

**dcM6+ / dcM12+ DC Drives****Ratings:**

5.0 to 150 HP	at 240 Vac
7.5 to 800 HP	at 480 Vac



From simple retrofit applications to complex systems, our dcM+ family of digital DC drives is ready and capable. Our system integrator customers requested advanced features like a built-in field regulator, digital encoder feedback and serial communications capability. With four (4) analog inputs, four (4) analog outputs and five (5) relay outputs, you can be sure you can integrate this powerful control into your system.

**Approvals:**

- CE Group I/O

**Design:**

- Alpha-numeric operator: removable, backlit  
2 lines x 16 character
- Analog inputs (4)
  - 1 fixed ( $\pm 10$  Vdc / 4-20 mA)
  - 3 programmable ( $\pm 10$  V / 4-20 mA)
  - Summary junction capability
- Analog outputs (4)
  - 2 Fixed
    - Armature volts / speed
    - Armature current  $\pm 10$  Vdc
  - 2 Programmable
    - $\pm 10$  Vdc or 4-20 mA
- Auto-restart function (programmable)
- Auto-tune to motor characteristics
- Compact size
- DC Tach generator feedback (25 Vdc / 80 Vdc / 250 Vdc ranges)
- Digital Inputs
  - 6 programmable
  - 2 fixed (start / enable)
- Encoder Feedback
  - Line driver or open collector (quadrature or single-channel)
  - 1024 ppr max (50 kHz max)
- Tach / encoder feedback loss protection
- Field forcing function for higher peak torques
- Field regulator
- Jog Speed (2)
- Master reset to user default parameters

**Design (con't):**

- Monitor modes
  - Armature current
  - Armature voltage
  - Digital / analog input status
  - Digital output status
  - Field current
  - Line frequency
  - Line voltage
  - Speed / voltage deviation
  - Speed / voltage feedback
- Multi-speed settings (7)
- Overload capacity: 150% for 60 sec. (optional 200% peak)
- Programmable electronic motor overload ( $I^2t$ )
- Programmable flash ROM, for custom applications
- Programmable monitor mode at power-up
- Programmable outputs (5) Form A relays
- Protected chassis
- RS-485 communication port
- Signal follower: bias and gain
- User friendly programming
- 5 Vdc supply (160 mA) for encoder
- 24 Vdc control logic
- 24 Vdc system open collector encoder
- 32-bit logic, including 16-bit DSP

**Operating Conditions:**

- Altitude: to 3300 ft; higher by derating
- Ambient service temperature: -10°C to 40°C
- Humidity: to 95% non-condensing
- Input voltage: +10% / -15%
  - 240 Vac
  - 480 Vac
- 3-phase, 3-wire, phase sequence insensitive

**Options:**

- External dynamic braking
- **RAPIDPAK** pre-engineered industrial solutions
- Remote operator stations
- Saflink (6/00)

**Performance:**

- Adjustable accel/decel: 0 to 300 seconds
- Controlled Speed Range:
  - 25:1 Armature Feedback
  - 50:1 DC Tach Feedback (5PY)
  - 100:1 Encoder Feedback
- Drive efficiency: 96 to 98%
- Jog forward and reverse

**Protection:**

- Loss of field current
- Overcurrent
- Current imbalance
- Loss of input phase
- Loss of speed feedback
- Overload (motor and drive)
- Overvoltage
- Blown armature fuse

**Packaging:**

The dcM6/12+ DC drives are available in several configurations to meet the needs of the OEM, panel builder or user alike. Please select from the available packages.

**CHASSIS:**

The chassis unit is intended for the "do-it-yourself" individual. It is perfect for replacement of existing DC drives or for integration in a local panel shop. This configuration is ideal for the System Integrator who requires a high performance drive in a compact package.

**PANEL:**

The panel configuration is available to include the power stack mounted and wired on a compact sub-panel. This sub-panel has room for options such as an armature contactor, blower motor starter, or input disconnect device. This panel can easily be mounted in your own larger enclosure.

**RAPIDPAK:**

We have extended our RAPIDPAK offering to include our three-phase DC drives. The ventilated NEMA-12 enclosure and the selection of operator devices makes this an ideal turn-key solution for industry. This flexible design offers quick turnaround on the most popular DC configurations. In fact, our standard lead time on DC RAPIDPAK is only 1 week. If you need it sooner you can request our RAPIDPAK Express option for shipment within 24 hours!

**CUSTOM PANELS:**

The high HP units are available in custom panel configurations. Please refer to the following pages for common option packages. If you don't see what you need, please speak to an applications engineer for a custom solution to your requirements.

Prices and specifications subject to change without notice.

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