

Eaton H-Max™ HVAC Drives



The H-Max Series adjustable frequency drive is specifically designed to meet the needs of the HVAC industry by offering leading HVAC software and hardware features. With an industry leading energy efficiency algorithm, high short circuit current rating and robust design, it offers customers increased efficiency, safety and reliability.



Product Range

- 0.75 – 125HP 230V AC
- 1.5 – 250HP 480V AC
- NEMA 1/IP21 or NEMA 12/IP54 Packaging

Benefits

- Industry leading energy efficient solution
- Easy menu navigation
- Multi-monitoring capability
- Corrosion resistant circuit boards
- Extended shelf life
- Meets EMC Class C2 requirements
- Ideal feature set for HVAC

Features

- Active Energy control algorithm
- Graphic display and keypad
- On board communications (RS485: ModBus, BacNet, N2 Ethernet: ModBus TCP, BacNet IP)
- OnBoard I/O (6DI, 3RO, 2AI, 1AO)
- Conformal coated circuit boards
- Real-time clock with battery backup
- 5% DC link choke
- Thin metal film bus capacitors



Product	FS4		FS5		FS6		FS7		FS8		FS9	
Voltage	230 Vac	480 Vac	230 Vac	480 Vac	230 Vac	480 Vac	230 Vac	480 Vac	230 Vac	480 Vac	230 Vac	480 Vac
hp	0.75 - 4	1.5 - 7.5	5 - 10	10 - 20	15 - 20	25 - 40	25 - 30	50 - 75	50 - 75	100 -150	100 - 120	200 - 250
kW	0.55 - 3.0	1.1 - 5.5	4 - 7.5	7.5 - 15	11 - 15	18.5 - 30	18.5 - 30	37 - 55	37 - 55	75 - 110	75 - 90	132 - 160
Amps	3.7 - 12.5	3.4 - 12	18 - 31	16 - 31	48 - 62	38 - 61	75 - 105	72 - 105	140 - 205	140 - 205	261 - 310	261 - 310



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Output Ratings

Output voltage	0 to V_{in}/U_{in} line voltage in
Continuous output current	Ambient temperature max. 104°F (40°C)
IL overload	1.1 x IL (1 min./10 min.)
Overload current	110% (1 min./10 min.)
Initial output current	150% for two seconds
Output frequency	0 to 320 Hz
Frequency resolution	0.01 Hz

Ambient Conditions

Operating Temperature	14 degree's F (-10° C), no frost to 104 degree's F (40° C). (Drive can operate at 122° F (50° C), See Catalog for derating)
Storage Temperature	-40 degree's F (-40° C) to 158° F (70° C)
Relative Humidity	0 to 95%, noncondensing, non-corrosive, no dripping water
Altitude	100% load capacity up to 3280ft (1000m) 1% derating for each 328ft (100m) above 3280ft (1000m); max. 9842ft (3000m); 380 - 480V

Input Ratings

Input voltage (V_{in})	200–240 Vac, 380–480 Vac, -10%/+10%
Input frequency (f_{in})	50/60 Hz (variation up to 47–66 Hz)
Connection to power	Once per minute or less (typical operation)
Short circuit withstand rating	100 kAIC

Protections

Overcurrent protection	Yes
Overvoltage protection	Yes
DC bus regulation anti-trip	Yes (accelerates or decelerates the load)
Undervoltage protection	Yes
Earth fault protection	Yes (in case of earth fault in motor or motor cable, only the frequency converter is protected)
Input phase supervision	Yes (trips if any of the input phases are missing)
Motor phase supervision	Yes (trips if any of the output phases are missing)
Overtemperature protection	Yes
Motor overload protection	Yes
Motor stall protection	Yes
Motor underload protection	Yes
Short circuit protection	Yes
Surge protection	Yes (varistor input)
Conformed coated (varnished) boards	Yes (prevents corrosion)

Eaton Corporation
 Electrical Sector
 1111 Superior Ave.
 Cleveland, OH 44114
 United States
 877-ETN-CARE (877-386-2273)
 Eaton.com

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