

PowerFlex Digital DC Drive

Catalog Numbers 20P, 23P



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Additional Resources

These documents contain more information on related products from Rockwell Automation.

Resource	Description
PowerFlex Digital DC Drive User Manual, publication 20P-UM001	Provides basic information that is required to install, start-up, and troubleshoot the PowerFlex DC drive.
A Global Reference Guide for Reading Schematic Diagrams, publication 100-2.10	Provides a simple cross-reference of common schematic/wiring diagram symbols that are used throughout various parts of the world.
Guarding Against Electrostatic Damage, publication 8000-4.5.2	Explains the causes of ESD and how to guard against its effects.
Preventive Maintenance of Industrial Control and Drive System Equipment, publication DRIVES-TD001	Provides a recommended preventative maintenance checklist.
Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Control, publication SGI-1.1	Provides general guidelines for the application, installation, and maintenance of solid-state control in the form of individual devices or packaged assemblies that incorporate solid-state components.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

For other information, contact Allen-Bradley Drives Technical Support at: <http://www.ab.com/support/abdrives>

Product Description

The PowerFlex Digital DC drive provides digital control for precise speed and current regulation, easy programmability, extensive diagnostics, and non-regenerative or regenerative operation. PowerFlex DC drives can run various applications, including extruder operations, finishing, drawing, and coating. The PowerFlex DC drive can effectively control applications that exhibit shock loads, high inertia, rapid acceleration and deceleration rates, or continuous regeneration. These features of the PowerFlex Digital DC drive make it an excellent choice for existing DC machinery upgrades. The compact design of this drive includes a fully contained power module and a common control structure for the entire range of horsepower. And, to make connectivity even easier, the PowerFlex DC drive provides a standard DPI™ interface that is compatible with all PowerFlex DPI communication products.

The standard hardware offers consists of an open type enclosure, armature converter, regulated field converter for field weakening or economy applications, and an advanced regulator with integrated DPI functionality. The standard I/O includes eight digital inputs, four digital outputs, three analog inputs, two analog outputs, a DC tachometer, and encoder capability.

Note: Optional I/O and feedback modules are available and are sold separately from the standard hardware offering. See I/O Option Kits and Feedback Option Kit on page [9](#).

Standard Drives Program

Packaging and Mounting

- **IP20, NEMA / UL Type Open** - For conventional mounting inside or outside a control cabinet.

Communication Tools

The PowerFlex Digital DC drive provides common communication tools that are familiar and easy to use, including the LCD Human Interface Module (HIM) and PC-based configuration tools.

- The LCD HIM provides:
 - Large and easy to read 7 line x 21 character, backlit display
 - Alternate function keys for shortcuts to common tasks
 - “Calculator-like” number pad for fast and easy data entry (Full Numeric version only)
 - Control keys for local start, stop, speed, and direction
 - Remote versions for panel mount applications
- PC-based Configuration tools include:
 - Connected Components Workbench™ software (CCW) software v2.0. This software leverages proven Rockwell Automation and Microsoft® Visual Studio® technologies for drive configuration and programming. CCW can be downloaded for free from <http://ab.rockwellautomation.com/programmable-controllers/connected-components-workbench-software>.
 - DriveTools™ SP (v4.01 or higher is required with a PowerFlex DC drive specific software patch. The patch can be downloaded from <http://www.ab.com/support/abdrives/webupdate/>). A suite of software tools that provide an intuitive way to program, troubleshoot, and maintain Allen-Bradley drives, including the PowerFlex DC Drive Start-Up Wizard.
 - DriveExplorer™ and DriveExplorer Lite (v5.02 or higher). A simple and flexible “online” tool to monitor and configure while connected to a drive.
- Internal communications allow you to integrate the drive into the manufacturing process. Status indicators for all internal communication options are visible on the cover for easy setup and monitoring of drive communications. You can easily manage information from “shop floor to top floor” and seamlessly integrate a complete system as you control, configure, and collect data.