MOTOR and WIRE RATING DATA

Wire, Fuse and Circuit Breaker Selection Tables

FOR MOTOR BRANCH CIRCUITS—ADOPTED FROM 1962 N. E. CODE

For exceptions, see note at head of table 430-146, 1962 N. E. C., also see paragraphs 430-22, 430-24, 430-34, and 430-59 of 1962 N. E. C.

Full load current rating of motor	Min. allowable size of copper conductor A.W.G. or Cir. Mil. for four conductors in raceways.		❶ For running protection of motors		Maximum Allowable Rating of Setting of Branch Circuit Protective Devices					
					❷ Single phase, squirrel-cage, and synchronous, (full voltage, reactor and resistor starting)		❷ Squirrel cage and synchronous (auto-transformer starting).		D.C. and Wound Rotor A.C. (Without code letters)	
	Type R, RW, RU, RUW Thermo-Plastic Type T 14-4/0 Type TW 14-4/0	Type RH	Max. setting non-adjustable protective devices	Max. setting adjustable protective devices	❶ Max. allowable rating of br. circuit fuses	❸ Max. allowable circuit breaker rating	❶ Max. allowable rating of br. circuit fuses	❸ Max. allowable circuit br. rating squirrel cage and synchronous (auto-transformer starting)	❶ Max. allowable rating of branch circuit fuses	❸ Max. allowable circuit breaker rating
Amps.			Amps.	Amps.	Amps.	Amps.	Amps.	Amps.	Amps.	Amps.
❹ 1	14	14	❺ 2	❺ 1.25	15	15	15	15	15	15
❹ 2	14	14	❺ 3	❺ 2.50	15	15	15	15	15	15
❹ 3	14	14	❺ 4	❺ 3.75	15	15	15	15	15	15
❹ 4	14	14	❺ 6	❺ 5.00	15	15	15	15	15	15
❹ 5	14	14	❺ 8	❺ 6.25	15	15	15	15	15	15
❹ 6	14	14	❺ 8	❺ 7.50	20	15	15	15	15	15
7	14	14	❺ 10	❺ 8.75	25	20	20	15	15	15
8	14	14	❺ 10	❺ 10.00	25	20	20	20	15	15
9	14	14	❺ 12	❺ 11.25	30	30	25	20	15	15
10	14	14	❺ 15	❺ 12.5	30	30	25	20	15	15
12	14	14	❺ 15	15.0	40	30	30	30	20	20
14	12	12	❺ 20	17.5	45	40	35	30	25	30
16	12	12	❺ 20	20.0	50	40	40	40	25	30
18	10	10	25	22.5	60	50	45	40	30	30
20	10	10	25	25.0	60	50	50	40	30	30
22	10	10	30	27.5	70	70	60	50	35	40
24	10	10	30	30.0	80	70	60	50	40	40
26	8	8	35	32.5	80	70	70	70	40	40
28	8	8	35	35.0	90	70	70	70	45	50
30	8	8	40	37.5	90	100	80	70	45	50
32	8	8	40	40.0	100	100	70	70	50	50
34	6	8	45	42.5	110	100	70	70	60	70
36	6	8	45	45.0	110	100	80	100	60	70
38	6	6	50	47.5	125	100	80	100	60	70
40	6	6	50	50.0	125	100	80	100	60	70
42	6	6	50	52.5	125	125	90	100	70	70
44	6	6	60	55.0	125	125	90	100	70	70
46	4	6	60	57.5	150	125	100	100	70	70
48	4	6	60	60.0	150	125	100	100	80	100
50	4	6	60	62.5	150	125	100	100	80	100
52	4	6	70	65.0	175	150	110	125	80	100
54	4	4	70	67.5	175	150	110	125	90	100
56	4	4	70	70.0	175	150	125	125	90	100
58	3	4	70	72.5	175	150	125	125	90	100
60	3	4	80	75.0	200	150	125	125	90	100
62	3	4	80	77.5	200	175	125	125	100	100
64	3	4	80	80.0	200	175	150	150	100	100
66	2	4	80	82.5	200	175	150	150	100	100
68	2	4	90	85.0	225	175	150	150	110	125
70	2	3	90	87.5	225	175	150	150	110	125
72	2	3	90	90.0	225	200	150	150	110	125
74	2	3	90	92.5	225	200	150	150	125	125
76	2	3	100	95.0	250	200	175	175	125	125
78	1	3	100	97.5	250	200	175	175	125	125
80	1	3	100	100.0	250	200	175	175	125	125
82	1	2	110	102.5	250	225	175	175	125	125
84	1	2	110	105.0	250	225	175	175	150	150
86	1	2	110	107.5	300	225	175	175	150	150
88	1	2	110	110.0	300	225	200	200	150	150
90	0	2	110	112.5	300	225	200	200	150	150
92	0	2	125	115.0	300	250	200	200	150	150
94	0	1	125	117.5	300	250	200	200	150	150
96	0	1	125	120.0	300	250	200	200	150	150
98	0	1	125	122.5	300	250	200	200	150	150
100	0	1	125	125.0	300	250	200	200	150	150
105	00	1	150	131.5	350	300	225	225	175	175
110	00	0	150	137.5	350	300	225	225	175	175
115	00	0	150	144.0	350	300	250	250	175	175
120	000	0	150	150.0	400	300	250	250	200	200
125	000	00	175	156.5	400	350	250	250	200	200
130	000	00	175	162.5	400	350	300	300	200	200
135	0000	00	175	169.0	450	350	300	300	225	225
140	0000	00	175	175.0	450	350	300	300	225	225
145	0000	000	200	181.5	450	400	300	300	225	225
150	0000	000	200	187.5	450	400	300	300	225	225

❶ Adapted from Table 430-146, N. E. C. Code.

❷ The N. E. C. classifies motors by code letters. The values shown are for motors with code letters F to V inclusive and motors without code letters. For motors with code letters A to E inclusive refer to N. E. Code, Tables 430-146 and 430-152.

❸ Adapted from Table 430-153, N. E. C. Code.

❹ For the grouping of small motors under the protection of a single set of fuses see Section 430-53 N. E. Code.

❺ For the running protection of motors of 1 H.P. and less see Section 430-32 N. E. Code.