

600V AC and 690V 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			
									690V	600V	690V	600V					
690 Volt				600 Volt													
				20x...E1P7	—	1	0.5	—	—	3	—	3	—	—			
				20x...E2P7	—	2	1										
				20x...E3P9	—	3	2										
				20x...E6P1	—	5	3										
				20x...E9P0	—	7.5	5										
				20x...E011	—	10	7.5										
20x...F012	—	7.5	5.5	20x...E012	—	10	7.5								—	6	6
				20x...E017	—	15	10								3	—	3
20x...F015	—	11	7.5	20x...E018	—	15	10								—	6	6
				20x...E022	—	20	15								3	—	3
20x...F020	—	15	11	20x...E023	—	20	15								—	6	6
20x...F023	—	18.5	15	20x...E024	—	20	20								—	6	6
				20x...E027	—	25	20								4	—	4
20x...F030	—	22	18.5	20x...E028	—	25	20								—	6	6
				20x...E032	—	30	25			4	—	4					
20x...F034	—	30	22	20x...E033	—	30	25			—	6	6					
				20x...E041	—	40	30			5	—	5					
20x...F046	—	37	30	20x...E042	—	40	30			—	6	6					
				20x...E052	—	50	40			5	—	5					
20x...F050	—	45	37	20x...E053	—	50	40			—	6	6					
20x...F061	—	55	45	20x...E063	—	60	50										
20x...F082	—	75	55	20x...E077	—	75	60										
20x...F098	—	90	75	20x...E099	—	100	75										
20x...F119	—	110	90	20x...E125	—	125	100										
20x...F142	—	132	110	20x...E144	—	150	125										
20x...F171	—	160	132	20x...E192	—	200	150										
20x...F212	—	200	160	20x...E242	—	250	200										
20x...F263	—	250	200	20x...E289	—	300	250			7	7						
2xG...F265	315	250	200	20x...E295	350	300	250										
2xG...F330	355	315	250	20x...E355	400	350	300										
2xG...F370	400	355	300	20x...E395	450	400	350										
2xG...F415	450	400	355	20x...E435	500	450	350										
2xG...F460	500	450	375	20x...E460	500	500	400										
2xG...F500	530	500	400	20x...E510	550	500	450										
2xG...F590	630	560	450	20x...E595	700	600	500										
2xG...F650	710	630	500	20x...E630	800	700	600										
2xG...F710	800	710	560	20x...E760	900	800	700										
2xG...F765	850	750	630	20x...E825	950	900	750	9									
2xG...F795	900	800	710	20x...E900	1000	950	800										
2xG...F960	1000	900	800	20x...E980	1100	1000	900										
2xG...F1K0	1100	1000	900	20x...E1K1	1200	1100	1000										
2xG...F1K4	1500	1400	1120	20x...E1K4	1500	1400	1250	10	10								

600 Volt AC and 810V DC Input Protection Devices – Wall Mount Frames 3...7

Applied Rating ⁽¹⁾	Cont. Output Amps	Drive Sized For Normal Duty				Drive Sized For Heavy Duty				Continuous AC Input		AC Input Protection Devices						Input Quantities	DC Input Protection ⁽¹⁴⁾		
		Cat. No.		Output Overload Amps	Cat. No.	Output Overload Amps		Dual-element Time-delay Fuse	Non Time-delay Fuse	Circuit Breaker Max Size ⁽⁶⁾	Circuit Breaker, Dual-element Time-delay Fuse	Motor Circuit Protector ⁽⁸⁾	140M Type E Combination Motor Controller with Adjustable Current Range ^{(9) (10)}								
		(x = F or G)	1 Min			3 s	(x = F or G)							1 Min	3 s						
		Frame	(x = F or G)	1 Min	3 s	Amps	Min ⁽²⁾	Max ⁽³⁾	Min ⁽²⁾	Max ⁽³⁾	Min Enclosure Volume (in. ³) ⁽⁷⁾	Cat. No.	Min Enclosure Volume (in. ³) ⁽¹³⁾	Amps							
600 Volt AC Input																					
0.5 Hp	3	0.9					20x...E1P7	1.4	2.6	0.8	1	2	1	3	3	4800	1	M-xxx-B16 ⁽¹¹⁾	9086	1.0	JKS-2
1 Hp	3	1.7	20x...E1P7	1.9	2.6		20x...E2P7	2.6	4.1	1.6	2	4	2	5	5	4800	2	M-xxx-B25 ⁽¹¹⁾	9086	1.9	JKS-4
2 Hp	3	2.7	20x...E2P7	3.0	4.1		20x...E3P9	4.1	5.9	2.5	3	6	3	8	8	4800	3	M-xxx-B40 ⁽¹¹⁾	9086	3.0	JKS-5
3 Hp	3	3.9	20x...E3P9	4.3	5.9		20x...E6P1	5.9	9.2	3.7	5	8	5	11 ⁽⁴⁾ , 10 ⁽⁵⁾	11 ⁽⁴⁾ , 20 ⁽⁵⁾	4800	5	M-D8E-B63	9086	4.3	JKS-8
5 Hp	3	6.1	20x...E6P1	6.7	9.2		20x...E9P0	9.2	13.5	5.7	7	13	7	15	20	4800	10	M-D8E-B63	9086	6.7	HSJ10
7.5 Hp	3	9	20x...E9P0	9.9	13.5		20x...E011	13.5	16.5	8.4	11	19	11	25	30	4800	15	M-xxx-C10 ⁽¹²⁾	9086	9.9	HSJ15
10 Hp	3	11	20x...E011	12.1	16.5		20x...E017	16.5	25.5	10.3	13	23	13	30	40	4800	15	M-xxx-C16 ⁽¹²⁾	9086	12.0	HSJ20
15 Hp	3	17	20x...E017	18.7	25.5		20x...E022	25.5	33.0	16.0	20	36	20	50	50	4800	20	M-F8E-C20	9086	18.6	HSJ30
20 Hp	3	22	20x...E022	24.2	33.0					20.7	26	46	26	60	70	4800	30	M-F8E-C25	9086	24.1	HSJ40
	4	22					20x...E027	33.0	40.5	20.7	26	46	26	60	70	4800	30	M-F8E-C25	9086	24.1	HSJ40
25 Hp	4	27	20x...E027	29.7	40.5		20x...E032	40.5	48.6	25.3	32	57	32	75	80	4800	35	M-F8E-C32	9086	29.6	HSJ50
30 Hp	4	32	20x...E032	35.2	48.0					30.0	38	68	38	90	100	4800	40	M-F8E-C32	9086	35.0	HSJ60
	5	32					20x...E041	48.0	61.5	30.0	38	68	38	90	100	7200	40	M-F8E-C32	13630	35.0	HSJ60
40 Hp	5	41	20x...E041	45.1	61.5		20x...E052	61.5	78.0	38.5	48	87	48	115	120	7200	50			44.9	HSJ70
50 Hp	5	52	20x...E052	57.2	78.0					48.8	61	110	61	145	150	7200	65			56.9	HSJ90
7.5 Hp	6	9.1					20x...E012	13.7	18.0	8.5	11	19	11	25	30		15	M-xxx-C10 ⁽¹²⁾	14400	10.0	HSJ15
10 Hp	6	12	20x...E012	13.2	18.0		20x...E018	18.0	27.0	11.3	14	25	14	35	40		15	M-xxx-C16 ⁽¹²⁾	14400	13.1	HSJ20
15 Hp	6	18	20x...E018	19.8	27.0		20x...E023	27.0	34.5	16.9	21	38	21	50	60		25	M-F8E-C20	14400	19.7	HSJ30
20 Hp	6	23	20x...E023	25.3	34.5		20x...E028	34.5	42.0	21.6	27 ⁽⁴⁾ , 25 ⁽⁵⁾	49 ⁽⁴⁾ , 50 ⁽⁵⁾	27 ⁽⁴⁾ , 25 ⁽⁵⁾	65	70		30	M-F8E-C25	14400	25.2	HSJ40
	6	24	20x...E024	26.4	36.0					22.5	28	51	28	70	70		30	M-F8E-C25	14400	26.3	HSJ40
	6	22					20x...E024	33.0	39.6	20.7	26	46	26	60	70		30	M-F8E-C25	14400	24.1	HSJ40
25 Hp	6	28	20x...E028	30.8	42.0		20x...E033	42.0	50.4	26.3	35	60	35	80	80		35	M-F8E-C32	14400	30.7	HSJ50
30 Hp	6	33	20x...E033	36.3	49.5		20x...E042	49.5	63.0	31.0	40	70	40	95	100		40	M-F8E-C32	14400	36.1	HSJ60
40 Hp	6	42	20x...E042	46.2	63.0		20x...E053	63.0	79.5	39.4	50	90	50	120	120		50			46.0	HSJ70
50 Hp	6	53 ⁽⁴⁾ , 52 ⁽⁵⁾	20x...E053	58.3	79.5		20x...E063	78.0	94.5	49.8 ⁽⁴⁾ , 48.8 ⁽⁵⁾	60	110	60	150 ⁽⁴⁾ , 145 ⁽⁵⁾	150		65			58.0 ⁽⁴⁾ , 56.9 ⁽⁵⁾	HSJ90
	6	63	20x...E063	69.3	94.5		20x...E077	94.5	115.5	59.1	75	135	75	175	180		75			69.0	HSJ110
75 Hp	6	77	20x...E077	84.7	115.5		20x...E099	115.5	148.5	72.3	90	165	90	215	220		95			84.3	HSJ150
100 Hp	6	99	20x...E099	108.9	148.5		20x...E125	148.5	187.5	92.9	115	210	115	280	280		120			108.4	HSJ175

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 ⁽¹⁾	D065 ⁽¹⁾	7.9	100	37 ⁽¹⁾	C075 ⁽¹⁾	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 ⁽¹⁾	D096 ⁽¹⁾	3.3	239.4	55 ⁽¹⁾	C104 ⁽¹⁾	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 ⁽¹⁾	D248 ⁽¹⁾	2.4	329	132 ⁽¹⁾	C260 ⁽¹⁾	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

Watts Loss for 600/690V Drives

Drive Cat. No. ⁽¹⁾⁽²⁾	Normal Duty		External Watts	Internal Watts	Total Watts	Drive Cat. No. ⁽¹⁾⁽²⁾	Normal Duty		External Watts	Internal Watts	Total Watts
	kW	Continuous Output Amps					Hp	Continuous Output Amps			
690 Volt						600 Volt					
						20x...E1P7	1.0	1.7	23	15	38
						20x...E2P7	2.0	2.7	40	17	57
						20x...E3P9	3.0	3.9	51	18	69
						20x...E6P1	5.0	6.1	80	22	103
						20x...E9P0	7.5	9	122	29	150
						20x...E011	10	11	152	34	186
20x...F012	7.5	12	169	50	219	20x...E012	10	12	168	50	217
						20x...E017	15	17	249	54	302
20x...F015	11	15	226	56	282	20x...E018	15	18	269	61	331
						20x...E022	20	22	329	74	403
20x...F020	15	20	296	65	361	20x...E023	20	23	332	70	403
20x...F023	18.5	23	327	70	397	20x...E024	20	24	326	71	397
						20x...E027	25	27	411	84	494
20x...F030	22	30	428	85	513	20x...E028	25	28	375	79	453
						20x...E032	30	32	503	105	608
20x...F034	30	34	478	94	573	20x...E033	30	33	439	90	528
						20x...E041	40	41	590	128	718
20x...F046	37	46	649	126	775	20x...E042	40	42	555	112	667
						20x...E052	50	52	784	176	959
20x...F050	45	50	699	138	836	20x...E053	50	53	711	144	855
20x...F061	55	61	760	130	891	20x...E063	60	63	757	132	889
20x...F082	75	82	1044	182	1226	20x...E077	75	77	935	166	1101
20x...F098	90	98	1310	231	1541	20x...E099	100	99	1269	229	1499
20x...F119	110	119	1658	302	1961	20x...E125	125	125	1678	318	1996
20x...F142	132	142	2003	387	2391	20x...E144	150	144	1960	389	2349
20x...F171	160	171	2655	389	3044	20x...E192	200	192	2801	433	3234
20x...F212	200	212	3375	513	3889	20x...E242	250	242	3642	593	4235
20x...F263	250	263	4286	690	4976	20x...E289	300	289	4437	762	5200
2xG...F265	250	265	4314	996	5310	2xG...E295	300	295	4592	1030	5622
2xG...F330	315	330	5160	1127	6287	2xG...E355	350	355	5191	1131	6321
2xG...F370	355	370	5803	1233	7036	2xG...E395	400	395	5812	1240	7052
2xG...F415	400	415	5865	1211	7076	2xG...E435	450	435	5590	1163	6753
2xG...F460	450	460	6638	1337	7975	2xG...E460	500	460	6407	1301	7708
2xG...F500	500	500	7117	1417	8534	2xG...E510	500	510	6946	1396	8342
2xG...F590	560	590	8941	2077	11019	2xG...E595	600	595	8903	2053	10956
2xG...F650	630	650	9865	2220	12085	2xG...E630	700	630	9942	2225	12167
2xG...F710	710	710	11136	2425	13561	2xG...E760	800	760	11093	2424	13517
2xG...F765	750	765	11139	2368	13507	2xG...E825	900	825	11046	2342	13389
2xG...F795	800	795	12663	2611	15275	2xG...E900	950	900	12225	2539	14764
2xG...F960	900	860	13608	2767	16375	2xG...E980	1000	980	13211	2709	15920
2xG...F1K0	1000	1040	16147	3545	19692	2xG...E1K1	1100	1110	16169	3552	19720
2xG...F1K4	1400	1400	19716	4034	23750	2xG...E1K4	1400	1430	19256	3966	23222

(1) Select the watts loss based on the catalog number.

(2) Frames 8...10, enclosure codes B, L, P, and W.