

Appendix D. Motors' full-load currents

D.1 Motors' full-load currents with alternate current according to UL 508a

Table D.1. Motors' full-load currents with alternate current related to the power in according to UL 508a – Rev. 2018 (50 Individual Load Ratings)

Power [HP]	110 – 120 V		200 V		208 V		220 – 240 V		380 – 415 V		440 – 480 V		550 – 600 V	
	Phase: 1	Phase: 3	Phase: 1	Phase: 3	Phase: 1	Phase: 3	Phase: 1	Phase: 3	Phase: 1	Phase: 3	Phase: 1	Phase: 3	Phase: 1	Phase: 3
1/10	3,0	–	–	–	–	–	1,5	–	1	–	–	–	–	–
1/8	3,8	–	–	–	–	–	1,9	–	1,2	–	–	–	–	–
1/6	4,4	–	2,5	–	2,4	–	2,2	–	1,4	–	–	–	–	–
1/4	5,8	–	3,3	–	3,2	–	2,9	–	1,8	–	–	–	–	–
1/3	7,2	–	4,1	–	4,0	–	3,6	–	2,3	–	–	–	–	–
1/2	9,8	4,4	5,6	2,5	5,4	2,4	4,9	2,2	3,2	1,3	2,5	1,1	2	0,9
3/4	13,8	6,4	7,9	3,7	7,6	3,5	6,9	3,2	4,5	1,8	3,5	1,6	2,8	1,3
1	16,0	8,4	9,2	4,8	8,8	4,6	8	4,2	5,1	2,3	4	2,1	3,2	1,7
1-1/2	20,0	12	11,5	6,9	11,0	6,6	10	6	6,4	3,3	5	3	4	2,4
2	24,0	13,6	13,8	7,8	13,2	7,5	12	6,8	7,7	4,3	6	3,4	4,8	2,7
3	34,0	19,2	19,6	11,0	18,7	10,6	17	9,6	10,9	6,1	8,5	4,8	6,8	3,9
5	56,0	30,4	32,2	17,5	30,8	16,7	28	15,2	17,9	9,7	14	7,6	11,2	6,1
7-1/2	80,0	44,0	46,0	25,3	44,0	24,2	40	22	27	14	21	11	16	9
10	100,0	56,0	57,5	32,2	55,0	30,8	50	28	33	18	26	14	20	11
15	135,0	84,0	–	48,3	–	46,2	56	42	44	27	34	21	27	17
20	–	108,0	–	62,1	–	59,4	88	54	56	34	44	27	35	22
25	–	136,0	–	78,2	–	74,8	110	68	70	44	55	34	44	27
30	–	160,0	–	92,0	–	88,0	136	80	87	51	68	40	54	32
40	–	208,0	–	120,0	–	114,0	176	104	112	66	88	52	70	41
50	–	260,0	–	150,0	–	143,0	216	130	139	83	108	65	86	52
60	–	–	–	177,0	–	169,0	–	154	–	103	–	77	–	62
75	–	–	–	221,0	–	211,0	–	192	–	128	–	96	–	77
100	–	–	–	285,0	–	273,0	–	248	–	165	–	124	–	99
125	–	–	–	359,0	–	343,0	–	312	–	208	–	156	–	125
150	–	–	–	414,0	–	396,0	–	360	–	240	–	180	–	144
200	–	–	–	552,0	–	528,0	–	480	–	320	–	240	–	192
250	–	–	–	–	–	–	–	604	–	403	–	302	–	242
300	–	–	–	–	–	–	–	722	–	482	–	361	–	289
350	–	–	–	–	–	–	–	828	–	560	–	414	–	336
400	–	–	–	–	–	–	–	954	–	636	–	477	–	382
450	–	–	–	–	–	–	–	1030	–	–	–	515	–	412
500	–	–	–	–	–	–	–	1180	–	786	–	590	–	472

* To obtain full-load currents for 265 V and 277 V motors, decrease corresponding 220 – 240 volt ratings by 13% and 17% respectively.

D.2 Motors' full-load currents with direct current according to UL 508a

Table D.2. Motors' full-load currents with direct current related to the power in according to UL 508a – Rev. 2018 (50 Individual Load Ratings)

Power [HP]	90 V	110 – 120 V	180 V	220 – 240 V	500 V	550 – 600 V
1/10	–	2,0	–	1,0	–	–
1/8	–	2,2	–	1,1	–	–
1/6	–	2,4	–	1,2	–	–
1/4*	4,0	3,1	2,0	1,6	–	–
1/3	5,2	4,1	2,6	2,0	–	–
1/2	6,8	5,4	3,4	2,7	–	–
3/4	9,6	7,6	4,8	3,8	–	1,6
1	12,2	9,5	6,1	4,7	–	2,0
1-1/2	–	13,2	8,3	6,6	–	2,7
2	–	17,0	10,8	8,5	–	3,6
3	–	25,0	16,0	12,2	–	5,2
5	–	40,0	27,0	20,0	–	8,3
7-1/2	–	58,0	–	29,0	13,6	12,2
10	–	76,0	–	38,0	18,0	16,0
15	–	110,0	–	55,0	27,0	24,0
20	–	148,0	–	72,0	34,0	31,0
25	–	184,0	–	89,0	43,0	38,0
30	–	220,0	–	106,0	51,0	46,0
40	–	292,0	–	140,0	67,0	61,0
50	–	360,0	–	173,0	83,0	75,0
60	–	–	–	206,0	99,0	90,0
75	–	–	–	255,0	123,0	111,0
100	–	–	–	341,0	164,0	148,0
125	–	–	–	425,0	205,0	185,0
150	–	–	–	506,0	246,0	222,0
200	–	–	–	675,0	330,0	294,0

* The full-load current for a 1/4 HP, 32 Vdc motor is 8.6 A.