

V1000

1/8 to 25 HP

NEMA 1 Current Vector Microdrive



A World of Power in the Palm of your Hand!

The V1000 is a world-class compact current vector drive that defines a new world standard. Demands for efficient production and better maintainability are on the rise, spurred by global competition. Yaskawa drives have earned a reputation for high performance, high functionality, and high quality.

In our pursuit to create drives optimized for the market, Yaskawa has created the first compact current vector microdrive equipped with the standard features shown on the right.

Features

- Up to 30% smaller than the competition
- Current vector control, open loop
- RoHS compliance
- On-line tuning
- Induction motor (IM) or permanent magnet motor (PM) operation
- Function Block Diagram (FBD) programming via DriveWorksEZ™
- Starting torque of 200% at 0.5 Hz
- Side-by-side installation due to patented hybrid heatsink
- 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
- Cooling fan replacement without tools
- MTBF: 28 years
- Short Circuit Current Rating (SCCR): 30kA rms symmetrical
- Common programming with all other Yaskawa drives
- DriveWizard software available at no extra cost

200-240VAC Single Phase 50/60 Hz

Model Number CIMR-VU <input type="checkbox"/> FAA	BA0001	BA0002	BA0003	BA0006	BA0010	BA0012	BA0018
Motor Capacity ND	1/4	1/4	3/4	1	3	3	5
(HP) HD	1/8	1/4	1/2	1	2	3	5
Output Current A ND	1.2	1.9	3.3	6.0	9.6	12.0	17.5
(rms) HD	0.8	1.6	3.0	5.0	8.0	11.0	17.5

200-240V Three Phase 50/60 Hz

Model Number CIMR-VU <input type="checkbox"/> FAA	2A0001	2A0002	2A0004	2A0006	2A0010	2A0012	2A0020	2A0030	2A0040	2A0056	2A0069
Motor Capacity ND	1/4	1/4	3/4	1	3	3	5	10	10	20	25
(HP) HD	1/8	1/4	1/2	1	2	3	5	7.5	10	15	20
Output Current A ND	1.2	1.9	3.5	6.0	9.6	12.0	19.6	30	40	56	69
(rms) HD	0.8	1.6	3.0	5.0	8.0	11.0	17.5	25	33	47	60

380-480VAC Three Phase 50/60 Hz

Model Number CIMR-VU <input type="checkbox"/> FAA	4A0001	4A0002	4A0004	4A0005	4A0007	4A0009	4A0011	4A0018	4A0023	4A0031	4A0038
Motor Capacity ND	1/2	1	2	3	4	5	7.5	10	15	20	25
(HP) HD	1/2	3/4	2	3	3	4	5	10	10	15	20
Output Current A ND	1.2	2.1	4.1	5.4	6.9	8.8	11.1	17.5	23	31	38
(rms) HD	1.2	1.8	3.4	4.8	5.5	7.2	9.2	14.8	18	24	31

Available Options

- Screwless Terminals
- Integral EMC Filter (C1, C2, C3)
- 24 VDC Control Power Unit
- 120 VAC Interface
- Network Communications: Profibus-DP, DeviceNet, EtherNet/IP, Modbus TCP/IP, MECHATROLINK-II
- Operator Kits: NEMA 1 (LED or LCD) and NEMA 3R/4X (LED or LCD)
- USB Copy Unit
- DIN Rail Kit
- Input CE Filter
- Dynamic Braking Resistor (3% or 10%)
- Input Reactor (3% or 5%)



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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	IP20/NEMA1
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, EtherNet/IP, Profibus-DP, Modbus TCP/IP, MECHATROLINK-II
Keypad Operator	Standard LED 5 digit display
	Optional multi-lingual, full-text remote LCD

Major Applications



Size Comparison

