PowerFlex® 4M AC Drive

Cost Effective Motor Control in a Compact Package

Allen-Bradley

Providing 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.

- Power ratings of 0.2...11 kW / 0.25...15 Hp at 120V, 240V and 480V to meet a wide range of applications
- Volts per hertz and slip compensation to meet application demands
- Help reduce energy costs and mechanical wear and tear
- An integral RS485/DSI port supports multi-drive networking
- A wide range of communication option cards including DeviceNet™, EtherNet/IP™, ControlNet™, PROFIBUS™ DP, BACnet®, LonWorks® and Bluetooth® adapters
- Flexible, time-saving installation using DIN rail mounting with A and B frame drives
- Feed-through wiring for simple retrofitting into applications requiring variable speed motor control
- Side-by-side mounting in ambient temperatures up to 40°C (104°F), saving valuable panel space
- Drives operate in ambient temperatures from -10°C (14°F) to 50°C (122°F)

When your application requires a compact drive ideal for machine level speed control, take advantage of the PowerFlex 4M AC drive. PowerFlex 4M AC drives provide the application versatility to meet the demands of global OEMs and end users who require space savings and flexibility with DIN rail mounting, feed-through wiring and ease of programming.

Flexible Installation

PowerFlex 4M AC drives offer flexible, time-saving installation using DIN rail mounting with A and B frame drives. PowerFlex 4M AC drives can be stacked side-by-side in ambient temperatures up to 40°C (104°F), saving valuable panel space. These drives operate in ambient temperatures up to 50°C (122°F) with minimal spacing between drives. Feed-through wiring provides simple variable speed motor control with minimal installation and retrofitting time.

Ease of Configuration

Connected Components Workbench™ software can help you get your drives up and running with an intuitive interface and startup wizards. This free software uses Rockwell Automation and Microsoft® Visual Studio® technologies for fast and easy drive configuration. Connected Components Workbench software can help minimize your machine design and development time and is ideal for standalone applications.

Specifications

Power Ratings	100 - 120V: 0.2...1.1 kW / 0.25...1.5 Hp 200 - 240V: 0.2...7.5 kW / 0.25...10 Hp 380 - 480V: 0.4...11 kW / 0.5...15 Hp	
Motor Control	Volts per hertz	Slip compensation
Application	Open loop speed regulation	
Overload Capability	Heavy duty application: 150% for 60 seconds, 200% for 3 sec	
Input Specifications	1 phase voltage: 100 … 120V/200 … 240V 3 phase voltage: 200 … 240V/380 ... 480V Frequency: 50 to 60 Hz Voltage: adjustable 0V to rated motor voltage; -10% / +10% voltage tolerance Logic control ride through: >0.5 seconds, 2 seconds typical Maximum short circuit rating: 100,000 amps symmetrical	
Output Voltage Range	Adjustable 0V to rated motor voltage	Intermittent current: 150% for 60 seconds, 200% for 3 secs
Frequency Range	Max output frequency 400 Hz	Input frequency variation 47 to 63 Hz
Ambient Operating Temperatures*	-10 °C to 50 °C (-14 °F to 122 °F)	
Altitude	1000 m (3280 ft)	
Enclosures	IP20 NEMA/Open IP30 NEMA/UL Type 1 (with conduit kit)	
Mounting	DIN rail (frames A and B) Zero Stacking (side-by-side mounting) 120 mm (4.7 in) air-flow gap at the top and bottom	
Configuration	Integral keypad with a 4-digit display Local potentiometer Connected Components Workbench software	10 additional LED indicators Studio 5000 Logix Designer™ application
Control I/O	5 digital inputs (24V DC, 2 programmable) 1 analog input (unipolar voltage or current) 1 relay (form C)	
Dynamic Braking	Internal IGBT – Available only in 5.5...7.5kW/7.5...15 Hp drives (C Frame)	
Carrier Frequency	2 to 10 kHz. 4 kHz default	
EMC Filtering	Embedded 1 ph 240V and 3 ph 480V. Available as an external option for all voltages	
Communications	Integral RS485 with Modbus RTU/DSI Optional: DeviceNet, LonWorks, Bluetooth, EtherNet/I, PROFIBUS DP, ControlNet, BACnet (Optional networks for use only with external DSI communications kit)	
Protection	Fault history log	
Standards	UL C-Tick RoHS CE cUL KCC	
Control Features	Flying start V/F ratio Bus regulator Process PID Mutli-drive connectivity (requires communication option card) 4 preset speeds	
Accessories	NEMA/UL Type 1 kits Line reactors Dynamic brake resistors for 5.5 to 7.5 kW/7.5 to 15 Hp drive ratings	EMC line filters DSI cable accessories/HIMs
Dimensions	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	

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 22F-PP001E-EN-P – August 2013
Publication 22F-PP001D-EN-P – April 2008