

WIRE SELECTION CHART FOR SUBMERSIBLE MOTORS

1. Select wire size for which maximum length equals or exceeds that required. Note that warranty is voided by use of smaller size or longer length than those recommended. Wire sizes comply with table 310-16, column 2 of National Electrical Code (1975 Edition). Allowable ampacity of insulated copper conductors (which covers type RHW, RUH and THWN conductors).

2. Voltage at service entrance will be rated voltage i.e. 225, 200, 230, 460, 575. (This is the 60 Hertz voltage assumed to be available at the service entrance.)

3. Voltage at the motor shall be at least 95% of service entrance voltage with the motor running under normal operating conditions.

4. Cable lengths are based on one continuous wire size run from the service entrance to the motor terminals rather than breaking down into different sizes for supply and drop cable. The portion of the total cable length which is between the service entrance and single phase motor control box should not exceed 25% of the total maximum allowable, to insure proper control of box operation.

2 & 3 Wire Single Phase Franklin Motors

MOTOR		MAXIMUM FEET OF COPPER CABLE, SIZE										
Volts	HP	14	12	10	8	6	4	2	0	00	000	0000
115	1/3	130	210	340	540	840	1300	1960	2910			
	1/2	100	160	250	390	620	960	1460	2160			
230	1/3	550	880	1390								
	1/2	400	650	1020								
	3/4	300	480	760	1200							
	1	250	400	630	990	1540						
	1-1/2	190	310	480	770	1200	1870					
	2	150	250	390	620	970	1530	2360				
	3	120	190	300	470	750	1190	1850	2890			
	5	0	110	180	280	450	710	1110	1740			
	7-1/2			120	200	310	490	750	1140	1410	1720	
	10				160	250	390	600	930	1160	1430	1760

Three Phase Franklin Motors

MOTOR		MAXIMUM FEET OF COPPER CABLE, SIZE										
Volts	HP	14	12	10	8	6	4	2	0	00	000	0000
200V 60Hz	1-1/2	310	500	790	1260	1960	3050					
	2	240	390	610	970	1520	2360	3610	5420			
	3	180	290	470	740	1160	1810	2760	4130			
	5	110	170	280	440	690	1080	1660	2490	3050	3670	4440
	7-1/2	0	0	200	310	490	770	1180	1770	2170	2600	3150
	10	0	0	150	230	370	570	880	1330	1640	1970	2390
	15	0	0	0	160	250	390	600	910	1110	1340	1630
	20	0	0	0	0	190	300	460	700	860	1050	1270
	25	0	0	0	0	0	240	370	570	700	840	1030
	230V 60Hz and 220V 50Hz	1-1/2	420	670	1060	1670	2610	4050	6160	9170		
2		320	510	810	1280	2010	3130	4770	7170	8780		
3		240	390	620	990	1540	2400	3660	5470	6690	8020	9680
5		140	230	370	590	920	1430	2190	3290	4030	4850	5870
7-1/2		0	160	260	420	650	1020	1560	2340	2870	3440	4160
10		0	0	190	310	490	760	1170	1760	2160	2610	3160
15		0	0	0	210	330	520	800	1200	1470	1780	2150
20		0	0	0	160	250	400	610	930	1140	1380	1680
25		0	0	0	0	200	320	500	750	920	1120	1360
30		0	0	0	0	0	260	410	620	760	930	1130
460V 60Hz and 380V- 460V 50Hz (Divide lengths by 1.4 for 380V 60Hz)	1-1/2	1700	2710	4270	6730							
	2	1300	2070	3270	5150	8050						
	3	1000	1600	2520	3970	6200						
	5	590	950	1500	2360	3700	5750					
	7-1/2	420	680	1070	1690	2640	4100	6260				
	10	310	500	790	1250	1960	3050	4680	7050			
	15	0	340	540	850	1340	2090	3200	4810	5900	7110	
	20	0	0	410	650	1030	1610	2470	3730	4580	5530	
	25	0	0	330	530	830	1300	1990	3010	3700	4470	5430
	30	0	0	270	430	680	1070	1640	2490	3060	3700	4500
575V 60Hz	1-1/2	2620	4180	6580								
	2	2030	3250	5110	8060							
	3	1580	2530	3980	6270							
	5	920	1480	2330	3680	5750						
	7-1/2	660	1060	1680	2650	4150						
	10	490	780	1240	1950	3060	4770					
	15	330	530	850	1340	2090	3260					
	20	0	410	650	1030	1610	2520	3860	5830			
	25	0	0	520	830	1300	2030	3110	4710			
	30	0	0	430	680	1070	1670	2560	3880	4770	5780	7030
40	0	0	0	500	790	1240	1900	2860	3510	4230	5140	
50	0	0	0	410	640	1000	1540	2310	2840	3420	4140	
60	0	0	0	0	540	850	1300	1960	2400	2890	3500	
75	0	0	0	0	0	690	1060	1600	1970	2380	2890	
100	0	0	0	0	0	0	790	1190	1460	1770	2150	