480 575-600	24 110 110/190-220 — 190-220 240 190-220/380-440 380-440 550	75D70131J 75D70131F 75D70131A 75D70131D 75D70131G 75D70131L 75D70131C 75D70131H 75D70131E	
	4, 5	V (Vacuum)	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	3RT1966-5AB31 3RT1966-5AF31 3RT1966-5AM31 3RT1966-5AP31 3RT1966-5AU31 3RT1966-5AV31 3RT1966-5AR31 3RT1966-5AT31	
	5	P	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	3RT1965-5AB31 3RT1965-5AF31 3RT1965-5AM31 3RT1965-5AP31 3RT1965-5AU31 3RT1965-5AV31 3RT1965-5AR31 3RT1965-5AT31	
	6	P V (Vacuum)	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	3RT1975-5AB31 3RT1975-5AF31 3RT1975-5AM31 3RT1975-5AP31 3RT1975-5AU31 3RT1975-5AV31 3RT1975-5AR31 3RT1975-5AT31	
	7	H	100-250 150-500	100-250 150-500	75ZAF750-70 75ZAF750-71	
	8	H	100-250	100-250	75ZAF1650-70①	

① Set of 2 coils. Recommend to change printed circuit board when changing coils. 49ZP1650 see page 17-130.

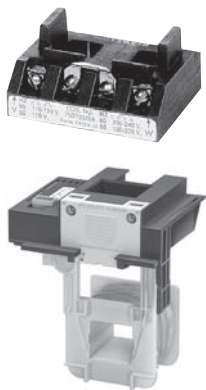
Replacement Parts

Starters and Contactors – DC Coils, Late Break Aux Contacts, Rectifiers, Contact Kits *Selection*

Ordering Information

- ▶ 4th character of starter or contactor catalog number indicates model.
- ▶ DC Coils for Size 00-4 require Late Break Interlock.

DC Coils — For Class 14, 17, 18, 22, 25, 26, 30, 32, 40, 43

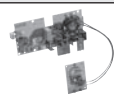
	Size	Model	Volts DC	Catalog Number	List Price \$
	00-2½	P U (ESP200)	12 24 32 48 125 250	75D73070R 75D73070S 75D73070T 75D73070U 75D73070V 75D73070W	
	3, 3½	P U (ESP200)	12 24 32 48 125 250	75D73251R 75D73251S 75D73251T 75D73251U 75D73251V 75D73251W	
	4	G U (ESP200)	48 125 250	75D70131U 75D70131V 75D70131W	
	4, 5	V (Vacuum)	23-26 42-48 110-127 240-277	3RT1966-5AB31 3RT1966-5AD31 3RT1966-5AF31 3RT1966-5AU31	

Note: For sizes 7 & 8 contactors the AC coils are used for DC see page 17-127.

Late Break Auxiliary Contacts

	Control Size	Model	Catalog Number	List Price \$
	00-4	P, G, S, T	49AB01LB	

Board for Size 8 Contactor

	Control Size	Model	Catalog Number	List Price
	8	H	49ZP1650	

Contact Kits – Single Pole Stationary and Movable Contacts, Contact Spring^①

Description	Size	Number of Poles in Kit	Model (4th position in part number)	Catalog Number	List Price \$
 Class 14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, 87, 88	Internal Aux Contact (00-1-¾) 00 0		P, U P, U P, U	75AF14 75BF14 75CF14	
	1 1¼-1P	1	P, U P, U	75DF14 75EF14	
	2	1	P, U	75FP14	
	2½	1	P, U	75GP14	
	3 3½	1	P, U P, U	75HF14 75IF14	
	4 4 (Vacuum)	1 3 (Bottles)	G, T V, C	75JG14 3RT1964-6V	
	5 5 (Vacuum)	3 3 (Bottles)	P V, C	3RT1966-6A 3RT1966-6V	
	6 6 (Vacuum)	3 3 (Bottles)	P V, C	3RT1976-6A 3RT1976-6V	
	7	3	H	49ZL750	
	8	3	H	49ZL1650	

Armature and Magnet Kits

Size	Catalog Number	List Price \$
00-2½	49AMSA2	
3-3½	49AMSA3	
4	49AMSA4	

① On 3-phase controls, all 3-poles should be replaced - 3 kits required.

Replacement Parts

Starters and Contactors – Coil VA Ratings and Overload Relays

Selection

Coil VA Ratings

Device Type	Contactors Size	Amps	Volts	Number of Poles	Total Inrush VA	Total Sealed VA
NEMA Starter	00 thru 2 1/2	—	—	—	218	25
	3 thru 3 1/2	—	—	—	310	26
	4	—	—	—	510	51
	5	—	—	—	590	6.7
	6	—	—	—	830	9.2
	7	—	—	—	850	12
	8	—	—	—	1900	48
	4,5,6 (Vacuum)	—	—	—	630	7.4
Lighting Contactor Mechanically Held (CLM)	—	20	—	2-12	625	6
	—	30	—	2-5	410	40
	—	60	—	2-3	410	40
	—	60	—	4-5	600	40
	—	100 - 200	—	2-3	900	200
	—	100 - 200	—	4-5	1300	130
	—	300 - 400	—	3	1600	550
Lighting Contactor Electrically Held (LC)	—	30	ALL	2-12	248	28
Lighting Contactor Electrically Held (LE)	—	20	ALL	3 and 4	31.7	4.8
	—	30	ALL	3 and 4	87	9.4
	—	60	ALL	3	166	12.6
	—	100	ALL	3	300	21
	—	200	ALL	3	300	5.6
	—	300	ALL	3	590	6.7
	—	400	ALL	3	830	9.2

Overload Relays^{①②} – For Class 14, 17, 18, 22, 25, 26, 30, 32, 83, 84, 87

Size	Half Size	Model	Number Poles	Ambient Comp Bimetal			
				Catalog Number (1) NC	List Price \$	Catalog Number (1) NO/NC	List Price \$
00-1	—	P	1 3	48DC18AA3 48DC38AA3		48DC39AA3	
1P	—	P	1	48EC18AA3			
—	1 1/4	P	3	48EC38AA3		48EC39AA3	
2	—	P	1 3	48GC18AA3 48GC38AA3		48GC39AA3	
—	2 1/2	P	1 3	48GC18AA3 48GC38AA3		48GC39AA3	
3	—	P	3	48HC38AA3			
—	3 1/2	P	3	48HC38AA3			
4	—	G	3	48JC38AA3			

For Starter and Contactor replacement parts not found in this section, please refer to Field Modification kits found starting on page 17-101.

① For replacement Solid State overload relays, please see the Overload Relay section found starting on page 17-66.

② Includes overload mounting plate to be coupled to contactor mounting plate.

Replacement Parts

Lighting and Heating Contactors, Type LC, LE, CLM, CMF, CMN

Selection

Power Pole Kits	Class	Enclosure type	Contactor Size (Amp)	Description	Catalog No.
	LC	Open, 1, 12, 4/4X	30	Single power pole Double power pole	49LCP1A 49LCP2A

Replacement Pole Kits	Class	Enclosure type	Description	Catalog No.
	LC	30	24V 60Hz / 20V 50Hz 115-120V 60Hz / 110V 50Hz 200-208V 60Hz 230-240V 60Hz / 220V 50Hz 277V 60Hz / 240V 50Hz 347V 60Hz 460-480V 60Hz / 440V 50Hz 575-600V 60Hz / 550V 50Hz	75LCC024A 75LCC120A 75LCC208A 75LCC240A 75LCC277A 75LCC347A 75LCC480A 75LCC600A
	LE	20, 30 60 100	NA 24VAC 50/60Hz 110VAC 50Hz / 120VAC 60Hz 208VAC 50/60Hz 220VAC 50Hz / 240VAC 60Hz 277VAC 60Hz 347VAC 60Hz 480VAC 60Hz 600VAC 60Hz 24VAC 50/60Hz 110VAC 50Hz / 120VAC 60Hz 208VAC 50/60Hz 220VAC 50Hz / 240VAC 60Hz 277VAC 60Hz 347VAC 60Hz 480VAC 60Hz 600VAC 60Hz	NA 3RT19455AC21 3RT19455AK61 3RT19455AM21 3RT19455AP61 3RT19455AU61 3RT19455AW61 3RT19455AV61 3RT19455AT61 3RT19455AC21 3RT19455AK61 3RT19455AM21 3RT19455AP61 3RT19455AU61 3RT19455AW61 3RT19455AV61 3RT19455AT61
Replacement Contact Kits	Class	Enclosure type	Description	Catalog No.
	LC	30	NA	NA
	LE	20, 30 60 100 200 300 400	NA 1 contact kit includes 3 moving and 6 fixed contacts.	NA 3RT1935-6A 3RT1945-6A 3RT1956-6A 3RT1965-6A 3RT1975-6A

AC Coils 20 Amps^②

Type	Contactor Size	Number of Poles	120V, 60Hz 110V, 50Hz	List Price \$	240V, 60Hz 208V, 50Hz	List Price \$	277V 50/60Hz	List Price \$	480V, 60Hz 440V, 50Hz	List Price \$
 CLM4097341	CLM	20 Amp	2-12	CLM4097341		CLM4097342		CLM4097343		CLM4097344

AC Coils 30-400 Amps^③

 CLMC4C120	Type	Contactor Size	Number of Poles	Catalog Number							List Price \$
				24V AC	120V AC	208V AC	220/240V AC	277V AC	480V AC	600V AC	
 CLMGU3C120	CLM+C	30 Amp	2-3-Pole	CLMC4C024	CLMC4C120	CLMC4C208	CLMC4C240	CLMC4C277	CLMC4C480	CLMC4C600	
			4-Pole	CLMC4C024	CLMC4C120	CLMC4C208	CLMC4C240	CLMC4C277	CLMC4C480	CLMC4C600	
			5-Pole	CLMC5C024	CLMC5C120	CLMC5C208	CLMC5C240	CLMC5C277	CLMC5C480	CLMC5C600	
	CLM+D	60 Amp	2-3-Pole	CLMD3C024	CLMD3C120	CLMD3C208	CLMD3C240	CLMD3C277	CLMD3C480	CLMD3C600	
			4-Pole	CLMD5C024	CLMD5C120	CLMD5C208	CLMD5C240	CLMD5C277	CLMD5C480	CLMD5C600	
			5-Pole	CLMD5C024	CLMD5C120	CLMD5C208	CLMD5C240	CLMD5C277	CLMD5C480	CLMD5C600	
	CLM+E	100, 200 Amp	2-3-Pole	CLME3C024	CLME3C120	CLME3C208	CLME3C240	CLME3C277	CLME3C480	CLME3C600	
			4-Pole	CLME5C024	CLME5C120	CLME5C208	CLME5C240	CLME5C277	CLME5C480	CLME5C600	
			5-Pole	CLME5C024	CLME5C120	CLME5C208	CLME5C240	CLME5C277	CLME5C480	CLME5C600	
	CLM+G Latching Coil	300/400 Amp	2-3-Pole	—	CLMGL3C120	CLMGL3C208	CLMGL3C240	CLMGL3C277	CLMGL3C480	CLMGL3C600	
	Unlatch Coil		2-3-Pole	—	CLMGU3C120	CLMGU3C208	CLMGU3C240	CLMGU3C277	CLMGU3C480	CLMGU3C600	

Control Module Rectifier^③

Type	Device	Contactor Size	Number of Poles	Catalog Number	List Price \$
CLM	CLM+G to CLM+H	30-200 Amps	All	CLMKCMR	

① Product Category: IEC.

② Coil kits for 20 amp CLM contactors include the coil
clearing auxiliary contact.

③ For 30-200 amp CLM contactors, in the event that
either the coil or the control module fails, it is
recommended that both be replaced.

Replacement Parts

• Revised •
03/25/14

Miscellaneous

Selection

Replacement Handle Assemblies and Disconnect Mechanisms Enclosure Types 1, 3R, 4, 4X Stainless Steel & 12

			Handle Assembly Only		Handle Assembly and Disconnect Mechanism	
Class	Disconnect (Amps)	Enclosure Size	Catalog Number	List Price \$	Catalog Number	List Price \$
17, 25, 32, 84, 87, CM, LE	30, 60 & 100	All Standard and Extra-wide Sizes	75D73944015		75D68257103	
37, 88	30 & 60		75D73944018		75D68257048	
17, 25, 32, 84	200		75D73944015		75D68257105	
37, 88, CM, LE	200		75D73944015		75D68257063	
87	200		75D73944023		75D68257068	
17, 25, 37, 87, 88, CM, LE	400 & 600		75D73944027		75D68257078	
					Handle Assembly Only	
Class	Motor Circuit Interrupter (Amps)	Enclosure Size	Catalog Number	List Price \$	Catalog Number	List Price \$
18, 26, 32, CM, LE	3 - 125	(24"H x 11"W x 8"D), (24"H x 20"W x 8"D)	75D73944025		75D68257080	
18, 26, 32	100 - 125	(36"H x 24"W x 8"D)	75D73944025		75D68257073	
18, 26, 32	150 & 250	All Standard Sizes	75D73944028		75D68257089	
18, 26, 37, 87, 88, CM	300 - 600		75D73944027		75D68257078	
87	3 - 125		75D73944025		75D68257080	
87	150		75D73944028		75D68257089	
87	250		75D73944011		75D68257077	
37, 88	30 - 125		75D73944025		75D68257073	
37, 84, 88, CM	150 - 250		75D73944011		75D68257077	
84	3 - 125		75D73944025		75D68257074	

NEMA & General
Purpose Control

17 CONTROL
PRODUCTS

Quarter Turn Assemblies

Description		Class	Enclosure Type	Catalog Number	List Price \$
	Quarter-Turn Latch	17, 18, 25, 26, 32, 87 & 88	1, 3/3R & 12	75D46260004	
			4 & 4X	75D46260005	