

PowerFlex® DC Drive Family

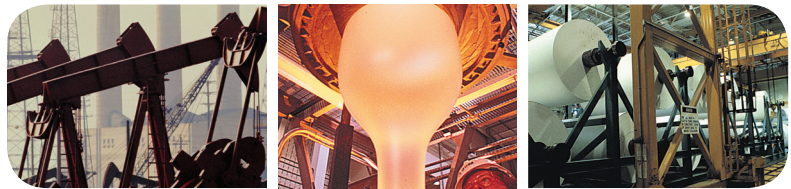


A Full Line of High-Performance Solutions

Allen-Bradley® PowerFlex® DC drives, stand-alone regulators and field controllers are designed for demanding stand-alone, coordinated drive control and drive system applications. They are a great choice for DC motor applications and retrofits up to 6000 Hp/4000 kW.

PowerFlex DC drives deliver highly functional, cost-effective drive and control solutions, and are easily configured for most applications. Drive modules are available from 1.2...1044 kW/1.5...1400 Hp at 200...690V AC in both regenerative and non-regenerative configurations. Standard hardware includes an open type enclosure, armature converter, regulated field converter for field weakening or economy applications, a regulator with integrated DPI functionality, DC tachometer and encoder capability.

PowerFlex DC Field Controllers provide 3-phase, four quadrant (reversing) DC motor or generator field control. They can be used for standalone DC motor field control or with a PowerFlex DC digital drive or DC Stand-alone Regulator (SAR). A fiber-optic interface circuit board enables transmission of the reference, feedback and status signals between the drive or regulator and field controller. In stand-alone mode, they provide power to a DC motor field with a fixed reference by using fixed I/O. The PowerFlex DC Field Controller can also control electromagnets.



Integrated Installation for DC Drive and Field Controller

- Design incorporates proven noise and voltage suppression characteristics, reducing installation concerns for noise-sensitive environments
- Pull-apart control terminal blocks allow for easy wiring and quick disconnect
- The flexible feedback and communication options provide an effective integration solution
- Use of an additional option module provides extensive I/O for installation flexibility, including up to 12 digital inputs and 8 outputs plus 2 relay outputs as well as 5 analog inputs and 2 analog outputs. Standard I/O is also ample and listed on page 3.
- Optimized global voltage settings designed to worldwide standards allow quick set-up anywhere in the world
- DC Tachometer and encoder feedback capabilities are embedded into the control circuitry as a standard feature in the DC drive, saving space and providing additional functionality

Premier Integration

For simplified drive startup and reduced development time, PowerFlex AC and DC drives and PowerFlex DC field controllers can be configured with Studio 5000 Logix Designer® software. This single software approach helps reduce programming time, ease startup and commissioning and streamline diagnostics while still allowing stand-alone drive software tool use on the factory floor.

LISTEN.
THINK.
SOLVE.®

Easy to Use DC Drives and Field Controllers

- Full-featured LCD Human Interface Module (HIM) with multi-line and multi-lingual display simplifies programming
- Device Peripheral Interface (DPI™) capability fully integrated into the regulator allows the DC drive and Field Controller to be fully compatible with PowerFlex architecture class AC drive communication cards, HIMs and software tools
- Tools such as Connected Components Workbench™ (CCW) or Studio 5000™ Software assist with programming, configuration, monitoring and troubleshooting
- PowerFlex drives offer internal communication options that help you cost-effectively assemble highly integrated applications
- Status indicators for all internal communications options are visible on the cover for easy set-up and monitoring of communications
- Flash upgradable – firmware can be updated any time via DPI

PowerFlex DC Drive Ratings and Specifications

230V AC, 3-Phase

Drive Output Rating			
Normal Duty kW	Normal Duty Hp	Amps	Frame Size
1.2	1.5	7	A
1.5	2	9	A
2.2	3	12	A
3.7	5	20	A
5.5	7.5	29	A
7.5	10	38	A
11	15	55	A
15	20	73	A
18.5	25	93	A
22	30	110	A
30	40	146	B
37	50	180	B
45	60	218	B
56	75	265	B
75	100	360	B
93	125	434	B
112	150	521	C
149	200	700	C
186	250	875	D
224	300	1050	D

575V AC, 3-Phase

Drive Output Rating			
Normal Duty kW	Normal Duty Hp	Amps	Frame Size
37	50	67.5	B
56	75	101.3	B
75	100	135	B
149	200	270	B
224	300	405	B
298	400	540	C
373	500	675	C
447	600	810	D
597	800	1080	D
671	900	1215	D
746	1000	1350	D
932	1250	1668	D

460V AC, 3-Phase

Drive Output Rating			
Normal Duty kW	Normal Duty Hp	Amps	Frame Size
1.5	2	4.1	A
2.2	3	6	A
3.7	5	10	A
5.5	7.5	14	A
7.5	10	19	A
11	15	27	A
15	20	35	A
18.5	25	45	A
22	30	52	A
30	40	73	A
37	50	86	A
45	60	100	A
56	75	129	A
75	100	167	B
93	125	207	B
112	150	250	B
149	200	330	B
187	250	412	B
224	300	495	C
298	400	667	C
373	500	830	D
447	600	996	D
552	700	1162	D
597	800	1328	D
671	900	1494	D

690V AC, 3-Phase

Drive Output Rating			
Normal Duty kW	Normal Duty Hp	Amps	Frame Size
298	400	452	C
373	500	565	C
447	600	678	D
552	700	791	D
597	800	904	D
671	900	1017	D
746	1000	1130	D
820	1100	1243	D
932	1250	1413	D
1044	1400	1582	D

PowerFlex DC Drive Ratings and Specifications

Standard I/O

- 8 digital inputs
- 4 digital outputs
- 3 analog inputs
- 2 analog outputs
- 2 relay outputs

Standards

- CE
- RCM
- KCC
- c-UL-us

Input Specifications

- 3-phase voltage: 230V/460V/575V/690V
- Frequency: 50 and 60 Hz +/- 5%

Output Specifications

- DC output voltage: Adjustable based on AC input
- Overload current: 150% for 60 seconds, 200% for 3 seconds

Ambient Temperature Limit for Enclosure Types

- IP20/ NEMA/UL Type Open = 50 °C (104 °F)
- 55 °C (131 °F) with derating

Approximate Dimensions mm (in.)

Frame	Width	Height	Depth
A	267 (10.5)	359 (14.0)	287 (11.3)
B	311 (12.2)	388 (15.3)	350 (13.8)*
C	521 (20.5)	511 (20.1)	416 (16.4)
D	711 (28.0)	1448 (57.0)	559 (22.0)

* Depth for 2 smallest frame B drives; other frame B drives have a depth of 380 (15)

PowerFlex DC Field Controller Ratings and Specifications

Ratings

3-Phase Input	Output Amps	Frame Size
200V AC	17	A
	60	
	120	
	245	B
	365	
	570	
500V AC	17	A
	60	
	120	
	245	B
	365	
	570	

Standard I/O

- 8 digital inputs
- 4 digital outputs
- 3 analog inputs
- 2 analog outputs
- 2 relay outputs

Standards

- CE
- RCM
- KCC
- c-UL-us

Input Specifications

- 3-phase voltage: 60...200V AC/230...500V AC, +/- 10%
- Frequency: 50 and 60 Hz, +/- 5%

Output Specifications

- DC output voltage: depends on input voltage

Ambient Temperature Limit for Enclosure Types

- IP20/NEMA/UL Type Open = 50 °C (104 °F)
- 55 °C (131 °F) with derating

Approximate Dimensions mm (in.)

Frame	Width	Height	Depth
A	267 (10.5)	359 (14.0)	287 (11.3)
B	311 (12.2)	388 (15.3)	350 (13.8)*

* Depth for 2 smallest frame B drives; other frame B drives have a depth of 380 (15)

Key Field Controller Features

- Use for standalone DC motor field control applications or in conjunction with a PowerFlex DC Digital Drive or PowerFlex DC Standalone Regulator (SAR)
- Use PowerFlex DC Field Controller in standalone mode to:
 - Provide power to a DC motor field with a fixed reference by using fixed I/O
 - Control electromagnets and other non-motor loads
- Allows you to modernize your DC motor control by using existing motor and external power bridge
- Provides a cost-effective solution for DC retrofit applications that require motor reversing



PowerFlex DC Drive Products

An Integral Part of Your Complete Allen-Bradley Motor Control Solution



The Allen-Bradley PowerFlex family of AC and DC drives provides comprehensive motor control solutions for a wide variety of applications. Having a single source for all your automation equipment – including both AC and DC drives – simplifies machine startup, operation and maintenance.

Connect with Us



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