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MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES

The CM3 series drive is a high-performance variable-speed (VFD) drive for three-phase induction motors, ideal for applications needing precise control with easy setup. Its compact design features contactor-style connections (top in / bottom out) and supports voltage vector (VVW) or scalar (V/F) control for scalable performance. With a built-in operator interface (HMI), SoftPLC, and free WPS programming software, it enables custom control schemes. Optional plug-in modules for additional I/O and communication protocols enhance flexibility, making the CM3 series a cost-effective, versatile solution for variable-speed needs.

CM3 STANDARD FEATURES

- Listed under new UL61800-5-1.
- Power Range:
 - 1/4HP to 2HP @ 1PH in 110-127 Vac Without Dynamic Braking Transistor / Chopper
 - 1/4HP to 3HP @ 1PH in 200-240 Vac 3HP Only With Dynamic Braking Transistor / Chopper
 - 1/4HP to 5HP @ 3PH in 200-240 Vac 3HP & 5HP Only With Dynamic Braking Transistor / Chopper
 - 1/2HP to 10HP @ 3PH in 380-480 Vac All Items With Dynamic Braking Transistor/Chopper
- Din rail or surface mounting with screws
- Control mode: Scalar (V/Hz) or Voltage Vector (VVW)
- Switching frequency: 2.5 to 15kHz
- Overload capacity: 150% for 60 sec. every 10 min or 200% for 3 sec. every 10min.
- Degree of protection: IP20
- 460VAC Models available with and without dynamic raking chopper.
- Conformal coated circuit board as per Class 3C2 in compliance with IEC 60721-3-3.
- Built-in SoftPLC (PLC functionality).
- Built-in 4 Digital inputs, 1 analog input, and one Form-C relay output.
- Two independent slots: one for communication and another to expand drive I/O capability.
- Selectable V/F, quadratic V/F or VVW vector control
- Password to protect the setting
- Special engineering units (V, A, Hz, rpm, s, °C, %)
- Backup of all parameters (via WPS software, memory card or internal memory of the CM3)
- Setting of the switching frequency according to the application requirements
- Speed reference via electronic potentiometer (EP)
- Speed reference via frequency input signal
- Multispeed with up to eight programmable speeds
- Slip compensation
- Manual or automatic torque boost (V/F scalar mode) or self-adjustment (VVW vector mode)
- 2 acceleration/deceleration ramps and emergency deceleration ramp
- "S" type ramp
- Brake resistors available as Kits.
- Internal dynamic brake choppers (frame sizes B and C)
- Infrared control (via CM3-IOAR accessory)
- PID controller to control processes in closed loop (via WPS)
- Flying start / ride through
- Skip frequency or frequency ranges
- Overload and overtemperature protection on the motor and IGBTs
- Overcurrent protection
- DC link voltage supervision
- Self-diagnosis alarm
- Fault log
- SoftPLC programming via free WPS software
- Fan control
- Energy Saving function
- Fire Mode function
- Modbus Master function
- Wide variety of communication options.
- One year Warranty

MORE INFO

Scan the QR code and get our NEW 2025 motor and drives standard product catalog



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CM5™ SERIES DRIVES

The CONTROLMAX™ CM5™ series drive features advanced plug-and-play technology for quick commissioning, offering flexibility, reliability, and excellent performance. Designed for industrial and professional use, it benefits OEMs, system integrators, panel installers, and end users. The CM5-IP20 drive supports up to 75HP @ 230VAC and 175HP @ 460VAC, with an IP66/NEMA4X Washdown option for indoor or outdoor use, even in direct sunlight.

CM5 STANDARD FEATURES

IP20 or NEMA 1 (IP31) - With Accessory Kits

Plastic & Metal

- 1/3 to 2HP @ 1PH in / 200 - 240VAC
- 1/3 to 3HP @ 1PH or 3PH in / 200 - 240VAC
- 2 to 75HP @ 3PH in / 200 - 240VAC
- 1/2 to 175HP @ 3PH in / 380 - 480VAC
- 1-1/2 to 10HP @ 3PH in / 500 - 600VAC
- 2 to 75HP @ 3PH in / 200 - 240VAC With Dynamic Braking @ 20% Duty
- 2 to 175HP @ 3PH in / 380 - 480VAC With Dynamic Braking @ 20% Duty
- 2 to 75HP @ 3PH in / 200 - 240VAC With Dynamic Braking @ 50% Duty
- 2 to 175HP @ 3PH in / 380 - 480VAC With Dynamic Braking @ 50% Duty

IP66 NEMA 4X - With Accessory Kits

Plastic & Metal

- 1/3 to 3HP @ 1PH or 3PH in / 200 - 240VAC
- 5 to 25HP @ 3PH in / 200-240VAC
- 1/2 to 50HP @ 3PH in / 380 - 480VAC
- 1-1/2 to 10HP @ 3PH in / 500 - 600VAC
- 1/3 to 3HP @ 1PH or 3PH in / 200 - 240VAC W/O Disconnect Switch
- 5 to 25HP @ 3PH in / 200 - 240VAC W/O Disconnect Switch
- 1/2 to 50HP @ 3PH in / 380 - 480VAC W/O Disconnect Switch
- 1-1/2 to 10HP @ 3PH in / 500 - 600VAC W/O Disconnect Switch
- 1/3 to 3HP @ 1PH or 3PH in / 200 - 230VAC With Disconnect Switch
- 5 to 25HP @ 3PH in / 200 - 230VAC With Disconnect Switch
- 1/2 to 50HP @ 3PH in / 380 - 480VAC With Disconnect Switch
- 1-1/2 to 10HP @ 3PH in / 500 - 600VAC With Disconnect Switch
- 1/3 to 25HP @ 3PH in / 200 - 240VAC With Dynamic Braking @ 20% Duty
- 1/2 to 50HP @ 3PH in / 380 - 480VAC With Dynamic Braking @ 20% Duty
- Listed under UL508C
- 230, 460, 575VAC Models available with and without dynamic braking chopper
- Pertains to IP20 Drives NEMA 1 (IP31) For Drive Frame Sizes A,B,C,D,E,F and G Require NEMA 1 Kit (See Accessories & Kits)
- CM5 Series Drives will work with PMAC Motors
- Heavy Duty rated - 150% current overload capacity
- Output frequency (0-500) HZ
- Switching frequency is adjustable: (2.5 to 15) kHz and (5 kHz standard)
- Overload capacity: 150% for 60 sec. every 10 min or
- Internal dynamic brake choppers (frame sizes B,C,D,E,F & G)
- Brake resistors available as Kits.
- PID controller to control processes in closed loop (via WPS)
- Flying start / ride through
- Skip frequency or frequency ranges
- 8 Programable Speeds

Four isolated programmable digital inputs; Built-in 24Vdc Power supply (max. 150 mA); One programmable relay output (1NO, 1NC, 240vac 0.5A). One programmable transistor output. One isolated programmable analog input (0-10V, 0/4-20mA).

One isolated programmable analog output (0-10V, 0/4-20mA)

- Din rail or surface mounting with screws
- V/F Scalar, Vector Control (Sensorless and closed loop with encoder feedback) & VVW PM Control (PMAC) (suitable for fan, Pump and compressor)
- Using the FlashMemory - Plug in load and remove
- Built-in RS-485 (Modbus RTU/BACnet) communication; I/O (Cat# CFW500-IOS) - CFW500 I/O Module; 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 1 RS485, 10vdc, 24vdc
- Optional I/O plug-in Modules; One (1) analog isolated input & Four (4) digital inputs
- Wide variety of communication options/ Optional Communication; Standard Communication: One (1) RS485 (Modbus RTU / BACnet) Port; Optional: CANopen, DeviceNet, Profibus-DP, EtherNet/IP, Modbus TCP, ProfiNet IO, USB, RS485 (two Ports) and RS232 port Modbus RTU, BACnet, DeviceNet, Profibus DP, CANopen, Modbus TCP, Ethernet/IP
- Ref Encoder Module = 1 input IOAENC; Or IODF Module with 3 Freq Inputs and 3 Freq Outputs.
- Optional Safe Torque off Module
- Records the last 3 Faults; Fault Log
- Speed reference via electronic potentiometer (EP)
- Energy Saving function
- Fire Mode function
- Overload and overtemperature protection on the motor and IGBTs
- Overcurrent protection
- Slip compensation
- 1 relay with NO/NC contact, Maximum voltage: 240 Vac, Maximum current of 0.5A Programmable functions
- Conformal coated circuit board as per Class 3C2 in compliance with IEC 60721-3-3
- NEMA 4X (IP66) Washdown Enclosure with and without disconnect switch, suitable for indoor and outdoor use (in direct sunlight)
- Built-in SoftPLC; Programming software "WPS" is free
- Scalar Control VVW
- Ladder Program - WLP compatible
- Programming Suite - WPS compatible
- One year Warranty