HP	230V	cable
1/2	2.0 A	AWG 18
3/4	2.8 A	AWG 18
1	3.6 A	AWG 18
1-1/2	5.2 A	AWG 18
2	6.8 A	AWG 18
3	9.6 A	AWG 18
5	15.2 A	AWG 16
7-1/2	22.0 A	AWG 14
10	28.0 A	AWG 12
15	42.0 A	AWG 10
20	54.0 A	AWG 8
25	68.0 A	AWG 6
30	80.0 A	AWG 4
40	104.0 A	AWG 3
50	130.0 A	AWG 2
60	154.0 A	AWG 1/0
75	192.0 A	AWG 2/0
100	248.0 A	AWG 4/0
125	312.0 A	kcmil 300
150	360.0 A	kcmil 400
200	480.0 A	kcmil 700

HP	460V	cable
1/2	1.0 A	AWG 18
3/4	1.4 A	AWG 18
1	1.8 A	AWG 18
1-1/2	2.6 A	AWG 18
2	3.4 A	AWG 18
3	4.8 A	AWG 18
5	7.6 A	AWG 18
7-1/2	11.0 A	AWG 18
10	14.0 A	AWG 16
15	21.0 A	AWG 14
20	27.0 A	AWG 12
25	34.0 A	AWG 10
30	40.0 A	AWG 10
40	52.0 A	AWG 8
50	65.0 A	AWG 6
60	77.0 A	AWG 4
75	96.0 A	AWG 3
100	124.0 A	AWG 2
125	156.0 A	AWG 1/0
150	180.0 A	AWG 2/0
200	240.0 A	AWG 4/0

HP	230V	cable
1/2	2.0 A	1.0 mm²
3/4	2.8 A	1.0 mm²
1	3.6 A	1.0 mm²
1-1/2	5.2 A	1.0 mm²
2	6.8 A	1.0 mm²
3	9.6 A	1.0 mm²
5	15.2 A	1.5 mm²
7-1/2	22.0 A	2.5 mm²
10	28.0 A	4.0 mm²
15	42.0 A	6.0 mm²
20	54.0 A	10.0 mm²
25	68.0 A	16.0 mm²
30	80.0 A	25.0 mm²
40	104.0 A	35.0 mm²
50	130.0 A	35.0 mm²
60	154.0 A	50.0 mm²
75	192.0 A	70.0 mm²
100	248.0 A	120.0 mm²
125	312.0 A	150.0 mm²
150	360.0 A	240.0 mm²
200	480.0 A	400.0 mm²

HP	460V	cable
1/2	1.0 A	1.0 mm²
3/4	1.4 A	1.0 mm²
1	1.8 A	1.0 mm²
1-1/2	2.6 A	1.0 mm²
2	3.4 A	1.0 mm²
3	4.8 A	1.0 mm²
5	7.6 A	1.0 mm²
7-1/2	11.0 A	1.0 mm²
10	14.0 A	1.5 mm²
15	21.0 A	2.5 mm²
20	27.0 A	4.0 mm²
25	34.0 A	6.0 mm²
30	40.0 A	6.0 mm²
40	52.0 A	10.0 mm²
50	65.0 A	16.0 mm²
60	77.0 A	25.0 mm²
75	96.0 A	35.0 mm²
100	124.0 A	35.0 mm²
125	156.0 A	50.0 mm²
150	180.0 A	70.0 mm²
200	240.0 A	120 mm²

...based on ambient air temperature of 86°F (30°C) and temperature rating of conductor 194°F (90°C).

mm² = square-millimeter kcmil = kilo circular mils AWG = american wire gauge

Full-load currents of three-phase ac-induction squirrel cage motors

HP	RPM	200 V	230 V	460 V	575 V
1/4	1800	1.09 A	0.95 A	0.48 A	0.38 A
	1200	1.61 A	1.40 A	0.70 A	0.56 A
	900	1.84 A	1.60 A	0.80 A	0.64 A
1/3	1800	1.37 A	1.19 A	0.68 A	0.48 A
	1200	1.83 A	1.59 A	0.80 A	0.64 A
	900	2.07 A	1.80 A	0.90 A	0.72 A
1/2	1800	1.98 A	1.72 A	0.86 A	0.69 A
	1200	2.47 A	2.15 A	1.08 A	0.86 A
	900	2.74 A	2.38 A	1.19 A	0.95 A
3/4	1800	2.83 A	2.46 A	1.23 A	0.98 A
	1200	3.36 A	2.92 A	1.46 A	1.17 A
	900	3.75 A	3.26 A	1.63 A	1.30 A
1	3600	3.22 A	2.80 A	1.40 A	1.12 A
	1800	4.09 A	3.56 A	1.78 A	1.42 A
	1200	4.32 A	3.76 A	1.88 A	1.50 A
	900	4.95 A	4.30 A	2.15 A	1.72 A
1-1/2	3600	5.01 A	4.36 A	2.18 A	1.74 A
	1800	5.59 A	4.86 A	2.43 A	1.94 A
	1200	6.07 A	5.28 A	2.64 A	2.11 A
	900	6.44 A	5.60 A	2.80 A	2.24 A
2	3600	6.46 A	5.60 A	2.80 A	2.24 A
	1800	7.36 A	6.40 A	3.20 A	2.56 A
	1200	7.87 A	6.84 A	3.42 A	2.74 A
	900	9.09 A	7.90 A	3.95 A	3.16 A
3	3600	9.59 A	8.34 A	4.17 A	3.34 A
	1800	10.8 A	9.40 A	4.70 A	3.76 A
	1200	11.7 A	10.2 A	5.12 A	4.10 A
	900	13.1 A	11.4 A	5.70 A	4.55 A
5	3600	15.5 A	13.5 A	6.76 A	5.41 A
	1800	16.6 A	14.4 A	7.21 A	5.78 A
	1200	18.2 A	15.8 A	7.91 A	6.32 A
	900	18.3 A	15.9 A	7.92 A	6.33 A
7-1/2	3600	22.4 A	19.5 A	9.79 A	7.81 A
	1800	24.7 A	21.5 A	10.7 A	8.55 A
	1200	25.1 A	21.8 A	10.9 A	8.70 A
	900	26.5 A	23.0 A	11.5 A	9.19 A
10	3600	29.2 A	25.4 A	12.7 A	10.1 A
	1800	30.8 A	26.8 A	13.4 A	10.7 A
	1200	32.2 A	28.0 A	14.0 A	11.2 A
	900	35.1 A	30.5 A	15.2 A	12.2 A
15	3600	41.9 A	36.4 A	18.2 A	14.5 A
	1800	45.1 A	39.2 A	19.6 A	15.7 A
	1200	47.6 A	41.4 A	20.7 A	16.5 A
	900	51.2 A	44.5 A	22.2 A	17.8 A
20	3600	58.0 A	50.4 A	25.2 A	20.1 A
	1800	58.9 A	51.2 A	25.6 A	20.5 A
	1200	60.7 A	52.8 A	26.4 A	21.1 A
	900	63.1 A	54.9 A	27.4 A	21.9 A

HP	RPM	200 V	230 V	460 V	575 V
25	3600	69.9 A	60.8 A	30.4 A	24.3 A
	1800	74.5 A	64.8 A	32.4 A	25.9 A
	1200	75.4 A	65.6 A	32.8 A	26.2 A
	900	77.4 A	67.3 A	33.7 A	27.0 A
30	3600	84.8 A	73.7 A	36.8 A	29.4 A
	1800	86.9 A	75.6 A	37.8 A	30.2 A
	1200	90.6 A	78.8 A	39.4 A	31.5 A
	900	94.1 A	81.8 A	40.9 A	32.7 A
40	3600	111 A	96.4 A	48.2 A	38.5 A
	1800	116 A	101 A	50.4 A	40.3 A
	1200	117 A	102 A	50.6 A	40.4 A
	900	121 A	105 A	52.2 A	41.7 A
50	3600	138 A	120 A	60.1 A	48.2 A
	1800	143 A	124 A	62.2 A	49.7 A
	1200	145 A	126 A	63.0 A	50.4 A
	900	150 A	130 A	65.0 A	52.0 A
60	3600	164 A	143 A	71.7 A	57.3 A
	1800	171 A	149 A	74.5 A	59.4 A
	1200	173 A	150 A	75.0 A	60.0 A
	900	177 A	154 A	77.0 A	61.5 A
75	3600	206 A	179 A	89.6 A	71.7 A
	1800	210 A	183 A	91.6 A	73.2 A
	1200	212 A	184 A	92.0 A	73.5 A
	900	222 A	193 A	96.5 A	77.5 A
100	3600	266 A	231 A	115 A	92.2 A
	1800	271 A	236 A	118 A	94.8 A
	1200	275 A	239 A	120 A	95.6 A
	900	290 A	252 A	126 A	101 A
125	3600	-	292 A	146 A	116 A
	1800	-	293 A	147 A	117 A
	1200	-	298 A	149 A	119 A
	900	-	305 A	153 A	122 A
150	3600	-	343 A	171 A	137 A
	1800	-	348 A	174 A	139 A
	1200	-	350 A	175 A	141 A
	900	-	365 A	183 A	146 A
200	3600	-	452 A	226 A	181 A
	1800	-	458 A	229 A	184 A
	1200	-	460 A	230 A	185 A
	900	-	482 A	241 A	193 A
250	3600	-	559 A	279 A	223 A
	1800	-	568 A	284 A	227 A
	1200	-	573 A	287 A	229 A
	900	-	600 A	300 A	240 A
300	1800	-	678 A	339 A	271 A
	1200	-	684 A	342 A	274 A
400	1800	-	896 A	448 A	358 A

Rating currents of three-phase ac-induction squirrel cage motors at 60 Hz

	220 V / 230 V																				
Motor rating (kW)	0,55	0,75	1,1	1,5	2,2	3	4	5,5	7,5	11	15	18,5	22	30	37	45	55	75	90	110	132
cos phi	0,75	0,8	0,83	0,83	0,83	0,84	0,84	0,85	0,86	0,86	0,86	0,86	0,87	0,87	0,87	0,88	0,88	0,88	0,88	0,88	0,88
Power efficiency (%)	69	74	77	78	81	81	82	83	85	87	87	88	89	90	90	91	91	91	92	92	92
Rated motor current (A)	2,7	3,4	4,5	6	8,7	11,5	15	20	27	39	52	64	75	100	124	147	180	246	292	357	423
Fuse Starting D.O.L. (A)	10	10	10	16	20	25	32	32	50	80	100	125	125	200	200	250	250	315	400	500	630
Fuse Starting S/D (A)	4	4	6	10	10	16	16	25	32	40	63	80	80	100	125	160	200	250	315	400	500

	380 V / 400 V																				
Motor rating (kW)	0,55	0,75	1,1	1,5	2,2	3	4	5,5	7,5	11	15	18,5	22	30	37	45	55	75	90	110	132
cos phi	0,75	0,8	0,83	0,83	0,83	0,84	0,84	0,85	0,86	0,86	0,86	0,86	0,87	0,87	0,87	0,88	0,88	0,88	0,88	0,88	0,88
Power efficiency (%)	69	74	77	78	81	81	82	83	85	87	87	88	89	90	90	91	91	91	92	92	92
Rated motor current (A)	1,6	2	2,6	3,5	5	6,6	8,5	11,5	15,5	22,5	30	36	43	58	72	85	104	142	169	204	243
Fuse Starting D.O.L. (A)	4	6	6	6	10	16	20	25	32	40	63	63	80	100	125	160	200	200	250	315	400
Fuse Starting S/D (A)	2	4	4	4	6	10	10	16	16	25	32	40	50	63	80	100	125	160	200	200	250

	500 V																				
Motor rating (kW)	0,55	0,75	1,1	1,5	2,2	3	4	5,5	7,5	11	15	18,5	22	30	37	45	55	75	90	110	132
cos phi	0,75	0,8	0,83	0,83	0,83	0,84	0,84	0,85	0,86	0,86	0,86	0,86	0,87	0,87	0,87	0,88	0,88	0,88	0,88	0,88	0,88
Power efficiency (%)	69	74	77	78	81	81	82	83	85	87	87	88	89	90	90	91	91	91	92	92	92
Rated motor current (A)	1,2	1,5	2	2,6	3,7	5	6,4	9	11,5	17	22,5	28	32	43	54	64	78	106	127	154	182
Fuse Starting D.O.L. (A)	4	4	6	6	10	16	16	20	25	32	50	50	63	80	100	125	160	200	200	250	250
Fuse Starting S/D (A)	2	2	4	4	4	6	10	16	16	20	25	32	32	50	63	80	80	125	160	160	200

	660 V / 690 V																				
Motor rating (kW)	0,55	0,75	1,1	1,5	2,2	3	4	5,5	7,5	11	15	18,5	22	30	37	45	55	75	90	110	132
cos phi	0,75	0,8	0,83	0,83	0,83	0,84	0,84	0,85	0,86	0,86	0,86	0,86	0,87	0,87	0,87	0,88	0,88	0,88	0,88	0,88	0,88
Power efficiency (%)	69	74	77	78	81	81	82	83	85	87	87	88	89	90	90	91	91	91	92	92	92
Rated motor current (A)	0,9	1,1	1,5	2	2,9	3,5	4,9	6,7	9	13	17,5	21	25	33	42	49	60	82	98	118	140
Fuse Starting D.O.L. (A)	4	4	4	6	10	10	16	16	20	25	32	32	50	63	80	80	100	160	160	200	250
Fuse Starting S/D (A)	2	2	2	4	4	4	6	10	10	16	20	25	25	32	50	63	63	100	100	125	160

Rated currents of 3-phase motors
(approximate figures for squirrel-cage motors)

Minimum fuse size for protection of 3-phase motors
The maximum size is determined by the requirements of the switchgear or overload relay.

The rated motor currents are for standard 1500 r.p.m. 3-phase enclosed ventilated and totally enclosed fan-cooled motors.
D.O.L. starting: Maximum starting current 6 x rated motor current. Maximum starting time 5 s.
Star- / Delta- starting: Maximum starting current 2 x rated motor current. Maximum starting time 15 s.
Set overload relay in the phase lead to 0,58 x rated motor current.
Rated fuse currents for Star- / Delta- starting are also valid for 3-phase motors with slip-ring rotors.
For higher rated currents, starting currents and/or longer starting times, larger fuses are required.
Tables are valid for "slow" and/or "gl" fuses.

Rated currents and minimum fuse size for protection of 3-phase motors - 50Hz