

Drive, Fuse & Circuit Breaker Ratings

The tables on the following pages provide drive ratings (including continuous, 1 minute and 3 second) and recommended AC line input fuse and circuit breaker information. Both types of short circuit protection are acceptable for UL and IEC requirements. Sizes listed are the recommended sizes based on 40 degree C and the U.S. N.E.C. Other country, state or local codes may require different ratings.

Fusing

If fuses are chosen as the desired protection method, refer to the recommended types listed below. If available amp ratings do not match the tables provided, the closest fuse rating that exceeds the drive rating should be chosen.

- IEC – BS88 (British Standard) Parts 1 & 2⁽¹⁾, EN60269-1, Parts 1 & 2, type gG or equivalent should be used.
- UL – UL Class CC, T, RK1 or J must be used.

Circuit Breakers

The “non-fuse” listings in the following tables include both circuit breakers (inverse time or instantaneous trip) and 140M Self-Protecting Motor Starters. **If one of these is chosen as the desired protection method**, the following requirements apply.

- IEC and UL – Both types of devices are acceptable for IEC and UL installations.

⁽¹⁾ Typical designations include, but may not be limited to the following; Parts 1 & 2: AC, AD, BC, BD, CD, DD, ED, EFS, EF, FF, FG, GF, GG, GH.

Table A 208 Volt AC Input Protection Devices (See [page 7](#) for Notes)

Drive Catalog Number	Frame		HP Rating	PWM Freq.	Temp.	Input Ratings			Output Amps			Dual Element Time Delay Fuse		Non-Time Delay Fuse		Circuit Breaker ⁽³⁾	Motor Circuit Protector ⁽⁴⁾	140M Motor Starter with Adjustable Current Range ^{(5)/(6)}			
	ND	HD				kHz	°C	Amps	kVA	Cont.	1 Min.	3 Sec.	Min. ⁽¹⁾	Max. ⁽²⁾	Min. ⁽¹⁾			Max. ⁽²⁾	Max. ⁽⁸⁾	Max. ⁽⁸⁾	Available Catalog Numbers - 140 . . . ⁽⁷⁾
208 Volt AC Input																					
20BB2P2	0	0.5	0.33	4	50	1.9	0.7	2.5	2.8	3.8	3	6	3	10	15	3	M-C2E-B25	M-D8E-B25	-	-	
20BB4P2	0	1	0.75	4	50	3.7	1.3	4.8	5.6	7.0	6	10	6	17.5	15	7	M-C2E-B63	M-D8E-B63	-	-	
20BB6P8	1	2	1.5	4	50	6.8	2.4	7.8	10.4	13.8	10	15	10	30	30	15	M-C2E-C10	M-D8E-C10	M-F8E-C10	-	
20BB9P6	1	3	2	4	50	9.5	3.4	11	12.1	17	12	20	12	40	40	15	M-C2E-C16	M-D8E-C16	M-F8E-C16	-	
20BB015	1	5	3	4	50	15.7	5.7	17.5	19.3	26.3	20	35	20	70	70	30	M-C2E-C20	M-D8E-C20	M-F8E-C20	-	
20BB022	1	7.5	5	4	50	23.0	8.3	25.3	27.8	38	30	50	30	100	100	30	M-C2E-C25	M-D8E-C25	M-F8E-C25	-CMN-2500	
20BB028	2	10	7.5	4	50	29.6	10.7	32.2	38	50.6	40	70	40	125	125	50	-	-	M-F8E-C32	-CMN-4000	
20BB042	3	15	10	4	50	44.5	16.0	48.3	53.1	72.5	60	100	60	175	175	70	-	-	M-F8E-C45	-CMN-6300	
20BB052	3	20	15	4	50	51.5	17.1	56	64	86	80	125	80	200	200	100	-	-	-	-CMN-6300	
20BB070	4	25	20	4	50	72	25.9	78.2	93	124	90	175	90	300	300	100	-	-	-	-CMN-9000	
20BB080	4	30	25	4	50	84.7	30.5	92	117	156	110	200	110	350	350	150	-	-	-	-CMN-9000	
20BB104	5	40	-	4	50	113	40.7	120	132	175	150	250	150	475	350	150	-	-	-	-	
		-	30	4	50	84.7	30.5	92	138	175	125	200	125	350	300	150	-	-	-	-CMN-9000	
20BB130	5	50	-	4	50	141	44.1	130	143	175	175	275	175	500	375	250	-	-	-	-	
		-	40	4	50	113	35.3	104	156	175	125	225	125	400	300	150	-	-	-	-	
20BB154	6	60	-	4	50	167	60.1	177	195	266	225	350	225	500	500	250	-	-	-	-	
		-	50	4	50	141	50.9	150	225	300	200	300	200	500	450	250	-	-	-	-	
20BB192	6	75	-	4	50	208	75.0	221	243	308	300	450	300	600	600	400	-	-	-	-	
		-	60	4	50	167	60.1	177	266	308	225	350	225	500	500	250	-	-	-	-	
20BB260	6	100	-	2	45	255	91.9	260	286	390	250	450	250	600	600	400	-	-	-	-	
		-	75	2	50	199	71.7	205	305	410	350	550	350	750	750	400	-	-	-	-	

Table B 240 Volt AC Input Protection Devices (See [page 7](#) for Notes)

Drive Catalog Number	Frame	HP Rating		PWM Freq.	Temp. °C	Input Ratings		Output Amps			Dual Element Time Delay Fuse		Non-Time Delay Fuse		Circuit Breaker ⁽³⁾	Motor Circuit Protector ⁽⁴⁾	140M Motor Starter with Adjustable Current Range ^{(5)/(6)}			
		ND	HD	kHz		Amps	kVA	Cont.	1 Min.	3 Sec.	Min. ⁽¹⁾	Max. ⁽²⁾	Min. ⁽¹⁾	Max. ⁽²⁾			Max. ⁽⁸⁾	Max. ⁽⁸⁾	Available Catalog Numbers - 140 . . . ⁽⁷⁾	
240 Volt AC Input																				
20BB2P2	0	0.5	0.33	4	50	1.7	0.7	2.2	2.4	3.3	3	6	3	10	15	3	M-C2E-B25	M-D8E-B25	-	-
20BB4P2	0	1	0.75	4	50	3.3	1.4	4.2	4.8	6.4	5	8	5	15	15	7	M-C2E-B63	M-D8E-B63	-	-
20BB6P8	1	2	1.5	4	50	5.9	2.4	6.8	9	12	10	15	10	25	25	15	M-C2E-C10	M-D8E-C10	M-F8E-C10	-
20BB9P6	1	3	2	4	50	8.3	3.4	9.6	10.6	14.4	12	20	12	35	35	15	M-C2E-C10	M-D8E-C10	M-F8E-C10	-
20BB015	1	5	3	4	50	13.7	5.7	15.3	16.8	23	20	30	20	60	60	30	M-C2E-C16	M-D8E-C16	M-F8E-C16	-
20BB022	1	7.5	5	4	50	19.9	8.3	22	24.2	33	25	50	25	80	80	30	M-C2E-C25	M-D8E-C25	M-F8E-C25	-CMN-2500
20BB028	2	10	7.5	4	50	25.7	10.7	28	33	44	35	60	35	100	100	50	-	-	M-F8E-C32	-CMN-4000
20BB042	3	15	10	4	50	38.5	16.0	42	46.2	63	50	90	50	150	150	50	-	-	M-F8E-C45	-CMN-6300
20BB052	3	20	15	4	50	47.7	19.8	52	63	80	60	100	60	200	200	100	-	-	-	-CMN-6300
20BB070	4	25	20	4	50	64.2	26.7	70	78	105	90	150	90	275	275	100	-	-	-	-CMN-9000
20BB080	4	30	25	4	50	73.2	30.5	80	105	140	100	180	100	300	300	100	-	-	-	-CMN-9000
20BB104	5	40	-	4	50	98	40.6	104	115	175	125	225	125	400	300	150	-	-	-	-
		-	30	4	50	73	30.5	80	120	160	100	175	100	300	300	100	-	-	-	-CMN-9000
20BB130	5	50	-	4	50	122	50.7	130	143	175	175	275	175	500	375	250	-	-	-	-
		-	40	4	50	98	40.6	104	156	175	125	225	125	400	300	150	-	-	-	-
20BB154	6	60	-	4	50	145	60.1	154	169	231	200	300	200	600	450	250	-	-	-	-
		-	50	4	50	122	50.7	130	195	260	175	275	175	500	375	250	-	-	-	-
20BB192	6	75	-	4	50	180	74.9	192	211	288	225	400	225	600	575	250	-	-	-	-
		-	60	4	50	145	60.1	154	231	308	200	300	200	600	450	250	-	-	-	-
20BB260	6	100	-	2	45	233	96.7	260	286	390	250	450	250	600	600	400	-	-	-	-
		-	75	2	50	169	70.1	205	305	410	350	550	350	750	750	400	-	-	-	-

Table C 400 Volt AC Input Protection Devices (See [page 7](#) for Notes)

Drive Catalog Number	Frame	kW Rating		PWM Freq. kHz	Temp. °C	Input Ratings		Output Amps			Dual Element Time Delay Fuse		Non-Time Delay Fuse		Circuit Breaker ⁽³⁾	Motor Circuit Protector ⁽⁴⁾	140M Motor Starter with Adjustable Current Range ⁽⁵⁾⁽⁶⁾			
		ND	HD			Amps	kVA	Cont.	1 Min.	3 Sec.	Min. ⁽¹⁾	Max. ⁽²⁾	Min. ⁽¹⁾	Max. ⁽²⁾			Max. ⁽⁸⁾	Max. ⁽⁸⁾	Available Catalog Numbers - 140... ⁽⁷⁾	
400 Volt AC Input																				
20BC1P3	0	0.37	0.25	4	50	1.1	0.77	1.3	1.4	1.9	3	3	3	6	15	3	M-C2E-B16	-	-	-
20BC2P1	0	0.75	0.55	4	50	1.8	1.3	2.1	2.4	3.2	3	6	3	8	15	3	M-C2E-B25	M-D8E-B25	-	-
20BC3P5	0	1.5	0.75	4	50	3.2	2.2	3.5	4.5	6.0	6	7	6	12	15	7	M-C2E-B40	M-D8E-B40	-	-
20BC5P0	0	2.2	1.5	4	50	4.6	3.2	5.0	5.5	7.5	6	10	6	20	20	7	M-C2E-B63	M-D8E-B63	-	-
20BC8P7	0	4	2.2	4	50	7.9	5.5	8.7	9.9	13.2	15	17.5	15	30	30	15	M-C2E-C10	M-D8E-C10	M-F8E-C10	-
20BC011	0	5.5	4	4	50	10.8	7.5	11.5	13	17.4	15	25	15	45	45	15	M-C2E-C16	M-D8E-C16	M-F8E-C16	-
20BC015	1	7.5	5.5	4	50	14.4	10.0	15.4	17.2	23.1	20	30	20	60	60	20	M-C2E-C20	M-D8E-C20	M-F8E-C20	-
20BC022	1	11	7.5	4	50	20.6	14.3	22	24.2	33	30	45	30	80	80	30	M-C2E-C25	M-D8E-C25	M-F8E-C25	-
20BC030	2	15	11	4	50	28.4	19.7	30	33	45	35	60	35	120	120	50	-	-	M-F8E-C32	-
20BC037	2	18.5	15	4	50	35.0	24.3	37	45	60	45	80	45	125	125	50	-	-	M-F8E-C45	-
20BC043	3	22	18.5	4	50	40.7	28.2	43	56	74	60	90	60	150	150	60	-	-	-	-
20BC056	3	30	22	4	50	53	36.7	56	64	86	70	125	70	200	200	100	-	-	-	-
20BC072	3	37	30	4	50	68.9	47.8	72	84	112	90	150	90	250	250	100	-	-	-	-
20BC085	4	45	-	4	45	81.4	56.4	85	94	128	110	200	110	300	300	150	-	-	-	-
		-	37	4	45	68.9	47.8	72	108	144	90	175	90	275	300	100	-	-	-	-
20BC105	5	55	-	4	50 ⁽⁹⁾	100.5	69.6	105	116	158	125	225	125	400	300	150	-	-	-	-
		-	45	4	50 ⁽⁹⁾	81.4	56.4	85	128	170	110	175	110	300	300	150	-	-	-	-
20BC125	5	55	-	4	50 ⁽⁹⁾	121.1	83.9	125	138	163	150	275	150	500	375	250	-	-	-	-
		-	45	4	50 ⁽⁹⁾	91.9	63.7	96	144	168	125	200	125	375	375	150	-	-	-	-
20BC140	5	75	-	4	40 ⁽⁹⁾	136	93.9	140	154	190	200	300	200	400	400	250	-	-	-	-
		-	55	4	40 ⁽⁹⁾	101	69.6	105	157	190	150	225	150	300	300	150	-	-	-	-
20BC170	6	90	-	4	50 ⁽⁹⁾	164	126	170	187	255	250	375	250	600	500	250	-	-	-	-
		-	75	4	50 ⁽⁹⁾	136	103	140	210	280	200	300	200	550	400	250	-	-	-	-
20BC205	6	110	-	4	40 ⁽⁹⁾	199	148	205	220	289	250	450	250	600	600	400	-	-	-	-
		-	90	4	40 ⁽⁹⁾	164	126	170	255	313	250	375	250	600	500	250	-	-	-	-
20BC260	6	132	-	2	45 ⁽⁹⁾	255	177	260	286	390	350	550	350	750	750	400	-	-	-	-
		-	110	2	50 ⁽⁹⁾	199	138	205	308	410	250	450	250	600	600	400	-	-	-	-

Table D 480 Volt AC Input Protection Devices (See [page 7](#) for Notes)

Drive Catalog Number	Frame	HP Rating		PWM Freq.	Temp.	Input Ratings		Output Amps			Dual Element Time Delay Fuse		Non-Time Delay Fuse		Circuit Breaker ⁽³⁾	Motor Circuit Protector ⁽⁴⁾	140M Motor Starter with Adjustable Current Range ⁽⁵⁾⁽⁶⁾			
		ND	HD	kHz	°C	Amps	kVA	Cont.	1 Min.	3 Sec.	Min. ⁽¹⁾	Max. ⁽²⁾	Min. ⁽¹⁾	Max. ⁽²⁾	Max. ⁽⁸⁾	Max. ⁽⁶⁾	Available Catalog Numbers - 140 . . . ⁽⁷⁾			
480 Volt AC Input																				
20BD1P1	0	0.5	0.33	4	50	0.9	0.7	1.1	1.2	1.6	3	3	3	6	15	3	M-C2E-B16	-	-	-
20BD2P1	0	1	0.75	4	50	1.6	1.4	2.1	2.4	3.2	3	6	3	8	15	3	M-C2E-B25	-	-	-
20BD3P4	0	2	1.5	4	50	2.6	2.2	3.4	4.5	6.0	4	8	4	12	15	7	M-C2E-B40	M-D8E-B40	-	-
20BD5P0	0	3	2	4	50	3.9	3.2	5.0	5.5	7.5	6	10	6	20	20	7	M-C2E-B63	M-D8E-B63	-	-
20BD8P0	0	5	3	4	50	6.9	5.7	8.0	8.8	12	10	15	10	30	30	15	M-C2E-C10	M-D8E-C10	M-F8E-C10	-
20BD011	0	7.5	5	4	50	9.5	7.9	11	12.1	16.5	15	20	15	40	40	15	M-C2E-C16	M-D8E-C16	M-F8E-C16	-
20BD014	1	10	7.5	4	50	12.5	10.4	14	16.5	22	17.5	30	17.5	50	50	20	M-C2E-C16	M-D8E-C16	M-F8E-C16	-
20BD022	1	15	10	4	50	19.9	16.6	22	24.2	33	25	50	25	80	80	30	M-C2E-C25	M-D8E-C25	M-F8E-C25	-CMN-2500
20BD027	2	20	15	4	50	24.8	20.6	27	33	44	35	60	35	100	100	50	-	-	M-F8E-C32	-CMN-4000
20BD034	2	25	20	4	50	31.2	25.9	34	40.5	54	40	70	40	125	125	50	-	-	M-F8E-C45	-CMN-4000
20BD040	3	30	25	4	50	36.7	30.5	40	51	68	50	90	50	150	150	50	-	-	M-F8E-C45	-CMN-4000
20BD052	3	40	30	4	50	47.7	39.7	52	60	80	60	110	60	200	200	70	-	-	-	-CMN-6300
20BD065	3	50	40	4	50	59.6	49.6	65	78	104	80	125	80	250	250	100	-	-	-	-CMN-9000
20BD077	4	60	-	4	50	72.3	60.1	77	85	116	100	170	100	300	300	100	-	-	-	-CMN-9000
		-	50	4	50	59.6	49.6	65	98	130	80	125	80	250	250	100	-	-	-	-CMN-9000
20BD096	5	75	-	4	50 ⁽⁹⁾	90.1	74.9	96	106	144	125	200	125	350	350	125	-	-	-	-
		-	60	4	50 ⁽⁹⁾	72.3	60.1	77	116	154	100	170	100	300	300	100	-	-	-	-CMN-9000
20BD125	5	100	-	4	50 ⁽⁹⁾	117	97.6	125	138	163	150	250	150	500	375	150	-	-	-	-
		-	75	4	50 ⁽⁹⁾	90.1	74.9	96	144	168	125	200	125	350	350	125	-	-	-	-
20BD156	6	125	-	4	50 ⁽⁹⁾	147	122	156	172	234	200	350	200	600	450	250	-	-	-	-
		-	100	4	50 ⁽⁹⁾	131	109	125	188	250	175	250	175	500	375	250	-	-	-	-
20BD180	6	150	-	4	50 ⁽⁹⁾	169	141	180	198	270	225	400	225	600	500	250	-	-	-	-
		-	125	4	50 ⁽⁹⁾	147	122	156	234	312	200	350	200	600	450	250	-	-	-	-
20BD248	6	200	-	2	45 ⁽⁹⁾	233	194	248	273	372	300	550	300	700	700	400	-	-	-	-
		-	150	2	50 ⁽⁹⁾	169	141	180	270	360	225	400	225	600	500	250	-	-	-	-

Table E 600 Volt AC Input Protection Devices (See page 7 for Notes)

Drive Catalog Number	Frame	HP Rating		PWM Freq. kHz	Temp. °C	Input Ratings			Output Amps			Dual Element Time Delay Fuse		Non-Time Delay Fuse		Circuit Breaker ⁽³⁾	Motor Circuit Protector ⁽⁴⁾	140M Motor Starter with Adjustable Current Range ⁽⁵⁾⁽⁶⁾			
		ND	HD			Amps	kVA	Cont.	1 Min.	3 Sec.	Min. ⁽¹⁾	Max. ⁽²⁾	Min. ⁽¹⁾	Max. ⁽²⁾	Max. ⁽⁸⁾			Max. ⁽⁸⁾	Available Catalog Numbers - 140 . . . ⁽⁷⁾		
600 Volt AC Input																					
20BE1P7	0	1	0.5	4	50	1.3	1.4	1.7	2	2.6	2	4	2	6	15	3		M-C2E-B16	-	-	-
20BE2P7	0	2	1	4	50	2.1	2.1	2.7	3.6	4.8	3	6	3	10	15	3		M-C2E-B25	-	-	-
20BE3P9	0	3	2	4	50	3.0	3.1	3.9	4.3	5.9	6	9	6	15	15	7		M-C2E-B40	M-D8E-B40	-	-
20BE6P1	0	5	3	4	50	5.3	5.5	6.1	6.7	9.2	9	12	9	20	20	15		M-C2E-B63	M-D8E-B63	-	-
20BE9P0	0	7.5	5	4	50	7.8	8.1	9	9.9	13.5	10	20	10	35	30	15		M-C2E-C10	M-D8E-C10		M-F8E-C10
20BE011	1	10	7.5	4	50	9.9	10.2	11	13.5	18	15	25	15	40	40	15		M-C2E-C10	M-D8E-C10	M-F8E-C10	-
20BE017	1	15	10	4	50	15.4	16.0	17	18.7	25.5	20	40	20	60	50	20		M-C2E-C16	M-D8E-C16	M-F8E-C16	-
20BE022	2	20	15	4	50	20.2	21.0	22	25.5	34	30	50	30	80	80	30		M-C2E-C25	M-D8E-C25	M-F8E-C25	-CMN-2500
20BE027	2	25	20	4	50	24.8	25.7	27	33	44	35	60	35	100	100	50		-	-	M-F8E-C25	-CMN-2500
20BE032	3	30	25	4	50	29.4	30.5	32	40.5	54	40	70	40	125	125	50		-	-	M-F8E-C32	-CMN-4000
20BE041	3	40	30	4	50	37.6	39.1	41	48	64	50	90	50	150	150	100		-	-	M-F8E-C45	-CMN-4000
20BE052	3	50	40	4	50	47.7	49.6	52	61.5	82	60	110	60	200	200	100		-	-	-	-CMN-6300
20BE062	4	60	50	2	50	58.2	60.5	62	78	104	80	125	80	225	225	100		-	-	-	-CMN-6300
20BE077	5	75	-	2	50 ⁽⁹⁾	72.3	75.1	77	85	116	90	150	90	300	300	100		-	-	-	-CMN-9000
					60	2	50 ⁽⁹⁾	58.2	60.5	63	94	126	90	125	90	250	250	100		-	-
20BE099	5	100	-	2	40 ⁽⁹⁾	92.9	96.6	99	109	126	125	200	125	375	375	150		-	-	-	-
					75	2	40 ⁽⁹⁾	72.3	75.1	77	116	138	100	175	100	300	300	100		-	-
20BE125	6	125	-	2	50 ⁽⁹⁾	117	122	125	138	188	150	250	150	375	375	250		-	-	-	-
					100	2	50 ⁽⁹⁾	93	96.6	99	149	198	125	200	125	375	375	150		-	-
20BE144	6	150	-	2	50 ⁽⁹⁾	135	141	144	158	216	175	300	175	400	400	250		-	-	-	-
					125	2	50 ⁽⁹⁾	117	122	125	188	250	150	275	150	375	375	250		-	-

Table F 690 Volt AC Input Protection Devices

Drive Catalog Number	Frame	kW Rating		PWM Freq.	Temp.	Input Ratings		Output Amps			Dual Element Time Delay Fuse		Non-Time Delay Fuse		Circuit Breaker ⁽³⁾	Motor Circuit Protector ⁽⁴⁾
		ND	HD	kHz	°C	Amps	kVA	Cont.	1 Min.	3 Sec.	Min. ⁽¹⁾	Max. ⁽²⁾	Min. ⁽¹⁾	Max. ⁽²⁾	Max. ⁽⁸⁾	Max. ⁽⁸⁾
690 Volt AC Input																
20BF052	5	45	–	4	50 ⁽⁹⁾	46.9	56.1	52	57	78	60	110	60	175	175	–
		–	37.5	4	50 ⁽⁹⁾	40.1	48.0	46	69	92	50	90	50	150	150	–
20BF060	5	55	–	4	50 ⁽⁹⁾	57.7	68.9	60	66	90	80	125	80	225	225	–
		–	45	4	50 ⁽⁹⁾	46.9	56.1	52	78	104	60	110	60	175	175	–
20BF082	5	75	–	2	50 ⁽⁹⁾	79.0	94.4	82	90	123	100	200	100	375	375	–
		–	55	2	50 ⁽⁹⁾	57.7	68.9	60	90	120	80	125	80	225	225	–
20BF098	5	90	–	2	40 ⁽⁹⁾	94.7	113	98	108	127	125	200	125	375	375	–
		–	75	2	40 ⁽⁹⁾	79.0	94.4	82	123	140	100	200	100	375	375	–
20BF119	6	110	–	2	50 ⁽⁹⁾	115	137	119	131	179	150	250	150	400	–	–
		–	90	2	50 ⁽⁹⁾	94.7	113	98	147	196	125	200	125	375	–	–
20BF142	6	132	–	2	50 ⁽⁹⁾	138	165	142	156	213	175	300	175	450	–	–
		–	110	2	50 ⁽⁹⁾	115	137	119	179	238	150	250	150	400	–	–

Notes:

- (1) Minimum protection device size is the lowest rated device that supplies maximum protection without nuisance tripping.
- (2) Maximum protection device size is the highest rated device that supplies drive protection. For US NEC, minimum size is 125% of motor FLA. Ratings shown are maximum.
- (3) Circuit Breaker - inverse time breaker. For US NEC, minimum size is 125% of motor FLA. Ratings shown are maximum.
- (4) Motor Circuit Protector - instantaneous trip circuit breaker. For US NEC minimum size is 125% of motor FLA. Ratings shown are maximum.
- (5) Bulletin 140M with adjustable current range should have the current trip set to the minimum range that the device will not trip.
- (6) Manual Self-Protected (Type E) Combination Motor Controller, UL listed for 208 Wye or Delta, 240 Wye or Delta, 480Y/277 or 600Y/347. Not UL listed for use on 480V or 600V Delta/Delta systems.
- (7) The AIC ratings of the Bulletin 140M Motor Protector may vary. See publication 140M-SG001B-EN-P.
- (8) Maximum allowable rating by US NEC. Exact size must be chosen for each installation.

Table G 540 Volt DC Input Protection Devices

Drive Catalog Number	Frame	kW Rating		DC Input Ratings		Output Amps			Fuse	Bussmann Style Fuse
		ND	HD	Amps	kW	Cont.	1 Min.	3 Sec.		
540 Volt DC Input										
20BC1P3	1	0.37	0.25	1.3	0.7	1.3	1.4	1.9	3	BUSSMANN_JKS-3
20BC2P1	1	0.75	0.55	2.1	1.1	2.1	2.4	3.2	6	BUSSMANN_JKS-6
20BC3P5	1	1.5	0.75	3.7	2.0	3.5	4.5	6.0	8	BUSSMANN_JKS-8
20BC5P0	1	2.2	1.5	5.3	2.9	5.0	5.5	7.5	10	BUSSMANN_JKS-10
20BC8P7	1	4	3.0	9.3	5.0	8.7	9.9	13.2	20	BUSSMANN_JKS-20
20BC011	1	5.5	4	12.6	6.8	11.5	13	17.4	25	BUSSMANN_JKS-25
20BC015	1	7.5	5.5	16.8	9.1	15.4	17.2	23.1	30	BUSSMANN_JKS-30
20BC022	1	11	7.5	24	13	22	24.2	33	45	BUSSMANN_JKS-45
20BC030	2	15	11	33.2	17.9	30	33	45	60	BUSSMANN_JKS-60
20BC037	2	18.5	15	40.9	22.1	37	45	60	80	BUSSMANN_JKS-80
20BC043	3	22	18.5	47.5	25.7	43	56	74	90	BUSSMANN_JKS-90
20BC056	3	30	22	61.9	33.4	56	64	86	110	BUSSMANN_JKS-110
20BC072	3	37	30	80.5	43.5	72	84	112	150	BUSSMANN_JKS-150
20BC085	4	45	–	95.1	51.3	85	94	128	200	BUSSMANN_JKS-200
		–	37	80.5	43.5	72	108	144	150	BUSSMANN_JKS-150
20BH105 ⁽¹⁾	5	55	–	117.4	63.4	105	116	158	200	BUSSMANN_JKS-200
		–	45	95.1	51.3	85	128	170	200	BUSSMANN_JKS-200
20BH125 ⁽¹⁾	5	55	–	139.8	75.5	125	138	163	225	BUSSMANN_JKS-225
		–	45	91.9	63.7	96	144	168	150	
20BH140 ⁽¹⁾	6	75	–	158.4	85.6	140	154	190	300	BUSSMANN_JKS-300
		–	55	117.4	63.4	105	158	190	200	BUSSMANN_JKS-200
20BH170 ⁽¹⁾	6	90	–	192.4	103.9	170	187	255	350	BUSSMANN_JKS-350
		–	75	158.4	85.6	140	210	280	300	BUSSMANN_JKS-300
20BH205 ⁽¹⁾	6	110	–	232	125.3	205	220	289	400	BUSSMANN_JKS-400
		–	90	192.4	103.9	170	255	313	350	BUSSMANN_JKS-350

⁽¹⁾ Also applies to "P" voltage class.

Table H 650 Volt DC Input Protection Devices

Drive Catalog Number	Frame	kW Rating		DC Input Ratings		Output Amps			Fuse	Busmann Style Fuse
		ND	HD	Amp s	kW	Cont.	1 Min.	3 Sec.		
650 Volt DC Input										
20BD1P1	0	0.5	0.33	1.0	0.6	1.1	1.2	1.6	6	BUSSMANN_JKS-6
20BD2P1	0	1	0.75	1.9	1.2	2.1	2.4	3.2	6	BUSSMANN_JKS-6
20BD3P4	0	2	1.5	3.0	2.0	3.4	4.5	6.0	6	BUSSMANN_JKS-6
20BD5P0	0	3	2	4.5	2.9	5.0	5.5	7.5	10	BUSSMANN_JKS-10
20BD8P0	0	5	3	8.1	5.2	8.0	8.8	12	15	BUSSMANN_JKS-15
20BD011	0	7.5	5	11.1	7.2	11	12.1	16.5	20	BUSSMANN_JKS-20
20BD014	1	10	7.5	14.7	9.5	14	16.5	22	30	BUSSMANN_JKS-30
20BD022	1	15	10	23.3	15.1	22	24.2	33	45	BUSSMANN_JKS-45
20BD027	2	20	15	28.9	18.8	27	33	44	60	BUSSMANN_JKS-60
20BD034	2	25	20	36.4	23.6	34	40.5	54	70	BUSSMANN_JKS-70
20BD040	3	30	25	42.9	27.8	40	51	68	80	BUSSMANN_JKS-80
20BD052	3	40	30	55.7	36.1	52	60	80	100	BUSSMANN_JKS-100
20BD065	3	50	40	69.7	45.4	65	78	104	150	BUSSMANN_JKS-150
20BD077	4	60	–	84.5	54.7	77	85	116	150	BUSSMANN_JKS-150
		–	50	67.9	45.4	65	98	130	150	BUSSMANN_JKS-150
20BR096 ⁽¹⁾	5	75	–	105.3	68.3	96	106	144	200	BUSSMANN_JKS-200
		–	60	84.5	54.7	77	116	154	150	BUSSMANN_JKS-150
20BR125 ⁽¹⁾	5	100	–	137.1	88.9	125	138	163	250	BUSSMANN_JKS-250
		–	75	105.3	68.3	96	144	168	200	BUSSMANN_JKS-200
20BR156 ⁽¹⁾	6	125	–	171.2	110.9	156	172	234	300	BUSSMANN_JKS-300
		–	100	137.1	88.9	125	188	250	250	BUSSMANN_JKS-250
20BR180 ⁽¹⁾	6	150	–	204.1	132.2	180	198	270	400	BUSSMANN_JKS-400
		–	125	171.2	110.9	156	234	312	300	BUSSMANN_JKS-300

⁽¹⁾ Also applies to “J” voltage class.