



## **PowerFlex<sup>®</sup> 70 and 700 Packages for Fan and Pump Applications Submittal**

**Submittal Date:**

**Project Name:**

**Project Location:**

**Consulting Engineer:**

**Contractor:**

**Contractor PO #:**

**Distributor Name:**

**Distributor Contact:**

**Distributor Reference #:**

Note: This is general submittal information. Reference product installation and/or user manual for detailed instructions.



# Catalog Number Explanation

## PowerFlex 70 and PowerFlex 700 Packages for Fan and Pump Applications

1 – 15HP @ 208VAC, 1 – 150HP @ 460VAC, 3 – 150HP @ 600VAC

### Catalog Number Explanation – Packaged Product

Position Number

1-3    4    5-7    8    9    10    11    12    13    14    15    16    17    18    19

21V    D    2P1    A    3    A    Y    N    A    R    C    0    B    N - LR

a    b    c    d    e    f    g    h    i    j    k    l    m    n    o

#### a

Drive	
Code	Type
21V	PowerFlex 70 Drive
21W	PowerFlex 700 Drive

#### b

Voltage Rating		
Code	Voltage	Ph.
X	208V ac	3
D	480V ac	3
E	600V ac	3

#### c1

ND Rating			
208V, 60Hz Input			
Code	Amps	Frame	kW (HP)
4P2	4.8	B	0.75 (1.0)
6P8	7.8	B	1.5 (2.0)
9P6	11	B	2.2 (3.0)
015	17.5	C	4 (5.0)
022	25.3	D	5.5 (7.5)
028	32.2	D	7.5 (10.0)
042	43	D	11 (15)

#### c2

ND Rating			
480V, 60Hz Input			
Code	Amps	Frame	kW (HP)
2P1	2.1	B	0.75 (1.0)
3P4	3.4	B	1.5 (2.0)
5P0	5	B	2.2 (3.0)
8P0	8	B	4.0 (5.0)
011	11	C	5.5 (7.5)
014	14	C	7.5 (10)
022	22	D	11 (15)
027	27	D	15 (20)
034	34	D	18.5 (25)
040	40	D	22 (30)
052	52	E	30 (40)
065	65	E	37 (50)
077 §	77	4	45 (60)
096 §	96	5	55 (75)
125 §	125	5	75 (100)
156 §	156	6	90 (125)
180 §	180	6	110 (150)
248 §	248	6	132 (200)

§ PowerFlex 700 options only.

#### c3

ND Rating			
600V, 60Hz Input			
Code	Amps	Frame	kW (HP)
3P9	3.9	B	2.2 (3.0)
6P1	6.1	B	4.0 (5.0)
9P0	9.0	C	5.5 (7.5)
011	11	C	7.5 (10)
017	17	D	11 (15)
022	22	D	15 (20)
027	27	D	18.5 (25)
032	32	D	22 (30)
041	41	E	30 (40)
052	52	E	37 (50)
062 §	62	4	45 (60)
077 §	77	5	55 (75)
099 §	99	5	75 (100)
125 §	125	6	90 (125)
144 §	144	6	110 (150)

§ PowerFlex 700 options only.

#### d

Enclosure	
Code	Enclosure
A	IP 20, NEMA Type 1

#### e

HIM	
Code	Operator Interface
0	Blank Cover
2	Digital LCD
3	Full Numeric LCD
4	Analog LCD
5	Prog. Only LCD

#### f

Documentation	
Code	Type
A	User Manual

#### g

Brake IGBT	
Code	w/Brake IGBT *
Y	Yes
N §	No

\* Brake IGBT is standard on PowerFlex 70 Frames B, C, D and E, and optional on PowerFlex 700 Frames 4, 5 and 6.

§ PowerFlex 700 options only.

#### i

Emission	
Code	CE Filter
A	Yes
N+	No

\* PowerFlex 70 600V ratings only.

#### j

Comm Slot	
Code	Version
C	ControlNet (Coax)
D	DeviceNet
E	EtherNet/IP
H	RS-485 HVAC
I	Interbus
L	LonWorks
P	PROFIBUS
Q	ControlNet (Fiber)
R	Remote I/O
S	RS-485 DF1
N	None

#### k

Control & I/O		
Code	Control	I/O Volts
A+	Standard	24V dc/ac
C*	Enhanced	24V dc

\* PowerFlex 700 options only.  
\* PowerFlex 70 options only.

#### l

Feedback	
Code	Feedback
0	None

#### m

Package	
Code	Description
A	Main Input Disconnect
B	3 Contactor Full Feature Bypass with Disconnect
C	3 Contactor Basic Bypass with Disconnect

#### n

Reserved

#### o

Options	
Code	Description
LR	Input Line Reactor *

\* Only available with Package Code A and B drives 1.0...10 HP @ 208V, 1.0...25 Hp @ 480V and 3.0...25 HP @ 600V.

\* Brake resistor only available for PowerFlex 70: 208V Frames B, C & D, 480V Frames B, C & D, 600V Frames B and C.

## Drive Ratings

### PowerFlex 70 and PowerFlex 700 Packages for Fan and Pump Applications

**1 – 15HP @ 208VAC, 1 – 150HP @ 460VAC, 3 – 150HP @ 600VAC**

Drive Ratings								
Catalog Number	Output Rating		Input Rating			Branch Circuit Protection		Estimated Power Dissipation
	kW (HP)	Amps	Voltage Range	kVA	Amps	Fuses	140M Motor Protectors	Watts
<b>208V AC – 3-Phase Input, 0 – 208V 3-Phase Output</b>								
<b>Main Input Disconnect</b>								
21VX4P2A_AY_A_C0AN	0.75 (1.0)	4.8	187-229	2	5.6	10	-	51
21VX6P8A_AY_A_C0AN	1.5 (2.0)	7.8	187-229	3.6	10	15	-	67
21VX9P6A_AY_A_C0AN	2.2 (3.0)	11	187-229	5.1	14	20	-	93
21VX015A_AY_A_C0AN	4.0 (5.0)	17.5	187-229	5.8	16	20	-	175
21VX022A_AY_A_C0AN	5.5 (7.5)	25.3	187-229	8.3	23.3	35	-	240
21VX028A_AY_A_C0AN	7.5 (10)	32.2	187-229	10.7	29.8	40	-	319
21VX042A_AY_A_C0AN	11 (15)	43	187-229	14.3	39.8	80	-	426
<b>3 Contactor Full Feature Bypass with Disconnect</b>								
21VX4P2A_AY_A_C0BN	0.75 (1.0)	4.8	187-229	2	5.6	10	-	61
21VX6P8A_AY_A_C0BN	1.5 (2.0)	7.8	187-229	3.6	10	15	-	77
21VX9P6A_AY_A_C0BN	2.2 (3.0)	11	187-229	5.1	14	20	-	103
21VX015A_AY_A_C0BN	4.0 (5.0)	17.5	187-229	5.8	16	20	-	185
21VX022A_AY_A_C0BN	5.5 (7.5)	25.3	187-229	8.3	23.3	35	-	250
21VX028A_AY_A_C0BN	7.5 (10)	32.2	187-229	10.7	29.8	40	-	329
21VX042A_AY_A_C0BN	11 (15)	43	187-229	14.3	39.8	80	-	436

## Drive Ratings PowerFlex 70 and PowerFlex 700 Packages - Continued

Drive Ratings								
Catalog Number	Output Rating		Input Rating			Branch Circuit Protection		Estimated Power Dissipation
	kW (HP)	Amps	Voltage Range	kVA	Amps	Fuses	140M Motor Protectors	Watts
<b>460V AC – 3-Phase Input, 0 – 460V 3-Phase Output</b>								
<b>Main Input Disconnect</b>								
21VD2P1A_AY_A_C0AN	0.75 (1)	2.1	414-500	1.4	1.6	6	-	47
21VD3P4A_AY_A_C0AN	1.5 (2)	3.4	414-500	3.2	2.6	10	-	65
21VD5P0A_AY_A_C0AN	2.2 (3)	5	414-500	3.2	3.9	10	-	89
21VD8P0A_AY_A_C0AN	4 (5)	8	414-500	5.7	6.9	15	-	128
21VD011A_AY_A_C0AN	5.5 (7.5)	11	414-500	7.9	9.5	20	-	168
21VD014A_AY_A_C0AN	7.5 (10)	14	414-500	10.4	12.5	20	-	225
21VD022A_AY_A_C0AN	11 (15)	22	414-500	16.6	19.9	35	-	340
21VD027A_AY_A_C0AN	15 (20)	27	414-500	20.6	24.8	35	-	476
21VD034A_AY_A_C0AN	18.5 (25)	34	414-500	25.9	31.2	60	-	404
21VD040A_AY_A_C0AN	22 (30)	40	414-500	30.5	36.7	70	-	438
21VD052A_AYNA_C0AN	30 (40)	52	414-500	39.7	47.7	80	-	551
21VD065A_AYNA_C0AN	37 (50)	65	414-500	49.6	59.6	100	-	690
21WD077A_A_NA_A0AN	45 (60)	77	414-500	60.1	72.3	150	-	930
21WD096A_A_NA_A0AN	55 (75)	96	414-500	74.9	90.1	175	-	1107
21WD125A_A_NA_A0AN	75 (100)	125	414-500	97.6	117	200	-	1479
21WD156A_A_NA_A0AN	90 (125)	156	414-500	122	147	250	-	1845
21WD180A_A_NA_A0AN	110 (150)	180	414-500	141	169	350	-	2204
21WD248A_A_NA_A0AN	132 (200)	248	414-500	194	233	400	-	2512
<b>3 Contactor Full Feature Bypass with Disconnect</b>								
21VD2P1A_AY_A_C0BN	0.75 (1)	2.1	414-500	1.4	1.6	6	-	57
21VD3P4A_AY_A_C0BN	1.5 (2)	3.4	414-500	3.2	2.6	10	-	75
21VD5P0A_AY_A_C0BN	2.2 (3)	5	414-500	3.2	3.9	10	-	99
21VD8P0A_AY_A_C0BN	4 (5)	8	414-500	5.7	6.9	15	-	138
21VD011A_AY_A_C0BN	5.5 (7.5)	11	414-500	7.9	9.5	20	-	178
21VD014A_AY_A_C0BN	7.5 (10)	14	414-500	10.4	12.5	20	-	235
21VD022A_AY_A_C0BN	11 (15)	22	414-500	16.6	19.9	35	-	350
21VD027A_AY_A_C0BN	15 (20)	27	414-500	20.6	24.8	35	-	486
21VD034A_AY_A_C0BN	18.5 (25)	34	414-500	25.9	31.2	60	-	414
21VD040A_AY_A_C0BN	22 (30)	40	414-500	30.5	36.7	70	-	448
21VD052A_AYNA_C0BN	30 (40)	52	414-500	39.7	47.7	80	-	561
21VD065A_AYNA_C0BN	37 (50)	65	414-500	49.6	59.6	100	-	700
21WD077A_A_NA_A0BN	45 (60)	77	414-500	60.1	72.3	150	-	940
21WD096A_A_NA_A0BN	55 (75)	96	414-500	74.9	90.1	175	-	1117
21WD125A_A_NA_A0BN	75 (100)	125	414-500	97.6	117	200	-	1489
21WD156A_A_NA_A0BN	90 (125)	156	414-500	122	147	250	-	1855
21WD180A_A_NA_A0BN	110 (150)	180	414-500	141	169	350	-	2214

## Drive Ratings PowerFlex 70 and PowerFlex 700 Packages - Continued

Drive Ratings								
Catalog Number	Output Rating		Input Rating			Branch Circuit Protection		Estimated Power Dissipation
	kW (HP)	Amps	Voltage Range	kVA	Amps	Fuses	140M Motor Protectors	Watts
<b>460V AC – 3-Phase Input, 0 – 460V 3-Phase Output</b>								
<b>3 Contactor Basic Bypass with Disconnect</b>								
21VD2P1A_AY_A_C0CN	0.75 (1)	2.1	414-500	1.4	1.6	-	140M-C2E-B25	57
21VD3P4A_AY_A_C0CN	1.5 (2)	3.4	414-500	3.2	2.6	-	140M-C2E-B40	75
21VD5P0A_AY_A_C0CN	2.2 (3)	5	414-500	3.2	3.9	-	140M-C2E-B63	99
21VD8P0A_AY_A_C0CN	4 (5)	8	414-500	5.7	6.9	-	140M-D8E-C10	138
21VD011A_AY_A_C0CN	5.5 (7.5)	11	414-500	7.9	9.5	-	140M-D8E-C16	178
21VD014A_AY_A_C0CN	7.5 (10)	14	414-500	10.4	12.5	-	140M-D8E-C16	235
21VD022A_AY_A_C0CN	11 (15)	22	414-500	16.6	19.9	-	140M-D8E-C25	350
21VD027A_AY_A_C0CN	15 (20)	27	414-500	20.6	24.8	-	140M-F8E-C32	486
21VD034A_AY_A_C0CN	18.5 (25)	34	414-500	25.9	31.2	-	140M-F8E-C45	414
21VD040A_AY_A_C0CN	22 (30)	40	414-500	30.5	36.7	-	140-CMN-4000	448
21VD052A_AYNA_C0CN	30 (40)	52	414-500	39.7	47.7	-	140-CMN-6300	561
21VD065A_AYNA_C0CN	37 (50)	65	414-500	49.6	59.6	-	140-CMN-9000	700
21WD077A_A_NA_A0CN	45 (60)	77	414-500	60.1	72.3	-	140-CMN-9000	940
21WD096A_A_NA_A0CN	55 (75)	96	414-500	74.9	90.1	175	-	1117
21WD125A_A_NA_A0CN	75 (100)	125	414-500	97.6	117	200	-	1489

## Drive Ratings PowerFlex 70 and PowerFlex 700 Packages - Continued

Drive Ratings								
Catalog Number	Output Rating		Input Rating			Branch Circuit Protection		Estimated Power Dissipation
	kW (HP)	Amps	Voltage Range	kVA	Amps	Fuses	140M Motor Protectors	Watts
<b>600V AC – 3-Phase Input, 0 – 600V 3-Phase Output</b>								
<b>Main Input Disconnect</b>								
21VD3P9A_AY_N_C0AN	2.2 (3)	5	414-500	3.2	3.9	10	-	89
21VD6P1A_AY_N_C0AN	4 (5)	8	414-500	5.7	6.9	15	-	128
21VD9P0A_AY_N_C0AN	5.5 (7.5)	11	414-500	7.9	9.5	20	-	168
21VD011A_AY_N_C0AN	7.5 (10)	14	414-500	10.4	12.5	20	-	226
21VD017A_AYNN_C0AN	11 (15)	22	414-500	16.6	19.9	35	-	340
21VD022A_AYNN_C0AN	15 (20)	27	414-500	20.6	24.8	35	-	433
21VD027A_AYNN_C0AN	18.5 (25)	34	414-500	25.9	31.2	60	-	324
21VD032A_AYNN_C0AN	22 (30)	40	414-500	30.5	36.7	70	-	355
21VD041A_AYNN_C0AN	30 (40)	52	414-500	39.7	47.7	80	-	442
21VD052A_AYNN_C0AN	37 (50)	65	414-500	49.6	59.6	100	-	561
21WD062A_A_NA_A0AN	45 (60)	77	414-500	60.1	72.3	150	-	825
21WD077A_A_NA_A0AN	55 (75)	96	414-500	74.9	90.1	175	-	1361
21WD099A_A_NA_A0AN	75 (100)	125	414-500	97.6	117	200	-	1874
21WD125A_A_NA_A0AN	90 (125)	156	414-500	122	147	250	-	1900
21WD144A_A_NA_A0AN	110 (150)	180	414-500	141	169	350	-	2280
<b>3 Contactor Full Feature Bypass with Disconnect</b>								
21VD3P9A_AY_N_C0BN	2.2 (3)	5	414-500	3.2	3.9	10	-	89
21VD6P1A_AY_N_C0BN	4 (5)	8	414-500	5.7	6.9	15	-	128
21VD9P0A_AY_N_C0BN	5.5 (7.5)	11	414-500	7.9	9.5	20	-	168
21VD011A_AY_N_C0BN	7.5 (10)	14	414-500	10.4	12.5	20	-	226
21VD017A_AYNN_C0BN	11 (15)	22	414-500	16.6	19.9	35	-	340
21VD022A_AYNN_C0BN	15 (20)	27	414-500	20.6	24.8	35	-	433
21VD027A_AYNN_C0BN	18.5 (25)	34	414-500	25.9	31.2	60	-	334
21VD032A_AYNN_C0BN	22 (30)	40	414-500	30.5	36.7	70	-	365
21VD041A_AYNN_C0BN	30 (40)	52	414-500	39.7	47.7	80	-	452
21VD052A_AYNN_C0BN	37 (50)	65	414-500	49.6	59.6	100	-	571
21WD062A_A_NA_A0BN	45 (60)	77	414-500	60.1	72.3	150	-	835
21WD077A_A_NA_A0BN	55 (75)	96	414-500	74.9	90.1	175	-	1371
21WD099A_A_NA_A0BN	75 (100)	125	414-500	97.6	117	200	-	1884
21WD125A_A_NA_A0BN	90 (125)	156	414-500	122	147	250	-	1910
21WD144A_A_NA_A0BN	110 (150)	180	414-500	141	169	350	-	2290

## Drive Specification

### PowerFlex 70 and PowerFlex 700 Packages for Fan and Pump Applications

**1 – 15HP @ 208VAC, 1 – 150HP @ 460VAC, 3 – 150HP @ 600VAC**

Category	Specification	
Agency Certification		UL508C
		CSA 22.2
Protection	AC Input Overvoltage Trip:	208V AC: 247V AC incoming line 480V AC: 570V AC incoming line 600V AC: 690V AC incoming line
	AC Input Undervoltage Trip:	208V AC: 120V AC incoming line 480V AC: 280V AC incoming line 600V AC: 345V AC incoming line
	Power Ride-Thru:	15 milliseconds at full load
	Logic Control Ride-Thru:	0.5 seconds minimum, 2 seconds typical
	Electronic Motor Overload Protection:	I <sup>2</sup> t Protection – 110% for 60 seconds (provides Class 10 protection)
	Overcurrent:	200% hardware limit, 220-300% instantaneous fault
	Ground Fault Trip:	Phase-to-ground on drive output
	Short Circuit Trip:	Phase-to-phase on drive output
Environment	Altitude:	1000 m (3300 ft) max. without derating
	Ambient Operating Temperature	0 to 40 degrees C (32 to 104 degrees F)
	Cooling Method:	Fan: all drive ratings
	Storage Temperature:	-40 to 70 degrees C (-40 to 158 degrees F)
	Atmosphere:	Important: Drive <b>must not</b> be installed in an area where the ambient atmosphere contains volatile or corrosive gas, vapors or dust. If the drive is not going to be installed for a period of time, it must be stored in an area where it will not be exposed to corrosive atmosphere.
	Relative Humidity:	5 to 95% non-condensing
Electrical	Voltage Tolerance:	208V ±10% 460V ±10% 600V ±10%
	Frequency Tolerance:	47-63 Hz
	Input Phases	Three-phase input provides full rating.
	Displacement Power Factor	0.98 across entire speed range
	Efficiency:	97.5% at rated amps, nominal line voltage
	Transistor Type:	Isolated Gate Bipolar (IGBT)



## Drive Specification PF70 and PF700 Packages - Continued

<b>Control</b>	Method:		Sinusoidal PWM, Volts/Hertz
	Carrier Frequency:		2-10 kHz, Drive rating based on 4kHz
	Frequency Accuracy: Digital Input: Analog Input:		Within $\pm 0.01\%$ of set output frequency Within 0.4% of maximum output frequency
	Speed Regulation – Open Loop with Slip Compensation		$\pm 0.5\%$ of base speed across a 40:1 speed range
	Output Frequency:		0 – 400 Hz (programmable)
	Stop Modes:		Multiple programmable stop modes including: Ramp, Coast, DC-Brake, Ramp-to-Hold and S-Curve.
	Accel/Decel:		Two independently programmable accel and decel times. Each time may be programmed from 0 – 3600 seconds in 0.1 second increments.
	Intermittent Overload:		110% Overload capability for up to 1 minute
	Electronic Motor Overload Protection:		Class 10 protection with speed sensitive response (drive). Class 20 protection -electronic (bypass).
<b>Control Inputs</b>	Digital:	Quantity:	(6) Programmable
		Specification: Rating: On State: Off State:	11.2mA @ 24V DC 19.2V minimum on state 3.2V maximum off state
	Analog:	Quantity:	(1) Isolated, bipolar, differential (1) Non-Isolated
		Specification: Resolution: 0 to 10V DC Analog: 4-20mA Analog:	10-bit 100k ohm input impedance 100 ohm input impedance
<b>Control Outputs</b>	Relay:	Quantity:	(2) Programmable Form C
		Specification: Resistive Rating: Inductive Rating:	250VAC/ 30VDC 50VA/60Watts 250VAC/30VDC 25VA/30 Watts
	Analog:	Quantity:	(1) Non-Isolated, 0-10V or 4-20mA
		Specification: Resolution: 0 to 10V DC Analog: 4-20mA Analog:	10-bit 2k ohm minimum 400 ohm maximum
<b>Keypad</b>	Display:	Removable LCD	
	Languages:	English, Francais, Espanol, Italiano, Deutsch, Portugues, Nederlands	
	Supported Protocols (Optional):	Modbus Siemens P1 Metasys N2 LonWorks	
	Software (Optional):	Windows Based	

## Maximum and Minimum Wire Sizes

### PowerFlex 70 and PowerFlex 700 Packages for Fan and Pump Applications

**1 – 15HP @ 208VAC, 1 – 150HP @ 460VAC, 3 – 150HP @ 600VAC**

#### Style A – Main Input Disconnect

Type	Terminals	Voltage	kW	HP	Wire Size		Torque (in-lbs)		
					Maximum	Minimum			
AC Input	L1, L2, L3	208V AC	0.75 – 3.7	1 – 5	8 AWG	14 AWG	35		
			5.5 – 7.5	7.5 - 10	4 AWG	14 AWG	35		
			11	15	2 AWG	14 AWG	155		
		460V AC	0.75 – 7.5	1 – 10	8 AWG	14 AWG	35		
			11 – 18.5	15 – 25	4 AWG	14 AWG	35		
			22 - 37	30 – 50	2 AWG	14 AWG	155		
			45 - 75	60 – 100	250 MCM	6 AWG	275		
			90 – 132	125 – 200	(2) 350 MCM	(2) 6 AWG	275		
		600V AC	0.75 – 7.5	1 – 10	8 AWG	14 AWG	35		
			11 – 18.5	15 – 25	4 AWG	14 AWG	35		
			22 - 37	30 – 50	2 AWG	14 AWG	155		
			45 - 75	60 – 100	250 MCM	6 AWG	275		
AC Output	U/T1, V/T2, W/T3	208V AC	0.75 – 4	1 – 5	12 AWG	22 AWG	5		
			5.5 – 11	7.5 – 15	8 AWG	18 AWG	12		
		460V AC	0.75 – 7.5	1 – 10	12 AWG	22 AWG	5		
			11 – 22	15 – 30	8 AWG	18 AWG	12		
			30 – 37	40 – 50	3 AWG	14 AWG	24		
			45	60	1/0 AWG	8 AWG	35		
			55	75	1/0 AWG	14 AWG	REFER TO DRIVE		
			75	100	2/0 AWG	4 AWG	REFER TO DRIVE		
		600V AC	90 – 132	125 – 200	4/0 AWG	14 AWG	52		
			0.75 – 7.5	1 – 10	12 AWG	22 AWG	5		
			11 – 22	15 – 30	8 AWG	18 AWG	12		
			30 – 37	40 – 50	3 AWG	14 AWG	24		
			45	60	1/0 AWG	8 AWG	35		
			55	75	1/0 AWG	14 AWG	REFER TO DRIVE		
			75	100	2/0 AWG	4 AWG	REFER TO DRIVE		
			90 – 110	125 – 150	4/0 AWG	14 AWG	52		
		Ground	GND	208V AC	0.75 – 11	1 – 15	4 AWG	14 AWG	45
				460V AC	0.75 – 30	1 – 40	4 AWG	14 AWG	45
37 – 75	50 – 100				2/0 AWG	14 AWG	150		
90 – 132	125 – 200				(2) 250 MCM	(2) 6 AWG	275		
600V AC	0.75 – 30			1 – 40	4 AWG	14 AWG	45		
	37 – 75			50 – 100	2/0 AWG	14 AWG	150		
	90 – 110			125 – 150	(2) 250 MCM	(2) 6 AWG	275		
Signal	T1 - T26 or T1 - T32			All	All	All	16 AWG	30 AWG	4.4

## Maximum and Minimum Wire Sizes - Continued

### Style B – 3 Contactor Full Feature Bypass with Disconnect

Type	Terminals	Voltage	kW	HP	Wire Size		Torque (in-lbs)
					Maximum	Minimum	
AC Input	L1, L2, L3	208V AC	0.75 – 3.7	1 – 5	8 AWG	14 AWG	35
			5.5 – 7.5	7.5 – 10	4 AWG	14 AWG	35
			11	15	2 AWG	14 AWG	155
		460V AC	0.75 – 7.5	1 – 10	8 AWG	14 AWG	35
			11 – 18.5	15 – 25	4 AWG	14 AWG	35
			22 – 37	30 – 50	2 AWG	14 AWG	155
			45 – 75	60 – 100	250 MCM	6 AWG	275
		600V AC	90 – 110	125 – 150	(2) 350 MCM	(2) 6 AWG	275
			2.2 – 7.5	3 – 10	8 AWG	14 AWG	35
			11 – 18.5	15 – 25	4 AWG	14 AWG	35
			22 – 37	30 – 50	2 AWG	14 AWG	155
			45 – 75	60 – 100	250 MCM	6 AWG	275
AC Output	T1, T2, T3	208V AC	0.75 – 5.5	1 – 7.5	8 AWG	22 AWG	13
			7.5 – 11	10 – 15	4 AWG	14 AWG	20
		460V AC	0.75 – 5.5	1 – 7.5	8 AWG	22 AWG	13
			7.5 – 22	10 - 30	4 AWG	14 AWG	20
			30 – 55	40 – 75	1/0 AWG	14 AWG	22
			75	100	350 MCM	6 AWG	275
		600V AC	90 – 110	125 – 150	350 MCM	6 AWG	275
			2.2 – 5.5	3 – 7.5	8 AWG	22 AWG	13
			7.5 – 22	10 - 30	4 AWG	14 AWG	20
			30 – 55	40 – 75	1/0 AWG	14 AWG	22
			75	100	350 MCM	6 AWG	275
		Ground	GND	208V AC	0.75 – 11	1 – 15	4 AWG
460V AC	0.75 – 30				1 – 40	4 AWG	14 AWG
	37 – 75			50 – 100	2/0 AWG	14 AWG	150
	90 – 110			125 – 150	(2) 250 MCM	(2) 6 AWG	275
600V AC	2.2 – 30			3 – 40	4 AWG	14 AWG	35
	37 – 75			50 – 100	2/0 AWG	14 AWG	150
	90 – 110	125 – 150	(2) 250 MCM	(2) 6 AWG	275		
Signal	T1 – T26 or T1 – T32	All	All	All	16 AWG	30 AWG	4.4
	T31 – T40				10 AWG	22 AWG	5 – 5.6

## Maximum and Minimum Wire Sizes - Continued

### Style C – 3 Contactor Basic Bypass with Disconnect

Type	Terminals	Voltage	kW	HP	Wire Size		Torque (in-lbs)
					Maximum	Minimum	
AC Input	L1, L2, L3	460V AC	0.75 – 5.5	1 – 7.5	8 AWG	22 AWG	13
			7.5 – 22	10 - 30	4 AWG	14 AWG	20
			30	40	1/0 AWG	14 AWG	22
			37 – 45	50 - 60	2 AWG	12 AWG	120
			55 – 75	75 – 100	250 MCM	6 AWG	275
AC Output	T1, T2, T3	460V AC	0.75 – 5.5	1 – 7.5	8 AWG	22 AWG	13
			7.5 – 22	10 - 30	4 AWG	14 AWG	20
			30 – 55	40 – 75	1/0 AWG	14 AWG	22
			75	100	350 MCM	6 AWG	275
Ground	GND	460V AC	0.75 – 30	1 – 40	4 AWG	14 AWG	35
			37 – 75	50 – 100	2/0 AWG	14 AWG	150
Signal	T1 – T26 or T1 – T32	All	All	All	16 AWG	30 AWG	4 – 4.4
	T18 – T24				10 AWG	22 AWG	5 – 5.6

## Short Circuit Breaking Capacity

### PowerFlex 70 and PowerFlex 700 Packages for Fan and Pump Applications

**1 – 15HP @ 208VAC, 1 – 150HP @ 460VAC, 3 – 150HP @ 600VAC**

Voltage	HP	Isc		
		Style A - Main Input Disconnect	Style B – 3 Contactor Full Feature Bypass with Disconnect	Style C – 3 Contactor Basic Bypass with Disconnect
208V AC	1 – 15	100 kA	100 kA	--
460V AC	1 – 30	100 kA	100 kA	65 kA
	40	100 kA	100 kA	42 kA
	50 – 60	100 kA	100 kA	35 kA
	75 – 100	100 kA	100 kA	100 kA
	125 – 150	100 kA	100 kA	-
	200	100 kA	-	-
600V AC	3 – 150	100 kA	100 kA	-



[www.rockwellautomation.com](http://www.rockwellautomation.com)

**Corporate Headquarters**

Rockwell Automation, 777 East Wisconsin Avenue, Suite 1400, Milwaukee, WI, 53202-5302 USA, Tel: (1) 414.212.5200, Fax: (1) 414.212.5201

**Headquarters for Allen-Bradley Products, Rockwell Software Products and Global Manufacturing Solutions**

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

**Headquarters for Dodge and Reliance Electric Products**

Americas: Rockwell Automation, 6040 Ponders Court, Greenville, SC 29615-4617 USA, Tel: (1) 864.297.4800, Fax: (1) 864.281.2433