



GENERAL APPLICATION DATA
MOTOR FULL-LOAD CURRENTS

The tables on this page and on page 2 represent an average for the full-load motor currents listed and are to be used for **estimating purposes only**. Do not use these tables for selection of Overload Relay Heater Units. Refer to Section 6.9 for this purpose.

TABLE A—D-C MOTORS

Motor Rating Horse-power	Current in Amperes			Motor Rating Horse-power	Current in Amperes		
	115 Volts	230 Volts	550 Volts		115 Volts	230 Volts	550 Volts
1/8	1.4	0.7	0.3	15	112	56	23
1/6	1.8	0.9	0.4	20	148	74	30
1/4	2.3	1.2	0.5	25	185	92	38
1/2	4.5	2.3	1.0	30	220	110	45
3/4	6.5	3.3	1.4	35	257	128	53
1	8.3	4.2	1.7	40	—	146	60
1 1/2	12.4	6.2	2.6	50	—	180	75
2	16.1	8.1	3.4	60	—	215	90
3	24.0	12.0	5.0	75	—	268	111
5	40	19.8	8.2	100	—	—	146
7 1/2	58	29	12	125	—	—	184
10	75	38	16	150	—	—	220

TABLE B—SINGLE-PHASE A-C MOTORS

Motor Rating Horse-power	Speed RPM	Current in Amperes		Motor Rating Horse-power	Speed RPM	Current in Amperes	
		115 Volts	230 Volts*			115 Volts	230 Volts*
1/8	3600	2.6	1.8	1	3600	16	8
	1800						
	1200 900						
1/6	3600	4.4	2.2	1 1/2	3600	20	10
	1800						
	1200 900						
1/4	3600	5.8	2.9	2	3600	23.0	11.5
	1800				24.0	12.0	
	1200 900				26.4	13.2	
1/2	3600	7.2	3.6	3	3600	32	16
	1800				34	17	
	1200 900				36	18	
3/4	3600	9.8	4.9	5	3600	54	27
	1800				56	28	
	1200 900				60	30	
7/8	3600	13.8	6.9	7 1/2	3600	79	39
	1800				80	40	
	1200 900				84	42	
1	3600	18.0	9.0	10	3600	97	48
	1800				100	50	
	1200 900				105	52	
1 1/2	3600	24.0	12.0	15	3600	114	57
	1800				118	59	
	1200 900				123	61	

HORSEPOWER RATINGS—NEMA
For Plugging or Inching Duty

AC Volts	Horsepower Ratings By NEMA Size				
	0	1	2	3	4
110	3/4	2	5	10	15
208-220	1	3	10	20	30
440-550	1	5	15	30	60

* To obtain full-load currents of 208- and 200-volt motors, increase corresponding 230-volt motor currents by 10 and 15 per cent, respectively.



GENERAL APPLICATION DATA

MOTOR FULL-LOAD CURRENTS OF THREE-PHASE A-C MOTORS

Motor Rating Horsepower	Syn. Speed RPM	Current in Amperes					Motor Rating Horsepower	Syn. Speed RPM	Current in Amperes				
		115 Volts	200 Volts	230 Volts	460 Volts	575 Volts			115 Volts	200 Volts	230 Volts	460 Volts	575 Volts
¼	1800	1.7	1.0	.87	.43	.35	40	1800	185	106	92.4	46.2	37.0
	1200	1.9	1.1	.96	.48	.38		1200	188	108	94.1	47.1	37.6
	900	2.8	1.6	1.38	.69	.55		900	208	120	104	52	41
⅓	1800	2.26	.95	1.13	.56	.45	50	1800	230	132	115	57.5	46.0
	1200	2.53	1.45	1.26	.63	.50		1200	233	134	116	58.2	46.6
	900	3.66	2.10	1.83	.91	.73		900	260	150	130	65	52
½	1800	3.3	1.90	1.65	.83	.66	60	1800	272	156	136	68.1	54.4
	1200	3.6	2.06	1.80	.90	.72		1200	278	160	139	69.4	55.6
	900	4	2.3	2	1	.8		900	308	177	154	77	62
¾	1800	4.8	2.76	2.40	1.20	.96	75	1800	309	177	154	77.1	62.0
	1200	5.3	3.03	2.64	1.32	1.06		1200	—	196	170	85.1	68.1
	900	5.6	3.22	2.8	1.4	1.1		900	—	198	173	86.3	69.0
1	3600	5.5	3.14	2.73	1.36	1.09	100	1200	—	221	192	96	77
	1800	6.2	3.55	3.08	1.54	1.23		900	—	222	193	96.5	77.2
	1200	6.8	3.88	3.38	1.69	1.35		600	—	259	225	113	90.2
1½	3600	7.9	4.5	3.95	1.97	1.58	125	1200	—	262	228	114	91.2
	1800	8.7	5.0	4.37	2.18	1.75		900	—	285	248	124	99
	1200	9.6	5.5	4.8	2.40	1.92		600	—	285	248	124	99.2
2	3600	10.5	6.0	5.2	2.62	2.09	150	450	—	320	278	139	111
	1800	11.2	6.4	5.6	2.81	2.24		1800	—	323	281	140	112
	1200	12.3	7.1	6.2	3.08	2.46		1200	—	326	283	142	113
3	3600	15.2	8.8	7.6	3.81	3.05	200	900	—	334	291	145	116
	1800	16.1	9.3	8.1	4.04	3.23		720	—	341	297	148	119
	1200	17.6	10.1	8.8	4.39	3.52		600	—	359	312	156	125
5	3600	19.2	11.0	9.6	4.8	3.9	250	450	—	387	337	168	135
	1800	24.7	14.2	12.3	6.2	4.9		1800	—	385	335	168	134
	1200	25.8	14.8	12.9	6.4	5.2		1200	—	390	339	169	136
7½	3600	27.5	15.8	13.8	6.9	5.5	300	900	—	399	347	173	139
	1800	30.4	17.5	15.2	7.6	6.1		720	—	407	354	177	142
	1200	36.1	20.8	18.1	9.0	7.2		600	—	414	360	180	144
10	3600	37.6	21.6	18.8	9.4	7.5	400	450	—	460	400	200	160
	1800	39.9	22.9	19.9	10.0	8.0		1800	—	510	443	222	177
	1200	44	25.3	22	11	9		1200	—	516	448	224	179
15	3600	56.0	32.2	28.0	14.0	11.2	500	900	—	528	459	229	184
	1800	47.5	27.3	23.4	11.9	9.5		720	—	536	466	232	186
	1200	49.3	28.3	24.6	12.3	9.8		600	—	552	480	240	192
20	3600	51.6	29.7	25.8	12.9	10.3	600	450	—	592	515	257	206
	1800	56	32.2	28	14	11		1800	—	635	552	276	221
	1200	69.3	39.9	34.7	17.3	13.9		1200	—	642	558	279	223
25	3600	69.8	40.1	34.9	17.4	14.0	800	900	—	658	572	286	229
	1800	71.9	41.3	36.0	18.0	14.4		720	—	667	580	290	232
	1200	74.8	43.0	37.4	18.7	15.0		600	—	680	591	296	236
30	3600	84	48.3	42	21	17	1000	450	—	727	633	316	253
	1800	95.4	54.9	47.7	23.8	19.1		360	—	763	664	332	266
	1200	91.6	52.7	45.8	22.9	18.3		1800	—	758	660	330	264
40	3600	94.7	54.4	47.3	23.7	18.9	1200	1200	—	768	667	334	267
	1800	97.9	56.3	49.0	24.5	19.6		900	—	786	683	342	273
	1200	108	62.1	54	27	22		600	—	811	705	352	282
50	3600	120	68.9	59.9	30.0	24.0	1500	450	—	865	752	376	301
	1800	114	65.8	57.2	28.6	22.9		360	—	911	792	396	317
	1200	117	67.6	58.8	29.4	23.5		1800	—	1008	876	438	351
60	3600	120	69.0	60.0	30.0	24.0	2000	1200	—	1020	887	444	355
	1800	136	78.2	68	34	27		900	—	1072	933	466	373
	1200	145	83.4	72.5	36.2	29.0		600	—	1135	988	494	395
75	3600	145	83.4	72.5	36.2	29.0	2500	450	—	1178	1024	512	410
	1800	140	80.3	69.8	34.9	27.9		1800	—	1259	1094	547	438
	1200	143	82.1	71.4	35.7	28.6		1200	—	1274	1108	554	443
100	3600	160	92.0	80	40	32	3000	900	—	1327	1154	577	462
	1800	168	96.6	84.0	42.0	33.6		600	—	1395	1213	606	485
	1200	168	96.6	84.0	42.0	33.6		450	—	435	1248	624	499

** Current in common conductor of 2-phase, 3-wire system will be 1.41 times value given.



GENERAL APPLICATION DATA
MOTOR FULL-LOAD CURRENTS

TABLE D—THREE-PHASE A-C MOTORS

Motor Rating Horsepower	Syn. Speed RPM	Current in Amperes				Motor Rating Horsepower	Syn. Speed RPM	Current in Amperes			
		110 Volts	220 Volts	440 Volts	550 Volts			110 Volts	220 Volts	440 Volts	550 Volts
¼	1800	1.9	1.0	0.5	0.4	40	1800	196	98	49.0	39.2
	1200	2.3	1.2	0.6	0.5		1200	198	99	49.5	39.6
	900	2.9	1.5	0.7	0.6		900	208	104	52.0	41.6
⅓	1800	2.3	1.2	0.6	0.5	50	1800	242	121	60.5	48.4
	1200	2.9	1.4	0.7	0.6		1200	244	122	61.0	48.8
	900	3.5	1.8	0.9	0.7		900	254	127	63.5	50.8
½	1200	4.1	2.1	1.0	0.8	60	600	276	138	69.0	55.2
	900	5.8	2.9	1.5	1.2		1800	—	143	71.5	57.2
	1800	4.7	2.3	1.2	0.9		1200	—	148	74.0	59.2
¾	1800	4.7	2.3	1.2	0.9	75	900	—	151	75.5	60.4
	1200	5.7	2.9	1.4	1.1		600	—	162	81.0	64.8
	900	6.9	3.5	1.7	1.4		1800	—	178	89.0	71.2
1	3600	5.5	2.8	1.4	1.1	100	1200	—	181	90.5	72.4
	1800	6.1	3.1	1.5	1.2		900	—	187	93.5	74.8
	1200	7.1	3.5	1.8	1.4		600	—	199	99.5	79.6
1½	3600	8.3	4.2	2.1	1.7	125	1800	—	233	116	93.2
	1800	8.6	4.3	2.1	1.7		1200	—	239	120	95.6
	1200	9.7	4.9	2.4	1.9		900	—	245	123	98.0
2	900	11.6	5.8	2.9	2.3	150	600	—	257	128	103
	3600	11.1	5.6	2.8	2.2		450	—	290	145	116
	1800	11.5	5.8	2.9	2.3		1800	—	289	144	115
3	1200	12.7	6.4	3.2	2.5	200	1200	—	298	149	119
	900	14.4	7.2	3.6	2.9		900	—	305	153	122
	3600	15.7	7.9	3.9	3.1		600	—	314	157	126
5	1800	16.6	8.3	4.1	3.3	250	450	—	320	160	128
	1200	17.8	8.9	4.5	3.6		1800	—	351	175	140
	900	20.4	10.2	5.1	4.1		1200	—	346	173	138
7½	3600	25.4	12.7	6.3	5.1	300	1200	—	350	175	140
	1800	26.4	13.2	6.6	5.3		900	—	363	182	145
	1200	28.2	14.1	7.1	5.6		600	—	376	188	150
10	900	31.2	15.6	7.8	6.2	400	450	—	378	189	151
	3600	38.4	19.2	9.6	7.7		1800	—	418	209	166
	1800	38.6	19.3	9.7	7.7		1200	—	460	230	184
15	1200	40.6	20.3	10.2	8.1	500	900	—	466	233	186
	900	47.6	23.8	11.9	9.5		600	—	490	245	196
	3600	49.0	24.5	12.3	9.8		450	—	494	247	197
20	1800	50.4	25.2	12.6	10.1	600	360	—	498	249	199
	1200	53.2	26.6	13.3	10.6		1800	—	528	264	211
	900	57.8	28.9	14.5	11.6		1200	—	572	286	229
25	600	67.6	33.8	16.9	13.5	800	900	—	580	290	232
	3600	73.4	36.7	18.4	14.7		600	—	604	302	242
	1800	76.2	38.1	19.1	15.2		450	—	625	312	250
30	1200	79.8	39.9	20.0	16.0	1000	360	—	630	315	252
	900	83.8	41.9	21.0	16.8		1800	—	630	315	252
	600	96.6	48.3	24.2	19.3		1200	—	676	338	270
40	3600	98	49.0	24.5	19.6	1250	900	—	685	342	274
	1800	101	50.5	25.3	20.2		600	—	696	348	278
	1200	103	51.7	25.9	20.6		450	—	722	361	289
50	900	109	54.6	27.3	21.8	1500	360	—	722	361	289
	600	123	61.5	30.8	24.6		1200	—	760	380	304
	3600	118	59.2	29.6	23.6		900	—	830	415	332
60	1800	125	62.7	31.3	25.0	2000	600	—	910	455	364
	1200	129	64.7	32.3	25.8		450	—	933	466	373
	900	135	67.4	33.7	27.0		360	—	955	477	382
75	600	144	71.9	35.9	28.8	2500	1800	—	1000	500	400
	3600	146	72.8	36.4	29.2		1200	—	1050	523	418
	1800	154	77.1	38.6	30.8		900	—	1160	578	462
100	1200	159	79.4	39.7	31.8	3000	600	—	1180	590	472
	900	176	87.9	43.9	35.2		450	—	1200	602	482
	600	—	—	—	—		360	—	1320	658	526



REFERENCE GUIDE

TYPES OF CONTROL, CLASS NUMBERS

Description, Class	Catalog Section	Description, Class	Catalog Section
A-C MANUAL		D-C CONTROL (Continued)	
Fractional-Horsepower Manual Starters		D-C Starters	
Class C10 Kits	6.1.1	Class P20 Full-Voltage	6.4.2
Class C11 Assembled Single Units	6.1.1	Class P21 Full-Voltage Reversing	6.4.2
Class C12 Assembled Double Units	6.1.1		
Class C13 Two-Speed Assembled Units	6.1.1		
Integral-Horsepower Manual Starters		SPECIAL-PURPOSE	
Class C20 Non-Reversing	6.1.2	A-C Pump-Control Panels	
Class C21 Reversing	6.1.2	Class B10 With Fusible Disconnect	6.6.1
Class C22 Two-Speed	6.1.2	Class B11 With Circuit Breaker	6.6.1
A-C MAGNETIC LINE-VOLTAGE		Automatic Transfer Panel	
Industrial-Control Relays		Class B20 Electrically Held	6.6.2
Class J10 Standard	6.2.1	Class B21 Mechanically Held	6.6.2
Class J11 Permanent-Magnet Latched	6.2.1		
Class J20 Kits	6.2.1	PUSHBUTTON STATIONS, PILOT DEVICES	
A-C Contactors		Class H10 Standard-Duty	6.7.1
Class A10 Electrically Held	6.2.2	Class H20 Heavy-Duty	6.7.2
Class A11 Reversing	6.2.3	Class H30 Oil-Tight Stations, Components	6.7.3
Class A12 Mechanically Held	6.2.4		
Class A13 Electrically Held Lighting	6.2.5	MODIFICATIONS, ACCESSORIES, COMPONENTS	
Class A14 Mechanically Held Lighting	6.2.5	Modifications	
A-C Starters		Full-Voltage Starters	6.8.1
Class A20 Non-Reversing	6.2.6	Reduced-Voltage Starters	6.8.1
Class A21 Reversing	6.2.7		
Class A22 Two-Speed	6.2.8	Accessory Kits	
Class A23 Three-Speed	6.2.8	Pilot Devices, Auxiliary Interlocks (Electrical), Overload Relays, Additional Pole	6.8.2
Class A24 Four-Speed	6.2.8	Class D12 Fuse-Clip Kits	6.8.2
A-C Combination Starters		Replacement Parts	
Class A30 With Disconnect Switch	6.2.9	Class G10 Replacement Coils	6.8.3
Class A31 With Circuit Breaker	6.2.9	Class G20 Replacement-Contact Kits	6.8.3
Class A32 Reversing With Disconnect Switch	6.2.10	Class G21 Contact-Cover Caps	6.8.3
Class A33 Reversing With Circuit Breaker	6.2.10	Class G22 Contact-Carrier Assemblies	6.8.3
Class A34 Two-Speed With Disconnect Switch	6.2.11	Class F11 Holding-Interlock Assembly	6.8.3
Class A35 Two-Speed With Circuit Breaker	6.2.11		
A-C REDUCED-VOLTAGE		Component Parts	
Class A50 Autotransformer Type	6.3.1	Class D13 Control-Power Transformers	6.8.4
Class A55 Part-Winding Type	6.3.2	Class D10 MC Switches	6.8.4
Class A58, A59 Star-Delta Type	6.3.2	Class D11 Handle-Operating Mechanisms	6.8.4
Class A64 Primary-Resistor Type	6.3.2		
D-C CONTROL		Independent Overload Relays	
D-C Contactors		Class L10	6.8.5
Class P10 Full-Voltage	6.4.1		
Class P11 Full-Voltage Reversing	6.4.1	OVERLOAD-RELAY HEATER ELEMENTS	
		Heater Units	
		Class G30	6.9.1