

# PowerFlex 40 AC Drive



The PowerFlex 40 AC drive gives OEMs, machine builders and end users performance-enhancing motor control in an easy-to-use, compact package. The PowerFlex 40 features sensorless vector control to meet low speed torque demands helping to improve application performance.

With flexible packaging options and an uncomplicated programming structure, this drive can be quickly and easily installed and configured for a variety of applications.

Ratings	100...120V: 0.4...1.1 kW / 0.5...1.5 Hp / 2.3...6 A
	200...240V: 0.4...7.5 kW / 0.5...10 Hp / 2.3...33 A
	380...480V: 0.4...11 kW / 0.5...15 Hp / 1.4...24 A
	500...600V: 0.75...11 kW / 1...15 Hp / 1.7...19 A
Motor Control	<ul style="list-style-type: none"> <li>V/Hz control</li> <li>Sensorless Vector Control</li> </ul>
Communications	Integral RS 485, Common Industrial Protocol
User Interface	Integral programming keypad and local LED
Enclosures	IP20, IP30, IP66/NEMA 4X
Certifications	<ul style="list-style-type: none"> <li>UL</li> <li>CE</li> <li>cUL</li> <li>C-Tick</li> </ul>
Options	See pages 24... 31
Additional Information	<a href="#">PowerFlex 4/40 Technical Data, publication 22-TD001</a> <a href="#">PowerFlex 40 User Manual, publication 22B-UM001</a>

## 100...120V AC, Single-Phase Drives (50/60 Hz, No Filter)

Drive Ratings				IP20, NEMA/UL Type Open	IP20 Flange Mount *	IP66, NEMA/UL Type 4X
kW	Hp	Output Current	Frame Size	Cat. No.	Cat. No.	Cat. No.
		A				
0.4	0.5	2.3	B	22B-V2P3N104	22B-V2P3F104	22B-V2P3C104
0.75	1	5	B	22B-V5P0N104	22B-V5P0F104	22B-V5P0C104
1.1	1.5	6	B	22B-V6P0N104	22B-V6P0F104	22B-V6P0C104

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

## 200...240V AC, Single-Phase Drives (50/60 Hz)

Drive Ratings				IP20, NEMA/UL Type Open	IP20 Flange Mount *	IP66, NEMA/UL Type 4X
kW	Hp	Output Current	Frame Size	Cat. No.	Cat. No.	Cat. No.
		A				
<b>w/Integral "S Type" EMC Filter †</b>						
0.4	0.5	2.3	B	22B-A2P3N114	-	-
0.75	1	5	B	22B-A5P0N114	-	-
1.5	2	8	B	22B-A8P0N114	-	-
2.2	3	12	C	22B-A012N114	-	-
<b>No Filter</b>						
0.4	0.5	2.3	B	22B-A2P3N104	22B-A2P3F104	22B-A2P3C104
0.75	1	5	B	22B-A5P0N104	22B-A5P0F104	22B-A5P0C104
1.5	2	8	B	22B-A8P0N104	22B-A8P0F104	22B-A8P0C104
2.2	3	12	C	22B-A012N104	22B-A012F104	-

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

† This filter is suitable for use with a cable length of up to 10 meters for Class A and 1 meter for Class B environments.

### 200...240V AC, Three-Phase Drives (50/60 Hz, No Filter)

Drive Ratings				IP20, NEMA/UL Type Open	IP20 Flange Mount *	IP66, NEMA/UL Type 4X
kW	Hp	Output Current	Frame Size	Cat. No.	Cat. No.	Cat. No.
		A				
0.4	0.5	2.3	B	22B-B2P3N104	22B-B2P3F104	22B-B2P3C104
0.75	1	5	B	22B-B5P0N104	22B-B5P0F104	22B-B5P0C104
1.5	2	8	B	22B-B8P0N104	22B-B8P0F104	22B-B8P0C104
2.2	3	12	B	22B-B012N104	22B-B012F104	22B-B012C104
3.7	5	17.5	B	22B-B017N104	22B-B017F104	22B-B017C104
5.5	7.5	24	C	22B-B024N104	22B-B024F104	-
7.5	10	33	C	22B-B033N104	22B-B033F104	-

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

### 380...480V AC, Three-Phase Drives (50/60 Hz, No Filter)

Drive Ratings				IP20, NEMA/UL Type Open	IP20 Flange Mount *	IP66, NEMA/UL Type 4X
kW	Hp	Output Current	Frame Size	Cat. No.	Cat. No.	Cat. No.
		A				
0.4	0.5	1.4	B	22B-D1P4N104	22B-D1P4F104	22B-D1P4C104
0.75	1	2.3	B	22B-D2P3N104	22B-D2P3F104	22B-D2P3C104
1.5	2	4	B	22B-D4P0N104	22B-D4P0F104	22B-D4P0C104
2.2	3	6	B	22B-D6P0N104	22B-D6P0F104	22B-D6P0C104
4	5	10.5	B	22B-D010N104	22B-D010F104	22B-D010C104
5.5	7.5	12	C	22B-D012N104	22B-D012F104	-
7.5	10	17	C	22B-D017N104	22B-D017F104	-
11	15	24	C	22B-D024N104	22B-D024F104 ‡	-

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

‡ Requires use of external DC Bus inductor or AC Line Reactor.

### 500...600V AC, Three-Phase Drives (50/60 Hz, No Filter)

Drive Ratings				IP20, NEMA/UL Type Open	IP20 Flange Mount *	IP66, NEMA/UL Type 4X
kW	Hp	Output Current	Frame Size	Cat. No.	Cat. No.	Cat. No.
		A				
0.75	1	1.7	B	22B-E1P7N104	22B-E1P7F104	22B-E1P7C104
1.5	2	3	B	22B-E3P0N104	22B-E3P0F104	22B-E3P0C104
2.2	3	4.2	B	22B-E4P2N104	22B-E4P2F104	22B-E4P2C104
4	5	6.6	B	22B-E6P6N104	22B-E6P6F104	22B-E6P6C104
5.5	7.5	9.9	C	22B-E9P9N104	22B-E9P9F104	-
7.5	10	12	C	22B-E012N104	22B-E012F104	-
11	15	19	C	22B-E019N104	22B-E019F104	-

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

# PowerFlex 4-Class Options

## Human Interface Modules and Accessories

Description	Cat. No.	Used with PowerFlex Drive				
		4M	4	40	40P	400
Remote (Panel Mount) LCD Display, Digital Speed Control, CopyCat Capable. IP66 (NEMA/UL Type 4X/12) Indoor Use Only. Includes 2.0 meter cable.	22-HIM-C2S §	✓	✓	✓	✓	✓
Remote Handheld, LCD Display, Full Numeric Keypad, Digital Speed Control, CopyCat Capable. IP30 (NEMA/UL Type 1). Includes 1.0 meter cable. Panel mount with optional Bezel Kit.	22-HIM-A3	✓	✓	✓	✓	✓
Remote Handheld, Wireless Interface Module with Bluetooth* Technology. IP30 (NEMA/UL Type 1). Panel Mount with optional Bezel Kit.	22-WIM-N1	✓	✓	✓	✓	✓
Remote (Panel Mount), Wireless Interface Module with Bluetooth Technology. IP66 (NEMA/UL Type 4X/12) Indoor Use Only.	22-WIM-N4S	✓	✓	✓	✓	✓
Bezel Kit. Panel Mount for LCD Display, Remote Handheld Unit. IP30 (NEMA/UL Type 1). Includes a 22-RJ45CBL-C20 cable.	22-HIM-B1	✓	✓	✓	✓	✓
DSI HIM Cable (DSI HIM to RJ45 cable)						
1.0 Meter (3.3 Feet) DSI HIM Cable (DSI HIM to RJ45 cable)	22-HIM-H10	✓	✓	✓	✓	✓
2.9 Meter (9.51 Feet) DSI HIM Cable (DSI HIM to RJ45 cable)	22-HIM-H30	✓	✓	✓	✓	✓

§ The 22-HIM-C2S is smaller than the 22-HIM-C2 and cannot be used as a direct replacement.

## Safety Options

Description	Cat. No.	Used with PowerFlex Drive				
		4M	4	40	40P	400
DriveGuard Safe Torque-Off	20A-DG01				✓	

## Other Options

Description	Cat. No.	Used with PowerFlex Drive				
		4M	4	40	40P	400
Auxiliary Relay Board - Expands drive output capabilities - Frames D-H only.	AK-U9-RLB1					✓

## Terminators

Description *	Cat. No.	Used with PowerFlex Drive				
		4M	4	40	40P	400
for use with 3.7 kW (5 Hp) & below drives	1204-TFA1	✓	✓	✓	✓	✓
for use with 1.5 kW (2 Hp) & up drives	1204-TFB2	✓	✓	✓	✓	✓

\* Refer to Appendix A of publication *DRIVES-IN001* for selection information.

## Reflected Wave Reduction Modules w/Common Mode Choke

Description *	Cat. No.	Used with PowerFlex Drive				
		4M	4	40	40P	400
17A with Common Mode Choke	1204-RWC-17-A	✓	✓	✓	✓	✓

\* Refer to Appendix A of publication *DRIVES-IN001* for selection information.

## Reflected Wave Reduction Modules

Voltage	ND kW	ND Hp	Cat. No.	Used with PowerFlex Drive				
				4M	4	40	40P	400
380... 480V AC	2.2...4	3...5	1321-RWR8-DP	✓	✓	✓	✓	✓
	4	5	1321-RWR12-DP	✓		✓	✓	✓
	5.5	7.5	1321-RWR18-DP	✓		✓	✓	✓
	7.5	10	1321-RWR25-DP	✓		✓	✓	✓
	11	15	1321-RWR25-DP	✓		✓	✓	✓
	15	20	1321-RWR35-DP					✓
	18.5	25	1321-RWR45-DP					✓
	22	30	1321-RWR55-DP					✓
	30	40	1321-RWR80-DP					✓
	37	50	1321-RWR80-DP					✓
	45	60	1321-RWR100-DP					✓
	55	75	1321-RWR130-DP					✓
	75	100	1321-RWR160-DP					✓
	90	125	1321-RWR200-DP					✓
	110	150	1321-RWR250-DP					✓
149	200	1321-RWR320-DP					✓	
187	250	1321-RWR320-DP					✓	
500... 600V AC	4	5	1321-RWR8-EP			✓	✓	
	5.5	7.5	1321-RWR12-EP			✓	✓	
	7.5	10	1321-RWR18-EP			✓	✓	
	11	15	1321-RWR25-EP			✓	✓	

## Communication Option Kits

Description	Cat. No.	Used with PowerFlex Drive				
		4M	4	40	40P	400
BACnet™ MS/TP RS485 Communication Adapter	22-COMM-B		✓ ‡	✓ ♣		✓
ControlNet™ Communication Adapter	22-COMM-C	✓ ‡	✓ ‡	✓ ♣	✓ ♣	✓
DeviceNet™ Communication Adapter	22-COMM-D	✓ ‡	✓ ‡	✓ ♣	✓ ♣	✓
EtherNet/IP™ Communication Adapter	22-COMM-E	✓ ‡	✓ ‡	✓ ♣	✓ ♣	✓
LonWorks® Communication Adapter	22-COMM-L		✓ ‡	✓ ♣	✓ ♣	✓
PROFIBUS™ DP Communication Adapter	22-COMM-P	✓ ‡	✓ ‡	✓ ♣	✓ ♣	✓
Serial Converter Module (RS485 to RS232). Provides serial communication via DF1 protocol for use with DriveExplorer and DriveExecutive™ software. Includes DSI to RS232 serial converter, 1203-SFC serial cable, 22-RJ45CBL-C20 cable, and DriveExplorer Lite CD.	22-SCM-232	✓	✓	✓	✓	✓
Serial Cable. 2.0 meter with a locking low profile connector. Connects the serial converter to a 9-pin sub-miniature D female computer connector.	1203-SFC	✓	✓	✓	✓	✓
Serial Null Modem Adapter. Use when connecting the serial converter to DriveExplorer on a handheld PC.	1203-SNM	✓	✓	✓	✓	✓
Universal Serial Bus™ (USB) Converter includes 2m USB, 20-HIM-H10 & 22-HIM-H10 Cables	1203-USB	✓	✓	✓	✓	✓
DSI Cable. 2.0 meter RJ45 to RJ45 cable, male to male connectors.	22-RJ45CBL-C20	✓	✓	✓	✓	✓
Splitter Cable. RJ45 one to two port splitter cable.	AK-U0-RJ45-SC1	✓	✓	✓	✓	✓
Terminal Block. RJ45 two position terminal block (6 pieces) with two 120 Ohm terminating resistors (loose).	AK-U0-RJ45-TB2P	✓	✓	✓	✓	✓
Terminating Resistors. 120 Ohm resistor embedded in an RJ45 connector (2 pieces).	AK-U0-RJ45-TR1	✓	✓	✓	✓	✓
DSI External Communications Kit. External mounting kit for 22-COMM Communication Adapters.	22-XCOMM-DC-BASE	✓	✓	✓	✓	✓
External Communications Kit Power Supply Optional 100...240V AC Power Supply for External DSI Communications Kit.	20-XCOMM-AC-PS1	✓	✓	✓	✓	✓
Compact I/O Module (3 Channel)	1769-SM2	✓	✓	✓	✓	✓
Serial Flash Firmware Kit Updates drive firmware via computer.	AK-U9-FLSH1					✓
Communication Adapter Cover Houses the Communication Adapter for B & C Frame drives. Note: Cover adds 25 mm (0.98 in.) to the overall depth of the drive.						
Frame B Drive	22B-CCB			✓ >		
Frame C Drive	22B-CCC			✓ >		
Frame C Drive	22C-CCC					✓ >
Frame B Drive	22D-CCB				✓ >	
Frame C Drive	22D-CCC				✓ >	

‡ PowerFlex 4 & 4M drives require External DSI Communication Kits. Communication Adapters cannot be drive mounted.

♣ Requires a Communication Adapter Cover when used with Frame B & C PowerFlex 40/40P drives or Frame C PowerFlex 400 drives.

> If IP30, NEMA/UL Type 1 is required, a 22-JBCB (Frame B drives) or 22-JBCC (Frame C drives) must also be ordered.

## IP30, NEMA/UL Type 1 Conversion Kit

Description	Frame	Cat. No.	Used with PowerFlex Drive				
			4M	4	40	40P	400
Converts IP20 drive to IP30, NEMA/UL Type 1 enclosure. Includes conduit box, mounting screws and plastic top panel.	A	22-JBAA		✓			
	B	22-JBAB		✓	✓	✓	
	C	22-JBAC			✓	✓	✓
Converts IP20 drive to IP30, NEMA/UL Type 1 enclosure. Includes communication option conduit box, mounting screws and plastic top panel.	B	22-JBCB			✓	✓	
	C	22-JBCC			✓	✓	✓

**Dynamic Brakes Resistors**

Voltage	Drive Rating		Minimum Resistance	Resistance ⌘	Cat. No. †	Used with PowerFlex Drive				
	kW	Hp	Ohms ±10%	Ohms ±5%		4M	4	40	40P	400
100...120V, 50/60 Hz, Single-Phase	0.2	0.25	48	91	AK-R2-091P500		✓			
	0.4	0.5	48	91	AK-R2-091P500		✓	✓		
	0.75	1	48	91	AK-R2-091P500		✓	✓		
	1.1	1.5	48	91	AK-R2-091P500			✓		
200...240V, 50/60 Hz, Single-Phase	0.2	0.25	48	91	AK-R2-091P500		✓			
	0.4	0.5	48	91	AK-R2-091P500		✓	✓		
	0.75	1	48	91	AK-R2-091P500		✓	✓		
	1.5	2	48	91	AK-R2-091P500		✓	✓		
200...240V, 50/60 Hz, Three-Phase	2.2	3	32	47	AK-R2-047P500			✓		
	0.2	0.25	48	91	AK-R2-091P500		✓			
	0.4	0.5	48	91	AK-R2-091P500		✓	✓	✓	
	0.75	1	48	91	AK-R2-091P500		✓	✓	✓	
	1.5	2	48	91	AK-R2-091P500		✓	✓	✓	
	2.2	3	32	47	AK-R2-047P500		✓	✓	✓	
	3.7	5	19	47	AK-R2-047P500		✓	✓	✓	
380...480V, 50/60 Hz, Three-Phase	5.5	7.5	13	30	AK-R2-030P1K2	✓		✓	✓	
	7.5	10	10	30	AK-R2-030P1K2	✓		✓	✓	
	0.4	0.5	97	360	AK-R2-360P500		✓	✓	✓	
	0.75	1	97	360	AK-R2-360P500		✓	✓	✓	
	1.5	2	97	360	AK-R2-360P500		✓	✓	✓	
	2.2	3	97	120	AK-R2-120P1K2		✓	✓	✓	
	4.0	5	77	120	AK-R2-120P1K2		✓	✓	✓	
500...600V, 50/60 Hz, Three-Phase	5.5	7.5	55	120	AK-R2-120P1K2	✓		✓	✓	
	7.5	10	39	120	AK-R2-120P1K2	✓		✓	✓	
	11	15	24	120	AK-R2-120P1K2 ❖	✓		✓	✓	
	0.75	1	120	360	AK-R2-360P500			✓	✓	
	1.5	2	120	360	AK-R2-360P500			✓	✓	
	2.2	3	82	120	AK-R2-120P1K2			✓	✓	
	4.0	5	82	120	AK-R2-120P1K2			✓	✓	
500...600V, 50/60 Hz, Three-Phase	5.5	7.5	51	120	AK-R2-120P1K2			✓	✓	
	7.5	10	51	120	AK-R2-120P1K2			✓	✓	
	11	15	51	120	AK-R2-120P1K2 ❖			✓	✓	

⌘ Verify resistor Ohms against minimum resistance for drive being used.

† Resistors listed are rated 5% duty cycle.

❖ Requires two resistors wired in parallel.

## Spare Parts

Description		Cat. No.	Used with PowerFlex Drive				
			4M	4	40	40P	400
Fan Replacement Kits	Fan Replacement Kit - Frame A	SK-U1-FAN1-A1		✓			
	Fan Replacement Kit - Frame B, 1 Fan	SK-U1-FAN1-B1		✓	✓	✓	
	Fan Replacement Kit - Frame B, 2 Fans	SK-U1-FAN2-B1		✓	✓	✓	
	Fan Replacement Kit - Frame A	SK-U1-FFAN1-A1	✓				
	Fan Replacement Kit - Frame B	SK-U1-FFAN1-B1	✓				
	Fan Replacement Kit - Frame C	SK-U1-FFAN1-C1	✓				
	Fan Replacement Kit - Frame C, 1 Fan	SK-U1-FAN1-C1			✓	✓	✓*
	Fan Replacement Kit - Frame C, 1 Fan, 15 Hp	SK-U1-FAN1-C2			✓	✓	✓⊛
	Fan Replacement Kit, NEMA 4X	SK-U1-FAN1-B4			✓		
	Fan Replacement Kit - Frame D, 2 Fans, B049...B090 & D038...D060 Ratings	SK-U1-FAN2-D1					✓
	Fan Replacement Kit - Frame E, 2 Fans, B120...B145 & D072...D142 Ratings	SK-U1-FAN2-E2					✓
	Fan Replacement Kit - Frame F, 2 Fans, IGBT, D170 & D208 Ratings	SK-U1-FAN2-F1					✓
	Fan Replacement Kit - Frame F, 1 Fan, Rectifier, D170 & D208 Ratings	SK-U1-FAN1-F2					✓
	Fan Replacement Kit - Frame F, 1 Fan, Choke, D170 & D208 Ratings	SK-U1-FAN1-F3					✓
	Fan Replacement Kit - Frame G, 1 Fan (Side), D260 & D310 Ratings	SK-U1-FAN1-G1					✓
	Fan Replacement Kit - Frame G, 2 Fans (Top), D260 & D310 Ratings	SK-U1-FAN1-G2					✓
	Fan Replacement Kit - Frame G, 4 Fans (Bottom), D260 & D310 Ratings	SK-U1-FAN4-G3					✓
	Fan Replacement Kit - Frame H, 1 Fan (Upper Side), D370 & D460 Ratings	SK-U1-FAN1-H1					✓
	Fan Replacement Kit - Frame H, 1 Fan (Middle Side), D370 & D460 Ratings	SK-U1-FAN1-H2					✓
	Fan Replacement Kit - Frame H, 4 Fans (Bottom), D370 & D460 Ratings	SK-U1-FAN4-H3					✓
Covers	Encoder Terminal Cover (All Frames)	SK-U1-DCVR4-EN				✓	
	Frame A Cover with Power Terminal Guard	SK-U1-ACVR1-A1		✓			
	Frame B Cover with Power Terminal Guard	SK-U1-ACVR1-B1		✓			
	Frame A Cover	SK-U1-FCVR1-A1	✓				
	Frame B Cover	SK-U1-FCVR1-B1	✓				
	Frame C Cover	SK-U1-FCVR1-C1	✓				
	Frame B Cover with Power Terminal Guard	SK-U1-BCVR1-B1			✓		
	Frame C Cover with Power Terminal Guard	SK-U1-BCVR1-C1			✓		
	Frame B Cover, NEMA 4X	SK-U1-BCVR1-B4			✓		
	Frame B Cover with Power Terminal Guard	SK-U1-DCVR3-B1					✓
	Frame C Cover with Power Terminal Guard	SK-U1-DCVR3-C1					✓
	Frame C Cover with Power Terminal Guard	SK-U1-CCVR1-C1					✓
	Frame D Cover	SK-U1-CCVR1-D1					✓
	Frame E Cover	SK-U1-CCVR1-E1					✓
	Frame F Cover	SK-U1-CCVR1-F1					✓
	Frame G Cover	SK-U1-CCVR1-G1					✓
	Frame H Cover	SK-U1-CCVR1-H1					✓
	NEMA 4X Replacement Conduit Plugs	SK-U1-PLUGS-B4			✓		

\* 3...10 HP @ 200...240V AC and 3...10 HP @ 380...480V AC

⊛ 15...20 HP @ 380...480V AC

**EMC Filters (Required to Meet CE Certification)**

Drive Ratings			PowerFlex 4M		PowerFlex 4		PowerFlex 40/40P		PowerFlex 400
Input Voltage	kW	Hp	S Type Filter	L Type Filter	S Type Filter	L Type Filter	S Type Filter	L Type Filter	IP00 (NEMA/UL Type Open)
			Cat. No. *	Cat. No. ‡	Cat. No. *	Cat. No. ‡	Cat. No. *	Cat. No. ‡	Cat. No. *
100...120V, 50/60 Hz, Single-Phase	0.2	0.25	-	22F-RF010-AL	-	22-RF010-AL	-	-	-
	0.4	0.5	-	22F-RF010-AL	-	22-RF010-AL	-	22-RF018-BL ♣	-
	0.75	1	-	22F-RF025-BL	-	22-RF018-BL	-	22-RF018-BL ♣	-
	1.1	1.5	-	22F-RF025-BL	-	22-RF025-CL §	-	22-RF018-BL ♣	-
200...240V, 50/60 Hz, Single-Phase	0.2	0.25	⊗	22F-RF010-AL	⊗	22-RF010-AL	-	-	-
	0.4	0.5	⊗	22F-RF010-AL	⊗	22-RF010-AL	⊗	22-RF018-BL ♣	-
	0.75	1	⊗	22F-RF010-AL	⊗	22-RF010-AL	⊗	22-RF018-BL ♣	-
	1.5	2	⊗	22F-RF025-BL	⊗	22-RF018-BL	⊗	22-RF018-BL ♣	-
200...240V, 50/60 Hz, Single-Phase, NO BRAKE	0.2	0.25	-	-	⊗	22-RF010-AL	-	-	-
	0.4	0.5	-	-	⊗	22-RF010-AL	-	-	-
	0.75	1	-	-	⊗	22-RF010-AL	-	-	-
	1.5	2	-	-	⊗	22-RF018-BL	-	-	-
200...240V, 50/60 Hz, Three-Phase	2.2	3	-	-	⊗	22-RF025-CL §	-	-	-
	0.2	0.25	22F-RF9P5-AS	22F-RF9P5-AL	22-RF9P5-AS	22-RF9P5-AL	-	-	-
	0.4	0.5	22F-RF9P5-AS	22F-RF9P5-AL	22-RF9P5-AS	22-RF9P5-AL	22-RF021-BS >	22-RF021-BL	-
	0.75	1	22F-RF9P5-AS	22F-RF9P5-AL	22-RF9P5-AS	22-RF9P5-AL	22-RF021-BS >	22-RF021-BL	-
	1.5	2	22F-RF9P5-AS	22F-RF9P5-AL	22-RF9P5-AS	22-RF9P5-AL	22-RF021-BS >	22-RF021-BL	-
	2.2	3	22F-RF021-BS	22F-RF021-BL	22-RF021-BS	22-RF021-BL	22-RF021-BS >	22-RF021-BL	22-RF034-CS
	3.7	5	22F-RF021-BS	22F-RF021-BL	22-RF021-BS	22-RF021-BL	22-RF021-BS >	22-RF021-BL	22-RF034-CS
	5.5	7.5	22F-RF039-CS	22F-RF039-CL	-	-	22-RF034-CS	22-RF034-CL	22-RF034-CS
	7.5	10	22F-RF039-CS	22F-RF039-CL	-	-	22-RF034-CS	22-RF034-CL	22-RF034-CS
	11	15	-	-	-	-	-	-	22-RFD070
	15	20	-	-	-	-	-	-	22-RFD100
	18.5	25	-	-	-	-	-	-	22-RFD100
	22	30	-	-	-	-	-	-	22-RFD150
	30	40	-	-	-	-	-	-	22-RFD150
37	50	-	-	-	-	-	-	22-RFD180	
380...480V, 50/60 Hz, Three-Phase	0.4	0.5	22F-RF6P0-AS	22F-RF6P0-AL	22-RF5P7-AS	22-RF5P7-AL	22-RF012-BS	22-RF012-BL	-
	0.75	1	22F-RF6P0-AS	22F-RF6P0-AL	22-RF5P7-AS	22-RF5P7-AL	22-RF012-BS	22-RF012-BL	-
	1.5	2	22F-RF6P0-AS	22F-RF6P0-AL	22-RF5P7-AS	22-RF5P7-AL	22-RF012-BS	22-RF012-BL	-
	2.2	3	22F-RF012-BS	22F-RF012-BL	22-RF012-BS	22-RF012-BL	22-RF012-BS	22-RF012-BL	22-RF018-CS
	3.7	5	22F-RF012-BS	22F-RF012-BL	22-RF012-BS	22-RF012-BL	22-RF012-BS	22-RF012-BL	22-RF018-CS
	5.5	7.5	22F-RF026-CS	22F-RF026-CL	-	-	22-RF018-CS	22-RF018-CL	22-RF018-CS
	7.5	10	22F-RF026-CS	22F-RF026-CL	-	-	22-RF018-CS	22-RF018-CL	22-RF018-CS
	11	15	22F-RF026-CS	22F-RF026-CL	-	-	22-RF026-CS	22-RF026-CL	22-RF026-CS
	15	20	-	-	-	-	-	-	22-RFD036
	18.5	25	-	-	-	-	-	-	22-RFD050
	22	30	-	-	-	-	-	-	22-RFD050
	30	40	-	-	-	-	-	-	22-RFD070
	37	50	-	-	-	-	-	-	22-RFD100
	45	60	-	-	-	-	-	-	22-RFD100
	55	75	-	-	-	-	-	-	22-RFD150
	75	100	-	-	-	-	-	-	22-RFD180
	90	125	-	-	-	-	-	-	22-RFD208
	110	150	-	-	-	-	-	-	22-RFD208
132	200	-	-	-	-	-	-	22-RFD323	
160	250	-	-	-	-	-	-	22-RFD480	
200	300	-	-	-	-	-	-	22-RFD480	
250	350	-	-	-	-	-	-	22-RFD480	

Continued on next page

## EMC Filters (continued)

Drive Ratings			PowerFlex 4M		PowerFlex 4		PowerFlex 40/40P		PowerFlex 400
Input Voltage	kW	Hp	S Type Filter	L Type Filter	S Type Filter	L Type Filter	S Type Filter	L Type Filter	IP00 (NEMA/UL Type Open)
			Cat. No. *	Cat. No. ‡	Cat. No. *	Cat. No. ‡	Cat. No. *	Cat. No. ‡	Cat. No. *
500...600V, 50/60 Hz, Three-Phase	0.75	1	-	-	-	-	-	22-RF8P0-BL	-
	1.5	2	-	-	-	-	-	22-RF8P0-BL	-
	2.2	3	-	-	-	-	-	22-RF8P0-BL	-
	4.0	5	-	-	-	-	-	22-RF8P0-BL	-
	5.5	7.5	-	-	-	-	-	22-RF015-CL	-
	7.5	10	-	-	-	-	-	22-RF015-CL	-
	11	15	-	-	-	-	-	22-RF024-CL	-

\* This filter is suitable for use with a cable length of up to 10 meters for Class A and 1 meter for Class B environments.

⊗ Drives are available in these ratings with internal "S Type" filters.

‡ This filter is suitable for use with a cable length of up to 100 meters for Class A and 5 meters for Class B environments.

§ The piggyback mounting option cannot be used with Frame B PowerFlex 4 drives and Frame C EMC Line Filters.

♣ PowerFlex 40 Only.

➤ Filter must be Series B or later.

## DC Series Bus Inductors

Voltage	Drive Rating			Inductance	Cat. No.	Used with PowerFlex Drive				
	kW	Hp	Amps	mH		4M	4	40	40P	400
200...240V, 50/60 Hz, Three-Phase	2.2	3	12	1.00	1321-DC12-1					✓
	3.7	5	17.5	0.65	1321-DC18-1					✓
	5.5	7.5	32	0.85	1321-DC32-1			✓		✓
	7.5	10	40	0.75	1321-DC40-2			✓		✓
400...480V, 50/60 Hz, Three-Phase	2.2	3	6	2	1321-DC9-2					✓
	4.0	5	10.5	2.1	1321-DC12-2					✓
	5.5	7.5	18	3.75	1321-DC18-4			✓		✓
	7.5	10	25	1.28	1321-DC25-4			✓		✓
	11	15	32	2.68	1321-DC32-3			✓		✓
500...600V, 50/60 Hz, Three-Phase	15	20	30	2.5	1321-DC40-4					✓
	5.5	7.5	12	2.1	1321-DC12-2_600			✓		
	7.5	10	18	3.75	1321-DC18-4			✓		
	11	15	25	1.28	1321-DC25-4			✓		



**Isolation Transformers for PowerFlex 400 - IP32, NEMA/UL Type 3R Standalone, 4...6% Nominal Impedance**

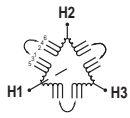


Diagram 1

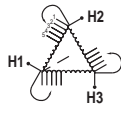


Diagram 2

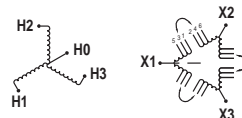


Diagram 3  
230V Primary, 460V Secondary Only

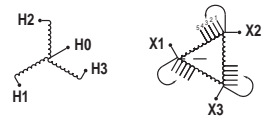


Diagram 4  
230V Primary, 460V Secondary Only

Rating		Wiring Diagram	208V, 60 Hz, Three-Phase Secondary	230V, 60 Hz, Three-Phase Secondary				460V, 60 Hz, Three-Phase Secondary		
			208V Primary	230V Primary	460V Primary	575V Primary	230V Primary	460V Primary	575V Primary	
kW	Hp		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	
2.2	3.0	1/3	1321-3TW005-XX	1321-3TW005-AA	1321-3TW005-BA	1321-3TW005-CA	1321-3TW005-AB	1321-3TW005-BB	1321-3TW005-CB	
4.0	5.0	1/3	1321-3TW007-XX	1321-3TW007-AA	1321-3TW007-BA	1321-3TW007-CA	1321-3TW007-AB	1321-3TW007-BB	1321-3TW007-CB	
5.5	7.5	1/3	1321-3TW011-XX	1321-3TW011-AA	1321-3TW011-BA	1321-3TW011-CA	1321-3TW011-AB	1321-3TW011-BB	1321-3TW011-CB	
7.5	10	1/3	1321-3TW014-XX	1321-3TW014-AA	1321-3TW014-BA	1321-3TW014-CA	1321-3TW014-AB	1321-3TW014-BB	1321-3TW014-CB	
11	15	2/4	1321-3TW020-XX	1321-3TW020-AA	1321-3TW020-BA	1321-3TW020-CA	1321-3TW020-AB	1321-3TW020-BB	1321-3TW020-CB	
15	20	2/4	1321-3TW027-XX	1321-3TW027-AA	1321-3TW027-BA	1321-3TW027-CA	1321-3TW027-AB	1321-3TW027-BB	1321-3TW027-CB	
18.5	25	2/4	1321-3TW034-XX	1321-3TW034-AA	1321-3TW034-BA	1321-3TW034-CA	1321-3TW034-AB	1321-3TW034-BB	1321-3TW034-CB	
22	30	2/4	-	1321-3TW040-AA	1321-3TW040-BA	1321-3TW040-CA	1321-3TW040-AB	1321-3TW040-BB	1321-3TW040-CB	
30	40	2/4	-	1321-3TW051-AA	1321-3TW051-BA	1321-3TW051-CA	1321-3TW051-AB	1321-3TW051-BB	1321-3TW051-CB	
37	50	2/4	-	1321-3TH063-AA	1321-3TH063-BA	-	1321-3TH063-AB	1321-3TH063-BB	-	
45	60	2/4	-	-	-	-	1321-3TH075-AB	1321-3TH075-BB	-	
55	75	2/4	-	-	-	-	1321-3TH093-AB	1321-3TH093-BB	-	
75	100	2/4	-	-	-	-	1321-3TH118-AB	1321-3TH118-BB	-	
90	125	2/4	-	-	-	-	1321-3TH145-AB	1321-3TH145-BB	-	
110	150	2/4	-	-	-	-	1321-3TH175-AB	1321-3TH175-BB	-	
132	200	2/4	-	-	-	-	1321-3TH220-AB	1321-3TH220-BB	-	
160	250	2/4	-	-	-	-	1321-3TH275-AB	1321-3TH275-BB	-	
200	300	2/4	-	-	-	-	1321-3TH330-AB	1321-3TH330-BB	-	
250	350	2/4	-	-	-	-	1321-3TH440-AB	1321-3TH440-BB	-	

## Input & Output Line Reactors - 3% Impedance

Voltage	Drive Ratings			IP00 *	IP11 *	Used with PowerFlex Drive				
	kW	Hp	Amps	(NEMA/UL Open Type) Cat. No.	(NEMA/UL Type 1) Cat. No.	4M	4	40	40P	400
200...240V, 60 Hz, Three-Phase	0.2	0.25	2.0	1321-3R2-A	-	✓	✓			
	0.4	0.5	4.0	1321-3R4-B	-	✓	✓	✓	✓	
	0.75	1	8.0	1321-3R8-B	-	✓	✓	✓	✓	
	1.5	2	8.0	1321-3R8-A	-	✓	✓	✓	✓	
	2.2	3	12	1321-3R12-A	1321-3RA12-A	✓	✓	✓	✓	✓
	3.7	5	17.5	1321-3R18-A	1321-3RA18-A	✓	✓	✓	✓	✓
	5.5	7.5	24	1321-3R25-A	1321-3RA25-A	✓		✓	✓	✓
	7.5	10	33	1321-3R35-A	1321-3RA35-A	✓		✓	✓	✓
	11	15	49	1321-3R45-A	1321-3RA45-A					✓
	15	20	65	1321-3R55-A	1321-3RA55-A					✓
	18.5	25	75	1321-3R80-A	1321-3RA80-A					✓
	22	30	90	1321-3R80-A	1321-3RA80-A					✓
	30	40	120	1321-3R100-A	1321-3RA100-A					✓
37	50	145	1321-3R130-A	1321-3RA130-A					✓	
380...480V, 60 Hz, Three-Phase	0.4	0.5	2.0	1321-3R2-B	-	✓	✓	✓	✓	
	0.75	1	4.0	1321-3R4-C	-	✓	✓	✓	✓	
	1.5	2	4.0	1321-3R4-B	-	✓	✓	✓	✓	
	2.2	3	6.0	1321-3R8-C	1321-3RA8-C	✓	✓	✓	✓	✓
	4.0	5	10.5	1321-3R8-B	1321-3RA8-B	✓	✓	✓	✓	✓
	5.5	7.5	12	1321-3R12-B	1321-3RA12-B	✓		✓	✓	✓
	7.5	10	17	1321-3R18-B	1321-3RA18-B	✓		✓	✓	✓
	11	15	22	1321-3R25-B	1321-3RA25-B	✓		✓	✓	✓
	15	20	30	1321-3R35-B	1321-3RA35-B					✓
	18.5	25	38	1321-3R35-B	1321-3RA35-B					✓
	22	30	45.5	1321-3R45-B	1321-3RA45-B					✓
	30	40	60	1321-3R55-B	1321-3RA55-B					✓
	37	50	72	1321-3R80-B	1321-3RA80-B					✓
	45	60	88	1321-3R80-B	1321-3RA80-B					✓
	55	75	105	1321-3R100-B	1321-3RA100-B					✓
	75	100	142	1321-3R130-B	1321-3RA130-B					✓
90	125	170	1321-3R160-B	1321-3RA160-B					✓	
110	150	208	1321-3R200-B	1321-3RA200-B					✓	
500...600V, 60 Hz, Three-Phase	0.75	1	2.0	1321-3R2-B	-			✓	✓	
	1.5	2	4.0	1321-3R4-C	-			✓	✓	
	2.2	3	4.0	1321-3R4-B	-			✓	✓	
	4.0	5	8.0	1321-3R8-C	-			✓	✓	
	5.5	7.5	12	1321-3R12-B	-			✓	✓	
	7.5	10	12	1321-3R12-B	-			✓	✓	
	11	15	18	1321-3R18-B	-			✓	✓	

\* Catalog numbers listed are for 3% impedance. 5% impedance reactor types are also available. Refer to publication 1321-TD001....