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TROUBLESHOOTING

- *LEDs:*
  - *POWER ..... 120VAC power is applied*
  - *STEP ..... Flashes green with each step pulse.*
  - *OVER TEMP ..... Max. drive temp limit (131°F, 55°C) exceeded.*
  - *MOTOR FAULT ..... Short circuit in motor windings, motor cable is disconnected or shorted, or INTERLOCK jumper is disconnected or extended.*
- *Status information (see command descriptions in 6000 Series Software Reference):*
  - *General status information ..... TASF, TSSF, TSTAT*
  - *Limits (end-of-travel, home) ..... TASF, TLIM*
  - *P-CUT input ..... TINO (bit #6)*
  - *Programmable inputs and TRG-A/B ..... TIN, INFNC*
  - *Programmable outputs and OUT-A ..... TOUT, OUTFNC*
  - *Motor fault ..... TASXF (bit #1)*
  - *Low voltage fault ..... TASXF (bit #2)*
  - *Over temperature fault ..... TASXF (bit #3)*
- *V_I/O must be connected to 5-24VDC for the P-CUT, HOM, NEG, POS, & TRG-A/B inputs to work.*
- *NEG & POS inputs must be grounded to GND terminal to allow motion (or disable with LH0 command).*
- *P-CUT input must be grounded to GND terminal to allow motion.*
- *To help prevent electrical noise, shield all connections at one end only.*
- *Error messages while programming or executing programs – see 6000 Series Programmer's Guide.*

CE

Product Type: OEMZL6104 Step Motor Drive/Controller

The above product is in compliance with the requirements of directives
- **72/23/EEC Low Voltage Directive**
- **93/68/EEC CE Marking Directive**

Additional Information:

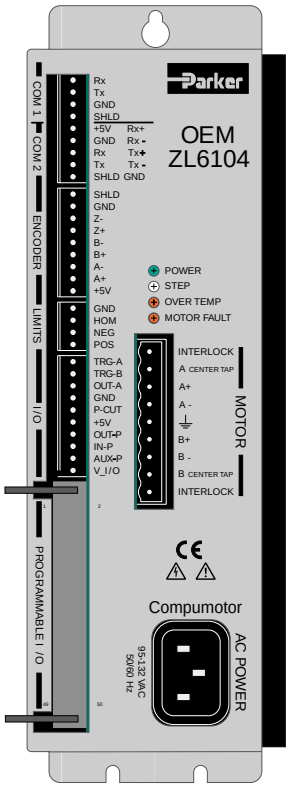
For complete user documentation, please refer to the Compumotor web site (www.compumotor.com) where User Guides can be found on-line or hard copies requested.

For questions, please contact:
Technical Assistance, Applications Engineering Department (e-mail tech_help@compumotor.com or call 800-358-9070 North America, 707-584-7558 International).

The following table describes which User Guides are applicable to the OEMZL6104:

Part Number	Title
88-014027-01	ZETA4 User Guide Note: All information contained within this user guide is applicable with the exception of the Active Damping feature. All references to this feature should be ignored.
88-015920-01	ZETA4 Drive and ZETA6104 Indexer/Driver User Guide Addendum LVD Installation Instructions Note: All information contained within this document is applicable to the OEMZL6104.
88-015436-01	EMC Installation Guide Note: Refer to the Step Motor Drives section of this document for applicable information

Quick Reference Guide



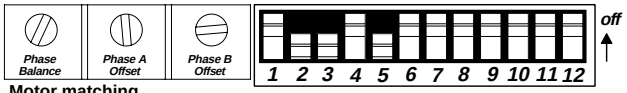
OEMZL6104 Drive/Controller

Compumotor Division
Parker Hannifin Corporation
p/n 88-018140-01 A
September 1, 1999

Parker

DIP SWITCH SETTINGS

Access through the top of the chassis (loosen screws, move cover plate)



Motor matching

Motor Current (Amps)	1	2	3	4	5
0.14	off	off	off	off	off
0.26	off	off	off	off	on
0.39	off	off	off	on	off
0.51	off	off	off	on	on
0.64	off	off	on	off	off
0.76	off	off	on	off	on
0.89	off	off	on	on	off
1.01	off	off	on	on	on
1.14	off	on	off	off	off
ES21BS 1.26	off	on	off	off	on
1.38	off	on	off	on	off
ES22BS 1.51	off	on	off	on	on
1.63	off	on	on	off	off
ES23BS 1.76	off	on	on	off	on
1.88	off	on	on	on	off
2.01	off	on	on	on	on
2.14	on	off	off	off	off
ES31BS 2.26	on	off	off	off	on
ES21BP 2.38	on	off	off	on	off
2.51	on	off	off	on	on
2.63	on	off	on	off	off
2.76	on	off	on	off	on
ES32BS 2.88	on	off	on	on	off
3.01	on	off	on	on	on
ES21BS 3.13	on	on	off	off	off
3.26	on	on	off	off	on
3.38	on	on	off	on	off
ES23BP 3.50	on	on	off	on	on
3.63	on	on	on	off	off
3.75	on	on	on	off	on
3.88	on	on	on	on	off
ES31BP, ES32BP, ES33BP 4.00	on	on	on	on	on

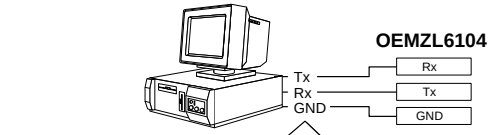
For additional motor information refer to Compumotor's website at www.compumotor.com

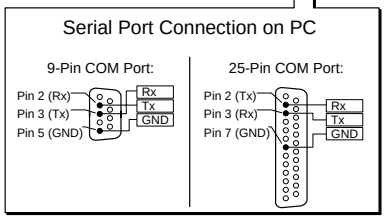
	6	7
AutoBaud	enabled	on	off
default →	disabled	off	off

Address	default →	8	9	10	11	12
	0	off	off	off	off	off
	1	off	off	off	off	on
	2	off	off	off	on	off
	3	off	off	off	on	on
	4	off	off	on	off	off
	5	off	off	on	off	on
	(Binary Weighted)					
	31	on	on	on	on	on

TIP: *The* ADDR *command allows you to automatically establish addresses for multiple units in a daisy-chain or multi-drop (*ADDR *address overrides the DIP switch setting).*

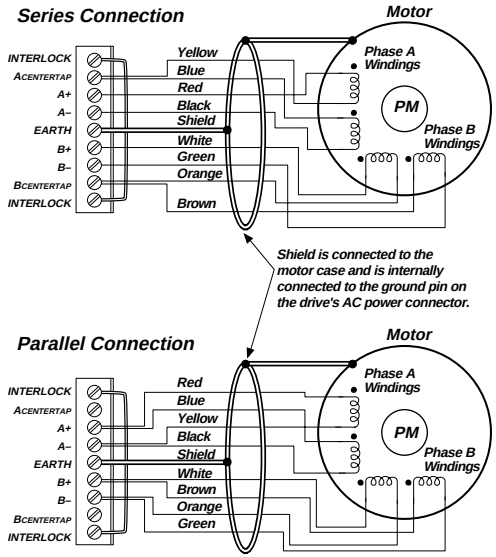
RS-232C CONNECTION



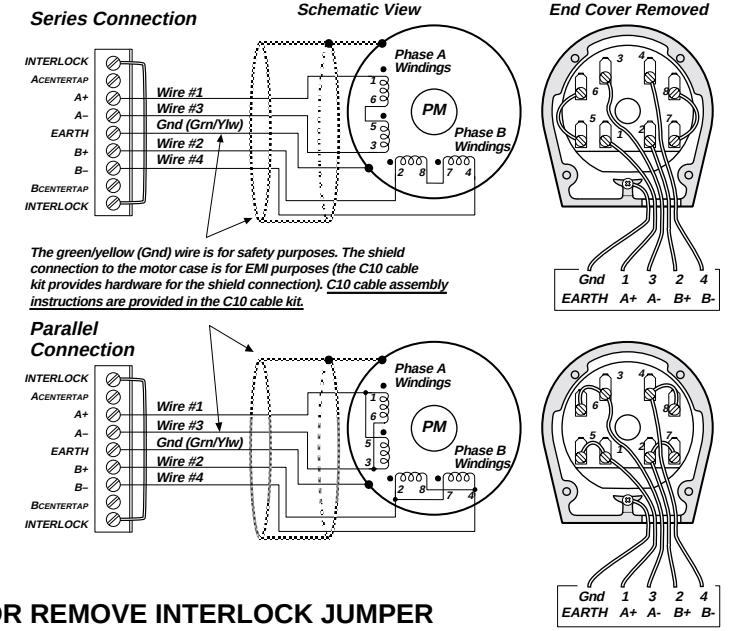


MOTOR CONNECTIONS

ES AND OS MOTORS



RS AND TS MOTORS



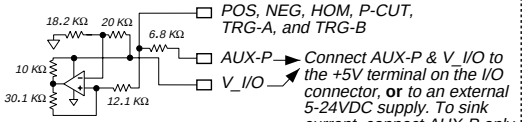
DO NOT LENGTHEN OR REMOVE INTERLOCK JUMPER

I/O SPECIFICATIONS & INTERNAL SCHEMATICS

AC Input ..... *95-132VAC, 50/60Hz, single phase*

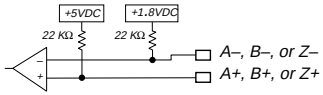
Serial Com .... *RS-232C 3-wire; RS-485 4-wire (change jumpers JU1-JU6 to position 1, set JU7 to position 3 if you need 2-wire, select termination resistors). Up to 99 units in a daisy chain or multi-drop. 9600 baud 8 data bits; 1 stop bit; no parity.*

Limits, P-CUT, & Trigger Inputs



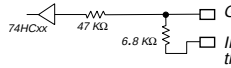
Specs: *Low ≤ 1/3 of V_I/O voltage, High ≥ 2/3 of V_I/O voltage; Voltage range = 0-24VDC.*

Encoder Inputs



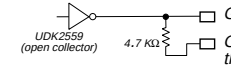
Specs: *Differential comparator. Use 2-phase quadrature encoders; max. frequency = 1.6 MHz; min. time between transitions = 625 ns. TTL levels (Low ≤ 0.4V, High ≥ 2.4V); range = 0-5VDC.*

Programmable Inputs



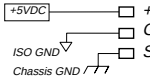
Specs: *HCMOS-compatible*; voltage range = 0-24VDC.*

Programmable Outputs



Specs: *Open collector output. Outputs will sink up to 300mA, or source up to 5mA at 5-24VDC.*

Terminals found on multiple connectors



** HCMOS-compatible levels: Low ≤ 1.00V, High ≥ 3.25V.*
*** Disconnect from +5V terminal BEFORE connecting an external 5-24VDC supply.*

PROGRAMMABLE I/O

Pin	Function
1	Input #16 (MSB of inputs)
3	Input #15
5	Input #14
7	Input #13
9	Input #12
11	Input #11
13	Input #10
15	Input #9
17	Output #8 (MSB of outputs)
19	Output #7
21	Output #6
23	Output #5
25	Input #8
27	Input #7
29	Input #6
31	Input #5
33	Output #4
35	Output #3
37	Output #2
39	Output #1 (LSB of outputs)
41	Input #4
43	Input #3
45	Input #2
47	Input #1 (LSB of inputs)
49	+5VDC

Even numbered pins connected to common logic ground.

STATUS LEDS

POWER	Green when power is on
STEP	Green when drive receives step; Green in auto test
OVER TEMP	Red indicates over temp fault
MOTOR FAULT	Red when drive detects short circuit in motor or motor cable; Red if interlock is open

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