

V1000-4X

1/8 to 25 HP

NEMA 4X Current Vector Microdrive



Washdown - Dust Tight!

The V1000-4X is a version of the standard V1000 in an integral enclosure that meets NEMA type 4X/12 *indoor use requirements*, UL type 4X/12 standards, and the IP66 rating of IEC 60529. This enclosure provides the protection required in tough washdown or dust-tight environments, common in Food and Beverage Processing, Packaging, Metal Machining, Woodworking, Pumping, Refrigeration, and Printing. The enclosure is epoxy-coated to protect against the harmful effects of sanitizing chemicals commonly used in food industries.

Specifications

Item	Specification
Overload Capacity	150% Overload for 60 sec. (Heavy Duty)
	120% Overload for 60 sec. (Normal Duty)
Output Frequency	0~400 Hz (higher frequencies available with custom software)
Control Methods	Open Loop Current Vector Control, V/f Control, PM Open Loop Vector Control
	Simple closed loop speed control available
Protective Design	NEMA Type 4X/IP66 (dust/water-proof)
Braking Transistor	Standard in all models
Braking Torque	20 - 40% increase with intelligent high-slip braking function
KEB Function	Uses mechanical energy to continue operation during momentary power failure, standard
Overvoltage Function	Prevention function for die-cushion in a hydraulic mechanical press and other applications
Maintenance	Elapsed timer assists in preventative maintenance for cooling fan, capacitors, and transistors
	Easily replaceable cooling fan
Global Certification	CE, UL, cUL, RoHS, TUV
Available I/O	(7) multi-function digital inputs
	(1) hardwire baseblock
	(2) multi-function analog inputs
	(1) multi-function pulse input
	(1) multi-function relay output
	(2) multi-function photo-coupler outputs
	(1) multi-function 0-10 Vdc analog output
(1) multi-function pulse output	
Network Communication	Standard: RS-422/485 MODBUS 115 kbps
	Optional: DeviceNet, EtherCAT, EtherNet/IP, MECHATROLINK-II, MECHATROLINK-III, Modbus TCP/IP, PROFIBUS-DP, PROFINET
Keypad Operator	Standard LED 5 digit display
	Optional multi-lingual, full-text remote LCD

Features

- NEMA Type 4X/IP66 enclosure
- Corrosion-resistant
- Current vector control, open loop
- RoHS compliance
- On-line tuning
- Induction motor (IM) or permanent magnet synchronous motor (PM) operation
- Function Block Diagram (FBD) programming via DriveWorksEZ™
- Starting torque of 200% at 0.5 Hz
- Removable terminal block with parameter backup function
- “One-touch” copy function with verify
- Super-fast 2 ms scan cycle with dual CPU
- EN954-1 Safety Cat. 3, Stop Cat. 0
- Increased vibration resistance, from 20 Hz to 50 Hz (0.65G)
- 1 in 10,000 failure rate
- Swing PWM function to decrease noise at low carrier frequencies
- Pre-maintenance function
- Modbus communication
- MTBF: 28 years
- Short Circuit Current Rating (SCCR): 30kA rms symmetrical
- Common programming with all other Yaskawa drives

V1000-4X 1/8 to 25 HP

200-240V / Single-Phase

Model Number CIMR-VU	Normal Duty		Heavy Duty		Dimensions (in.)		
	Rated Output Current (Amps)	HP	Rated Output Current (Amps)	HP	H	W	D
BA0001GAA	1.2	1/4	0.8	1/8	6.38	8.74	7.28
BA0002GAA	1.9	1/4	1.6	1/4			
BA0003GAA	3.3	3/4	3.0	1/2			
BA0006GAA	6.0	1	5.0	1	7.36	10.04	9.25
BA0010GAA	9.6	3	8.0	2			
BA0012GAA	12.0	3	11.0	3			

200-240V / Three-Phase

Model Number CIMR-VU	Normal Duty		Heavy Duty		Dimensions (in.)		
	Rated Output Current (Amps)	HP	Rated Output Current (Amps)	HP	H	W	D
2A0001GAA	1.2	1/4	0.8	1/8	6.38	8.74	7.28
2A0002GAA	1.9	1/4	1.6	1/4			
2A0004GAA	3.5	3/4	3.0	1/2			
2A0006GAA	6.0	1	5.0	1			
2A0010GAA	9.6	3	8.0	2	7.36	10.04	9.25
2A0012GAA	12.0	3	11.0	3			
2A0020GAA	19.6	5	17.5	5	11.42	16.54	12.01
2A0030GAA	30	10	25	7.5			
2A0040GAA	40	10	33	10			
2A0056GAA	56	20	47	15			
2A0069GAA	69	25	60	20		18.31	

380-480V / Three-Phase

Model Number CIMR-VU	Normal Duty		Heavy Duty		Dimensions (in.)		
	Rated Output Current (Amps)	HP	Rated Output Current (Amps)	HP	H	W	D
4A0001GAA	1.2	1/2	1.2	1/2	6.38	8.74	7.28
4A0002GAA	2.1	1	1.8	3/4			
4A0004GAA	4.1	2	3.4	2			
4A0005GAA	5.4	3	4.8	3	7.36	10.04	9.25
4A0007GAA	6.9	4	5.5	3			
4A0009GAA	8.8	5	7.2	4			
4A0011GAA	11.1	7.5	9.2	5			
4A0018GAA	17.5	10	14.8	10	11.42	16.54	12.01
4A0023GAA	23	15	18	10			
4A0031GAA	31	20	24	15			
2A0038GAA	38	25	31	20			

Major Applications



Food & Beverage



Packaging



Pump



Conveyor

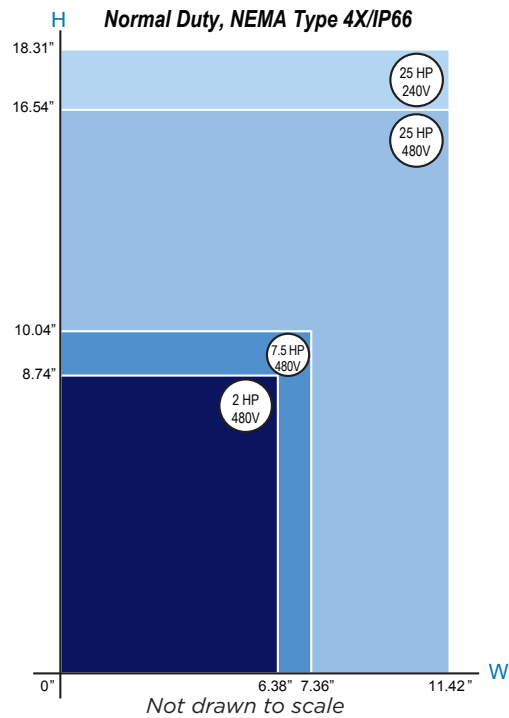


Industrial Washer



Refrigeration

Size Comparison



Options*

- 120 VAC Interface
- Network Communications: DeviceNet, EtherCAT, EtherNet/IP, MECHATROLINK-II, MECHATROLINK-III, Modbus TCP/IP, PROFIBUS-DP, PROFINET

* Although the V1000-4X is compatible with most V1000 options, those options may not be waterproof. These options require special consideration regarding proper wiring techniques, including cable glands.