

Description



Application

H-Max™ frequency inverters are specially suitable for continuously variable speed control of three-phase asynchronous motors in heating, ventilation and air conditioning (HVAC) applications. A comprehensive range of control and function modules allow an automatic changeover in applications with several motors, cascade and bypass controllers and direct control of non-stabilized motors.

The devices of the H-Max™ series support energy-optimized applications with fluid flow machines (pumps, fans). They allow the PID controllers to maintain a constant conveying pressure in booster stations regardless of throughput. A fire control ensures reliable operation of pumps in sprinkler systems.

The network protocols relevant for HVAC applications – BACNet and Modbus – are included onboard as standard in two versions (RS485, Ethernet).

With this comprehensive range of setting options, ease of handling is important. The frequency inverters are preset for the assigned motor rating and can be taken into operation without any parameterization required. A clear, comprehensive graphic display shows all relevant drive parameters. Two enclosure versions with IP21 and IP54 protection types are available for individual installation.

For the operation of standard three-phase asynchronous motors the devices supply rated operational currents of 3.4 to 310 A for assigned shaft ratings of:

- 0.75 to 90 kW at 230 V (three-phase mains connection),
- 1.1 to 160 kW at 400 V (three-phase mains connection).

Features

- Compact design through state-of-the-art IGBT modules
- Integrated radio interference suppression filter (EMC)
- Integrated DC link choke
- Plug-in keypad with backlit graphic LCD display
- 6 digital inputs (24 V DC) for sink- and source-type control
- 3 relays (2 changeover contacts, 1 N/O, 230 V) on a plug-in card, can be replaced with other relay configurations or additional digital and analog inputs and outputs
- 2 analog inputs (0 to +10 V, 4 to 20 mA), selectable and scaleable
- 1 analog output (0 to +10 V), scaleable
- 1 serial interface (RS485, Modbus RTU)
- Internal braking transistor
- 2 slots for optional fieldbus connection (CANopen, PROFIBUS-DP, DeviceNet, LonWorks)
- User-friendly commissioning through fast configuration and application menu
- Compliance with global standards to CE, UL, c-UL and c-Tick

Functions

A comprehensive range of protection functions allow safe operation and the protection of frequency inverter, motor and application. They offer protection against:

- Overcurrent, ground fault
- Overload (electronic motor protection), underload, dry running
- Overtemperature
- Overvoltage, undervoltage

Further functions are:

- Flying restart circuit
- Thermistor protection
- Restart interlock, automatic restart
- Actual/reference value monitoring
- U/f control or sensorless vector control
- Double starting current and 1.1 times overcurrent
- 2 PID controllers
- Sequencing, multi-motor and bypass control, cascading
- Fire control
- Automatic sleep and wake-up function
- Timer function (day/time control)
- Braking control
- DC braking before start and up to motor standstill
- 8 fixed frequencies
- Electronic motor potentiometer
- Logic function (AND, OR, XOR)
- Upper and lower frequency and current limits
- Frequency hopping (frequency masking)
- 2 parameter sets

Documentation

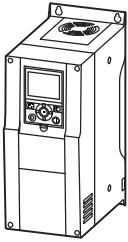




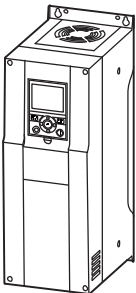






An instructional leaflet and a CD are included with each frequency inverter of the H-Max™ series.

The instructional leaflet is a quick guide with illustrations and notes in 23 languages about the correct handling, mounting and electrical connection of the device. The CD contains the instructional leaflet as well as the Hardware and Engineering manual in several languages.

The current documentation is also available for download from www.moeller.net/support



Ordering

	Rated operational current of frequency inverter ¹⁾	Assigned motor rating (50/60 Hz) ²⁾	Rated operational current motor	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
	I _e A	P kW	I _e A						
Rated operational voltage 3 AC 230 V									
	3.7	0.55	2.7	HMX32AG3D721-B 127151		1 off  	HMX32AG3D722-B 127170		1 off  
	4.8	0.75	3.2	HMX32AG4D821-B 127152			HMX32AG4D822-B 127171		
	6.6	1.1	4.6	HMX32AG6D621-B 127153			HMX32AG6D622-B 127172		
	8	1.5	6.3	HMX32AG8D021-B 127154			HMX32AG8D022-B 127173		
	11	2.2	8.7	HMX32AG01121-B 127155			HMX32AG01122-B 127174		
	12.5	3	11.5	HMX32AG01221-B 127156			HMX32AG01222-B 127175		
	18	4	14.8	HMX32AG01821-B 127157		1 off  	HMX32AG01822-B 127176		1 off  
	24.2	5.5	19.6	HMX32AG02421-B 127158			HMX32AG02422-B 127177		
	31	7.5	26.4	HMX32AG03121-B 127159			HMX32AG03122-B 127178		
	48	11	38	HMX32AG04821-B 127160			1 off  	HMX32AG04822-B 127179	
62	15	51	HMX32AG06221-B 127161		HMX32AG06222-B 127180				

Notes

¹⁾ Rated operational current at an operating frequency of 6 kHz and an ambient temperature of +40 °C

²⁾ Assigned motor rating for normal internally and externally ventilated four-pole, three-phase asynchronous motors with 1500 rpm (at 50 Hz) or 1800 rpm (at 60 Hz)

Information relevant for export to North America



Product Standards UL 508C; CSA-C22.2 No. 14; IEC/EN61800-3; IEC/EN61800-5; CE marking
 NA Certification Request filed for UL and CSA
 Suitable for Branch circuits
 Max. Voltage Rating 3~ 240 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)
 Degree of Protection IEC: IP21; UL/CSA NEMA 1

Rated operational current of frequency inverter ¹⁾	Assigned motor rating (50/60 Hz) ²⁾	Rated operational current motor	With internal radio interference suppression filter, protection type IP21			With internal radio interference suppression filter, protection type IP54		
			Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
I _e A	P kW	I _e A						
Rated operational voltage 3 AC 230 V								
77	18.5	63	HMX32AG07721-B 127162		1 off	HMX32AG07722-B 127181		1 off
88	22	71	HMX32AG08821-B 127163			HMX32AG08822-B 127182		
106	30	96	HMX32AG10621-B 127164			HMX32AG10622-B 127183		
143	45	117	HMX32AG14321-B 127165			HMX32AG14322-B 127184		
170	45	141	HMX32AG17021-B 127166			HMX32AG17022-B 127185		
208	55	173	HMX32AG20821-B 127167			HMX32AG20822-B 127186		
261	75	233	HMX32AG26121-B 127168			HMX32AG26122-B 127187		
310	90	279	HMX32AG31021-B 127169			HMX32AG31022-B 127188		

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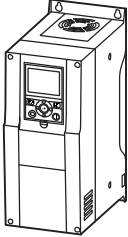


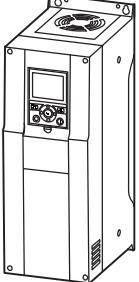
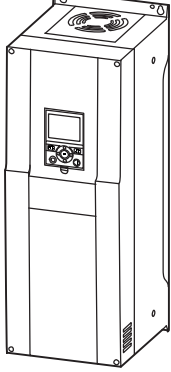
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Suitable for	Branch circuits
Max. Voltage Rating	3~ 240 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)
Degree of Protection	IEC: IP21; UL/CSA NEMA 1



	Rated operational current of frequency inverter ¹⁾	Assigned motor rating (50/60 Hz) ²⁾	Rated operational current Motor	Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	Std. pack
	I _e A	P kW	I _e A					
Rated operational voltage 3 AC 400 V								
	3.4	1.1	2.1	HMX34AG3D421-B 126928		HMX34AG3D422-B 126958		1 off  
	4.8	1.5	3.6	HMX34AG4D821-B 126929		HMX34AG4D822-B 126959		
	5.6	2.2	5	HMX34AG5D621-B 126940		HMX34AG5D622-B 126960		
	8	3	6.6	HMX34AG8D021-B 126941		HMX34AG8D022-B 126961		
	9.6	4	8.5	HMX34AG9D621-B 126942		HMX34AG9D622-B 126962		
	12	5.5	11.3	HMX34AG01221-B 126943		HMX34AG01222-B 126963		
	16	7.5	15.2	HMX34AG01621-B 126944		HMX34AG01622-B 126964		
	23	11	21.7	HMX34AG02321-B 126945		HMX34AG02322-B 126965		
	31	15	29.3	HMX34AG03121-B 126946		HMX34AG03122-B 126966		
	38	18.5	36	HMX34AG03821-B 126947		HMX34AG03822-B 126967		
	46	22	41	HMX34AG04621-B 126948		HMX34AG04622-B 126968		
	61	30	55	HMX34AG06121-B 126949		HMX34AG06122-B 126969		
	72	37	68	HMX34AG07221-B 126950		HMX34AG07222-B 126970		
	87	45	81	HMX34AG08721-B 126951		HMX34AG08722-B 126971		
	105	55	99	HMX34AG10521-B 126952		HMX34AG10522-B 126972		
	140	75	134	HMX34AG14021-B 126953		HMX34AG14022-B 126973		
	170	90	161	HMX34AG17021-B 126954		HMX34AG17022-B 126974		
	205	110	196	HMX34AG20521-B 126955		HMX34AG20522-B 126975		
	261	132	231	HMX34AG26121-B 126956		HMX34AG26122-B 126976		
	310	160	279	HMX34AG31021-B 126957		HMX34AG31022-B 126977		

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Suitable for
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UL 508C; CSA-C22.2 No. 14; IEC/EN61800-3; IEC/EN61800-5; CE marking
Request filed for UL and CSA
Branch circuits
3~ 480 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)
IEC: IP21; UL/CSA NEMA 1