GV3000 Vector Drive

1 thru 100 Hp **230 VAC** **3 Phase - 50/60 Hz**
1 thru 400 Hp **460 VAC** **3 Phase - 50/60 Hz**

Applications: Constant torque or constant horsepower applications. New installations, replacements and original equipment manufacturers (OEM).

Features: NEMA 1, NEMA 4, NEMA 12, IP20, and IP00 enclosures. Output frequency 0 to 200 Hz with peak overload capacity of 150%. Digital speed or torque control. Built-in PID process control loop. Automatic tuning to motor and full rated torque down to zero speed.

Input Ratings	Voltage	230	460
	Voltage Range	180-264	340-528
	Phase	3 Phase	
	Frequency	50/60 Hz +5%	
	Impedance	Line reactor needed for supplies with greater than 30,000 amp symmetrical fault capacity	
Output Ratings	Horsepower	1-100 Hp @ 230VAC, 3PH; 1-400 Hp @ 460VAC, 3 PH;	
	Overload Capacity	Heavy Duty (Constant Torque) = 150% for 60 seconds, 200% for 3 seconds	
		Normal Duty (Variable Torque) = 110% for 60 seconds and 150% overload for 3 seconds.	
	Frequency	0-200 Hz	
	Voltage	0 to maximum input voltage (RMS)	
Protective Features	Trip	Microprocessor checksum, over current, over voltage, under voltage, over temperature (motor or control), output shorted or grounded, motor overload, encoder loss.	
	External Output	LED trip condition indicators codes, fault relay output	
	Short Circuit	Phase to phase, phase to ground	
	Electronic Motor Overload	Meets UL508C (I^2T)	
Environmental Conditions	Temperature	0° to 40°C, NEMA 1;0° to 50°C, Power Module IP00	
	Cooling	Forced air	
	Enclosure	NEMA 1, NEMA 4X, NEMA 12, IP20 and IP00	
	Altitude	Sea level to 3300 Feet (1000 Meters)	
	Humidity	NEMA1: 5% to 95% RH Non-Condensing; NEMA 4X To 100% RH Condensing	
	Storage Temperature	-40 to +65°C	
Keypad Display	Display	4 digit bright 7-segment LED readout; 14 discrete LED indicators	
	Keys	9 key membrane with tactile feedback	
	Functions	Output status monitoring, Digital speed control, Parameter setting and display, Diagnostic and Fault log display, Motor run and jog, Auto/Manual toggle	
	LED Indicators	Forward run command, Reverse run command, Jog active, Auto/Manual Indication, Monitor display indication	
	Remote Mount	Optional remote mountable LCD keypad, fullt text display, multi-language support, quick start menu, NEMA 12 rating, 5 meter distance capable with included cable	
	Trip	Last 10 trips retained in memory with elapsed time stamp	
Control Specifications	Control Method	Microprocessor controlled PWM output, selectable encoderless vector, sensorless vector or V/Hz inverter	
	PWM Frequency	Selectable 2KHz, 4KHz (Standard), or 8KHz	
	Frequency Setting	±10 VDC, 0-10 VDC, 4-20 mA or 0-20 mA; digital (keypad); Serial Communications (via option); RS-232 via CS3000 Software	
	Accel/Decel	0-999.9 seconds	
	Motor Matching	Automatic tuning to motor with manual override	
	PC Setup Software	CS3000 Software available using the RS-232 port for commissioning, parameter viewer, scope capture and cloning	
	Maximum Output Frequency	200 Hz	
Motor Feedback	Feedback Type	Incremental encoder coupled to motor shaft	
	Pulses/Rev	512 PPR, 1024 PPR (Standard), 2048 PPR, 4096 PPR, SE (No encoder - sensorless vector operation)	
	Input Type	2 channel in quadrature, 15 VDC, differential	
	Power Supply for Encoder	15 VDC, 250 mA maximum	
	Max. Frequency	125 KHz	
Analog Inputs	One Differential	±10VDC, 0-10VDC, 4-20 mA or 0-20 mA, 10-bit + sign	
	Input Impedance	50 kOhms (Volt mode); 250 Ohms (Current mode)	
Analog Outputs	Analog Outputs	1 Assignable	
	Full Scale Range	0-10V or 4-20mA	
	Source Current	1 mA maximum (volt mode), 20mA (using external supply or +15V encoder supply)	
	Resolution	9 bits	
Digital Inputs	Quantity	3 Assignable, 5 dedicated inputs (Function Loss, Run/Jog, Reset, Stop, Start)	
	Rated Voltage	24VDC Nominal Utilizing Internal 24VDC Isolated Power Supply	
	Update Rate	75mSec ~ 126mSec (depending on input and whether V/Hz or Vector mode)	
Relay Outputs	Rated Voltage	250VAC/30VDC maximum	
	Maximum Current	5A maximum resistive / 2 amps maximum inductive	
	Output Conditions	7 Programmable Conditions	