

Z1000 HVAC Drive

3 HP to 500 HP

Fan and Pump Applications



The Z1000 variable speed drive is designed for building automation applications such as fans, pumps, and cooling towers through 500 HP. The Z1000 features an easy-to-read LCD keypad that provides Hand-Off-Auto interface and a real time clock. These features make the Z1000 perfect for most building automation applications that require reliable motor control.

Harmonic Mitigation^{*1}

Built-in 5% line impedance for input harmonic reduction.

Noise Filter^{*1}

On board EMI/RFI filter complies with IEC 61800-3 restricted distribution for first environment.

Serial Communications

Embedded BACnet communications (BTL Certified), along with Modbus/Memobus.

Ratings

Plenum Rated (UL 1995). Seismic Rated (IBC 2012)^{*2}. OSHPD (OSP-0293-10)^{*2}. Made with RoHS compliant materials.

Internal Real-Time Clock

Time and date stamping for events, along with timer controls for starting stopping and speed changes without the need for external controls.

PI Feature

Maintains a set point for closed loop control of fans and pumps for pressure, flow or temperature regulation and eliminates the need for a closed loop output signal from a BAS. Independent PI to control an external device in the system.

LCD Operator

5-Line 16 character alpha-numeric, easy to read and understand display, with Hand-Off-Auto functions.

Carrier Frequency

5 kHz carrier frequency with dynamic noise control for quiet motor operation.

Application Macros

Choose from pre-configured set up macros to match the application for quick and easy set up.

Sealed Heatsink^{*1}

Allows for drive to be mounted in a NEMA 12 enclosure with heatsink external.

^{*1}: Optional, 300-500HP and 600V.

^{*2}: Not applicable to 600V Models

Specifications

Overload Capacity: 110% for 60 seconds,

Output Frequency: 0.01 to 240 Hz

Control Methods

- V/Hz Control
- Open Loop Vector Control for Permanent Magnet motors

Motor Types

- Squirrel Cage Induction
- Interior Permanent Magnet (IPM)

Enclosures

- NEMA Type 1 / IP20 : 3 - 100 HP (208V), 3 - 250 HP (480V), and 2 - 100 HP (600V)
- Open Type / IP00 : 125 - 150 HP (208V), 300 - 500 HP (480V), and 125 - 250 HP (600V)

Ambient Operating Temperature

- 208/480 V: -10°C to 40°C (14°F to 104°F)
- 600 V: -10°C to 50°C (14°F to 122°F)

Certification

- UL, CSA, CE, IBC^{*2}, RoHS, OSHPD^{*2}

Standard I/O

- Seven Multi-Function Programmable Digital Inputs (24Vdc)
- Two Multi-Function Programmable Analog Inputs (0-10VDC or 4-20mA)
- One Fault Relay Output (Form C - 2 Amps at 250Vac max)
- Three Multi-Function Programmable Relay Output (Form A - 2 Amps @ 250Vac max)
- Two Multi-Function Programmable Analog Outputs (0-10Vdc or 4-20mA)
- One 24 Vdc, 150 mA Transducer or Transmitter Power Supply for customer use

Network Communications

- Built-in Metasys, APOGEE FLN, BACnet, RS485/422 - Programmable up to 76.8 kbps
- Optional: LonWorks, EtherNet/IP



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208V Class

Model Number CIMR-ZU2A	Rated Output Current (Amps)	HP	Dimensions (in.)			Enclosure Type
			H	W	D	
0011FAA	10.6	3	14.1	4.9	8.6	IP20 NEMA Type 1
0017FAA	16.7	5	17.6		9.2	
0024FAA	24.2	7.5			20.1	
0031FAA	30.8	10	21.3	10.3		
0046FAA	46.2	15		30.5		
0059FAA	59.4	20	15.7		15.7	
0075FAA	74.8	25				
0088FAA	88.0	30	13.8		13.8	
0114FAA	114	40				
0143FAA	143	50	13.8	13.8		
0169FAA	169	60			13.8	13.8
0211FAA	211	75	13.8	13.8		
0273FAA	273	100			13.8	13.8
0343AAA	343	125	13.8	13.8		
0396AAA	396	150			13.8	13.8

600V Class

Model Number CIMR-ZU5A	Rated Output Current (Amps)	HP	Dimensions (in.)			Enclosure Type
			H	W	D	
0003FAA	2.7	2	11.8	5.5	5.8	IP20 NEMA Type 1
0004FAA	3.9	3			6.5	
0006FAA	6.1	5				
0009FAA	9	7.5			13.4	
0011FAA	11	10	7.4			
0017FAA	17.5	15		15.8		
0022FAA	22	20	20.3		11.0	
0027FAA	27	25		28.7		
0032FAA	32	30	11.1		11.1	
0041FAA	41	40		27.8		
0052FAA	52	50	13.0		13.0	
0062FAA	62	60		31.5		19.7
0077FAA	77	75	13.8		13.8	
0099FAA	99	100		13.8		13.8
0125AAA	125	125	13.8		13.8	
0145AAA	145	150		13.8		13.8
0192AAA	192	200	13.8		13.8	
0242AAA	242	250		13.8		13.8

480V Class

Model Number CIMR-ZU4A	Rated Output Current (Amps)	HP	Dimensions (in.)			Enclosure Type	
			H	W	D		
0005FAA	4.8	3	14.1	4.9	8.6	IP20 NEMA Type 1	
0008FAA	7.6	5			9.2		
0011FAA	11.0	7.5					17.6
0014FAA	14.0	10	20.1	7.9			
0021FAA	21.0	15			21.3		
0027FAA	27.0	20	10.3	10.3			
0034FAA	34.0	25			27.6		11.8
0040FAA	40.0	30	11.4	11.4			
0052FAA	52.0	40			30.5		14.2
0065FAA	65.0	50	15.7	15.7			
0077FAA	77.0	60			18.9	18.9	
0096FAA	96.0	75	37.4	19.7			
0124FAA	124	100			14.6	14.6	
0156FAA	156	125	14.6	14.6			
0180FAA	180	150			14.6	14.6	
0240FAA	240	200	14.6	14.6			
0302FAA	302	250			14.6	14.6	
0361AAA	361	300	14.6	14.6			
0414AAA	414	350			14.6	14.6	
0480AAA	480	400	14.6	14.6			
0515AAA	515	450			14.6	14.6	
0590AAA	590	500	14.6	14.6			

FREE Estimating Tools

- Energy Savings Predictor
- Harmonics Estimator
- Carbon Footprint Calculator



iTunes App

Energy savings app for the iPhone and the iPod touch is available at iTunes.com - search for Yaskawa.

