

# Motor Current

## SELECTION TABLES - Three-Phase Motors

AC Motors - full load current tables (1450rpm approx.) (provided as a guide to the selection of suitable MEM control gear). The tables are based on motors of approximately 1450rpm of average efficiency and power factor. Motors of higher speed usually take a lower current than that shown in the table; while motors of lower speed usually take higher current. Wide variations from these figures can arise, especially on single phase motors, and engineers should, whenever possible, determine the actual f.l.c. from the motor rating plate in each case.

### SINGLE PHASE MOTORS

Motor rating	hp	Approx. F.L.C. at line voltage		
		110V ac	220V ac	240V ac
0.07 kW	1/12	2.4	1.2	1.1
0.1 kW	1/8	3.3	1.6	1.5
0.12 kW	1/6	3.8	1.9	1.7
0.18 kW	1/4	4.5	2.3	2.1
0.25 kW	1/3	5.8	2.9	2.6
0.37 kW	1/2	7.9	3.9	3.6
0.56 kW	3/4	11	5.5	5
0.75 kW	1	15	7.3	6.7
1.1 kW	1.5	21	10	9
1.5 kW	2	26	13	12
2.2 kW	3	37	19	17
3 kW	4	49	24	22
3.7 kW	5	54	27	25
4 kW	5.5	60	30	27
5.5 kW	7.5	85	41	38
7.5 kW	10	110	55	50

## THREE PHASE MOTORS

Motor rating	hp	Approx. F.L.C. at line voltage				
		220V ac	240V ac	380V ac	415V ac	550V ac
0.1 kW	1/8	0.7	0.6	0.4	0.4	0.3
0.12 kW	1/6	1	0.9	0.5	0.5	0.3
0.18 kW	1/4	1.3	1.2	0.8	0.7	0.4
0.25 kW	1/3	1.6	1.5	0.9	0.9	0.6
0.37 kW	1/2	2.5	2.3	1.4	1.3	0.8
0.56 kW	3/4	3.1	2.8	1.8	1.6	1.1
0.75 kW	1	3.5	3.2	2	1.8	1.4
1.1 kW	1.5	5	4.5	2.8	2.6	1.9
1.5 kW	2	6.4	5.8	3.7	3.4	2.6
2.2 kW	3	9.5	8.7	5.5	5	3.5
3.0 kW	4	12	11	7	6.5	4.7
3.7 kW	5	15	13	8	8	6
4.0 kW	5.5	16	14	9	8	6
5.5 kW	7.5	20	19	12	11	8
7.5 kW	10	27	25	16	15	11
9.3 kW	12.5	34	32	20	18	14
10 kW	13.5	37	34	22	20	15
11 kW	15	41	37	23	22	16
15 kW	20	64	50	31	28	21
18 kW	25	67	62	39	36	26
22 kW	30	74	70	43	39	30
30 kW	40	99	91	57	52	41
37 kW	50	130	119	75	69	50
45 kW	60	147	136	86	79	59
55 kW	75	183	166	105	96	72
75 kW	100	239	219	138	125	95
90 kW	125	301	269	170	156	117
110 kW	150	350	325	205	189	142
130 kW	175	410	389	245	224	169
150 kW	200	505	440	278	255	192

# General Conversion Tables

### To convert

Inches to millimetres (mm)	25.4
Millimetres to inches	0.03937
Feet to metres (m)	0.3048
Metres to feet (ft)	3.2808
Yards to metres (m)	0.9144
Metres to yards (yds)	1.0936
Miles to kilometres (km)	1.69093
Kilometres to miles	0.6214
Square inches to square millimetres (mm <sup>2</sup> )	645.16
Square millimetres to square inches (inch <sup>2</sup> )	0.00155
Square yards to square metres (m <sup>2</sup> )	0.8361
Square metres to square yards (yds <sup>2</sup> )	1.196
Cubic inches to cubic centimetres (cm <sup>3</sup> )	16.387
Cubic centimetres to cubic inches (inch <sup>3</sup> )	0.06102
Pounds to kilogrammes (kg)	0.4536

### To convert

Kilogrammes to pounds (lb)	2.2046
Tons (2,240lb) to kilogrammes (kg)	1,016.05
Kilogrammes to tons (2,240 lb)	0.0009842
Ounces (avoirdupois) to grammes	28.3495
Grammes to ounces (avoirdupois)	0.0353
Gallons to litres	4.5461
Litres to gallons	0.220
Force N (Newtons) to lb ft	0.225
1N = 1kg (mass) accelerated at 1 metre/sec	
1Nm=1J (Joule) to calorie	0.239
Horsepower to kilowatts (kW)	0.7458
Kilowatts to horsepower (h.p.)	1.3408
1W (watt) = 1J/S	
Atmospheres to lb per square inch (lb/inch <sup>2</sup> )	14.68
1bar = 1kg/cm <sup>2</sup> =735.6mm Hg=14.2lb/inch <sup>2</sup>	

### Multiply by

