ACtionMaster

AC DRIVES
VARIABLE FREQUENCY

SERIES H
40 to 300 HP
230v/460v

Performance Benefits

Cleveland Motion Controls ACtionMaster Series H AC Drives are designed to meet worldwide drive performance requirements and conform to global standards.

ACtionMaster Series H Drives are variable frequency AC drives utilizing new Space Vector PWM (pulse-width-modulation) technology, providing a higher level of performance, including low total harmonic distortion, low current ripple, low torque ripple, low motor temperature rise, and better voltage utilization. Customer results include better efficiency (low iron loss in motor), low motor heat (for extended motor life), stable and smooth operation, and high and stable torque.

The CMC® ACtionMaster Series H provides numerous other benefits, including a built-in PI Control for better process control of flow, temperature, pressure, etc. Series H Drives can be operated with a variety of convenient communications interfaces, including RS485, ModBus-RTU, DeviceNet, Profibus and F-Net. CT/VT Dual Ratings enable users to pick the most suitable drive for various load conditions.

CMC Series H Drives utilize an easy-to-use straight line programming, enabling quick and easy parameter change and monitoring through a 32 character two line LCD display. They also provide high overall torque for any speed range and 150% torque at low speed, ideal for high duty applications.

Standard Design Features

CMC ACtionMaster Series H AC Drives are readily available with numerous standard features:

- kW/ Voltage Ratings (VAC):
  - 30-55(40-75HP)/200-230, 3 phase
  - 30-220(40-300HP)/380-460, 3 phase
- Inverter Typ: PWM with IGBT
- CPU: 32 bits high speed DSP
- Control method: Volts/Hertz with Space Vector PWM technology
- CT/VT dual ratings.
- Enclosure: IP00
- 2-10 kHz Carrier Frequency
- 0.5-400 Output Frequency
- Removable Keypad (able to read & write parameters)
- 6 Multi-function inputs
- 5 Multi-function outputs (3 open collectors, 2 relays)
- 4-20mA Analog Output
- DC Injection Braking

Options

- Dynamic Braking Units
- Communications Board:
  - RS485, F-Net, ModBus-RTU, DeviceNet, and Profibus
- Windows-based operating software
  - Driveview 2.0

Applications

- Fan/Blower
- Packaging
- Printing
- Converting
- Waste water removal
- Conveyor applications
- Cranes & hoists
- Textile machinery

- New Space Vector PWM Technology delivers:
  -Better efficiency
  -Low motor heat
  -Higher voltage utilization
  -Stable & smooth operation
  -High & stable torque
- Accommodates numerous industrial applications. Ideal for HVAC.
- Built-In PI Controller provides valuable process control–flow, temperature, pressure, etc.
- Flexible Windows-based-communications interface accommodates RS485, ModBus-RTU, DeviceNet, Profibus, and F-Net.
- CT/VT Dual Ratings provide greater flexibility for constant and variable torque.
- User-friendly straight line programming facilitates quick and easy parameter changes.
- High overall torque in all speed ranges.
- Conformance to Global Standards:
  -UL and cUL listed for North America
  -CE for Europe
  -IS09001 and ISO14000 Quality Process Controlled

AC DRIVES
VARIABLE FREQUENCY

SERIES H
40 to 300 HP
230v/460v

ACtionMaster

COMMON SPECIFICATIONS

Output Ratings	Max. Frequency	0.5 to 400 Hz
	Output Voltage	3 Phase, 0 to Input Voltage
Control	Control Method	Space Vector PWM
	Frequency Setting Resolution	Digital Reference: 0.01 Hz (Below 100 Hz), 0.1 Hz (Over 100 Hz) Analog Reference: 0.03 Hz / 60 Hz
	Frequency Accuracy	Digital: 0.01% of Maximum Output Frequency Analog; 0.1% Of Maximum Output Frequency
	V/F Ratio	Linear, Non-Linear, User Programmable
	Braking Torque (w/o DB)	About 20%
	Overload Capacity CT	150% of Rated Current for 1 Minute, 200% for 0.5 Second
	Overload Capacity VT	110% of Rated Current for 1 Minute, 150% for 0.5 Second
	Torque Boost	Manual Torque Boost (0 to 20%), Auto Torque Boost
Operating	Operation Method	Keypad / Terminal / Remote (Optional)
	Frequency Setting	Analog: 0 to 10 V / 4 to 20mA, Digital: Keypad
	Accel / Decel Time	0.1 to 6,000 sec, 8 Pre-Defined (Programmable)
	Multi-Step	8 Preset Operational Speed
	Jog	Jog Operation
	Operating Function	DC Braking, Frequency Limit, Frequency Jump, Slip Compensation, PI Control, Stall Prevention
	Operating Status	Frequency Detection Level, Overload Alarm, Stalling, Over Voltage, Under Voltage Drive Overheat, Run, Stop, Constant Speed, Speed Searching
	Start Signal	Forward, Reverse
Programmable I/O	Programmable Input	6 Programmable Inputs
	Programmable Output	5 Programmable Outputs: 2 Form A Contact (N.O.) Fault Contact Output (A, C, B) - 250 VAC 1A, 30 VDC 1A 3 Open Collector Outputs: 24V, 50mA
	Analog	4 ~ 20mA
	Meter	RPM, Hz Current, Voltage (Output Pulse: 500 Hz, Output Voltage: 0 ~ 10 V)
Protective Functions	Drive Trip	Over Voltage, Under Voltage, Over Current, Drive Overload, Fuse Open, Ground Fault Drive Overheat, Motor Overheat, Main CPU Error
	Stall Prevention	Over Current Prevention
	Instant Power Loss	Less Than 15msec : Continuous Operation, More Than 15msec: Auto Restart (Programmable)
Operating Conditions	Ambient Temperature	14˚F ~ 104˚F (-10˚C ~ 40˚C), CE Certification: 41˚F ~ 104˚F (5˚C ~ 40˚C)
	Storage Temperature	-4˚F ~ 149˚F (-20˚C ~ 65˚C)
	Humidity	90% RH Max. (Non-Condensing), CE Certification: 5 ~ 85% (Non-Condensing)
	Altitude - Vibration	Below 3,300ft. (1,000m) Below 5.9m/sec^2 (0.6 g)
	Air Pressure	86 ~ 106kPa
	Application Site	No corrosive gas, combustible gas, oil mist, or dust
	Cooling Method	Forced Air Cooling
	Enclosure	IP00
	International Standards	CE Certified, UL Listed (UL 508C)

DRIVE RATING SELECTION GUIDE

Application Motor		200 ~ 230V	380 ~ 460V
kW	HP	3 Phase	3 Phase
30	40	ACM-030H-2	ACM-030H-4
37	50	ACM-037H-2	ACM-037H-4
45	60	ACM-045H-2	ACM-045H-4
55	75	ACM-055H-2	ACM-055H-4

Application Motor		380 ~ 460V
kW	HP	3 Phase
75	100	ACM-075H-4
90	125	ACM-090H-4
110	150	ACM-110H-4
132	175	ACM-132H-4
160	215	ACM-160H-4
220	300	ACM-220H-4

INDUSTRIAL PRODUCTS & SYSTEMS

7550 Hub Parkway
Cleveland, Oh 44125-5794
Tel: 216-524-8800 or (800) 321-8072
Fax: 216-642-2100
Visit Us: www.CMCcontrols.com

Cleveland Motion Controls
An IMC Company