Quick Reference Guide

CE

Product Type: OEMZL4 Step Motor Drive

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 OEMZL4:

| 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
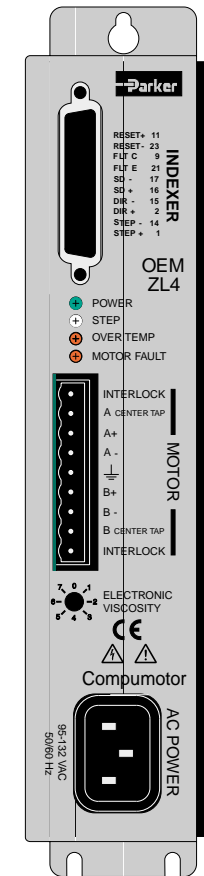
OEMZL4
Stepper Drive

Compumotor Division
Parker Hannifin Corporation
p/n 88-018139-01 B
September 1, 1999

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

off ↑ **1** SW 1 **12**   **1** SW 2 **6** ↑ off
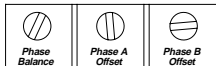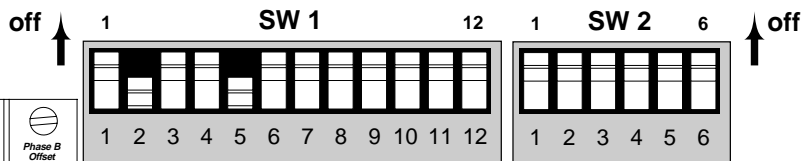
Phase Balance | Phase A Offset | Phase B Offset
Motor matching

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
ES22BP 3.13	on	on	off	off	off
3.26	on	on	off	off	on
3.38	on	on	off	on	off
ES33BS 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

RESOLUTION [2]
(steps per revolution)

	6	7	8	9
50,800 steps	off	off	off	on
50,000 steps	off	off	on	off
36,000 steps	off	off	on	on
25,600 steps	off	on	off	off
25,400 steps	off	off	on	on
25,000 steps *(Default Setting)*	off	off	off	off
21,600 steps	off	on	on	off
20,000 steps	off	on	on	on
18,000 steps	on	off	off	off
12,800 steps	on	off	off	on
10,000 steps	on	off	on	off
5,000 steps	on	off	on	on
2,000 steps	on	on	off	off
1,000 steps	on	on	off	on
400 steps	on	on	on	off
200 steps	on	on	on	on

WAVEFORM [2]

	10	11
-4% 3rd harmonic *(Default Setting)*	off	off
-10% 3rd harmonic	off	on
-6% 3rd harmonic	on	off
Pure sine	on	on

AUTOMATIC TEST [2]

	6	7	8	9	10	11
	on	on	on	on	on	on

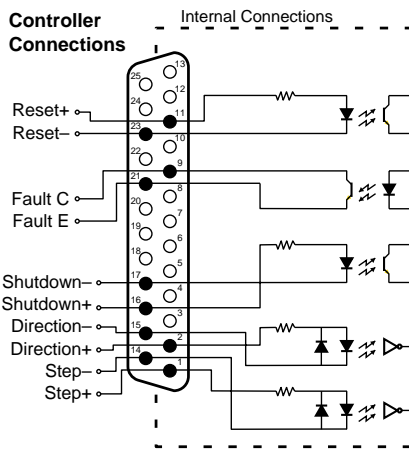## S&D/CW&CCW [2]

	12
Step & Direction Indexer	off
Clockwise & Counterclockwise Indexer	on

2. The drive reads these switches only upon power up. It reads all other switches continuously.

SW 2

5 6	NO FUNCTION
	NO FUNCTION
3 4	NO FUNCTION
	NO FUNCTION

ANTI-RESONANCE DISABLE

2	
off	Anti-res. Enabled
on	Anti-res. Disabled

AUTOMATIC STANDBY

1	
off	Full Current
on	50% Current Standby
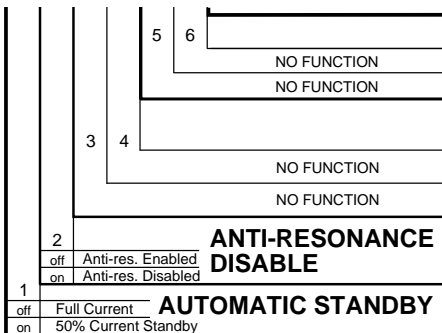
INPUTS & OUTPUTS

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

Controller Connections — Internal Connections

Reset+
Reset−
Fault C
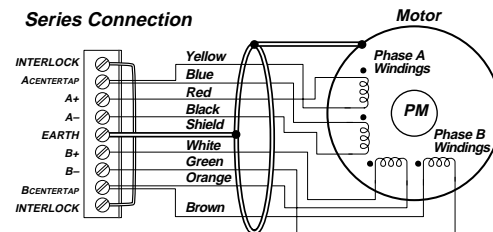Fault E
Shutdown−
Shutdown+
Direction−
Direction+
Step−
Step+

STATUS LEDS

POWER — Green when power is on
STEP — Green when drive receives step / Flashes Red/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
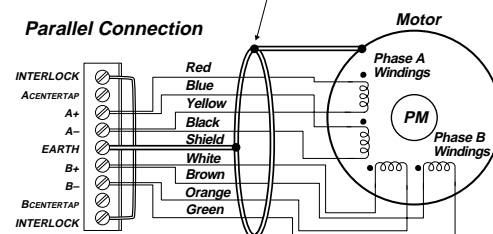
MOTOR CONNECTIONS

ES AND OS MOTORS

Series Connection

Terminal	Wire	
INTERLOCK		
A CENTERTAP	Yellow	
A+	Blue	Phase A Windings
A−	Red	
EARTH	Black / Shield	
B+	White	
B−	Green	Phase B Windings
B CENTERTAP	Orange	
INTERLOCK	Brown	

PM

Shield is connected to the motor case and is internally connected to the ground pin on the drive's AC power connector.

Parallel Connection

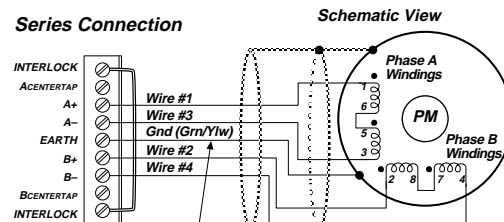| Terminal	Wire	
INTERLOCK		
A CENTERTAP	Red	
A+	Blue	Phase A Windings
A−	Yellow	
EARTH	Black / Shield	
B+	White	
B−	Brown	
B CENTERTAP	Orange	Phase B Windings
INTERLOCK	Green	

PM

DO NOT LENGTHEN OR REMOVE INTERLOCK JUMPER

RS AND TS MOTORS

Series Connection — Schematic View — End Cover Removed

Terminal	Wire
INTERLOCK	
A CENTERTAP	
A+	Wire #1
A−	Wire #3
EARTH	Gnd (Grn/Ylw)
B+	Wire #2
B−	Wire #4
B CENTERTAP	
INTERLOCK	

Phase A Windings / Phase B Windings / PM

Gnd EARTH | 1 A+ | 3 A− | 2 B+ | 4 B−
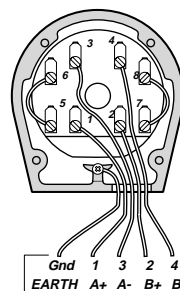
The green/yellow (Gnd) wire is for safety purposes. The shield connection to the motor case is for EMI purposes (the C10 cable kit provides hardware for the shield connection). C10 cable assembly instructions are provided in the C10 cable kit.

Parallel Connection

Terminal	Wire
INTERLOCK	
A CENTERTAP	
A+	Wire #1
A−	Wire #3
EARTH	Gnd (Grn/Ylw)
B+	Wire #2
B−	Wire #4
B CENTERTAP	
INTERLOCK	

Phase A Windings / Phase B Windings / PM

Gnd EARTH | 1 A+ | 3 A− | 2 B+ | 4 B−

DO NOT LENGTHEN OR REMOVE INTERLOCK JUMPER