

Divelbiss Corporation		CONFIDENTIAL	Revision:	A
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Allen Aircraft Products

Elevate Test Fixture

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Document Revision History		
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1. OVERVIEW

This document defines the board level hardware requirements as well as the mechanical and environmental requirements for PCBA for the Elevate Test Fixture.

2. SCOPE

This document defines the design requirements for the Elevate Test Fixture PCBA. This specification is subject to change.

3. CONTROLLER: PLC on a CHIP

- a. Part # PLChip
- b. Watchdog LED

4. PROGRAMMING LANGUAGE: EZ LADDER (Ladder Diagram and Function Block)

5. INPUTS

a. Sensor Inputs

- i. Qty 4
- ii. Current Excitation
 1. 14mA reference
 2. Current sourcing
- iii. Connectors
 1. Pluggable
 2. 5mm screw terminals
 3. Pinout

Pinout	Function
1	Sensor 1 +
2	Sensor 1 -
3	Sensor 2 +
4	Sensor 2 -
5	Sensor 3 +
6	Sensor 3 -
7	Sensor 4 +
8	Sensor 4 -

b. PWM Driver Control Signals

- i. Voltage
 1. 5V
- ii. Pull up resistor
 1. 10K
- iii. Functions
 1. Enable
 2. Direction
 3. Speed0
 4. Speed1
 5. Speed2
- iv. Connectors
 1. Pluggable

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2. 5mm Screw terminals
3. Pinout

Pinout	Function
1	COM
2	ENABLE
3	DIR
4	SPD0
5	SPD1
6	SPD2

6. OUTPUTS

a. Analog Outputs

- i. Qty 4
- ii. Signal from sensor input
- iii. Voltage Divider
 1. Ratio: TBD
- iv. Connector
 1. Pluggable
 2. 5mm Screw terminals
 3. Pinout

Pinout	Function
1	AI0+
2	AI0-
3	AI1+
4	AI1-
5	AI2+
6	AI2-
7	AI3+
8	AI3-

b. Pump Output

- i. Qty: 1
- ii. H-bridge output
- iii. 4A
- iv. 12-32 VDC
- v. Connector
 1. Pluggable
 2. 5mm Screw terminals
 3. Pinout

Pinout	Function
1	PUMP+
2	PUMP-

8. POWER SUPPLY

- a. 12-32 VDC input
- b. PWR IN - Connector
 - i. Pluggable

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- ii. 5mm Screw terminals
- iii. Pinout

Pinout	Function
1	+V
2	COM

- c. PWR OUT - Connector
 - i. Pluggable
 - ii. 5mm Screw terminals
 - iii. Pinout

Pinout	Function
1	+V
2	COM

8. ENVIRONMENTAL REQUIREMENTS

- a. TEMPERATURE
 - i. Operating temperature: 10 - 40 °C
 - ii. Storage temperature: 0 - 60 °C
- b. HUMIDITY
 - i. 0-95 %

9. MECHANICAL REQUIREMENTS

- a. Construction
 - i. Conformal Coating
- b. Mounting
 - i. DIN RAIL Track
- c. Size
 - i. TBD

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