

7-1 Brake Resistors and Brake Units Used in AC Motor Drives

230V models

Model	Applicable Motor		125% Braking Torque / 10% ED*1							Max. Braking Torque*2		
	HP	kW	Braking Torque (kg-m)	Brake Unit	Brake Resistor for Each Brake Unit*3			Resistor Value Spec. for Each AC Motor Drive	Total Braking Current (A)	Min. Resistor Value (Ω)	Max. Total Braking Current (A)	Peak Power (kW)
				VFDB*4	P/N	Q'ty	Usage					
VFD007C23A-21	1	0.7	0.5	-	BR080W200	1	-	80W 200Ω	1.9	63.3	6	2.3
VFD015C23A-21	2	1.5	1.0	-	BR200W091	1	-	200W 91Ω	4.2	47.5	8	3.0
VFD022C23A-21	3	2.2	1.5	-	BR300W070	1	-	300W 70Ω	5.4	38.0	10	3.8
VFD037C23A-21	5	3.7	2.5	-	BR400W040	1	-	400W 40Ω	9.5	19.0	20	7.6
VFD055C23A-21	7.5	5.5	3.7	-	BR1K0W020	1	-	1000W 20Ω	19	14.6	26	9.9
VFD075C23A-21	10	7.5	5.1	-	BR1K0W020	1	-	1000W 20Ω	19	14.6	26	9.9
VFD110C23A-21	15	11	7.5	-	BR1K5W013	1	-	1500W 13Ω	29	12.6	29	10.6
VFD150C23A-21	20	15	10.2	-	BR1K0W4P3	2	2 in series	2000W 8.6Ω	44	8.3	46	17.5
VFD185C23A-21	25	18	12.2	-	BR1K0W4P3	2	2 in series	2000W 8.6Ω	44	8.3	46	17.5
VFD220C23A-21	30	22	14.9	-	BR1K5W3P3	2	2 in series	3000W 6.6Ω	58	5.8	66	25.1
VFD300C23A-00 VFD300C23A-21	40	30	20.3	2015*2	BR1K0W5P1	2	2 in series	4000W 5.1Ω	75	4.8	80	30.4
VFD370C23A-00 VFD370C23A-21	50	37	25.1	2022*2	BR1K2W3P9	2	2 in series	4800W 3.9Ω	97	3.2	120	45.6
VFD450C23A-00 VFD450C23A-21	60	45	30.5	2022*2	BR1K5W3P3	2	2 in series	6000W 3.3Ω	118	3.2	120	45.6
VFD550C23A-00 VFD550C23A-21	75	55	37.2	2022*3	BR1K2W3P9	2	2 in series	7200W 2.6Ω	145	2.1	180	68.4
VFD750C23A-00 VFD750C23A-21	100	75	50.8	2022*4	BR1K2W3P9	2	2 in series	9600W 2Ω	190	1.6	240	91.2
VFD900C23A-00 VFD900C23A-21	125	90	60.9	2022*4	BR1K5W3P3	2	2 in series	12000W 1.65Ω	230	1.6	240	91.2

Table 7-1

460V models

Model	Applicable Motor		125% Braking Torque / 10% ED*1							Max. Braking Torque*2		
	HP	kW	Braking Torque (kg-m)	Brake Unit	Brake Resistor for Each Brake Unit*3			Resistor Value Spec. for Each AC Motor Drive	Total Braking Current (A)	Min. Resistor Value (Ω)	Max. Total Braking Current (A)	Peak Power (kW)
				VFDB*4	P/N	Q'ty	Usage					
VFD007C43A-21 VFD007C4EA-21	1	0.7	0.5	-	BR080W750	1	-	80W 750Ω	1	190.0	4	3.0
VFD015C43A-21 VFD015C4EA-21	2	1.5	1.0	-	BR200W360	1	-	200W 360Ω	2.1	126.7	6	4.6
VFD022C43A-21 VFD022C4EA-21	3	2.2	1.5	-	BR300W250	1	-	300W 250Ω	3	108.6	7	5.3
VFD037C43A-21 VFD037C4EA-21	5	3.7	2.5	-	BR400W150	1	-	400W 150Ω	5.1	84.4	9	6.8
VFD040C43A-21 VFD040C4EA-21	5.5	4.0	2.7	-	BR1K0W075	1	-	1000W 75Ω	10.2	54.3	14	10.6
VFD055C43A-21 VFD055C4EA-21	7.5	5.5	3.7									

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				VFDB*4	P/N	Q'ty	Usage					
VFD075C43A-21 VFD075C4EA-21	10	7.5	5.1	-	BR1K0W075	1	-	1000W 75Ω	10.2	47.5	16	12.2
VFD110C43A-21 VFD110C4EA-21	15	11	7.5	-	BR1K5W043	1	-	1500W 43Ω	17.6	42.2	18	13.7
VFD150C43A-21 VFD150C4EA-21	20	15	10.2	-	BR1K0W016	2	2 in series	2000W 32Ω	24	26.2	29	22.0
VFD185C43A-21 VFD185C4EA-21	25	18	12.2	-	BR1K0W016	2	2 in series	2000W 32Ω	24	23.0	33	25.1
VFD220C43A-21 VFD220C4EA-21	30	22	14.9	-	BR1K5W013	2	2 in series	3000W 26Ω	29	23.0	33	25.1
VFD300C43A-21 VFD300C4EA-21	40	30	20.3	-	BR1K0W016	4	2 parallel, 2 in series	4000W 16Ω	47.5	14.1	54	41.0
VFD370C43S-00 VFD370C43S-21	50	37	25.1	4045*1	BR1K2W015	4	2 parallel, 2 in series	4800W 15Ω	50	12.7	60	45.6
VFD450C43S-00 VFD450C43S-21	60	45	30.5	4045*1	BR1K5W013	4	2 parallel, 2 in series	6000W 13Ω	59	12.7	60	45.6
VFD550C43A-00 VFD550C43A-21	75	55	37.2	4030*2	BR1K0W5P1	4	4 in series	8000W 10.2Ω	76	9.5	80	60.8
VFD750C43A-00 VFD750C43A-21	100	75	50.8	4045*2	BR1K2W015	4	2 parallel, 2 in series	9600W 7.5Ω	100	6.3	120	91.2
VFD900C43A-00 VFD900C43A-21	125	90	60.9	4045*2	BR1K5W013	4	2 parallel, 2 in series	12000W 6.5Ω	117	6.3	120	91.2
VFD1100C43A-00 VFD1100C43A-21	150	110	74.5	4110*1	BR1K2W015	10	5 parallel, 2 in series	12000W 6Ω	126	6.0	126	95.8
VFD1320C43A-00 VFD1320C43A-21	175	132	89.4	4160*1	BR1K5W012	12	6 parallel, 2 in series	18000W 4Ω	190	4.0	190	144.4
VFD1600C43A-00 VFD1600C43A-21	215	160	108.3	4160*1	BR1K5W012	12	6 parallel, 2 series	18000W 4Ω	190	4.0	190	144.4
VFD1850C43A-00 VFD1850C43A-21	250	185	125.3	4185*1	BR1K5W012	14	7 parallel, 2 in series	21000W 3.4Ω	225	3.4	225	171.0
VFD2000C43A-00 VFD2000C43A-21	270	200	135.4	4110*2	BR1K2W015	10	5 parallel, 2 in series	24000W 3Ω	252	3	252	191.5
VFD2200C43A-00 VFD2200C43A-21	300	220	148.9	4110*2	BR1K2W015	10	5 parallel, 2 in series	24000W 3Ω	252	3.0	252	190.5
VFD2500C43A-00 VFD2500C43A-21	340	250	169.3	4160*2	BR1K5W012	12	6 parallel, 2 in series	36000W 2Ω	380	2	380	288.8

Model	Applicable Motor		125% Braking Torque / 10% ED*1							Max. Braking Torque*2		
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				VFDB*4	P/N	Q'ty	Usage					
VFD2800C43A-00 VFD2800C43C-21	375	280	189.6	4160*2	BR1K5W012	12	6 parallel, 2 in series	36000W 2Ω	380	2.0	380	288.8
VFD3150C43A-00 VFD3150C43C-21	425	315	213.3	4160*2	BR1K5W012	12	6 parallel, 2 in series	36000W 2Ω	380	2.0	380	288.8
VFD3550C43A-00 VFD3550C43C-21	475	355	240.3	4185*2	BR1K5W012	14	7 parallel, 2 in series	42000W 1.7Ω	450	1.7	450	342.0
VFD4000C43A-00 VFD4000C43C-21	530	400	270.8	4160*3	BR1K5W012	12	6 parallel, 2 in series	54000W 1.3Ω	540	1.3	540	410.4
VFD4500C43A-00 VFD4500C43C-21	600	450	304.7	4185*3	BR1K5W012	12	6 parallel, 2 in series	54000W 1.3Ω	600	1.1	675	513.0
VFD5000C43A-00 VFD5000C43C-21	675	500	338.5	4185*3	BR1K5W012	14	7 parallel, 2 in series	63000W 1.1Ω	675	1.1	675	513.0
VFD5600C43A-00 VFD5600C43C-21	750	560	379.1	4160*4	BR1K5W012	12	6 parallel, 2 in series	72000W 1.0Ω	760	1.0	760	577.6

Table 7-2

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