Details

The VLA4 combines Varedan’s high performance class AB linear analog ultra-low drift output stage with our new digital control platform. Feedback options include standard incremental quadrature to modern absolute digital systems such as BiSS and EnDat.

The VLA4 can be configured and tuned through an easy to use PC based VaredanGUI™). The VLA4 supports:

- Single or three phase analog current commands
- Internally commutated current mode
- Velocity mode
- Position mode

Features

- PC Based VaredanGUI™ for setup and tuning
- Multiple Power Levels Share Common Interface
- Safe Operating Area Protection of Power Devices
- Fully Opto-Isolated I/O
- Linear Output Control for quiet operation
- Analog Current Torque, Digital Velocity & Position Control
- Up to 10kHz Bandwidth
- Single & 3-Phase; Linear, Rotary & Voice Coil Motors
- Ethernet and RS232 Communications Interfaces
- Dual Feedback Ports, Input & Output, Supporting Halls, Quad, Sine and Absolute Digital Encoders
- Zero Crossover Distortion
- 24V Keep Alive Option
- Expansion Interface Board (Optional)
- Factory Programmable Options
OUTPUT CONNECTIONS
3 Digital Outputs, Opto-Isolated (Sink or Source), 5-24V, Up to 100mA load current
1 Analog Output, 0-5V
Ethernet (UDP) - Transmit
RS232 – Transmit

INPUT CONNECTIONS
5 Digital Inputs, Opto-Isolated (Sink or Source), 5-24V
2 Analog inputs, Differential, ±10V
Ethernet (UDP) - Receive
RS232 – Receive

FEEDBACK
Primary Feedback Port:
Incremental Quadrature Input (Differential), Analog Sine/Cos Input (Differential), BiSS, EnDat, Step/Direction Input

Auxiliary Feedback Port:
Incremental Quadrature Input/Output (Differential), Synthesized Quadrature Output (Differential), 3 Additional Differential Digital I/O

Halls (Digital):
3 Inputs U,V,W (Single Ended)

MECHANICAL
Dimensions
VLA4-210: 7.50” x 8.00” x 2.612”
VLA4-415: 7.50” x 8.00” x 2.612”
VLA4-525/540: 7.50” x 8.00” x 2.612”
VLA4-825/840: 7.50” x 8.00” x 3.871”
VLA4-1525/1540: 7.50” x 8.00” x 4.871”

Weight
VLA4-210: 3.6 pounds
VLA4-415: 3.6 pounds
VLA4-525/540: 4.6 pounds
VLA4-825/840: 7.8 pounds
VLA4-1525/1540: 9.8 pounds

POWER REQUIREMENTS
+24VDC or ±15vdc Bias Supply @300mA per side
± DC Motor Bus Supply

OPERATIONAL MODES
1-Phase Current/Torque
3-Phase Current/Torque (Internal Commutation)
3-Phase ABSine Torque (External 2-Phase Commutation)
Velocity Control
Position Control
Step/Direction
Stored Motion
Cam/Following

FAULT PROTECTION
Amplifier Protection Features
Dynamic SOA Over Power Protection
Under-Voltage Protection
Over-Voltage Protection
Over-Temperature Protection
Over-Current Protection
Short Circuit Protection

Motor Protection Features
Motor Over-Temperature Input (NTC, PTC)
Continuous Current Limit (I2T)
Peak Current Limit

ENVIRONMENTAL LIMITS
0 to 70 deg. C Ambient
-40 to 85 deg. C Storage
5 to 95% Relative Humidity. Non-condensing.

POWER STAGE
High Performance Low Noise ClassAB Power Stage
*Up to 10 kHz -3dB current loop bandwidth

* = Contact Varedan Engineering for higher bandwidth options

Varedan Technologies warrants this product to be free from defects for a period of one year after the date of shipment and according to the Terms and Conditions of Sale.