

PowerFlex 4 and 40 AC Drives

Original Instructions



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Product Selection

Drive Ratings			PowerFlex 4			IP 20 Flange Mount ⁽²⁾	PowerFlex 40			IP 66, UL Type 4X Panel Mount	IP 20 Flange Mount ⁽²⁾
Input Voltage	kW	HP	Output Current	Catalog Number	Frame Size	Catalog Number	Output Current	Catalog Number	Frame Size	Catalog Number	Catalog Number
120V 50/60 Hz 1-Phase No Filter	0.2	0.25	1.5A	22A-V1P5N104	A	22A-V1P5F104	—	—	—	—	—
	0.4	0.5	2.3A	22A-V2P3N104	A	22A-V2P3F104	2.3A	22B-V2P3N104	B	22B-V2P3C104	22B-V2P3F104
	0.75	1.0	4.5A	22A-V4P5N104	B	22A-V4P5F104	5.0A	22B-V5P0N104	B	22B-V5P0C104	22B-V5P0F104
	1.1	1.5	6.0A	22A-V6P0N104	B	22A-V6P0F104	6.0A	22B-V6P0N104	B	22B-V6P0C104	22B-V6P0F104
240V 50/60 Hz 1-Phase NO BRAKE No Filter	0.2	0.25	1.4A	22A-A1P4N103	A	—	—	—	—	—	—
	0.4	0.5	2.1A	22A-A2P1N103	A	—	—	—	—	—	—
	0.75	1.0	3.6A	22A-A3P6N103	A	—	—	—	—	—	—
	1.5	2.0	6.8A	22A-A6P8N103	B	—	—	—	—	—	—
240V 50/60 Hz 1-Phase NO BRAKE With Integral "S Type" EMC Filter ⁽¹⁾	0.2	0.25	1.4A	22A-A1P4N113	A	—	—	—	—	—	—
	0.4	0.5	2.1A	22A-A2P1N113	A	—	—	—	—	—	—
	0.75	1.0	3.6A	22A-A3P6N113	A	—	—	—	—	—	—
	1.5	2.0	6.8A	22A-A6P8N113	B	—	—	—	—	—	—
240V 50/60 Hz 1-Phase With Integral "S Type" EMC Filter ⁽¹⁾	0.2	0.25	1.5A	22A-A1P5N114	A	—	—	—	—	—	—
	0.4	0.5	2.3A	22A-A2P3N114	A	—	2.3A	22B-A2P3N114	B	—	—
	0.75	1.0	4.5A	22A-A4P5N114	A	—	5.0A	22B-A5P0N114	B	—	—
	1.5	2.0	8.0A	22A-A8P0N114	B	—	8.0A	22B-A8P0N114	B	—	—
240V 50/60 Hz 1-Phase No Filter	0.2	0.25	1.5A	22A-A1P5N104	A	22A-A1P5F104	—	—	—	—	—
	0.4	0.5	2.3A	22A-A2P3N104	A	22A-A2P3F104	2.3A	22B-A2P3N104	B	22B-A2P3C104	22B-A2P3F104
	0.75	1.0	4.5A	22A-A4P5N104	A	22A-A4P5F104	5.0A	22B-A5P0N104	B	22B-A5P0C104	22B-A5P0F104
	1.5	2.0	8.0A	22A-A8P0N104	B	22A-A8P0F104	8.0A	22B-A8P0N104	B	22B-A8P0C104	22B-A8P0F104
240V 50/60 Hz 3-Phase No Filter	0.2	0.25	1.5A	22A-B1P5N104	A	22A-B1P5F104	—	—	—	—	—
	0.4	0.5	2.3A	22A-B2P3N104	A	22A-B2P3F104	2.3A	22B-B2P3N104	B	22B-B2P3C104	22B-B2P3F104
	0.75	1.0	4.5A	22A-B4P5N104	A	22A-B4P5F104	5.0A	22B-B5P0N104	B	22B-B5P0C104	22B-B5P0F104
	1.5	2.0	8.0A	22A-B8P0N104	A	22A-B8P0F104	8.0A	22B-B8P0N104	B	22B-B8P0C104	22B-B8P0F104
	2.2	3.0	12.0A	22A-B012N104	B	22A-B012F104	12.0A	22B-B012N104	B	22B-B012C104	22B-B012F104
	3.7	5.0	17.5A	22A-B017N104	B	22A-B017F104	17.5A	22B-B017N104	B	22B-B017C104	22B-B017F104
	5.5	7.5	—	—	—	—	24.0A	22B-B024N104	C	—	22B-B024F104
	7.5	10.0	—	—	—	—	33.0A	22B-B033N104	C	—	22B-B033F104
480V 50/60 Hz 3-Phase No Filter	0.4	0.5	1.4A	22A-D1P4N104	A	22A-D1P4F104	1.4A	22B-D1P4N104	B	22B-D1P4C104	22B-D1P4F104
	0.75	1.0	2.3A	22A-D2P3N104	A	22A-D2P3F104	2.3A	22B-D2P3N104	B	22B-D2P3C104	22B-D2P3F104
	1.5	2.0	4.0A	22A-D4P0N104	A	22A-D4P0F104	4.0A	22B-D4P0N104	B	22B-D4P0C104	22B-D4P0F104
	2.2	3.0	6.0A	22A-D6P0N104	B	22A-D6P0F104	6.0A	22B-D6P0N104	B	22B-D6P0C104	22B-D6P0F104
	3.7	5.0	8.7A	22A-D8P7N104	B	22A-D8P7F104	—	—	—	—	—
	4.0	5.0	—	—	—	—	10.5A	22B-D010N104	B	22B-D010C104	22B-D010F104
	5.5	7.5	—	—	—	—	12.0A	22B-D012N104	C	—	22B-D012F104
	7.5	10.0	—	—	—	—	17.0A	22B-D017N104	C	—	22B-D017F104
600V 50/60 Hz 3-Phase No Filter	0.75	1.0	—	—	—	—	1.7A	22B-E1P7N104	B	22B-E1P7C104	22B-E1P7F104
	1.5	2.0	—	—	—	—	3.0A	22B-E3P0N104	B	22B-E3P0C104	22B-E3P0F104
	2.2	3.0	—	—	—	—	4.2A	22B-E4P2N104	B	22B-E4P2C104	22B-E4P2F104
	4.0	5.0	—	—	—	—	6.6A	22B-E6P6N104	B	22B-E6P6C104	22B-E6P6F104
	5.5	7.5	—	—	—	—	9.9A	22B-E9P9N104	C	—	22B-E9P9F104
	7.5	10.0	—	—	—	—	12.0A	22B-E012N104	C	—	22B-E012F104
	11.0	15.0	—	—	—	—	19.0A	22B-E019N104	C	—	22B-E019F104

(1) This filter is suitable for use with a cable length of at least 10 meters for Class A and 1 meter for Class B environments.

(2) Meets IP40/54/65 (NEMA 1/12/4/4X) when installed in an enclosure of like rating.

(3) Requires use of external DC Bus Inductor or AC Line Reactor.

Shaded areas are applicable to PowerFlex 40 only.

Drive Ratings — PowerFlex 40

Catalog Number	Output Ratings		Input Ratings			Branch Circuit Protection				Power Dissipation	
	kW (HP)	Amps	Voltage Range	kVA	Amps	Fuses ⁽²⁾	140M Motor Protectors ^{(3) (4)}	Contactors	Min. Enclosure Volume ⁽⁵⁾ (in. ³)	Internal	Total
100...120V AC – 1-Phase Input, 0...230V 3-Phase Output											
22B-V2P3N104	0.4 (0.5)	2.3	90...132	1.15	9.0	15	140M-C2E-C16	100-C12	1655	9	30
22B-V5P0N104	0.75 (1.0)	5.0	90...132	2.45	20.3	35	140M-D8E-C20	100-C23	1655	12	55
22B-V6P0N104	1.1 (1.5)	6.0	90...132	3.0	24.0	40	140M-F8E-C32	100-C37	1655	12	70
200...240V AC – 1-Phase Input, 0...230V 3-Phase Output ⁽¹⁾											
22B-A2P3N104	0.4 (0.5)	2.3	180...264	1.15	6.0	10	140M-C2E-B63	100-C09	1655	9	30
22B-A5P0N104	0.75 (1.0)	5.0	180...264	2.45	12.0	20	140M-C2E-C16	100-C12	1655	12	55
22B-A8P0N104	1.5 (2.0)	8.0	180...264	4.0	18.0	30	140M-D8E-C20	100-C23	1655	16	80
22B-A012N104	2.2 (3.0)	12.0	180...264	5.5	25.0	40	140M-F8E-C32	100-C37	2069	11	110
200...240V AC – 3-Phase Input, 0...230V 3-Phase Output											
22B-B2P3N104	0.4 (0.5)	2.3	180...264	1.15	2.5	6	140M-C2E-B40	100-C07	1655	9	30
22B-B5P0N104	0.75 (1.0)	5.0	180...264	2.45	5.7	10	140M-C2E-C10	100-C09	1655	12	55
22B-B8P0N104	1.5 (2.0)	8.0	180...264	4.0	9.5	15	140M-C2E-C16	100-C12	1655	16	80
22B-B012N104	2.2 (3.0)	12.0	180...264	5.5	15.5	25	140M-C2E-C16	100-C23	1655	16	115
22B-B017N104	3.7 (5.0)	17.5	180...264	8.6	21.0	35	140M-F8E-C25	100-C23	1655	16	165
22B-B024N104	5.5 (7.5)	24.0	180...264	11.8	26.1	40	140M-F8E-C32	100-C37	2069	28	225
22B-B033N104	7.5 (10.0)	33.0	180...264	16.3	34.6	60	140M-F8E-C45	100-C60	2069	28	290
380...480V AC – 3-Phase Input, 0...460V 3-Phase Output											
22B-D1P4N104	0.4 (0.5)	1.4	342...528	1.4	1.8	3	140M-C2E-B25	100-C07	1655	15	30
22B-D2P3N104	0.75 (1.0)	2.3	342...528	2.3	3.2	6	140M-C2E-B40	100-C07	1655	13	40
22B-D4P0N104	1.5 (2.0)	4.0	342...528	4.0	5.7	10	140M-C2E-B63	100-C09	1655	13	60
22B-D6P0N104	2.2 (3.0)	6.0	342...528	5.9	7.5	15	140M-C2E-C10	100-C09	1655	17	90
22B-D010N104	4.0 (5.0)	10.5	342...528	10.3	13.0	20	140M-C2E-C16	100-C23	1655	14	150
22B-D012N104	5.5 (7.5)	12.0	342...528	11.8	14.2	25	140M-D8E-C20	100-C23	2069	23	160
22B-D017N104	7.5 (10.0)	17.0	342...528	16.8	18.4	30	140M-D8E-C20	100-C23	2069	24	200
22B-D024N104	11.0 (15.0)	24.0	342...528	23.4	26.0	50	140M-F8E-C32	100-C43	2069	25	285
460...600V AC – 3-Phase Input, 0...575V 3-Phase Output											
22B-E1P7N104	0.75 (1.0)	1.7	414...660	2.1	2.3	6	140M-C2E-B25	100-C09	1655	13	40
22B-E3P0N104	1.5 (2.0)	3.0	414...660	3.65	3.8	6	140M-C2E-B40	100-C09	1655	13	60
22B-E4P2N104	2.2 (3.0)	4.2	414...660	5.2	5.3	10	140M-D8E-B63	100-C09	1655	17	90
22B-E6P6N104	4.0 (5.0)	6.6	414...660	8.1	8.3	15	140M-D8E-C10	100-C09	1655	14	150
22B-E9P9N104	5.5 (7.5)	9.9	414...660	12.1	11.2	20	140M-D8E-C16	100-C16	2069	23	160
22B-E012N104	7.5 (10.0)	12.2	414...660	14.9	13.7	25	140M-D8E-C16	100-C23	2069	24	200
22B-E019N104	11.0 (15.0)	19.0	414...660	23.1	24.1	40	140M-F8E-C25	100-C30	2069	25	285

(1) 200...240V AC - 1-Phase drives are also available with an integral EMC filter. Catalog suffix changes from N104 to N114 or N103 to N113.

(2) Recommended Fuse Type: UL Class J, CC, T or Type BS88; 600V (550V) or equivalent.

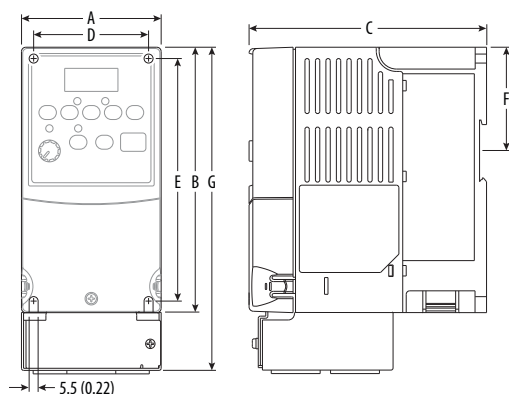
(3) The AIC ratings of the Bulletin 140M Motor Protector Circuit Breakers may vary. See [Bulletin 140M Motor Protection Circuit Breakers Application Ratings](#).

(4) 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, corner ground, or high-resistance ground systems.

(5) 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 specified in this column. Application specific thermal considerations may require a larger enclosure.

Product Dimensions

Approximate Dimensions



Dimensions are in millimeters and (inches). Weights are in kilograms and (pounds).

Frame	A	B ⁽¹⁾	C	D	E	F	G ⁽²⁾	Shipping Weight
A	80 (3.15)	152 (5.98)	136 (5.35)	67 (2.64)	140 (5.51)	59.3 (2.33)	185 (7.28)	1.4 (3.1)
B	100 (3.94)	180 (7.09)	136 (5.35)	87 (3.43)	168 (6.61)	87.4 (3.44)	213 (8.39)	2.2 (4.9)
C	130 (5.1)	260 (10.2)	180 (7.1)	116 (4.57)	246 (9.7)	—	320 (12.6)	4.3 (9.5)

(1) Overall height of standard IP 20/Open Type Drive.

(2) Overall height of drive with IP 30/NEMA 1/UL Type 1 option kit installed.

Ratings are in kW and (HP).

PowerFlex 4 — Frame	120V AC – 1-Phase	240V AC – 1-Phase	240V AC – 3-Phase	480V AC – 3-Phase
A	0.2 (0.25) 0.4 (0.5)	0.2 (0.25) 0.4 (0.5) 0.75 (1.0)	0.2 (0.25) 0.4 (0.5) 0.75 (1.0) 1.5 (2.0)	0.4 (0.5) 0.75 (1.0) 1.5 (2.0)
B	0.75 (1.0) 1.1 (1.5)	1.5 (2.0)	2.2 (3.0) 3.7 (5.0)	2.2 (3.0) 3.7 (5.0)

PowerFlex 40 — Frame	120V AC – 1-Phase	240V AC – 1-Phase	240V AC – 3-Phase	480V AC – 3-Phase	600V AC – 3-Phase
B	0.4 (0.5) 0.75 (1.0) 1.1 (1.5)	0.4 (0.5) 0.75 (1.0) 1.5 (2.0)	0.4 (0.5) 0.75 (1.0) 1.5 (2.0) 2.2 (3.0) 3.7 (5.0)	0.4 (0.5) 0.75 (1.0) 1.5 (2.0) 2.2 (3.0) 4.0 (5.0)	0.75 (1.0) 1.5 (2.0) 2.2 (3.0) 4.0 (5.0)
C		2.2 (3.0)	5.5 (7.5) 7.5 (10.0)	5.5 (7.5) 7.5 (10.0) 11.0 (15.0)	5.5 (7.5) 7.5 (10.0) 11.0 (15.0)

Shaded areas are applicable to PowerFlex 40 only.