

FRANKLIN AID



Franklin Electric



Franklin Application/Installation Data (AID) ... For The Professional Driller-Installer

Vol. 19, No. 1, January/February 2001

Circuit Breaker/ Fuse Size Clarifications

In the 2000 Franklin Electric AIM Manual, we have included Circuit Breaker and Fuse Sizing for our submersible motors (Tables 13 & 21). You should note that the values listed in the AIM Manual are the maximum allowable values per the National Electrical Code (NEC) and that fuse and circuit breaker sizes should never exceed these values.

However, smaller, more conservative breaker/fuse sizes are typically used in submersible applications. These smaller sizes, along with the NEC maximum sizes, are listed in the tables on the following pages of this publication (three-phase, pp. 2-3, single-phase, p. 4).

Remember, either size will protect the circuit, but never exceed the maximum NEC value.

NEWS FROM THE MIDWEST

You already know that providing First Class Field Service is important to Franklin Electric. Last year, we expanded our US Field Service team from 5 to 7 Field Service Engineers to ensure better coverage. Now we are pleased to announce that Bob McClain has joined the Field Service team to cover our Midwestern territory. Bob is based at our headquarters in Bluffton, Indiana, and covers Wisconsin, Michigan, Illinois, Indiana, Ohio, Kentucky, and West Virginia. Bob comes to us from within Franklin Electric, where he has spent the past five years of his 22-year tenure on the Submersible Service Hotline. Bob can be reached by voicemail (219-827-5406), e-mail (bmcclain@fele.com), or by calling the Submersible Service Hotline (800-348-2420). Please join us in welcoming him to his new position.



PERMIT#1039
FORTWAYNE, IN
US POSTAGE PAID
PRESORT STANDARD

Bluffton, Indiana 46714
Franklin Electric



Type	Motor Model Prefix	Rating			Circuit Breakers or Fuse Amps			Circuit Breakers or Fuse Amps		
					(Maximum per NEC)			Typical Submersible		
		HP	KW	Volts	Nontime Delay (Std.) Fuse	Dual Element Time Delay Fuse	Inverse Time Breaker	Nontime Delay (Std.) Fuse	Dual Element Time Delay Fuse	Inverse Time Breaker
4 Inch	234501	1/2	0.37	200	10	5	8	10	4	15
	234511	1/2	0.37	230	8	5	6	8	4	15
	234541	1/2	0.37	380	5	3	4	5	2	15
	234521	1/2	0.37	460	4	3	3	4	2	15
	234502	3/4	0.55	200	15	8	10	12	5	15
	234512	3/4	0.55	230	10	6	8	10	5	15
	234542	3/4	0.55	380	6	4	5	6	3	15
	234522	3/4	0.55	460	5	3	4	5	3	15
	234503	1	0.75	200	15	10	15	15	6	15
	234513	1	0.75	230	15	8	10	12	6	15
	234543	1	0.75	380	8	5	8	8	4	15
	234523	1	0.75	460	6	4	5	6	3	15
	234504	1 1/2	1.1	200	20	10	15	20	8	15
	234514	1 1/2	1.1	230	15	10	15	15	8	15
	234544	1 1/2	1.1	380	10	6	8	10	4	15
	234524	1 1/2	1.1	460	8	5	8	8	4	15
	234534	1 1/2	1.1	575	6	4	5	6	3	15
	234305	2	1.5	200	25	15	20	25	11	20
	234315	2	1.5	230	25	15	20	25	10	20
	234345	2	1.5	380	15	8	15	15	6	15
	234325	2	1.5	460	15	8	10	11	5	15
	234335	2	1.5	575	10	5	8	10	4	15
	234306	3	2.2	200	35	20	30	35	15	30
	234316	3	2.2	230	30	20	25	30	12	25
	234346	3	2.2	380	20	15	15	20	8	15
	234326	3	2.2	460	15	10	15	15	6	15
	234336	3	2.2	575	15	8	10	11	5	15
	234307	5	3.7	200	60	35	50	60	25	50
	234317	5	3.7	230	50	30	40	45	20	45
	234347	5	3.7	380	30	20	25	30	12	25
	234327	5	3.7	460	25	15	20	25	10	25
	234337	5	3.7	575	20	15	20	20	8	20
	234308	7 1/2	5.5	200	90	50	70	80	35	70
234318	7 1/2	5.5	230	80	45	60	70	30	60	
234348	7 1/2	5.5	380	45	25	40	40	20	40	
234328	7 1/2	5.5	460	40	25	30	35	15	30	
234338	7 1/2	5.5	575	30	20	25	30	12	25	
234349	10	7.5	380	70	40	60	60	25	60	
234329	10	7.5	460	60	30	45	50	25	45	
234339	10	7.5	575	45	25	35	40	20	35	
6 Inch	236650	5	3.7	200	60	35	45	50	25	45
	236600	5	3.7	230	45	30	40	45	20	40
	236660	5	3.7	380	30	20	25	30	11	25
	236610	5	3.7	460	25	15	20	25	10	20
	236620	5	3.7	575	20	15	15	20	8	20
	236651	7 1/2	5.5	200	80	45	70	80	35	70
	236601	7 1/2	5.5	230	70	40	60	70	30	60
	236661	7 1/2	5.5	380	45	25	35	40	20	35
	236611	7 1/2	5.5	460	35	20	30	35	15	30
	236621	7 1/2	5.5	575	30	20	25	25	11	25
	236652	10	7.5	200	100	60	90	100	45	90
	236602	10	7.5	230	90	60	80	90	40	80
	236662	10	7.5	380	60	35	45	50	25	45
236612	10	7.5	460	45	30	40	45	20	40	
236622	10	7.5	575	35	25	30	35	15	30	

Type	Motor Model Prefix	Rating			Circuit Breakers or Fuse Amps			Circuit Breakers or Fuse Amps		
					(Maximum per NEC)			Typical Submersible		
		HP	KW	Volts	Nontime Delay (Std.) Fuse	Dual Element Time Delay Fuse	Inverse Time Breaker	Nontime Delay (Std.) Fuse	Dual Element Time Delay Fuse	Inverse Time Breaker
6 Inch	236653	15	11	200	150	90	125	150	60	125
	236603	15	11	230	150	80	110	125	60	110
	236663	15	11	380	80	45	70	80	35	70
	236613	15	11	460	70	40	60	60	30	60
	236623	15	11	575	60	30	45	50	25	45
	236654	20	15	200	200	110	175	175	80	175
	236604	20	15	230	175	100	150	175	70	150
	236664	20	15	380	100	60	90	100	45	90
	236614	20	15	460	90	50	70	80	35	70
	236624	20	15	575	70	40	60	70	30	60
	236655	25	18.5	200	250	150	200	225	100	200
	236605	25	18.5	230	225	125	175	200	90	175
	236665	25	18.5	380	125	80	110	125	50	110
	236615	25	18.5	460	110	60	90	100	45	90
	236625	25	18.5	575	90	50	70	80	35	70
	236656	30	22	200	300	175	250	300	125	250
	236606	30	22	230	250	150	225	250	100	200
	236666	30	22	380	150	90	125	150	60	125
	236616	30	22	460	125	80	110	125	50	100
	236626	30	22	575	100	60	90	100	40	80
	236667	40	30	380	200	125	175	200	90	175
	236617	40	30	460	175	100	150	175	70	150
	236627	40	30	575	150	80	110	125	60	110
	236668	50	37	380	250	150	225	250	110	225
	236618	50	37	460	225	125	175	200	90	175
	236628	50	37	575	175	100	150	175	70	150
236669	60	45	380	300	175	250	300	125	250	
236619	60	45	460	250	150	225	250	100	225	
236629	60	45	575	200	125	175	200	80	175	
8 Inch	239660	40	30	380	200	125	175	200	80	175
	239600	40	30	460	175	100	150	175	70	150
	239610	40	30	575	150	80	110	125	60	110
	239661	50	37	380	250	150	200	225	100	200
	239601	50	37	460	200	125	175	200	80	175
	239611	50	37	575	175	90	150	150	70	150
	239662	60	45	380	300	175	250	300	125	250
	239602	60	45	460	250	150	200	225	100	200
	239612	60	45	575	200	110	175	175	80	175
	239663	75	55	380	350	200	300	350	150	300
	239603	75	55	460	300	175	250	300	125	250
	239613	75	55	575	250	150	200	225	100	200
	239664	100	75	380	500	300	400	450	200	400
	239604	100	75	460	400	225	350	400	175	350
	239614	100	75	575	350	200	300	300	125	300
	239165	125	90	380	700	400	600	600	250	600
	239105	125	90	460	500	300	450	500	225	450
	239115	125	90	575	450	250	350	400	175	350
	239166	150	110	380	800	450	600	700	300	600
	239106	150	110	460	600	350	500	600	250	500
	239116	150	110	575	500	300	400	450	200	400
	239167	175	130	380	800	500	700	800	350	700
	239107	175	130	460	700	400	600	700	300	600
	239117	175	130	575	600	350	450	600	225	450
	239168	200	150	380	1000	600	800	1000	400	800
	239108	200	150	460	800	450	700	800	350	700
239118	200	150	575	600	350	500	600	250	500	

Type	Motor Model Prefix	Rating			Circuit Breakers or Fuse Amps			Circuit Breakers or Fuse Amps		
					(Maximum per NEC)			Typical Submersible		
		HP	KW	Volts	Nontime Delay (Std.) Fuse	Dual Element Time Delay Fuse	Inverse Time Breaker	Nontime Delay (Std.) Fuse	Dual Element Time Delay Fuse	Inverse Time Breaker
4 Inch 2 - Wire	244502	1/3	0.25	115	25	15	20	25	10	20
	244503	1/3	0.25	230	15	8	15	12	5	15
	244504	1/2	0.37	115	35	20	30	30	15	30
	244505	1/2	0.37	230	20	10	15	15	8	15
	244507	3/4	0.55	230	25	15	20	20	10	20
	244508	1	0.75	230	30	20	25	25	11	25
	244309	1 1/2	1.10	230	35	20	30	35	15	30
4 Inch 3 - Wire	214502	1/3	0.25	115	25	15	20	25	10	20
	214503	1/3	0.25	230	15	8	15	12	5	15
	214504	1/2	0.37	115	35	20	30	30	15	30
	214505	1/2	0.37	230	20	10	15	15	8	15
	214507	3/4	0.55	230	25	15	20	20	10	20
	214508	1	0.75	230	30	20	25	25	11	25
4-Inch 3-Wire W-Run Cap	224300	1 1/2	1.1	230	35	20	30	30	15	30
	224301	2	1.5	230	30	20	25	30	15	25
	224302	3	2.2	230	45	30	40	45	20	40
	224303	5	3.7	230	80	45	60	70	30	60
6 Inch	226110	5	3.7	230	80	45	60	70	30	60
	226111	7 1/2	5.5	230	125	70	100	110	50	100
	226112	10	7.5	230	150	80	125	150	60	125
	226113	15	11	230	200	125	175	200	90	175

Addendum to Table 13 - Page 13 of AIM Manual
Single Phase - 60 Hz - 3450 RPM



Have you heard about **Franklin Tech**, Franklin's newest hands-on motor workshop? If you did not receive your **Franklin Tech** brochure in the mail, visit our website at

www.franklin-electric.com,

or call the **Submersible Service Hotline** at

800-348-2420

to learn more about this exciting new training opportunity!