

M-Max Series

Adjustable frequency drives



Maximize your potential

The M-Max™ Series of adjustable frequency drives represents the next drive generation engineered to solve specific application requirements. With a compact design, impressive torque response and simple handling, the new Eaton M-Max Series offers increased efficiency and product life. Including both single- and three-phase devices, the easy-to-use microprocessor-based drives incorporate standard features that can be programmed to tailor the drive's performance to suit a wide variety of application requirements. The M-Max Series is designed for today's machinery applications, including conveyor belts, transport drives and packaging machines, as well as pumps and fans.



Key features

- On-board startup wizards and preset macros to simplify commissioning
- Side-by-side mounting and orientation flexibility to maximize panel space
- Modbus®-RTU as standard serial fieldbus
- Temperature-controlled cooling fan to increase efficiency and extend life
- NEMA® 1 kits available
- 5% DC choke available as standard for FS4 and FS5
- Replaceable fans available for FS4 and FS5
- Optional communication cards including PROFIBUS® DeviceNet™ and CANopen

Protective features

- Overcurrent
- Overvoltage and undervoltage
- Ground fault
- Stall
- Input and output phase loss
- Motor overload and underload
- Motor temperature
- Communication loss



EATON

Powering Business Worldwide



Easy installation.
Minimal maintenance.
Maximum flexibility.

Enable your application to
achieve its maximum potential

Eaton drive products lower your application costs by saving installation and startup time. They are also easy to maintain and troubleshoot, saving you time and money. With their unique feature set, M-Max Series drives make the maximum impact, with a minimum amount of energy.

Although programming drives can often seem complicated, the M-Max Series preserves your valuable time. The menu structure of the M-Max Series is designed to get equipment up and running quickly, so you do not have to spend hours programming and commissioning the device. A startup wizard guides you through user-friendly parameterization and operations menus. Four application-specific parameter sets are available for quick, out-of-box commissioning; a menu for the most important parameters and well-structured submenus enable simple settings for your most complex applications.



AVAILABLE MODELS

Models are rated at:

- 1/4 to 1-1/2 hp at 115 V single-phase 50/60 Hz
- 1/4 to 3 hp at 240 V single-phase 50/60 Hz
- 1/4 to 15 hp at 240 V three-phase 50/60 Hz
- 1/4 to 25 hp at 480 V three-phase 50/60 Hz
- 1 to 7-1/2 hp at 575 V three-phase 50/60 Hz



The ideal drive for machine applications

Make the maximum impact

The M-Max Series uses a 32-bit microprocessor and insulated gate bipolar transistors (IGBTs) that provide quiet motor operation, high motor efficiency and smooth low-speed performance. The integrated proportional-integral (PID) controller, the RFI filter and a brake chopper, as well as the extensive motor-protective functions ensure a high level of operational reliability and allow significant energy savings—all while keeping the drive compact for use in tight spaces. M-Max drives come with a host of functions dedicated to solving your application needs, including flying start (starting into a running motor), configurable responses in the event of a fault, and Modbus-RTU protocol as standard. All enable robust, efficient performance.

Get the maximum performance

The rugged M-Max Series was designed to meet a host of performance criteria for machinery applications.

The M-Max Series has a maximum ambient temperature of +50 °C, 150% overload for 1 minute and 200% overload for 2 seconds, ensuring high reliability. Its conformal-coated control boards allow for use in highly humid and aggressive environments such as sewage treatment plants. Built-in EMI/RFI filters and shielding clamps that allow connection of control and motor cable shields enable the drive to meet EMC requirements categories C2 and C3.

And because it loses less power—30% less wattage on average compared to competitive devices—the M-Max drive is highly energy-efficient. In addition, the performance of the sensorless vector control ensures high-speed accuracy, even with load deviations and low motor speeds.

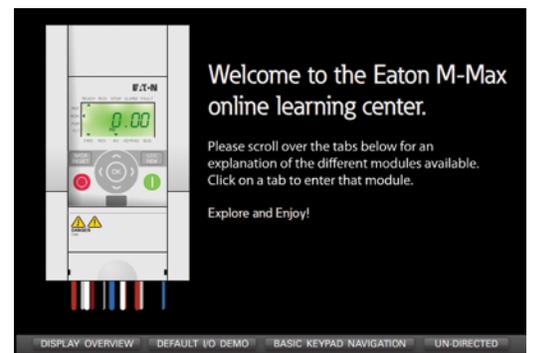
Designed for durability, the M-Max Series provides maximum performance when you need it most.

Explore M-Max drives online

The link below takes you directly to the Eaton Online Learning Center where you can discover the features and ease-of-use of M-Max drives.

Interact with the keypad controls, navigation, displays and parameter changes. You can also control M-Max in an unscripted “do whatever you want” mode to explore the full functionality of this virtual demo case.

www.eaton.com/m-maxdemo



M-Max Series—Dimensions in Inches (mm)

FS1	FS2	FS3	FS4	FS5
6.30 x 2.60 x 4.02 (160 x 66 x 102)	7.68 x 3.54 x 4.14 (195 x 90 x 105)	9.96 x 3.94 x 4.41 (253 x 100 x 112)	14.57 x 6.50 x 6.61 (370 x 165 x 168)	16.30 x 6.50 x 8.07 (414 x 165 x 205)



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