

PRODUCT PROFILE

PowerFlex® 4M AC Drive

Cost-effective motor control in a compact package

Providing users with powerful motor speed control in a compact, space saving design, the Allen-Bradley PowerFlex 4M AC drive is the smallest and most cost effective member of the PowerFlex family of drives. Ideal for machine level speed control, the PowerFlex 4M drive provides the application versatility to meet the demands of global OEMs and end users who require space savings and easy-to-use AC drives that provide application flexibility, feed-through wiring and ease-of-programming.

The PowerFlex 4M AC drive is available in three frame sizes (A, B and C) and power ratings from 0.2 to 11 kW (0.25 to 15 Hp) and in voltage classes of 120, 240 and 480 volts.



Product Features

DIN Rail Mounting Design

- Installation can be a virtual snap using the DIN rail mounting feature on A and B frame drives.
- Zero Stacking[™] is allowable for ambient temperatures up to 40°C, saving valuable panel space. 50°C ambient temperatures are permitted with minimal spacing between drives.

Feed-through Wiring Design

- Feed through wiring for simple retrofitting into applications requiring variable speed motor control.
- Feed-through wiring design provides simple variable speed motor control with minimal installation and retrofitting time.



*PowerFlex 4M AC Drives
0.2 to 11 kW (0.25 to 15 Hp), 120V, 240V & 480V*

Versatile Programming and Network Solutions

- Integral RS485 communications enable the drives to be used in a multi-drop network configuration. A serial converter module provides connectivity to any controller that has the ability to initiate DF1 messaging.
- A NEMA/UL Type 4X remote and NEMA/UL Type 1 handheld LCD keypad provide additional programming and control flexibility, both featuring the popular CopyCat function.
- DriveExplorer™ and DriveTools™ SP software can be used to program, monitor and control the drives.

Premier Integration with PowerFlex Drives

For simplified AC drive start-up and reduced development time using the Allen-Bradley® Logix control platform, we've integrated PowerFlex® AC drive configuration with RSLogix™ 5000 software. This single-software approach simplifies parameter and tag programming while still allowing stand-alone drive software tool use on the factory floor.

Energy Savings with Speed Control and Regulation

Using AC drives to operate mechanical equipment at optimum speed helps reduce energy costs and eliminates mechanical wear and tear that can occur in the mechanical parts.

PRODUCT SELECTION, SPECIFICATIONS

Operator Interface	Integral keypad with a 4 digit display, 10 additional LED indicators, local potentiometer, optional Remote Human Interface Modules (HIM) and optional DriveExplorer™ or DriveExecutive™ software				
Standards	UL, CE, CSA, C-Tick				
Electrical	Maximum Short Circuit Rating: 100,000 Amps Symmetrical				
Protection	Electronic Motor Overload Protection: I ² t protection – 150% for 60 seconds, 200% for 3 seconds (Provides Class 10 protection)				
Input Specifications	1 Phase Voltage: 100 - 120V / 200 - 240V 3 Phase Voltage: 200 - 240V / 380 - 480V Frequency: 47-63 Hz Logic Control Ride Through: >0.5 seconds, 2 seconds typical				
Output Voltage Range/ Overload Capacity/ Frequency Range	Voltage: Adjustable from 0V to rated motor voltage Intermittent Current: 150% for 60 secs, 200% for 3 secs 0 - 400Hz				
Enclosure and Ambient Operating Temperature	IP 20/Open = -10° to 50°C (14°-122°F)				
EMC Filters	Internal (1 phase 240V and 3 phase 480V) External (1 & 3 phase)				
Control I/O	3 Dedicated 2 programmable digital inputs, 1 analog input either 4-20 mA or 0-10v 24V DC sink or source 1 - Form C Relay				
Control Performance	Volts per Hertz Slip Compensation				
Feed-through Wiring	Yes				
Dynamic Braking	Internal IGBT - available only in 7.5 - 15 Hp drives (C frame)				
Carrier Frequency	2 – 10 kHz				
Ratings	Input Voltage Class	Output Voltage Class	A Frame Ratings	B Frame Ratings	C Frame Ratings
	100-120V, 1Ø	0-230V, 3Ø	0.25 to 0.5 Hp (0.2 to 0.4 kW)	1.0 to 1.5 Hp (0.75 to 1.1 kW)	NA
	200-240V, 1Ø	0-230V, 3Ø	0.25 to 1.0 Hp (0.2 to 0.75 kW)	2.0 to 3.0 Hp (1.5 to 2.2 kW)	NA
	200-240V, 3Ø	0-230V, 3Ø	0.25 to 2.0 Hp (0.2 to 1.5 kW)	3.0 to 5.0 Hp (2.2 to 3.7 kW)	7.5 to 10 Hp (5.5 to 7.5 kW)
	380-480V, 3Ø	0-460V, 3Ø	0.50 to 2.0 Hp (0.4 to 1.5 kW)	3.0 to 5.0 Hp (2.2 to 3.7 kW)	7.5 to 15 Hp (5.5 to 11.0 kW)
Dimensions mm (inches)	A Frame: 174 (6.85) H X 72 (2.83) W X 136 (5.35) D B Frame: 174 (6.85) H X 100 (3.94) W X 136 (5.35) D C Frame: 260 (10.24) H X 130 (5.12) W X 180 (7.09) D				
Communications	Integral RS485 with Modbus RTU/DSI Optional: - DeviceNet™ ¹ . - LonWorks™ ¹ . - Bluetooth® ¹ . - EtherNet/IP™ ¹ . - PROFIBUS™ DP ¹ . - ControlNet™ ¹ . - BACnet® ¹ . 1. Optional network for use only with External DSI Communications Kit.				
Additional Accessories	EMC line filters, Line reactors, Dynamic brake resistors for 7.5 - 15 hp drive ratings, DSI cable accessories/HIMs				

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