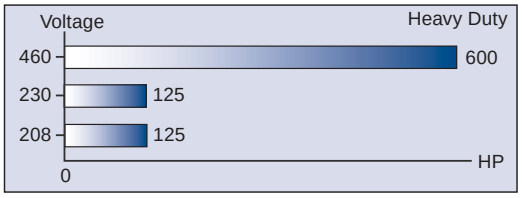
VG10 Dynamic Torque Vector AC Drive

EMERSON Industrial Automation

Drives For Every Industry

- Three control methods
  - Closed Loop Flux Vector
  - Open Loop (Sensorless) Vector
  - Volts / Hertz
- Maximum Frequency 400Hz
- Motor Auto Tuning for optimum performance
  - Full Dynamic Tuning (spinning motor)
  - Static Tuning (loaded motor, not spinning)
  - On-Line Tuning (continuous tuning while running)
- Keypad: Graphic back-lit LCD combined with digital LED, Copy Function, 5 lines x 13 characters
- Uniform programming parameters with GP10
- Soft Switching Technology to eliminate output filters
- -10°C to 50°C (+14°F to 122°F)
- Serial Communication (RS485 Modbus Standard; Lon Works, Device Net, Ethernet, Metasys N2, Profibus-DP, and Interbus-S optional)
- Dynamic Braking built in and includes 3% DB resistor at 10HP and below
- Dual Motor Parameter Table
- "Side by Side" mounting with zero clearance to optimize panel space, 30HP and below
- NEMA 1, 12* or 4*, Open Chassis
- Saflink compatible



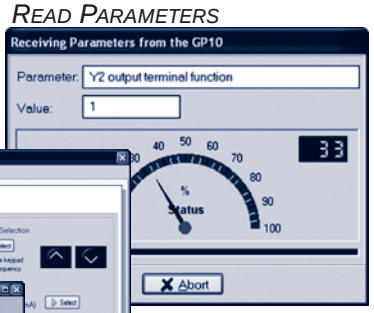
The VG10 is available in both standard NEMA-1 and RapidPak configurations. For more information on Saftronics RapidPak refer to brochure 027-2043.

SAFLINK™ is an innovative tool designed for easier programming and trouble-shooting of Saftronics drives.

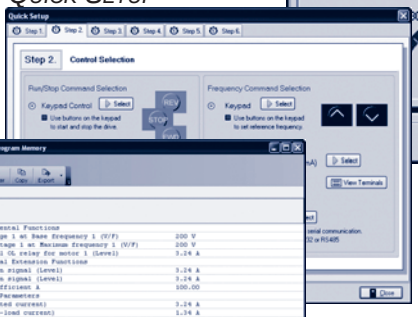
Please visit our Web site at www.saftronics.com and try out a demo -version.

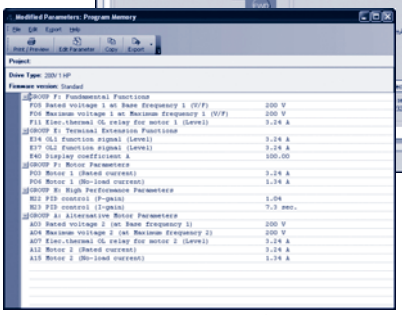
*Rating Dependent

Read Parameters



Quick Setup





Modified Parameter Overview

SAFTRONICS

VG10

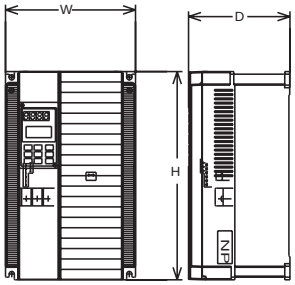
EMERSON
Industrial Automation

One Source ... Many Powerful Solutions

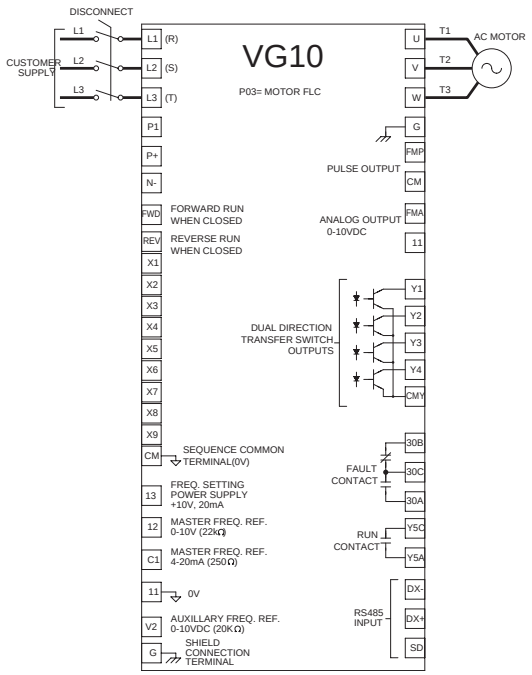
Ratings & Dimensions

VOLT	HP	AMPS	PART NUMBER VG10-	DIMENSIONS (in inches) W	H	D	WEIGHT (lbs)
230 V	0.25	1.5	2F25-1	4.33	10.24	5.12	4.8
	0.5	3	2F50-1	4.33	10.24	5.12	4.8
	1	5	2001-1	4.33	10.24	5.71	5.5
	2	8	2002-1	5.91	10.24	5.71	8.4
	3	11	2003-1	5.91	10.24	5.71	8.4
	5	17	2005-1	5.91	10.24	5.71	8.4
	7.5	25	2007-1	8.66	10.24	7.68	13.4
	10	33	2010-1	8.66	10.24	7.68	13.4
	15	46	2015-1	9.84	15.75	7.68	22.0
	20	59	2020-1	9.84	15.75	7.68	22.0
	25	74	2025-1	9.84	15.75	7.68	23.1
	30	87	2030-1	9.84	15.75	7.68	23.1
	40	115	2040-1	13.5	29.7	10.0	70
	50	145	2050-1	14.9	33.1	10.6	86
	60	180	2060-1	14.9	38.0	10.6	106
	75	215	2075-1	14.9	38.0	10.6	110
	100	283	2100-1	21.0	41.3	11.2	172
	125	346	2125-1	26.9	50.4	14.2	282

VOLT	HP	AMPS	PART NUMBER VG10-	DIMENSIONS (in inches) W	H	D	WEIGHT (lbs)
460 V	0.5	1.5	4F50-1	4.33	10.24	5.12	4.8
	1	2.5	4001-1	4.33	10.24	5.71	5.5
	2	3.7	4002-1	5.91	10.24	5.71	8.4
	3	5.5	4003-1	5.91	10.24	5.71	8.4
	5	9	4005-1	5.91	10.24	5.71	8.4
	7.5	13	4007-1	8.66	10.24	7.68	14.3
	10	18	4010-1	8.66	10.24	7.68	14.3
	15	24	4015-1	9.84	10.24	7.68	22
	20	30	4020-1	9.84	15.75	7.68	22
	25	39	4025-1	9.84	15.75	7.68	23.1
	30	45	4030-1	9.84	15.75	7.68	23.1
	40	60	4040-1	13.5	15.75	10.0	70
	50	75	4050-1	14.9	29.7	10.6	82
	60	91	4060-1	14.9	29.7	10.6	95
	75	112	4075-1	14.9	34.6	10.6	97
	100	150	4100-1	14.9	34.6	10.6	115
	125	176	4125-1	21.0	38.0	12.4	174
	150	210	4150-1	21.0	38.0	12.4	245
	200	253	4200-1	21.0	38.0	14.2	245
	250	304	4250-1	21.0	53.1	14.2	245
	300	377	4300-1	26.9	53.1	14.2	337
	350	415	4350-1	26.9	55.1	14.2	337
	400	520	4400-1	26.9	55.1	17.7	562
	450	585	4450-1	26.9	57.1	17.7	562
	500	650	4500-1	34.6	57.1	17.7	804
	600	740	4600-1	34.6	57.1	17.7	804



Terminal Layout



The VG10 is Saftronics latest generation of Flux Vector AC Drives. The VG10's proven power section has been improved by incorporating the latest IGBT technology. This new technology allows for a unique "Soft-Switching" output. The benefits of this technology offer reduced RFI/EMI and a 50% reduction in dv/dt voltage spikes. The VG10 has also expanded it's horse-power ratings in both 230VAC (1/4 - 125HP) and 460VAC (1/2 - 600HP) for even greater flexability.

The VG10's performance has greatly been increased using the latest 32 bit microprocessor technology. This has allowed for the capability of performing "Auto-Tuning" without spinning the motor where situations do not allow for uncoupling the load. The "Dynamic Auto-Tuning" has been improved to continuously monitor the motors characteristics during running and adjust the internal motor parameters for the most precise speed and torque control. The VG10 has an improved digital keypad to include a LCD/LED graphical back-lit display for ease of set-up and troubleshooting.

The VG10, 30 HP and below has been designed to allow side by side mounting to maximize panel space use.

Like all of our products, the VG10 is backed by our world class, 24/7 support. A technician is only a phone call away. We even offer bi-lingual customer and technical support for our Spanish speaking customers.

Specifications

ITEM	RATINGS
Output Rating	3-Phase, 200-230 V, 50/60 Hz, 380-480 V, 50/60 Hz
Voltage Fluctuation	+10%, -15%
Frequency Fluctuation	±5%
Control Method	Sinusoidal PWM Control (V/F, Dynamic Torque Vector, Flux Vector with optional Encoder Card)
Frequency Output Range	0.1 to 400 Hz
Accel/Decel Time	0.1 to 3600.0 seconds - Independent
Braking Torque	1/4 - 1 HP = 150%, 2 - 10 HP = 100%, 15 - 30 HP = 20% 40 HP and higher 15%
Overload	150 %, 1 Minute (Heavy duty)
Carrier Frequency	0.75 - 15 kHz - 75 HP or less 0.75 - 10 KHz - 100 HP or more
Keypad	Backlit LCD / English Language, LED Monitor Display with Copy Function
Ambient Temperature	-10°C to 50°C (+14°F to 122°F)
Storage Temperature	-25°C to 65°C (-13°F to 149°F)
Starting Torque	200%, 30 Hp and below, 180% 40 Hp and above, below 1 Hz
Fuse Protection	Motor coast to a stop at blown fuse
Ground Fault	Provided by electronic circuit
Power Charge	Charge LED stays on until voltage drops below 25 Vdc
Speed Control Accuracy	±0.2% (±0.02% with PG)

*To maintain maximum uptime and performance, Saftronics offers a **24 hour / 7 day per week toll free emergency support**. The Saftronics technical support team is available for trouble shooting assistance as well as weekend and holiday shipment of repair parts.*

P/N: 027-VG10B1
Rev: 12/2004

SAFTRONICS DRIVES FOR EVERY INDUSTRY

Clearwater Tech - Phone: 800.894.0412 - Fax: 208.368.0415 - Web: www.clrwtr.com - Email: info@clrwtr.com