

# GV6000

## DRIVES

### The multi-purpose Industrial AC Drive that solves virtually all variable speed drive applications

The Reliance Electric GV6000 drive incorporates V/Hz, Sensorless Vector, and Flux Vector control. From simple to complex, the GV6000 drive will meet your application needs in a platform that is expandable and easiest to use in its class. The GV6000 package provides simplicity and broad application flexibility with the performance you need in an ultra compact bookshelf design. Ideal for stand-alone, retro-fit, or integration into new system designs where high power density is required.

#### Standard and Optional Features:

A zero-stacking bookshelf design with 3 methods of control as standard:

- General Purpose (Scalar V/Hz)
- Sensorless Vector Control (SVC)
- Flux Vector Control (FVC)

Each method provides a cost effective means to address the wide range of applications required by today's demanding drives customers. All methods are standard without the need for expensive or complicated option boards. Encoder feedback interface is included at no additional cost on each drive.

A simple, yet powerful keypad is supplied with every Reliance Electric GV6000 drive with a backlit LCD display providing an interface to the drive that is user-friendly yet fully functional, including our CopyCat function for transferring parameter sets between drives.

Diagnostics is a very important attribute of the Reliance Electric GV6000 product line. A dedicated fault/alarm key directs you to the fault and alarm queues which have integral troubleshooting text for each fault or alarm that may occur.

Dynamic braking is provided with an integral snubber (7th) transistor (standard on frame 0 – 4 drives). Other optional features include a wide assortment of communications modules, software utilities, remote keypads and full-numeric keypads.



#### Specifications - I/O:

- 6 programmable digital inputs available in 24VDC or 115VAC
- 2 analog inputs  $\pm 10V/4-20mA$  (11 bit + sign)
- 3 programmable digital outputs (dry contacts: 1 form-C, 1 form-A, and 1 form-B)
- 2 analog outputs  $\pm 10V/4-20mA$  (11 bit + sign)
- Encoder feedback input
- Frequency input for drive references

#### Specifications - General:

- 0° to 50°C, 1000m altitude without derating
- 5 to 95% humidity, non-condensing
- Input voltage operating range exceeds  $\pm 10\%$  of nominal and 47 to 63Hz frequency
- Operational on single-phase power for 50% of the nominal current rating
- 97.5% efficiency, nominal line voltage and rated amps
- Sine-coded PWM with adjustable carrier frequency; motor frequency 0 to 420 Hz
- Speed regulation 0.001% across a 120:1 speed range; 1000:1 operating range; 250 rad/sec bandwidth (Flux Vector Control)

#### Agency Certifications/Listings:

- UL, cUL, CE, C-tick (Australian Certification)  
Note: CE and C-tick are not available on 575 volt drives

✓ Aggregate/Cement

Food

✓ Mining

✓ Forest/Paper

✓ Petro/Chem

✓ Unit/Baggage Handling

✓ HVAC/Industrial Air Handling

✓ Environmental/Fluid Power

✓ Automotive

✓ Metals

RELIANCE  
ELECTRIC

DODGE®

Stock GV6000 240 VAC Input, NEMA 1, 24VDC I/O

Model No.	Normal Duty HP	Continuous Amps	Frame	Braking Transistor Standard
6V21-2P2TA	0.5	2.2	0	✓
6V21-4P2TA	1	4.2	0	✓
6V21-6P8TA	2	6.8	1	✓
6V21-9P6TA	3	9.6	1	✓
6V21-015TA	5	15	1	✓
6V21-022TA	7.5	22	1	✓
6V21-028TA	10	28	2	✓
6V21-042TA	15	42	3	✓
6V21-052TA	20	52	3	✓
6V21-070TA	25	70	4	✓
6V21-080TA	30	80	4	✓
6V21-104NA	40	104	5	
6V21-130NA	50	130	5	
6V21-154NA	60	154	6	
6V21-192NA	75	192	6	
6V21-260NA	100	260	6	

Stock GV6000 575 VAC Input, NEMA 1, 24VDC I/O

Model No.	Normal Duty HP	Continuous Amps	Frame	Braking Transistor Standard
6V51-1P7TA	1	1.7	0	✓
6V51-2P7TA	2	2.7	0	✓
6V51-3P9TA	3	3.9	0	✓
6V51-6P1TA	5	6.1	0	✓
6V51-9P0TA	7.5	9	0	✓
6V51-011TA	10	11	1	✓
6V51-017TA	15	17	1	✓
6V51-022TA	20	22	2	✓
6V51-027TA	25	27	2	✓
6V51-0321TA	30	32	3	✓
6V51-041TA	40	41	3	✓
6V51-052TA	50	52	3	✓
6V51-062TA	60	62	4	✓
6V51-077NA	75	77	5	
6V51-099NA	100	99	5	
6V51-125NA	125	125	6	
6V51-144NA	150	144	6	

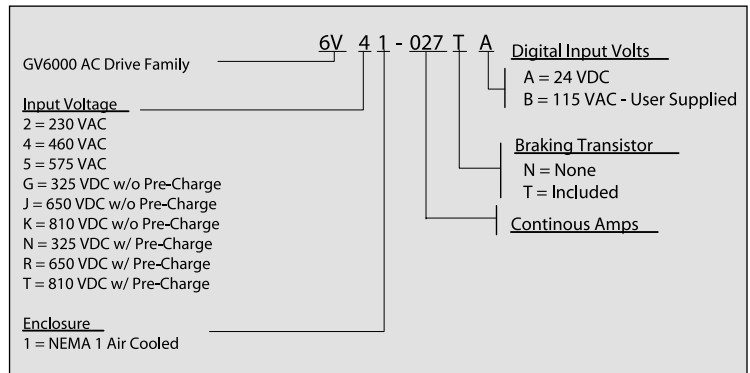
Stock GV6000 460 VAC Input, NEMA 1, 24VDC I/O

Model No.	Normal Duty HP	Continuous Amps	Frame	Braking Transistor Standard
6V41-1P1TA	0.5	1.1	0	✓
6V41-2P1TA	1	2.1	0	✓
6V41-3P4TA	2	3.4	0	✓
6V41-5P0TA	3	5	0	✓
6V41-8P0TA	5	8	0	✓
6V41-011TA	7.5	11	0	✓
6V41-014TA	10	14	1	✓
6V41-022TA	15	22	1	✓
6V41-027TA	20	27	2	✓
6V41-034TA	25	34	2	✓
6V41-040TA	30	40	3	✓
6V41-052TA	40	52	3	✓
6V41-065TA	50	65	3	✓
6V41-077TA	60	77	4	✓
6V41-096NA	75	96	5	
6V41-125NA	100	125	5	
6V41-156NA	125	156	6	
6V41-180NA	150	180	6	
6V41-248NA	200	248	6	

GV6000 Dimensions

Frame	Depth (in)	Height (in)	Width (in)	Weight (lb)
0	7.87	13.23	4.33	11.5
1	7.87	13.23	5.31	15.5
2	7.87	13.48	8.74	27.6
3	7.87	20.37	8.74	40.9
4	7.94	29.87	8.66	54.0
5	10.84	25.37	12.16	82.0
6	10.85	38.43	15.9	157.5 to 165.5*

\*Depends on horsepower rating.



www.rockwellautomation.com www.dodge-pt.com www.reliance.com www.ptplace.com www.ptplace.ca www.ptplace.com.mx

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