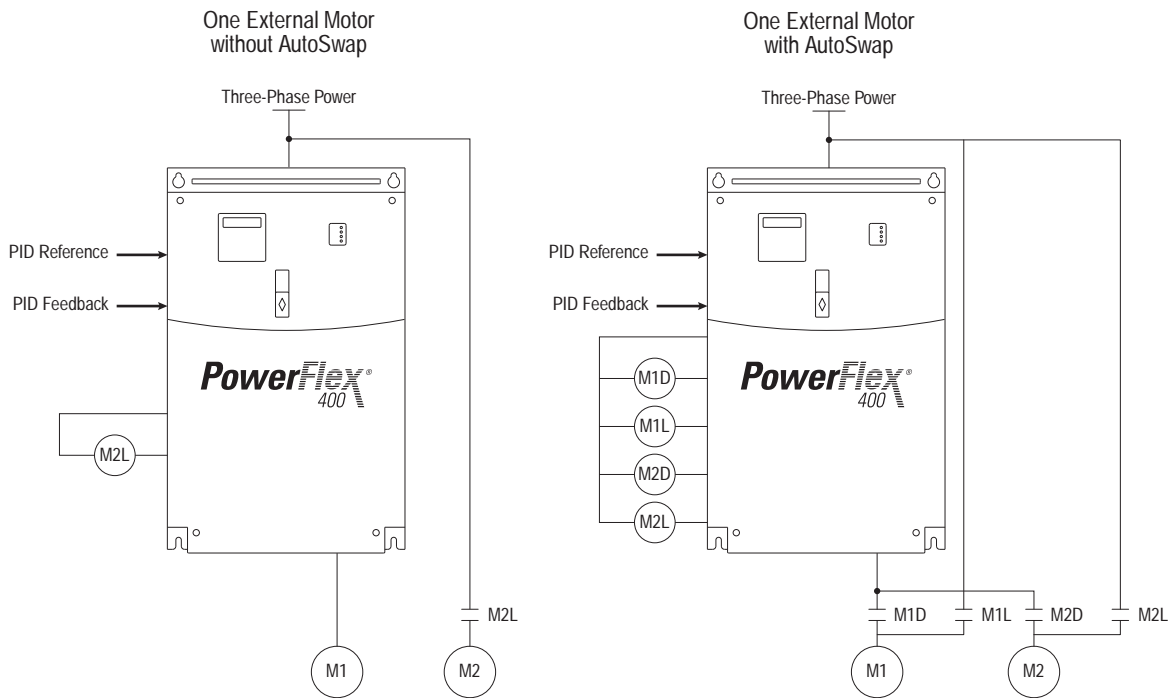


Product Selection Guide

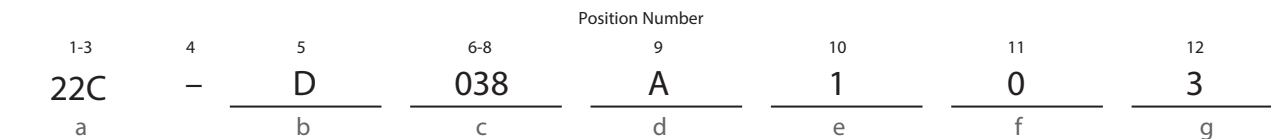
Auxiliary Motor Control

The PowerFlex 400 has a built-in Auxiliary Motor Control feature. This feature allows operation of up to three line-started motors and the motor controlled directly by the PowerFlex 400 drive. System output can vary from 0% (auxiliary motors off and drive-controlled motor at zero speed) to 400% (3 auxiliary motors and drive-controlled motor at full speed). When Auxiliary Motor Control is enabled, the internal PID controller in the PowerFlex 400 uses a reference and feedback signal to adjust the speed of the drive-controlled motor such that the feedback signal follows the reference signal. When demand exceeds the first motors capacity, the PowerFlex 400 Auxiliary Motor Control automatically starts an auxiliary motor. The speed of the drive-controlled motor is reduced to account for the auxiliary motors additional output to the system. If demand continues to increase, the PowerFlex Auxiliary Motor Control starts additional motors using the same process. When demand decreases, an auxiliary motor is stopped and the PowerFlex Auxiliary Motor Control increases the speed of the drive-controlled motor to account for lost system output. A Motor Interlock input identifies motors that are out of service and causes them to skip over to the next available motor.

An Auto Swap function also can be used which allows equal wear to be placed on each motor by periodically swapping the drive controlled and auxiliary motors. Each motor in the system will over time be connected to the PowerFlex 400 drive and also directly to the AC line. During an Auto Swap, the motor that is directly connected to the PowerFlex 400 drive is stopped and the contactor is opened. The contactor of the next motor that will be controlled by the PowerFlex 400 drive is opened if running across the AC line. A contactor is closed connecting this motor directly to the PowerFlex 400 drive and is started. An additional motor is line started if necessary.



Catalog Number Explanation



a

Drive	
Code	Type
22C	PowerFlex 400

b

Voltage Rating		
Code	Voltage	Ph.
B	240V AC	3
D	480V AC	3

c1

Rating			
200...240V Input			
Code	Amps	kW (Hp)	Frame
012	12	2.2 (3.0)	C
017	17.5	3.7 (5.0)	C
024	24	5.5 (7.5)	C
033	33	7.5 (10)	C
049	49	11 (15)	D
065	65	15 (20)	D
075	75	18.5 (25)	D
090	90	22 (30)	D
120	120	30 (40)	E
145	145	37 (50)	E

c2

Rating			
380...480V Input			
Code	Amps	kW (Hp)	Frame
6P0	6.0	2.2 (3.0)	C
010	10.5	4.0 (5.0)	C
012	12	5.5 (7.5)	C
017	17	7.5 (10)	C
022	22	11 (15)	C
030	30	15 (20)	C
038	38	18.5 (25)	D
045	45.5	22 (30)	D
060	60	30 (40)	D
072	72	37 (50)	E
088	88	45 (60)	E
105	105	55 (75)	E
142	142	75 (100)	E
170	170	90 (125)	F
208	208	110 (150)	F
260	260	132 (200)	G
310	310	160 (250)	G
370	370	200 (300)	H
460	460	250 (350)	H

d

Enclosure	
Code	Enclosure
N	Panel Mount - IP20, NEMA/UL Type Open ⁽¹⁾
A	Panel Mount - IP30, NEMA/UL Type 1 ⁽²⁾
F	Flange Mount - IP20, NEMA/UL Type Open ⁽³⁾

⁽¹⁾ Frame C drives only available with IP20, NEMA/UL Type Open enclosure. Field installed conversion kit available to achieve IP30, NEMA/UL Type 1 rating.

⁽²⁾ Frame D, E and F drives only available with IP30, NEMA/UL Type 1 enclosure.

⁽³⁾ Frame C drives only.

e

HIM	
Code	Interface Module
1	Fixed Keypad

f

Emission Class	
Code	Rating
0	Not Filtered

g

Version	
Code	Version
3	RS485

PowerFlex 400 Standard Drives

200...240V AC, Three Phase Drives

Drive Ratings				Rating	Catalog No.	
kW	HP	Output Current ⁽¹⁾	Frame Size		Panel Mount	Flange Mount
2.2	3.0	12 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-B012N103	22C-B012F103
3.7	5.0	17.5 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-B017N103	22C-B017F103
5.5	7.5	24 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-B024N103	22C-B024F103
7.5	10	33 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-B033N103	22C-B033F103
11	15	49 A	D	IP30, NEMA/UL Type 1	22C-B049A103	–
15	20	65 A	D	IP30, NEMA/UL Type 1	22C-B065A103	–
18.5	25	75 A	D	IP30, NEMA/UL Type 1	22C-B075A103	–

200...240V AC, Three Phase Drives (Continued)

Drive Ratings				Rating	Catalog No.	
kW	HP	Output Current ⁽¹⁾	Frame Size		Panel Mount	Flange Mount
22	30	90 A	D	IP30, NEMA/UL Type 1	22C-B090A103	-
30	40	120 A	E	IP30, NEMA/UL Type 1	22C-B120A103	-
37	50	145 A	E	IP30, NEMA/UL Type 1	22C-B145A103	-

- (1) Drive terminals are sized according to UL. Depending on operating ambient and wire used, some local or national codes may require a larger wire size than what the power terminals can accept. Multiple conductors, 90°C wire, and/or lugs may be required. See the PowerFlex 400 user manual, publication [22C-UM001](#) for details on terminal block wire ranges.
- (2) IP30, NEMA/UL Type 1 can be achieved for panel mount drives with top cover and optional conduit box kit installed. Field installed conversion kit specified under [User Installed Options on page 11](#)

380...480V AC, Three Phase Drives

Drive Ratings				Rating	Catalog No.	
kW	HP	Output Current ⁽¹⁾	Frame Size		Panel Mount	Flange Mount
2.2	3.0	6.0 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-D6P0N103	22C-D6P0F103
4.0	5.0	10.5 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-D010N103	22C-D010F103
5.5	7.5	12 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-D012N103	22C-D012F103
7.5	10	17 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-D017N103	22C-D017F103
11	15	22 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-D022N103	22C-D022F103 ⁽³⁾
15	20	30 A	C	IP20, NEMA/UL Open Type ⁽²⁾	22C-D030N103	22C-D030F103 ⁽³⁾
18.5	25	38 A	D	IP30, NEMA/UL Type 1	22C-D038A103	-
22	30	45.5 A	D	IP30, NEMA/UL Type 1	22C-D045A103	-
30	40	60 A	D	IP30, NEMA/UL Type 1	22C-D060A103	-
37	50	72 A	E	IP30, NEMA/UL Type 1	22C-D072A103	-
45	60	88 A	E	IP30, NEMA/UL Type 1	22C-D088A103	-
55	75	105 A	E	IP30, NEMA/UL Type 1	22C-D105A103	-
75	100	142 A	E	IP30, NEMA/UL Type 1	22C-D142A103	-
90	125	170 A	F	IP30, NEMA/UL Type 1	22C-D170A103	-
110	150	208 A	F	IP30, NEMA/UL Type 1	22C-D208A103	-
132	200	260 A	G	IP30, NEMA/UL Type 1	22C-D260A103	-
160	250	310 A	G	IP30, NEMA/UL Type 1	22C-D310A103	-
200	300	370 A	H	IP30, NEMA/UL Type 1	22C-D370A103	-
250	350	460 A	H	IP30, NEMA/UL Type 1	22C-D460A103	-

- (1) Drive terminals are sized according to UL. Depending on operating ambient and wire used, some local or national codes may require a larger wire size than what the power terminals can accept. Multiple conductors, 90°C wire, and/or lugs may be required. See the PowerFlex 400 User Manual, publication [22C-UM001](#) for details on terminal block wire ranges.
- (2) IP30, NEMA/UL Type 1 can be achieved for panel mount drives with top cover and optional conduit box kit installed. Field installed conversion kit specified under [User Installed Options on page 11](#).
- (3) 11 and 15 kW (15 and 20 HP) Frame C flange mount drives require external DC series bus inductor.