

Vari-Green® Drive – 100+

200-240 VAC, 380-480 VAC, 3Ø

Factory Mounted, Pre-Programmed, Variable Speed Control

R³ Filtering Technology



The Vari-Green Drive 100+ is factory mounted, wired and programmed to match the fan and motor characteristics. The Vari-Green Drive can be configured with an on-board potentiometer dial; a 0-10VDC or 4-20mA signal for fan speed control. 24VDC power is available for powering Vari-Green Controls as well as a motorized backdraft damper.

Included in price of fan with the Vari-Green Drive:

- Mounting
- Wiring
- Programming

Competitive bids with standalone variable frequency drives should account for these items.

SPECIFICATIONS		Part # 385819	Part # 385820	Part # 386422	Part # 386423
Output Ratings	Voltage	0 - 240VAC	0 – 480 VAC	0 – 240 VAC	0 – 480 VAC
	Max motor FLA	8.0A	6.0A	16.0A	14.0A
	Frequency*: 15 – 240 Hz	Yes	Yes	Yes	Yes
	Phase	3Ø	3Ø	3Ø	3Ø
Input Ratings	Voltage (+15%/-10%)	200–240VAC	380–480VAC	200–240VAC	380–480VAC
	Frequency: 50/60Hz (±5%)	Yes	Yes	Yes	Yes
	Phase	3Ø	3Ø	3Ø	3Ø
	Efficiency, full load	≥ 96%	≥ 98%	≥ 96%	≥ 98%
	Power Factor	≥ 0.9	≥ 0.85	≥ 0.9	≥ 0.85
	% THD (Meets IEEE 519)	32.0	32.0	32.0	32.0
	On Board Fuses	Yes	Yes	Yes	Yes
Environment	Max Ambient Temp	40°C (104°F)	40°C (104°F)	40°C (104°F)	40°C (104°F)
	Storage Temperature	-30 to 65°C (-22°F–149°F)	-30 to 65°C (-22°F–149°F)	-30 to 65°C (-22°F–149°F)	-30 to 65°C (-22°F–149°F)
	Relative Humidity (Non-condensing)	Up to 95% RH	Up to 95% RH	Up to 95% RH	Up to 95% RH
	Agency Approvals: UL Listed E223975 to 61800-5-1	Yes	Yes	Yes	Yes
Certifications	Enclosure Rating	Type 4/IP66	Type 4/IP66	Type 4/IP66	Type 4/IP66

*Actual frequency range will vary.

Operational Features	VGD 100	VGD 100+
Analog Input 0-10V, 0-24V, 4-20mA (selectable via DIP switch)	Yes	Yes
Damper Actuator Output 24VDC, 0.5A Max	Yes	Yes
Control Voltage Output 24VDC, 50mA Max	Yes	Yes
LEDs (3): Power, Run, Fault	Yes	Yes
Relay Output (2)	No	Yes
Digital Input – Dry (2)	No	Yes
Digital Input – Voltage (2)	No	Yes
RS-485 (Modbus/BACnet)	No	Yes
Bluetooth/Smart Phone Interface	No	Yes
On-Board PID Control	No	Yes
Optional Pressure Transducer	No	Yes

CONTROL WIRING			
Terminal	Description	Rating	Notes
A+ A-	Damper Output	24VDC / 0.5A Max	Programmable activation modes
24 AI SG	24VDC Output Analog Input	24VDC / 50mA Max 0-24V / 0-10V / 4-20mA	Voltage or current input configurable via analog dip switches 1 & 2
O1 O O2	Relay Output Relay Output	125VAC-0.5A / 250VAC-0.25A / 30VDC-2.0A / 125VDC-0.24A / 220VDC-0.24A	Can be configured to “N.O.” (default) or “N.C.” Functions: run, fault, ...
V1 V2 V3 V4	Voltage Input 1 Voltage Input 2	12-250V AC/DC / 8mA Max draw on at 10V min, Off at 3V Max 52kOhm input impedance	Can be configured to “Active High” (default) or “Active Low” Functions: enable, limit switch, fireman’s override, speed A, speed B, shutdown
D1 D2 SG	Dry Input 1 Dry Input 2 Input Common	24VDC when open / Short to SG to activate	Can be configured to “Active High” (default) or “Active Low” Functions: enable, limit switch, firemen’s override, speed A, speed B, shutdown
+ - SG	RS-485 Communications	N/a	Modbus, BACnet

WIRING SIZES AND TERMINAL LUGS							
VFD rating	Terminals	Screw Size Metric	Screw Torque			Conductor Size	
			kgf. cm	lbf.in	Nm	AWG/kcmil	mm2
200 – 240VAC 380 – 480VAC	All Control Terminals	M2.6	4.55	3.98	0.4	14 - 26	0.2 – 2.5