



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

230V

Applicable Motor		*1 125% Braking Torque 10% ED					*2 Max. Braking Torque			
HP	kW	Braking Torque [kg-m]	Brake Unit *4VFDB	*3Braking Resistor for each Brake Unit	Resistor value spec. for each AC motor Drive	Total Braking Current [A]	Min. Resistor Value [Ω]	Max. Total Braking Current [A]	Peak Power [kW]	
										1
2	1.5	1.0	-	BR200W091*1	200W 91Ω	4.2	47.5	8	3.0	
3	2.2	1.5	-	BR300W070*1	300W 70Ω	5.4	38.0	10	3.8	
5	3.7	2.5	-	BR400W040*1	400W 40Ω	9.5	19.0	20	7.6	
7.5	5.5	3.7	-	BR1K0W020*1	1000W 20Ω	19	14.6	26	9.9	
10	7.5	5.1	-	BR1K0W020*1	1000W 20Ω	19	14.6	26	9.9	
15	11	7.5	-	BR1K5W013*1	1500W 13Ω	29	12.6	29	10.6	
20	15	10.2	-	BR1K0W4P3*2	2 series	2000W 8.6Ω	44	8.3	46	17.5
25	18	12.2	-	BR1K0W4P3*2	2 series	2000W 8.6Ω	44	8.3	46	17.5
30	22	14.9	-	BR1K5W3P3*2	2 series	3000W 6.6Ω	58	5.8	66	25.1
40	30	20.3	2015*2	BR1K0W5P1*2	2 series	4000W 5.1Ω	75	4.8	80	30.4
50	37	25.1	2022*2	BR1K2W3P9*2	2 series	4800W 3.9Ω	97	3.2	120	45.6
60	45	30.5	2022*2	BR1K5W3P3*2	2 series	6000W 3.3Ω	118	3.2	120	45.6
75	55	37.2	2022*3	BR1K2W3P9*2	2 series	7200W 2.6Ω	145	2.1	180	68.4
100	75	50.8	2022*4	BR1K2W3P9*2	2 series	9600W 2Ω	190	1.6	240	91.2
125	90	60.9	2022*4	BR1K5W3P3*2	2 series	12000W 1.65Ω	230	1.6	240	91.2

Table 7-1

460V

Applicable Motor		*1 125% Braking Torque 10% ED					*2 Max. Braking Torque			
HP	kW	Braking Torque [kg-m]	Brake Unit *4VFDB	*3Braking Resistor for each Brake Unit	Resistor value spec. for each AC motor Drive	Total Braking Current [A]	Min. Resistor Value [Ω]	Max. Total Braking Current [A]	Peak Power [kW]	
										1
2	1.5	1.0	-	BR200W360*1	200W 360Ω	2.1	126.7	6	4.6	
3	2.2	1.5	-	BR300W250*1	300W 250Ω	3	108.6	7	5.3	
5	3.7	2.5	-	BR400W150*1	400W 150Ω	5.1	84.4	9	6.8	
5.5	4.0	2.7	-	BR1K0W075*1	1000W 75Ω	10.2	54.3	14	10.6	
7.5	5.5	3.7	-							
10	7.5	5.1	-	BR1K0W075*1	1000W 75Ω	10.2	47.5	16	12.2	
15	11	7.5	-	BR1K5W043*1	1500W 43Ω	17.6	42.2	18	13.7	
20	15	10.2	-	BR1K0W016*2	2 series	2000W 32Ω	24	26.2	29	22.0
25	18	12.2	-	BR1K0W016*2	2 series	2000W 32Ω	24	23.0	33	25.1
30	22	14.9	-	BR1K5W013*2	2 series	3000W 26Ω	29	23.0	33	25.1
40	30	20.3	-	BR1K0W016*4	2 parallel, 2 series	4000W 16Ω	47.5	14.1	54	41.0
50	37	25.1	4045*1	BR1K2W015*4	2 parallel, 2 series	4800W 15Ω	50	12.7	60	45.6
60	45	30.5	4045*1	BR1K5W013*4	2 parallel, 2 series	6000W 13Ω	59	12.7	60	45.6
75	55	37.2	4030*2	BR1K0W5P1*4	4 series	8000W 10.2Ω	76	9.5	80	60.8
100	75	50.8	4045*2	BR1K2W015*4	2 parallel, 2 series	9600W 7.5Ω	100	6.3	120	91.2
125	90	60.9	4045*2	BR1K5W013*4	2 parallel, 2 series	12000W 6.5Ω	117	6.3	120	91.2
150	110	74.5	4110*1	BR1K2W015*10	5 parallel, 2 series	12000W 6Ω	126	6.0	126	95.8
175	132	89.4	4160*1	BR1K5W012*12	6 parallel, 2 series	18000W 4Ω	190	4.0	190	144.4
215	160	108.3	4160*1	BR1K5W012*12	6 parallel, 2 series	18000W 4Ω	190	4.0	190	144.4
250	185	125.3	4185*1	BR1K5W012*14	7 parallel, 2 series	21000W 3.4Ω	225	3.4	225	172.1

Applicable Motor		*1 125% Braking Torque 10% ED					*2 Max. Braking Torque			
HP	kW	Braking Torque [kg-m]	Brake Unit	*3Braking Resistor for each Brake Unit		Resistor value spec. for each AC motor Drive	Total Braking Current [A]	Min. Resistor Value [Ω]	Max. Total Braking Current [A]	Peak Power [kW]
			*4VFDB							
300	220	148.9	4110*2	BR1K2W015*10	5 parallel, 2 series	24000W 3 Ω	252	3.0	252	190.5
375	280	189.6	4160*2	BR1K5W012*12	6 parallel, 2 series	36000W 2 Ω	380	2.0	380	288.8
425	315	213.3	4160*2	BR1K5W012*12	6 parallel, 2 series	36000W 2 Ω	380	2.0	380	288.8
475	355	240.3	4185*2	BR1K5W012*14	7 parallel, 2 series	42000W 1.7 Ω	450	1.7	450	344.2
600	450	304.7	4185*3	BR1K5W012*12	6 parallel, 2 series	54000W 1.3 Ω	600	1.1	675	513.0

Table 7-2