

## 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<sup>\*1</sup>

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

### Noise Filter<sup>\*1</sup>

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

Seismic Rated (IBC 2012)<sup>\*2</sup>. OSHPD (OSP-0293-10)<sup>\*2</sup>. Plenum Rated (UL 1995). 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<sup>\*1</sup>

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<sup>\*2</sup>, RoHS, OSHPD<sup>\*2</sup>

### 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		9.4
0031FAA	30.8	10					21.3
0046FAA	46.2	15	30.5	13.4	15.7		
0059FAA	59.4	20					
0075FAA	74.8	25	31.5	19.7	13.8		
0088FAA	88.0	30					
0114FAA	114	40	IP00 Open-Type				
0143FAA	143	50					
0169FAA	169	60					
0211FAA	211	75					
0273FAA	273	100					
0343AAA	343	125					
0396AAA	396	150					

### 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			6.6	
0009FAA	9	7.5			13.4	
0011FAA	11	10				
0017FAA	17.5	15	15.8	8.7	7.8	
0022FAA	22	20				
0027FAA	27	25	20.3	11.0	10.2	
0032FAA	32	30				
0041FAA	41	40	28.7	13.0	11.1	
0052FAA	52	50				
0062FAA	62	60	27.8	17.8	13.0	
0077FAA	77	75				
0099FAA	99	100	IP00 Open-Type			
0125AAA	125	125				
0145AAA	145	150				
0192AAA	192	200				
0242AAA	242	250				

### 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				
0011FAA	11.0	7.5				
0014FAA	14.0	10	17.6	9.2		
0021FAA	21.0	15				
0027FAA	27.0	20	20.1	7.9	9.4	
0034FAA	34.0	25				
0040FAA	40.0	30	21.3	10	10.3	
0052FAA	52.0	40				
0065FAA	65.0	50	27.6	11.8	11.4	
0077FAA	77.0	60				
0096FAA	96.0	75	30.5	14.2	15.7	
0124FAA	124	100				
0156FAA	156	125	41.1	16.1	18.9	
0180FAA	180	150				
0240FAA	240	200	37.4	19.7	14.6	
0302FAA	302	250				
0361AAA	361	300	44.9	26.4	14.6	
0414AAA	414	350				
0480AAA	480	400	IP00 Open-Type			
0515AAA	515	450				
0590AAA	590	500				

### 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](http://iTunes.com) - search for Yaskawa.

