

**400V AC and 480V AC**

Cat. No.	Light Duty kW Output	Normal Duty kW Output	Heavy Duty kW Output	Cat. No.	Light Duty Hp Output	Normal Duty Hp Output	Heavy Duty Hp Output	Enclosure Code/Frame Size						
								B, J, L, T	F	G	N	K, P, W, Y	R	
<b>400 Volt</b>				<b>480 Volt</b>										
20x...C2P1	–	0.75 (0.75) <sup>(1)</sup>	0.75 (0.37) <sup>(1)</sup>	20x...D2P1	–	1 (1) <sup>(1)</sup>	1 (0.5) <sup>(1)</sup>							
20x...C3P5	–	1.5 (1.5) <sup>(1)</sup>	1.5 (0.75) <sup>(1)</sup>	20x...D3P4	–	2 (2) <sup>(1)</sup>	2 (1.5) <sup>(1)</sup>							
20x...C5P0	–	2.2 (2.2) <sup>(1)</sup>	2.2 (1.5) <sup>(1)</sup>	20x...D5P0	–	3 (3) <sup>(1)</sup>	3 (2) <sup>(1)</sup>							
20x...C8P7	–	4 (4) <sup>(1)</sup>	4 (2.2) <sup>(1)</sup>	20x...D8P0	–	5 (5) <sup>(1)</sup>	5 (3) <sup>(1)</sup>							
20x...C011	–	5.5 (5.5) <sup>(1)</sup>	5.5 (4) <sup>(1)</sup>	20x...D011	–	7.5 (7.5) <sup>(1)</sup>	7.5 (5) <sup>(1)</sup>							
20x...C015	–	7.5 (7.5) <sup>(1)</sup>	5.5 (5.5) <sup>(1)</sup>	20x...D014	–	10 (10) <sup>(1)</sup>	7.5 (7.5) <sup>(1)</sup>							
20x...C022	–	11	7.5	20x...D022	–	15	10							
20x...C030	–	15	11	20x...D027	–	20	15							
20x...C037	–	18.5	15	20x...D034	–	25	20							
20x...C043	–	22	18.5	20x...D040	–	30	25							
20x...C060	–	30	22	20x...D052	–	40	30	–						
20x...C072	–	37	30	20x...D065	–	50	40							
20x...C085	–	45	37	20x...D077	–	60	50							
20x...C104	–	55	45	20x...D096	–	75	60							
20x...C140	–	75	55	20x...D125	–	100	75							
20x...C170	–	90	75	20x...D156	–	125	100							
20x...C205	–	110	90	20x...D186	–	150	125							
20x...C260	–	132	110	20x...D248	–	200	150							
20x...C302	–	160	132	20x...D302	–	250	200							
20x...C367	–	200	160	20x...D361	–	300	250							
20x...C456	–	250	200	20x...D415	–	350	300							
2xG...C460	315	250	200	20x...D430	400	350	300	8	–	–	–	8		
2xG...C477	–	270	200	20x...D477	–	400	300	–	7 <sup>(2)</sup>	–	7	–		
2xG...C540	315	315	250	20x...D485	450	400	350							
2xG...C567	355	315	250	20x...D545	500	450	350							
2xG...C650	400	355	315	20x...D617	600	500	400	8					8	
2xG...C750	450	400	355	20x...D710	650	600	450							
2xG...C770	450	400	355	20x...D740	700	650	500							
2xG...C910	560	500	400	20x...D800	800	700	600							
2xG...C1K0	630	560	500	20x...D960	900	800	700		–	–	–			
2xG...C1K1	710	630	500	20x...D1K0	1000	900	750							
2xG...C1K2	800	710	560	20x...D1K2	1100	1000	800	9					9	
2xG...C1K4	850	800	630	20x...D1K3	1250	1100	900							
2xG...C1K5	900	850	710	20x...D1K4	1350	1250	1000							
2xG...C1K6	1000	900	710	20x...D1K5	1500	1350	1100							
2xG...C2K1	1400	1250	1000	20x...D2K0	2000	1750	1650	10					10	

(1) Ratings in parenthesis are only applicable for Frame 1.

(2) For Frames 6 and 7, a user-installed flange kit (catalog number 20-750-FLNG4-Fx) is available to convert a code N drive that provides a NEMA/UL Type 4X/12 back.

**480 Volt AC and 650 Volt DC Input Protection Devices – Wall Mount Frames 1...7 (continued)**

Applied Rating <sup>(1)</sup>	Cont. Output Amps	Drive Sized For Normal Duty						Drive Sized For Heavy Duty						Input Quantities						AC Input Protection Devices						DC Input Protection <sup>(14)</sup>			
		Cat. No.		Output Overload Amps		3 s		Cat. No.		Output Overload Amps		3 s		Continuous AC Input		Non-Time Delay Fuse		Circuit Breaker Max Size <sup>(5)</sup>		Circuit Breaker, Dual-element Time-delay Fuse		Motor Circuit Protector <sup>(7)</sup>		140M Type E Combination Motor Controller with Adjustable Current Range <sup>(8) (9)</sup>		Continuous DC Input		Non-Time Delay Fuse	
		(x = F or G)		1 Min		3 s		(x = F or G)		1 Min		3 s		kVA		Amps		Min <sup>(3)</sup> Max <sup>(4)</sup>		Min <sup>(3)</sup> Max <sup>(4)</sup>		Min Enclosure Volume (in. <sup>3</sup> ) <sup>(6)</sup>		Cat. No.		Min Enclosure Volume (in. <sup>3</sup> ) <sup>(13)</sup>		Amps	
		Frame <sup>(2)</sup>																											
<b>480 Volt AC Input</b>																													
300 Hp	7	361	20x...D361	397.1	541.5	20x...D415	541.5	649.8	281.8	338.9	475	800	475	1000	1000	1000	600										396.1	Bussman 170M6612	
350 Hp	7	415	20x...D415	456.5	622.5			649.8	281.8	338.9	475	800	475	1000	1000	1000	600									396.1	Bussman 170M6612		
400 Hp	7	477	20x...D477	524.7	715.5				323.9	389.6	525	900	525	1200	1200	1200	600									455.3	Bussman 170M6612		
									372.3	447.8	600	1000	600	1400	1400	1400	600									523.3	Bussman 170M6613		

- (1) Applied rating refers to the motor that is connected to the drive. For example, a D022 drive can be used in Normal Duty mode on a 15 Hp motor, or in Heavy Duty mode on a 10 Hp motor. A D014 drive can be used in Heavy Duty mode on a 7.5 Hp motor with the same ratings as a D011. The drive can be programmed for either mode. Wiring and fuses can be sized based on the programmed mode. For any given drive catalog number, Normal Duty mode provides higher continuous current but smaller overload current when compared to Heavy Duty mode. See parameter 306 [Duty Rating].
- (2) Only enclosure codes F, N, and R. See Drive Rating Cross-reference in PowerFlex 750-Series AC Drives Installation Instructions, publication [750-IN001](#), for frame sizes of other enclosure types.
- (3) Minimum protection device size is the lowest rated device that supplies maximum protection without nuisance tripping.
- (4) Maximum protection device size is the highest rated device that supplies drive protection. For US NEC, minimum size is 125% of motor FLA. Ratings that are shown are maximum.
- (5) Circuit breaker - inverse time breaker. For US NEC, minimum size is 125% of motor FLA. Ratings that are shown are maximum.
- (6) When using a circuit breaker or time-delay fuse with a drive that is installed in a ventilated enclosure, the enclosure volume must be greater than or equal to the minimum volume specified in this column. Application specific thermal considerations can require a larger enclosure.
- (7) Recommended motor circuit protector - instantaneous trip circuit breaker. The trip setting must be set to the input current of the drive and must be sized for the continuous current of the system.
- (8) Bulletin 140M with adjustable current range must have the current trip set to the minimum range so that the device does not trip.
- (9) manual self-protected (Type E) combination motor controller, UL Listed for 480Y/277V and 600Y/347V AC Input. Not UL Listed for use on 480V or 600V Delta/Delta, corner ground, or high-resistance ground systems.
- (10) Bulletin 140M must be Frame C (C2E), Frame D (D8E), or Frame F (F8E).
- (11) Bulletin 140M must be Frame C (C2E), Frame D (D8E), or Frame F (F8E).
- (12) Bulletin 140M must be Frame D (D8E) or Frame F (F8E).
- (13) When using a manual self-protected (Type E) combination motor controller, the drive must be installed in a ventilated or non-ventilated enclosure with the minimum volume that is specified in this column. Application specific thermal considerations can require a larger enclosure.
- (14) See Fuse Certification and Test Data in PowerFlex AC Drives in Common Bus Configurations Application Guidelines, publication [DRIVES-AL002](#), for fuse self-certification and test data for Bussmann 170M and JKS fuses recommended for the DC bus fusing.

**Brake Resistance for 400/480V Drives (continued)**

Frame	480V				400V			
	ND Hp	Catalog Code	Min Resistance	Max DB Current	ND kW	Catalog Code	Min Resistance	Max DB Current
2	1.0	D2P1	31.6	25	0.75	C2P1	31.6	25
	2.0	D3P4	31.6	25	1.5	C3P5	31.6	25
	3.0	D5P0	31.6	25	2.2	C5P0	31.6	25
	5.0	D8P0	31.6	25	4	C8P0	31.6	25
	7.5	D011	31.6	25	5.5	C011	31.6	25
	10	D014	31.6	25	7.5	C015	31.6	25
	15	D022	22.6	34.9	11	C022	22.6	34.9
3	20	D027	31.6	25	15	C030	31.6	25
	25	D034	31.6	25	18.5	C037	31.6	25
	30	D040	16.6	47.6	22	C043	16.6	47.6
4	40	D052	15.8	50	30	C060	15.8	50
	50	D065	15.8	50	37	C072	15.8	50
5	50 <sup>(1)</sup>	D065 <sup>(1)</sup>	7.9	100	37 <sup>(1)</sup>	C075 <sup>(1)</sup>	7.9	100
	60	D077	7.9	100	45	C085	7.9	100
	75	D096	7.9	100	55	C104	7.9	100
6	75 <sup>(1)</sup>	D096 <sup>(1)</sup>	3.3	239.4	55 <sup>(1)</sup>	C104 <sup>(1)</sup>	3.3	239.4
	100	D125	3.3	239.4	75	C140	3.3	239.4
	125	D156	3.3	239.4	90	C170	3.3	239.4
	150	D186	3.3	239.4	110	C205	3.3	239.4
	200	D248	3.3	239.4	132	C260	3.3	239.4
7	200 <sup>(1)</sup>	D248 <sup>(1)</sup>	2.4	329	132 <sup>(1)</sup>	C260 <sup>(1)</sup>	2.4	329
	250	D302	2.4	329	160	C302	2.4	329
	300	D361	2.4	329	200	C367	2.4	329
	350	D415	1.65	478.8	250	C456	1.65	478.8
	400	D477	1.65	478.8	270	C477	1.65	478.8

(1) IP54, NEMA/UL Type 12 (enclosure code G).

**Brake Resistance for 600V Drives (Frames 3...5)**

Frame	600V			
	ND Hp	Catalog Code	Min Resistance	Max DB Current
3	1.0	E1P7	92	11
	2.0	E2P7	92	11
	3.0	E3P9	92	11
	5.0	E6P1	32	30
	7.5	E9P0	32	30
	10	E011	32	30
	15	E017	32	30
	20	E022	32	30

**Ambient Temperature/Load and Altitude/Load – 480V AC (Frames 1...7) (continued)**

Cat. No. (see page 19)	480V AC Power Rating						Derating for IP20 NEMA/UL Type Open (Frames 1...5) and IP00 NEMA/UL Type Open (Frames 6 and 7) <sup>(1)</sup>	
	Light Duty		Normal Duty		Heavy Duty		Ambient Temperature/Load	Altitude/Load
	Hp	Cont. Amps	Hp	Cont. Amps	Hp	Cont. Amps		
20x...D248	—	—	200	248	150	186		
20x...D302	—	—	250	302	200	248		
20x...D361	—	—	300	361	250	302		
20x...D415	—	—	350	415	300	361		
20x...D477	—	—	400	477	300	361		

(1) Other enclosure types follow the same derating, while not exceeding, the maximum surrounding air temperature listed in [Environmental Specifications on page 9](#).

**Watts Loss for 400/480V Drives**

Drive Cat. No. <sup>(1)(2)</sup>	Normal Duty		External Watts <sup>(3)</sup>	Internal Watts <sup>(3)</sup>	Total Watts <sup>(3)</sup>	Drive Cat. No. <sup>(1)(2)</sup>	Normal Duty		External Watts <sup>(3)</sup>	Internal Watts <sup>(3)</sup>	Total Watts <sup>(3)</sup>
	kW	Continuous Output Amps					Hp	Continuous Output Amps			
<b>400 Volt</b>						<b>480 Volt</b>					
20x...C2P1	0.75	2.1	16 (16)	55 (56)	71 (72)	20x...D2P1	1.0	2.1	17 (21)	60 (61)	77 (82)
20x...C3P5	1.5	3.5	26 (33)	57 (60)	83 (93)	20x...D3P4	2.0	3.4	27 (39)	61 (64)	88 (103)
20x...C5P0	2.2	5	39 (44)	58 (62)	97 (106)	20x...D5P0	3.0	5	41 (54)	63 (67)	104 (121)
20x...C8P7	4.0	8.7	75 (79)	64 (80)	139 (159)	20x...D8P0	5.0	8	71 (91)	68 (82)	139 (173)
20x...C011	5.5	11.5	108 (107)	70 (85)	178 (192)	20x...D011	7.5	11	108 (118)	74 (88)	182 (206)
20x...C015	7.5	15.4	161 (166)	80 (80)	241 (246)	20x...D014	10	14	149 (152)	81 (81)	230 (233)
20x...C022	11	22	225	86	311	20x...D022	15	22	237	91	328
20x...C030	15	30	300	103	403	20x...D027	20	27	273	101	374
20x...C037	18.5	37	362	115	477	20x...D034	25	34	368	115	483
20x...C043	22	43	505	126	631	20x...D040	30	40	503	126	629
20x...C060	30	60	487	130	617	20x...D052	40	52	422	125	547
20x...C072	37	72	615	147	762	20x...D065	50	65	559	144	703
20x...C085	45	85	705	162	867	20x...D077	60	77	646	158	804
20x...C104	55	104	928	201	1129	20x...D096	75	96	855	189	1044
20x...C140	75	140	1239	319	1558	20x...D125	100	125	1109	299	1408
20x...C170	90	170	1381	300	1681	20x...D156	125	156	1299	294	1593
20x...C205	110	205	1893	381	2274	20x...D186	150	186	1718	358	2076
20x...C260	132	260	2449	502	2951	20x...D248	200	248	2384	492	2876
20x...C302	160	302	2566	461	3027	20x...D302	250	302	2704	491	3195
20x...C367	200	367	3322	586	3908	20x...D361	300	361	3409	606	4015
20x...C456	250	456	3922	743	4665	20x...D415	350	415	3604	683	4287
2xG...C460	250	460	4779	1090	5869	2xG...D430	350	430	4385	971	5356
20x...C477	270	477	4199	793	4992	20x...D477	400	477	4392	828	5220
2xG...C540	315	540	5316	1216	6532	2xG...D485	400	485	5091	1126	6217
2xG...C567	315	567	5652	1298	6950	2xG...D545	450	545	5649	1253	6902
2xG...C650	355	650	7011	1577	8588	2xG...D617	500	617	6942	1489	8431
2xG...C750	400	750	7577	1726	9303	2xG...D710	600	710	7631	1659	9290
2xG...C770	400	770	8086	1848	9934	2xG...D740	650	740	8133	1776	9909
2xG...C910	500	910	9155	2251	11406	2xG...D800	700	800	8710	2216	10926
2xG...C1K0	560	1040	9732	2357	12089	2xG...D960	800	960	9696	2391	12087
2xG...C1K1	630	1090	10745	2548	13293	2xG...D1K0	900	1045	10784	2589	13373
2xG...C1K2	710	1175	13778	2978	16756	2xG...D1K2	1000	1135	13378	2899	16277
2xG...C1K4	800	1465	13959	3013	16973	2xG...D1K3	1100	1365	14055	3025	17080
2xG...C1K5	850	1480	15441	3308	18749	2xG...D1K4	1250	1420	15573	3314	18887
2xG...C1K6	900	1590	15569	3717	19286	2xG...D1K5	1350	1525	15619	3779	19398
2xG...C2K1	1250	2150	22320	4790	27110	2xG...D2K0	1750	2070	22495	4802	27297

- (1) Select the watts loss based on the catalog number.
- (2) Frames 8...10, enclosure codes B, J, L, P, and W.
- (3) Frame 1 watts loss in parentheses.