

Compact Vector Control Drive

V1000

A World of Power in the Palm of your Hand!



400V Class
Power Range: 0.4kW to 18.5kW

200V Class
Power Range: 0.2kW to 18.5kW

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
- Current vector control, open loop
- RoHS compliance
- On-line tuning
- Induction Motor or Permanent Motor Operation
- Function Block Diagram (FBD) programming via DriveWorksEZ™
- Starting torque of 200% at 0.5 Hz
- Side-By-Side installation
- Removable terminal block with parameter backup function
- Copy functions allows easy migration of parameters
- EN954-1 Safety Cat. 3, Stop Cat. 0
- Swing PWM function to decrease noise at low carrier frequencies
- Modbus communication
- Cooling fan replacement without tools
- Common programming with all other Yaskawa drives
- DriveWizard+ software available at no extra cost
- Ambient Operating Temperature - 50° C*
- Speed Control Range 1:100 (OLV Control), 1:40 (V/f Control), 1:10 (OLV/PM Control)
- 95% Humidity (RH) or less with no condensation
- Heatsink Overheat Protection by Thermistor

Specifications

Item	Specifications
Overload Capacity	150% Overload for 60 sec. (Heavy Duty) 120% Overload for 60 sec. (Normal Duty)
Output Frequency	0~400 Hz
Control Methods	Open Loop Current Vector Control, V/f Control, PM Open Loop Vector Control Simple closed loop speed control available
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
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

*Derating required, please contact Yaskawa for details.

Standard Specifications

General-Purpose

200 V Class

Model	Three-Phase CIMR-V□2A□□□□	0001	0002	0004	0006	0008	0010	0012	0018	0020	0030	0040	0056	0069		
	Single-Phase CIMR-V□BA□□□□	0001	0002	0003	0006	—	0010	0012	—	0018	—	—	—	—		
Max. Applicable Motor Capacity	kW	ND	0.2	0.4	0.75	1.1	1.5	2.2	3	3.7	5.5	7.5	11	15	18.5	
		HD	0.1	0.2	0.4	0.75	1.1	1.5	2.2	3	3.7	5.5	7.5	11	15	
Output	Rated Output Capacity	kVA	ND	0.5	0.7	1.3	2.3	3.0	3.7	4.6	6.7	7.5	11.4	15.2	21.3	26.3
			HD	0.3	0.6	1.1	1.9	2.6	3	4.2	5.3	6.7	9.5	12.6	17.9	22.9
	Rated Output Current	A	ND	1.2	1.9	3.5	6	8	9.6	12	17.5	19.6	30	40	56	69
			HD	0.8	1.6	3	5	6.9	8	11	14	17.5	25	33	47	60
	Overload Tolerance		ND Rating: 120% of rated output current for 60 s, HD Rating: 150% of rated output current for 60 s. (Derating may be required for repetitive loads)													
	Max. Output Voltage		Three-phase power supply: Three-phase 200 to 240 V (relative to input voltage) Single-phase power supply: Three-phase 200 to 240 V (relative to input voltage)													
Max. Output Frequency		400 Hz (user-set)														
Power	Rated Voltage/Rated Frequency		Three-phase AC power supply: 200 to 240 V 50/60 Hz, Single-phase AC power supply: 200 to 240 V 50/60 Hz, DC power supply: 270 to 340 V													
	Allowable Voltage Fluctuation		-15 to +10%													
	Allowable Frequency Fluctuation		±5%													

400 V Class

Model	Three-Phase CIMR-V□4A□□□□	0001	0002	0004	0005	0007	0009	0011	0018	0023	0031	0038		
Max. Applicable Motor Capacity	kW	ND	0.4	0.75	1.5	2.2	3	3.7	5.5	7.5	11	15	18.5	
		HD	0.2	0.4	0.75	1.5	2.2	3	3.7	5.5	7.5	11	15	
Output	Rated Output Capacity	kVA	ND	0.9	1.6	3.1	4.1	5.3	6.7	8.5	13.3	17.5	23.6	29
			HD	0.3	1.4	2.6	3.7	4.2	5.5	7	11.3	13.7	18.3	23.6
	Rated Output Current	A	ND	1.2	2.1	4.1	5.4	6.9	8.8	11.1	17.5	23	31	38
			HD	1.2	1.8	3.4	4.8	5.5	7.2	9.2	14.5	18	24	31
	Overload Tolerance		ND Rating: 120% of rated output current for 60 s, HD Rating: 150% of rated output current for 60 s. (Derating may be required for repetitive loads)											
	Max. Output Voltage		Three-phase 380 to 480 V (relative to input voltage)											
Max. Output Frequency		400 Hz (user-set)												
Power	Rated Voltage/Rated Frequency		Three-phase AC power supply: 380 to 480 V 50/60 Hz, DC power supply: 510 to 680 V											
	Allowable Voltage Fluctuation		-15 to +10%											
	Allowable Frequency Fluctuation		±5%											

Available Options

- Screwless Terminals
- Customize the Drive
- Network Communications: DeviceNet, EtherCAT, EtherNet/IP, MECHATROLINK-II, MECHATROLINK-III, Modbus TCP/IP, PROFIBUS-DP, PROFINET
- Application Presets
- Built in Braking Transistors
- LED or LCD Operator Kits
- Din Rail Kit
- IP20/IP00 Protection Class