

# PowerFlex<sup>®</sup> 400



## AC Drive Optimized for Commercial Fan and Pump Applications

Providing users with easy installation in mechanical fan and pump systems, the Allen-Bradley PowerFlex<sup>®</sup> 400 AC drive offers a wide range of built-in features allowing for seamless building system integration. Available in power ratings of 7.5-100 HP @ 380 – 480V AC and 7.5-50 HP @ 200 – 240V AC, the PowerFlex 400 is designed to meet global OEM, contractor and end-user demands for flexibility, space savings and ease-of-use. The PowerFlex 400 is a cost-effective solution for speed control in variable torque fan and pump applications.

### Features

- Integral **PID Controller** allows a process variable to be maintained by automatically adjusting the output frequency
- Three programmable **Skip Frequencies and Bands** prevent the drive from running continuously at resonant speeds which could cause mechanical breakdowns
- Selectable **Fan/Pump Curves** provide reduced voltage patterns for centrifugal fan and pump loads
- **Sleep Function** allows the drive to be cycled off when the system demand drops below a preset level and to be restarted automatically when the demand increases
- For applications that require unattended operation, the **Start At PowerUp Function** provides the ability to resume running once power is restored after a power outage
- Connection to fire and life safety systems via **Freeze/Fire and Purge** inputs

### Operator Keypad:



- Integral keypad features 2 line, 16 character LCD display
- 5 LED indicators provide system configuration and fault status
- Configurable Hand/Off/Auto function buttons



PowerFlex 400

### Communications:

- RS485 communications integral to base drive
- Embedded Modbus RTU and Johnson Metasys N2 protocols are parameter selectable and require no additional hardware or software
- Supports Drive Serial Interface (DSI) communication modules and accessories
- DriveExplorer™ and DriveTools™ SP software can be used to easily program, monitor and control the drives

### Packaging:

- Installation flexibility is enhanced by the UL plenum rating allowing for direct mounting in an air handling system
- Disconnect and contactor bypass packages simplify installation and startup by combining operator interface, control, communications and power options in preconfigured assemblies
- Contactor bypass packages supplied with 3 - contactors allowing drive test functionality and drive isolation when in bypass mode



## Specifications

<b>Standards</b>	<ul style="list-style-type: none"> <li>• UL and cUL (CSA) Listed</li> <li>• UL Plenum Rating</li> <li>• C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>• CE Marked</li> <li>• EMC EN61800-3 (with external filter)</li> <li>• Low Voltage EN60204-1/EN50178</li> </ul>																																																																																
<b>Input Specification</b>	3-Phase Voltage: 200-240 / 380-480V +/-10% Frequency: 48-63 Hz Logic Control Ride Through: >= 0.5 seconds, 2 seconds typical																																																																																	
<b>Output Specification</b>	Voltage: Adjustable from 0V to rated motor voltage Frequency Range: 0 to 320 Hz Overload Current: 110% for 60 seconds																																																																																	
<b>Enclosure and Ambient Operating Temperature</b>	<ul style="list-style-type: none"> <li>• Frame C               <ul style="list-style-type: none"> <li>IP20 / NEMA Type Open: -10 to 50°C (14 to 122°F)</li> <li>IP30 / NEMA1 / UL Type 1 (with conversion kit): -10 to 45°C (14 to 113°F)</li> </ul> </li> <li>• Frame D and E               <ul style="list-style-type: none"> <li>IP30 / NEMA1 / UL Type 1: -10 to 45°C (14 to 113°F)</li> </ul> </li> </ul>																																																																																	
<b>Control</b>	<ul style="list-style-type: none"> <li>• 7 Digital Inputs (24V sink/source)               <ul style="list-style-type: none"> <li>– 3 Semi-Programmable</li> <li>– 4 Programmable</li> </ul> </li> <li>• 2 Programmable Form C Relay Outputs</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Analog Inputs – 1 Isolated (-10 to 10V or 4 to 20mA)               <ul style="list-style-type: none"> <li>– 1 Non-Isolated (0 to 10V or 4 to 20mA)</li> </ul> </li> <li>• 2 Analog Outputs (0 to 10V or 4 to 20mA)</li> <li>• 1 Optocoupler Output</li> </ul>																																																																																
<b>Options (Accessories)</b>	<ul style="list-style-type: none"> <li>• Communication: DeviceNet™, EtherNet/IP™ and PROFIBUS™ Communication Cards</li> <li>• EMC Line Filters</li> <li>• Line and Load Reactors</li> </ul>	<ul style="list-style-type: none"> <li>• DSI Cables</li> <li>• IP30 Conversion/Conduit Kit (Frame C)</li> </ul>																																																																																
<b>Ratings</b>	<table border="1"> <thead> <tr> <th>Voltage Class</th> <th>kW (HP)</th> <th>Cont. Output Current (Amps)</th> <th>Frame</th> </tr> </thead> <tbody> <tr><td>200-240V</td><td>5.5 (7.5)</td><td>24</td><td>C</td></tr> <tr><td>200-240V</td><td>7.5 (10)</td><td>33</td><td>C</td></tr> <tr><td>200-240V</td><td>11 (15)</td><td>49</td><td>D</td></tr> <tr><td>200-240V</td><td>15 (20)</td><td>65</td><td>D</td></tr> <tr><td>200-240V</td><td>18.5 (25)</td><td>75</td><td>D</td></tr> <tr><td>200-240V</td><td>22 (30)</td><td>90</td><td>D</td></tr> <tr><td>200-240V</td><td>30 (40)</td><td>120</td><td>E</td></tr> <tr><td>200-240V</td><td>37 (50)</td><td>145</td><td>E</td></tr> <tr><td>380-480V</td><td>5.5 (7.5)</td><td>12</td><td>C</td></tr> <tr><td>380-480V</td><td>7.5 (10)</td><td>17</td><td>C</td></tr> <tr><td>380-480V</td><td>11 (15)</td><td>22</td><td>C</td></tr> <tr><td>380-480V</td><td>15 (20)</td><td>30</td><td>C</td></tr> <tr><td>380-480V</td><td>18.5 (25)</td><td>38</td><td>D</td></tr> <tr><td>380-480V</td><td>22 (30)</td><td>45.5</td><td>D</td></tr> <tr><td>380-480V</td><td>30 (40)</td><td>60</td><td>D</td></tr> <tr><td>380-480V</td><td>37 (50)</td><td>72</td><td>E</td></tr> <tr><td>380-480V</td><td>45 (60)</td><td>88</td><td>E</td></tr> <tr><td>380-480V</td><td>55 (75)</td><td>105</td><td>E</td></tr> <tr><td>380-480V</td><td>75 (100)</td><td>142</td><td>E</td></tr> </tbody> </table>	Voltage Class	kW (HP)	Cont. Output Current (Amps)	Frame	200-240V	5.5 (7.5)	24	C	200-240V	7.5 (10)	33	C	200-240V	11 (15)	49	D	200-240V	15 (20)	65	D	200-240V	18.5 (25)	75	D	200-240V	22 (30)	90	D	200-240V	30 (40)	120	E	200-240V	37 (50)	145	E	380-480V	5.5 (7.5)	12	C	380-480V	7.5 (10)	17	C	380-480V	11 (15)	22	C	380-480V	15 (20)	30	C	380-480V	18.5 (25)	38	D	380-480V	22 (30)	45.5	D	380-480V	30 (40)	60	D	380-480V	37 (50)	72	E	380-480V	45 (60)	88	E	380-480V	55 (75)	105	E	380-480V	75 (100)	142	E	
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<b>Dimensions mm (in)</b>	C Frame: 260 (10.2) H x 130 (5.1) W x 180 (7.1) D D Frame: 384 (15.12) H x 250 (9.84) W x 205.4 (8.08) D E Frame: 589 (23.19) H x 370 (14.57) W x 260 (10.24) D																																																																																	

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

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