

Table 4A

Motor Full-Load Currents of Three Phase AC Induction Type Motors^①

Motor Rating Horsepower	Current in Amperes			
	208V	230V	460V	575V
1/8	1.11	.96	.48	.38
1/4	1.34	1.18	.59	.47
1/2	2.4	2.2	1.1	.9
3/4	3.5	3.2	1.6	1.3
1	4.6	4.2	2.1	1.7
1 1/2	6.6	6	3	2.4
2	7.5	6.8	3.4	2.7
3	10.6	9.6	4.8	3.9
5	16.7	15.2	7.6	6.1
7 1/2	24.2	22.0	11.0	9.0
10	30.8	28.0	14.0	11.0
15	46.2	42.0	21.0	17.0
20	59.4	54	27	22
25	74.8	68	34	27
30	88	80	40	32
40	114	104	52	41
50	143	130	65	52
60	169	154	77	62
75	211	192	96	77
100	273	248	124	99
125	343	312	156	125
150	396	360	180	144
200	528	480	240	192
250	—	—	302	242
300	—	—	361	289
350	—	—	414	336
400	—	—	477	382
450	—	—	515	412
500	—	—	590	472

Table 4B

Motor Full-Load Currents In Amperes, Single Phase, AC

Horsepower	115V	230V
1/8	4.4	2.2
1/4	5.8	2.9
1/2	7.2	3.6
3/4	9.8	4.9
1	13.8	6.9
1 1/2	16	8
2	20	10
3	24	12
5	34	17
7 1/2	56	28
10	80	40
15	100	50

Table 4C

Motor Full-Load Currents In Amperes, DC

Horsepower	120V	240V
1/8	3.1	1.6
1/4	4.1	2.0
1/2	5.4	2.7
3/4	7.6	3.8
1	9.5	4.7
1 1/2	13.2	6.6
2	17	8.5
3	25	12.2
5	40	20
7 1/2	58	29
10	76	38

Table 4D

Conversion Table of Polyphase Design B, C, D, and E Maximum Locked-Rotor Currents for Selection of Disconnecting Means and Controllers as Determined from Horsepower and Voltage Rating and Design Letter For use only with Sections 430-110, 440-12, 440-41, and 455-8(c) of the National Electric Code.

Rated HP	Maximum Motor Locked-Rotor Current Amperes Two and Three Phase Design B, C, D, and E											
	115 Volts B, C, D E		200 Volts B, C, D E		208 Volts B, C, D E		230 Volts B, C, D E		460 Volts B, C, D E		575 Volts B, C, D E	
	1/8	40	40	23	23	22.1	22.1	20	20	10	10	8
1/4	50	50	28.8	28.8	27.6	27.6	25	25	12.5	12.5	10	10
1	60	60	34.5	34.5	33	33	30	30	15	15	12	12
1 1/2	80	80	46	46	44	44	40	40	20	20	16	16
2	100	100	57.5	57.5	55	55	50	50	25	25	20	20
3	—	—	73.6	84	71	81	64	73	32	36.5	25.6	29.2
5	—	—	105.8	140	102	135	92	122	46	61	36.8	48.8
7 1/2	—	—	146	210	140	202	127	183	63.5	91.5	50.8	73.2
10	—	—	186.3	259	179	249	162	225	81	113	64.8	90
15	—	—	267	388	257	373	232	337	116	169	93	135
20	—	—	334	516	321	497	290	449	145	225	116	180
25	—	—	420	646	404	621	365	562	183	281	146	225
30	—	—	500	775	481	745	435	674	218	337	174	270
40	—	—	667	948	641	911	580	824	290	412	232	330
50	—	—	834	1185	802	1139	725	1030	363	515	290	412
60	—	—	1001	1421	962	1367	870	1236	435	618	348	494
75	—	—	1248	1777	1200	1708	1085	1545	543	773	434	618
100	—	—	1668	2154	1603	2071	1450	1873	725	937	580	749
125	—	—	2087	2692	2007	2589	1815	2341	908	1171	726	936
150	—	—	2496	3230	2400	3106	2170	2809	1085	1405	868	1124
200	—	—	3335	4307	3207	4141	2900	3745	1450	1873	1160	1498
250	—	—	—	—	—	—	—	—	1825	2344	1460	1875
300	—	—	—	—	—	—	—	—	2200	2809	1760	2247
350	—	—	—	—	—	—	—	—	2550	3277	2040	2622
400	—	—	—	—	—	—	—	—	2900	3745	2320	2996
450	—	—	—	—	—	—	—	—	3250	4214	2600	3371
500	—	—	—	—	—	—	—	—	3625	4682	2900	3746

Table 5

Normal-Load and Fault Currents of Three Phase Transformers

Transformer Characteristics 3-Phase		AC Voltage 3-Phase					
		280V		240V		480V	
kVA Rating	% Impedance	Normal Load Continuous Amperes	Short Circuit Current	Normal Load Continuous Amperes	Short Circuit Current	Normal Load Continuous Amperes	Short Circuit Current
112.5	2.25	312	14,491	271	13,128	135	6,540
150	3.00	416	14,699	361	13,477	180	6,720
225	4.50	625	15,139	541	14,186	271	7,106
300	5.00	834	18,326	722	17,328	361	8,664
500	5.00	1388	30,536	1203	28,872	601	14,424
750	5.75	2080	40,373	1804	38,590	902	19,295
1000	5.75	2780	53,830	2406	51,467	1203	25,734
1500	5.75	4162	80,745	3610	77,201	1805	38,590
2000	5.75	—	—	4812	102,914	2406	51,467
2500	5.75	—	—	6010	128,647	3008	64,324
1000	8.00	—	—	—	—	1203	19,850
1500	8.00	—	—	—	—	1805	29,766

① Values may vary depending on manufacturer, type of motor and NEMA design. For full load currents of 200 volt motors, increase the corresponding 230 volt motor full-load current by 15 percent.

Table 5 Notes:

- Primary source available is assumed as 500 MVA at the primary of the transformer with a source circuit X/R ratio of 12.
- Motor contribution is included in the table at twice the full-load current for 208 volt transformers and at 4 times the full-load current for 240 volt and 480 volt transformers. These values are derived from the assumption that 208 volt systems are 50% motor load and 240 and 480 volt systems are 100% motor load.
- All short circuit current values are in symmetrical RMS amperes.