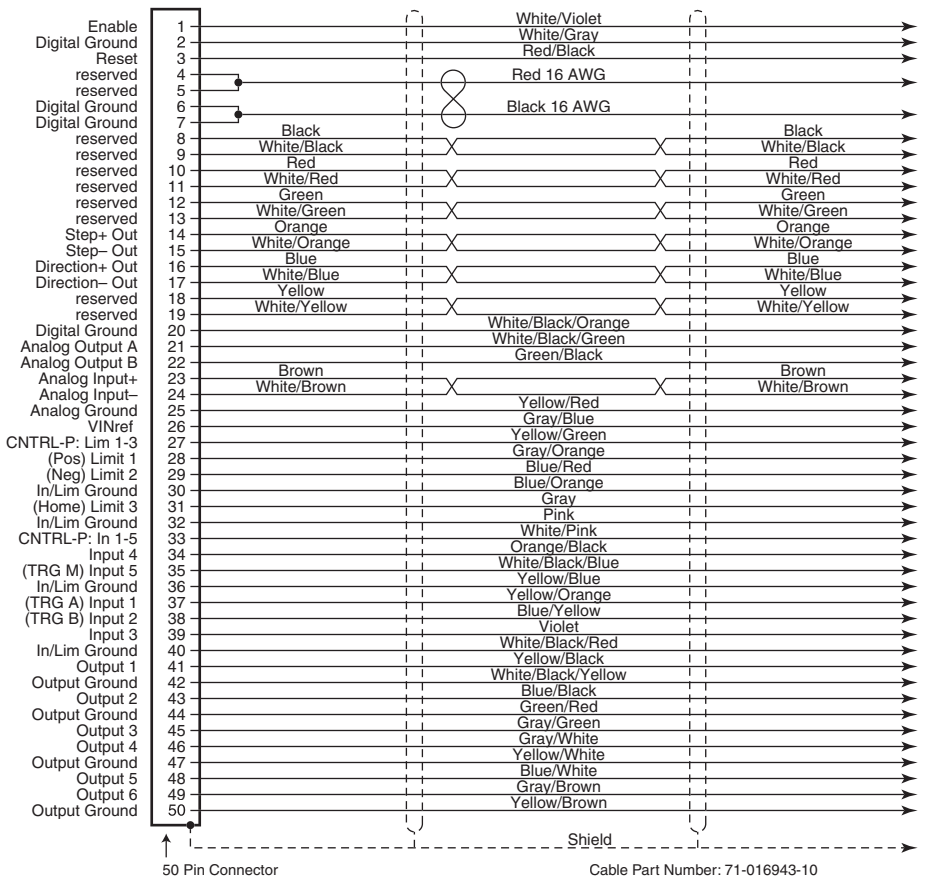
Gemini 50-Pin Connector to Flying Leads Cable



Protective Circuits

Short Circuit Protection
Inrush Current Protection
Drive Overtemperature Protection
Undervoltage Protection
Regeneration Protection

Environmental Specifications

Operating Temperature:	Still Air: 45°C (113°F) Moving Air: 50°C (122°F)
Storage Temperature:	-40°C – 85°C (-40°F – 185°F)
Humidity:	0 – 95%, non-condensing
Shock:	15g, 11 msec half sine
Vibration:	10 – 2000 Hz at 2g

Troubleshooting

Commonly used status commands (binary status bits are numbered 1 to n, from left to right):

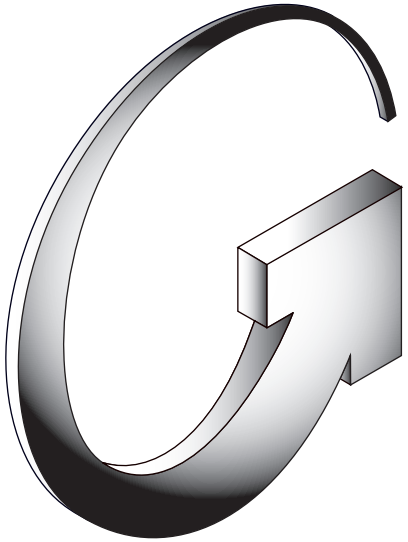
TERRLG	Error log reports the last 10 error conditions (cleared with CERRLG).
TASF	General report, including fault conditions.
TASXF	Additional report of conditions not covered with TAS.
TCS	If TASX bit #7 or bit #28 is set, you can identify the cause with TCS.
TINOF	Bit 6 shows status of Enable input; 1 = OK for motion.
TIN	Status of digital inputs.
TLIM	Status of home and end-of-travel limits.
TIO	Status of expansion I/O.
TOUT	Status of digital outputs.
TSSF	Report of system status bits.
TSTAT	Report of system statistics.

You must configure all motor parameters. Be sure to follow the drive configuration procedure (see *Hardware Installation Guide*).

The drive can not be enabled (DRIVE1) unless the Enable input is grounded and the Reset input is not grounded.

Use one of these methods to reset the drive/controller:
- RESET command (resets drive & internal controller).
- DRESET command (resets drive, but not controller).
- Momentarily close the Reset input.
- Cycle power to the drive.

Gemini Quick Reference Guide



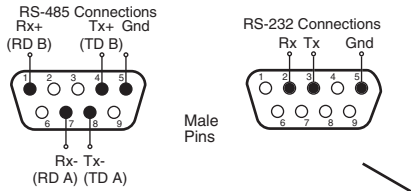
Gemini GT6K Series Digital Stepper Controller/Drives

Compumotor Division
Parker Hannifin Corporation
p/n 88-019931-01 A (effective October 15, 2001)

Quick Reference Guide

RS-232/485 Connector – COM1 – Port 1

To configure drive parameters, connect a PC to this port.
Use Motion Planner for drive configuration.
Enabling Ethernet will disable the COM1 port.



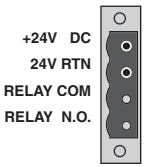
+24VDC/Relay Connector

Required +24VDC input.
19.2 – 28.8 VDC.
500 mA minimum.

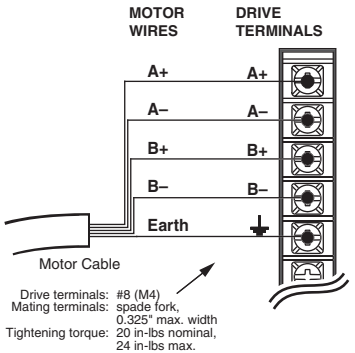
When drive is enabled, it holds relay closed.

Relay rating: 5A at 24VDC or 120VAC.

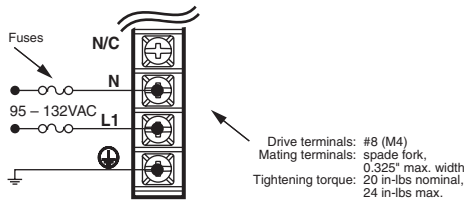
If drive is faulted or disabled, relay will open. (Typical use: control of motor brake.)



Motor Output Connections

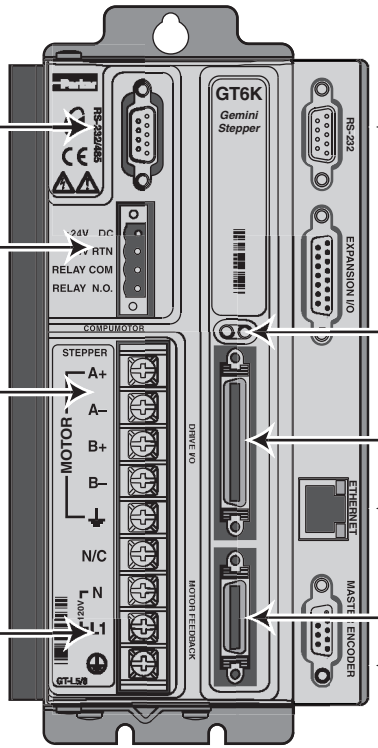


AC Input Connections



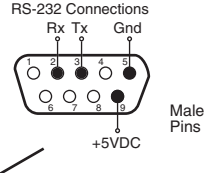
GT6K-L5/L8 at 120VAC

GT6K Stepper

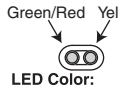


RS-232 Connector – COM2 – Port 2

Connect an RP240, or use this port for RS-232.
Download Operating System through this port only.
Ethernet and COM2 can both be active at the same time.



LEDs



LED Color:

Left	Right	Indicated State:
Red	Grn	+24VDC only
Red	Yel	AC only
Grn	Grn (flash)	Motion in progress
Grn	Yel/Grn (flash)	Autorun mode
Off	Yel	Initializing
Grn	Off	Drive ready
Red	Off	Drive not enabled or Drive faulted

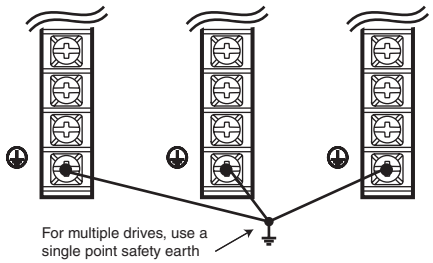
Ethernet Connector

RJ-45 connector for 10Base-T (10Mbps twisted pair) TCP/IP protocol.
Default address is 192.168.10.30.
Green LED on = Connection OK;
Yellow LED on (flash) = Transmitting.

Master Encoder Connector

Connect an encoder for Following only; not for servo feedback or stepper stall detect.

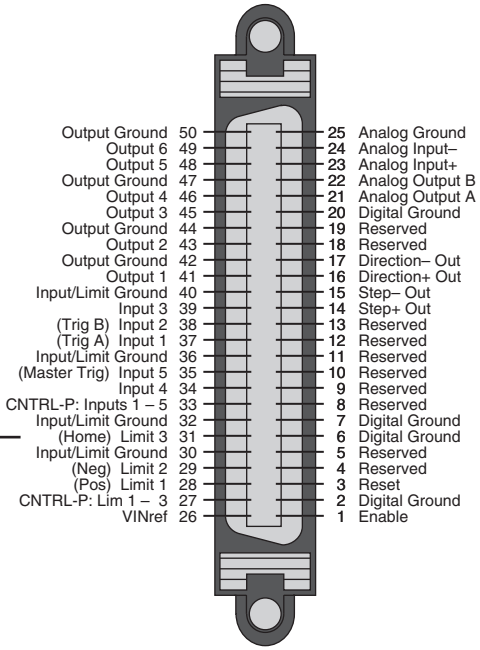
Multiple Drive Connections



Expansion I/O Connector

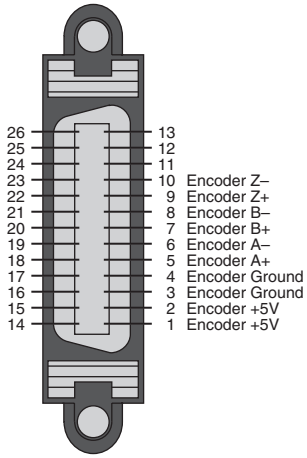
Connect as many as eight EVM32-II I/O modules in series, for up to 256 additional I/O points.

50 Pin DRIVE I/O Connector



Output Ground	50	25	Analog Ground
Output 6	49	24	Analog Input–
Output 5	48	23	Analog Input+
Output Ground	47	22	Analog Output B
Output 4	46	21	Analog Output A
Output 3	45	20	Digital Ground
Output Ground	44	19	Reserved
Output 2	43	18	Reserved
Output Ground	42	17	Direction– Out
Output 1	41	16	Direction+ Out
Input/Limit Ground	40	15	Step– Out
Input 3	39	14	Step+ Out
(Trig B) Input 2	38	13	Reserved
(Trig A) Input 1	37	12	Reserved
Input/Limit Ground	36	11	Reserved
(Master Trig) Input 5	35	10	Reserved
Input 4	34	9	Reserved
CNTRL-P: Inputs 1 – 5	33	8	Reserved
Input/Limit Ground	32	7	Digital Ground
(Home) Limit 3	31	6	Digital Ground
Input/Limit Ground	30	5	Reserved
(Neg) Limit 2	29	4	Reserved
(Pos) Limit 1	28	3	Reset
CNTRL-P: Lim 1 – 3	27	2	Digital Ground
VINref	26	1	Enable

26 Pin MOTOR FEEDBACK Connector



26	13	
25	12	
24	11	
23	10	Encoder Z–
22	9	Encoder Z+
21	8	Encoder B–
20	7	Encoder B+
19	6	Encoder A–
18	5	Encoder A+
17	4	Encoder Ground
16	3	Encoder Ground
15	2	Encoder +5V
14	1	Encoder +5V

Pins 11 - 26 are not used by the GT6K