



# Gem6K Drive/Controllers



**A single, compact, standalone product that combines the performance and reliability of the Gemini digital servo and stepper drive with the power and versatility of the 6K Controller.**

## Gem6K Drive Features

### Functionality

- Digital torque, velocity, position loops
- Simplified motor configuration
- Short circuit, brownout, over-voltage and over-temperature protection
- Error logging
- 24V Keep Alive circuitry

### Servo Drive Features

- Encoder or resolver feedback capability
- Sinusoidal commutation
- Digital notch filters
- Compatible with linear servo motors

### Stepper Drive Features

- Encoderless Stall Detection
- Active Damping, ABS Damping and Electronic Viscosity circuitry
- Compatible with linear stepper motors
- Software selectable step resolution

## Gem6K Control Features

### Connectivity

- Ethernet and serial communications
- Master encoder port
- Full ASCII compatibility

### Software & Features

- Programming via Compumotor's popular wizards-based Motion Planner™ software package
- Embedded Ethernet Client
- Electronic cam and compiled move profiles
- Position-based following
- PLC Scan Mode
- Multitasking
- Variables and high-level math
- Parameter scaling
- Program monitoring and diagnostics
- Compatible with platforms such as Visual C++, VisualBasic, etc.



### I/O Capability

- Onboard I/O: 8 digital inputs (3 limit, 5 programmable), 6 digital outputs, 1 analog input, 2 analog monitor outputs, 1 relay output
- Expandable I/O: 256 digital points or combination of digital and analog points (maximum analog I/O of 64 in and 64 out)

## Members of the Gemini Family

- Gemini GV - Digital Servo Drive*
- Gemini GV6 - Digital Servo Drive with Basic Control*
- Gemini GV6K - Digital Servo Drive with Full Control*
- Gemini GT - Digital Stepper Drive*
- Gemini GT6 - Digital Stepper Drive with Basic Control*
- Gemini GT6K - Digital Stepper Drive with Full Control*

## Parker Hannifin Corp.

Compumotor Division  
 5500 Business Park Drive  
 Rohnert Park, CA 94928  
 800.358.9070 compumotor.com



# Gem6K Ordering Nomenclature

**G**  **6K-**     (Example: GV6K-U6E)

**V - Servo**  
**T - Stepper**

**E - Encoder**  
**R - Resolver**

Servo  
Power Levels

**L3**  
**U3**  
**U6**  
**U12**  
**H20**  
**H40**

Stepper  
Power Levels

**L5**  
**L8**

Input Voltage (VAC)	Bus Voltage (VDC)	Continuous Current (Apc)	Maximum Current (Apc)
120	170	3	7.5
120/240 1 ø	170/340	3	7.5
120/240 1 ø	170/340	6	15
120/240 1 ø	170/340	12	30
208/240 1 or 3 ø	295/340	20	50
208/240 3 ø	295/340	40	100

Input Voltage (VAC)	Bus Voltage (VDC)	Continuous Current (Apc)
120	170	5
120	170	8

## Available Motors

### Servo

#### NEMA-Size Motors

- SM Series (16, 23)
- BE Series (16, 23, 34)
- NeoMetric Series (34)
- J Series (34)

#### Metric-Size Motors

- NeoMetric (70mm, 92mm)
- J Series (70mm, 92mm)
- M Series (105-205mm)

#### Linear Motors

- SL Series

### Stepper

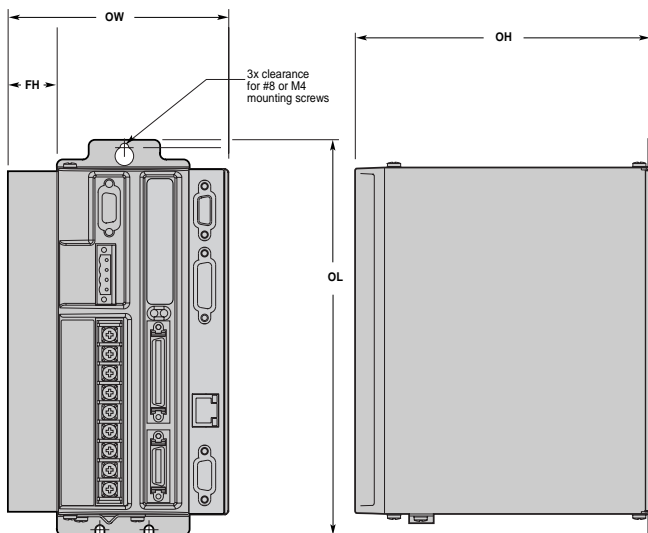
#### NEMA-Size Motors

- O Series (16, 23)
- E Series (23, 34)
- R Series (34, 42)
- T Series (34, 42)

## Accessories

- EVM32-II Expandable I/O Module
- GemVM-50 Breakout Module
- GPDM Power Dissipation Module
- A wide assortment of cabling and connector options

## Dimensions



PRODUCT	OW Overall Width inches (mm)	FH Fin Height inches (mm)	OL Overall Length inches (mm)	OH Overall Height inches (mm)
GV6K-L3n	3.88 (98.6)	0.38 (9.5)	8.0 (203.2)	6.0 (153.0)
GV6K-U3n	3.88 (98.6)	0.38 (9.5)	8.0 (203.2)	6.0 (153.0)
GV6K-U6n	4.50 (114.3)	1.00 (25.4)	8.0 (203.2)	6.0 (153.0)
GV6K-U12n	4.50 (114.3)	1.00 (25.4)	8.0 (203.2)	6.0 (153.0)
GT6K-L5	3.88 (98.6)	0.38 (9.5)	8.0 (203.2)	6.0 (153.0)
GT6K-L8	4.50 (114.3)	1.00 (25.4)	8.0 (203.2)	6.0 (153.0)
GV6K-H20n	5.75 (146.1)	2.25 (57.2)	9.9 (251.5)	6.0 (153.0)
GV6K-H40n	5.69 (144.6)	N/A	12.88 (327)	8.49 (215.7)