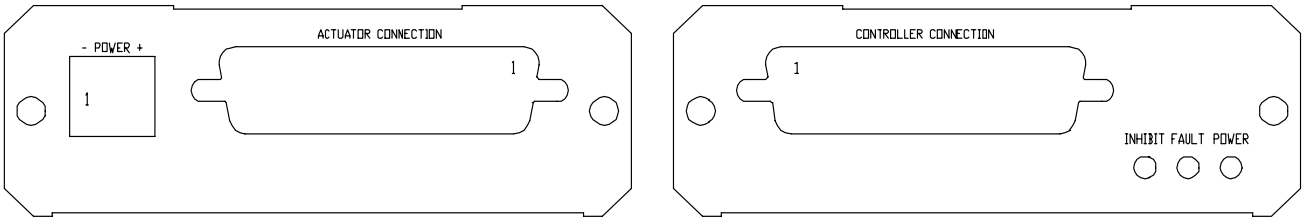
LAA-5 Pinout,



J1- Power Interface : 2Pin 5.08mm Centers Phoenix
Mating Connector: OnShore# EDZ95002
Digi-Key# ED1717

1. Main power return
2. Main V+ power input

J2 - Actuator Connector: 25-Pin Female D-Sub
Mating Connector: NorComp# 171-025-102-001
Digi-Key# 225M

11. /Fault
12. /Inhibit
13. M2 (Motor output 2)
23. /Fault return
24. /Inhibit return
25. M1 (Motor output 1)

J3 - Controller Connector: 25-Pin Male D-Sub
Mating Connector: NorComp# 171-025-202-001
Digi-Key# 225F

11. /Fault
12. /Inhibit
13. AVIN (analog voltage in +/- 10V)
23. /Fault return
24. /Inhibit return
25. AVGND (Analog voltage ground)

Pins J2.11 and J3.11 are internally connected.

Pins J2.12 and J3.12 are internally connected.

Pins J2.23 and J3.23 are internally connected.

Pins J2.24, J3.24 and J3.25 are internally connected to the main power ground.

All undefined pins are straight through connector to connector, pin 'n' to pin 'n' circuits.

What are the PIN-OUTS for the LAA-5?

LAA-5 AMPLIFIER - ACTUATOR CONNECTOR, FEMALE (OUTPUT TO ACTUATOR)

Pin Number	Description	
1	**+5V**	5 VOLTS TO ACTUATOR FROM CONTROLLER
2	**5 VOLT RETURN**	0 VOLTS TO ACTUATOR FROM CONTROLLER
3	**PHASE A+**	PASS THROUGH FROM AMPLIFIER
4	**PHASE B+**	PASS THROUGH FROM AMPLIFIER
5	**INDEX+**	PASS THROUGH FROM AMPLIFIER
6	**OVERTEMPERATURE**	PASS TROUGH FROM ACTUATOR
7	**OVERTEMPERATURE RTN**	PASS TROUGH FROM ACTUATOR
8	**LIMIT+**	PASS TROUGH FROM ACTUATOR
9	**LIMIT- RETRACT**	PASS TROUGH FROM ACTUATOR
10	**LIMIT RETURN**	PASS TROUGH FROM ACTUATOR
11	**FAULT**	OUTPUT SHUTDOWN BIT OPEN COLLECTOR OPTO
12	**INHIBIT**	AMP ENABLE BIT, LED OF OPTO
13	**MOTOR+**	POWER TO ACTUATOR COIL
14	**PHASE A-**	PASS THROUGH FROM ACTUATOR
15	**PHASE B-**	PASS THROUGH FROM ACTUATOR
16	**INDEX-**	PASS THROUGH FROM ACTUATOR
17	**NOT USED**	
18	**NOT USED**	
19	**NOT USED**	
20	**NOT USED**	
21	**NOT USED**	
22	**ROTARY COARSE HOME**	
23	**FAULT RETURN**	
24	**INHIBIT RETURN**	
25	**MOTOR-**	POWER RETURN FROM COIL

LAA-5 AMPLIFIER - ACTUATOR CONNECTOR, MALE (INPUT FROM CONTROLLER)

Pin Number	Description	
1	**+5V**	5 VOLTS TO ACTUATOR FROM CONTROLLER
2	**5 VOLT RETURN**	5 VOLTS TO ACTUATOR FROM CONTROLLER
3	**PHASE A+**	PASS THROUGH FROM AMPLIFIER
4	**PHASE B+**	PASS THROUGH FROM AMPLIFIER
5	**INDEX+**	PASS THROUGH FROM AMPLIFIER
6	**OVERTEMPERATURE**	PASS TROUGH FROM ACTUATOR
7	**OVERTEMPERATURE RTN**	PASS TROUGH FROM ACTUATOR
8	**LIMIT+**	PASS TROUGH FROM ACTUATOR
9	**LIMIT- RETRACT**	PASS TROUGH FROM ACTUATOR
10	**LIMIT RETURN**	PASS TROUGH FROM ACTUATOR
11	**FAULT**	OUTPUT SHUTDOWN BIT OPEN COLLECTOR OPTO
12	**INHIBIT**	AMP ENABLE BIT, LED OF OF OPTO
13	**V. SERVO COMMAND**	+/- 10 VOLT FROM CONTROLLER
14	**PHASE A-**	PASS THROUGH FROM ACTUATOR
15	**PHASE B-**	PASS THROUGH FROM ACTUATOR
16	**INDEX-**	PASS THROUGH FROM ACTUATOR
17	**NOT USED**	
18	**NOT USED**	
19	**NOT USED**	
20	**NOT USED**	
21	**NOT USED**	
22	**ROTARY COARSE HOME**	
23	**FAULT RETURN**	
24	**INHIBIT RETURN**	
25	**V RETURN SERVO COMMAND**	+/- 10 VOLT FROM CONTROLLER

What type of software do I need?**What are the specifications for (LAA-5) Amplifier?**

Specifications for (LAA-5) Amplifier

Supply Voltage:	11-48 Volts DC
Output Current	3 Amps Continuous; 6 Amps Peak
Nominal Input Voltage Control Range:	±10 Volts
Maximum Input Voltage:	±15 Volts
Quiescent Current:	Approximately 30mA
Enable Input Current:	Approximately 2mA
Overtemp Output Current:	0.8V at 2mA
Input/Output Gain:	Approximately 0.6 Amps/Volt
Input/Output Linearity:	Approximately ±6% over the entire operating range for an output current of 1 to 3 amps
Operating Frequency Band:	>1KHz
Switching Frequency:	Approximately 55KHz
Operating Temperature Range:	0°C <= To <=50ºC
Storage Temperature Range:	-40°C <= Ts <=125ºC
Input Impedence:	>2K Ohms

-The SMAC LAA-5 amplifier is a PWM style amplifier.

-The inhibit pin input is 9 volts and must be grounded for amplifier to shut down.
-To allow the amplifier to operate the pin can just be left floating.

-The yellow fault light is on when the amplifier becomes overheated.

-The fault pin can switch up to 30 volts at 10ma. This switch is normally open. If you place a 5 volt, 10ma current limited signal to the Fault output (pin 11) it will go to about 0 volts when an overheat condition is reached.

-Fault (10), fault return (23), inhibit (11), servo command (13), servo return (25) are the only pins that are used for the amplifier. All other pins are flow through only. These are used to make cabling easier.

What size power supply should I get?

The following are minimum requirements. For exact requirements contact the factory.

24 VDC ACTUATORS	**LINEAR**	**2 amps**
	ROTARY (1624 SERIES)	**1 amp**
	ROTARY (2342 SERIES)	**2 amps**
48 VDC ACTUATORS	**LINEAR**	**2 amps**
	ROTARY (3557CR SERIES - 1Nm)	**3 amps**