CHAPTER ONE

Introduction

IN THIS CHAPTER

- Gemini Product Overview
- Compatible Compumotor Products

Gemini Products—Overview

The Gemini Series is a *family* of high performance digital drives. The family contains drives for both stepper and servo motors. With many models and options available, the user can choose the precise level of power and control for the application's motion requirements.

Gemini Product Descriptions

Gemini GT and GV

Gemini GT Stepper Drives and GV Servo Drives are the basic Gemini products. They are controlled with standard command interfaces of step/direction or ±10V, and can be used with standard indexers or controllers.

The drives are configured over RS-232/485 with either Motion Planner on a personal computer (PC), or Pocket Motion Planner on a palm PC. Many advanced features are standard in the drives, such as sensorless stall detect and ABS damping in the GT, and digital tuning and notch filters in the GV.

Gemini GT6 and GV6

The Gemini GT6 and GV6 are controller/drives available with several different programming modes. These drives have basic motion control and sequencing capabilities, and can be used in distributed control applications. By using optional plug-in cards, they can be equipped with interfaces for SERCOS, Profibus, Interbus-S, and other industry standard fieldbus networks.

The GT6 and GV6 are configured and programmed over RS-232/485, either with Motion Planner on a PC, or Pocket Motion Planner on a palm PC.

GT6 or GV6 drives are also available with an optional SERCOS interface. These drives can be configured via the acyclic channels of the motion bus, or via the RS-232/485 port using the tools mentioned above.

Gemini GT6K and GV6K

The Gemini GT6K and GV6K are single axis packaged controller/drives that offer full 6K Series controller functionality and programmability for complex distributed control applications. Key features include: complex program capabilities such as math, variables, and logic control; flexible and expandable serial I/O modules; and Ethernet compatibility for PC bus access. The user programs these devices over an RS-232/485 communication port; a second port is available for use with a full-time operator interface.

Gemini Product Names

The following table lists the meanings of letters and numbers in Gemini product names. Notice that “T” is associated with step motor products (“sTep”), and “V” is associated with servo motor products (“serVo”).

Control Level:

Step Motor Drives and Drive/Indexers		Servo Motor Drives and Controller/Drives	
GT	Step Motor Drive	GV	Servo Motor Drive
GT6	6000-based Step Motor Indexer	GV6	6000-based Servo Controller
GT6K	6K-based Step Motor Indexer	GV6K	6K-based Servo Controller

Power Level:

Step Motor Power Levels		Servo Motor Drives and Controller/Drives	
L5	120VAC, 5A at 170VDC	L3	120VAC, 3A at 170VDC
L8	120VAC, 8A at 170VDC	U3	120/240VAC 1 Ø, 3A at 170/340VDC
U5	120/240VAC 1 Ø, 5A at 74VDC	U6	120/240VAC 1 Ø, 6A at 170/340VDC
U8	120/240VAC 1 Ø, 8A at 74VDC	U12	120/240VAC 1 Ø, 12A at 170/340VDC

Amperage values represent continuous current, peak of the sine wave.

“L” = “Low” voltage input (120VAC); “U” = “Universal” voltage input (120/240VAC)

Options:

Data Bus (-db) Option (for GT6 and GV6 only):

IS Interbus

PB Profibus

SC SERCOS

Feedback (-fb) Option (for Servos only):

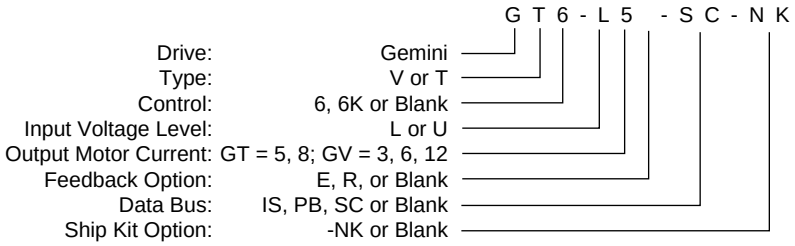
E Encoder/Hall

R Resolver

Ship Kit Options:

NK No Kit

Format:



Format Example

Compatible Compumotor Products

GT-nn Stepper	6K or other Compumotor indexer	
GV-nnn Servo	±10V mode:	6K or other Compumotor controller
	Step/Direction mode:	6K or other Compumotor indexer
Software	Motion Planner	
	Pocket Motion Planner (version 1.2 or higher)	
	Note: Gemini drives are not compatible with ASCII communication programs such as Motion Architect or X Language software.	
Cables	See list in *Appendix A Specifications*.	
Motors	See information in the separate *Gemini Motor Reference Manual*.	

User Guides

The following items ship with the drive:

Gemini Quick Start Guide
Gemini Hardware Installation Guide
Gemini Programmer's Reference
Gemini Motor Reference Manual
Motion Planner CD-ROM

You can also order the drive only, with none of the above items. Specify the -*NK* option (“No Kit”).

Motor Information

Information about Compumotor motors is in the separate *Gemini Motor Reference Manual*.