Precision Motion Controls

LN3X Linear Series Low-Noise Drive

The LN3X drive is a self contained bipolar linear amplifier microstepping drive and indexer in one package. The units support distance and velocity profiling modes. The drive's low EMI/RFI radiation makes it an ideal choice for noise sensitive precision measurements

The standard system has a resolution of 25600 steps/rev. and receives movement commands over a RS232 serial port. The drive performs trapezoidal position moves with user supplied velocity, distance and acceleration parameters. In the velocity mode new velocity commands can be sent while the drive is moving to create user define profiles. The motion programs can be stored in EEPROM .

Current is programmable up to 2.5 amp and 3.5 amp in high current version. The high current version is intended for low speed applications.

Features

- **Short Circuit /temperature protection**

- **Built-in Indexer**

- **Selectable current ranges**

- **Third harmonic waveform correction**

- **Virtually no radiated electrical noise**

- **Very low mechanical vibration**

- **Built in EEPROM storage for motion profiles**

- **95-130/190-270 VAC 50/60Hz AC line isolated supply**

Drive Specification

Performance (unloaded motor)

Repeatability: ±arc-seconds (unidirectional)

Accuracy: ±5 arc-minutes (bidirectional)

Step-to-Step Accuracy: ±20 arc-seconds (unidirectional)

Inputs (optically isolated): 5 VDC, TTL typical

Home: Active low level

Limits: Active low level

Output (optically isolated): 30VDC, 5ma max.

Communication: RS232

Environmental – Operating

Driver: 0 to 60 °C measured at the heatsink

Motor: 80 °C measured at motor case

Ambient: 10 to 40 °C, 0 to 95% humidity, non-conducting

Environmental- Storage

Motor + Driver: 0 to 60 °C, 0 to 95% humidity, non-conducting

Power: 95-130/190-260 VAC 50/60 Hz, 1.2A

Weight: 14 Lbs

Commands

Vxxxx	velocity 0.01 to 50 rev/s	RD	report position	XDx	define x program
Axxxx	acceleration 0.1 to 999 rev/sec²	RS	report status	XE	end program. Write to EEPROM
Dxxxxx	distance 0 to 240,000,000 steps	S	Stop	XRx	run program x
G	go start motion	RC	report software version	RXx	report program x
GH	go home	CF	turn off motor current		
Hx	set direction	CN	turn on motor current		
MC	motion velocity mode	RL	report limits, home status		
MI	motion incremental position	RS	report motor status		
PZ	zero position counter	Txxx	store power up test speed		

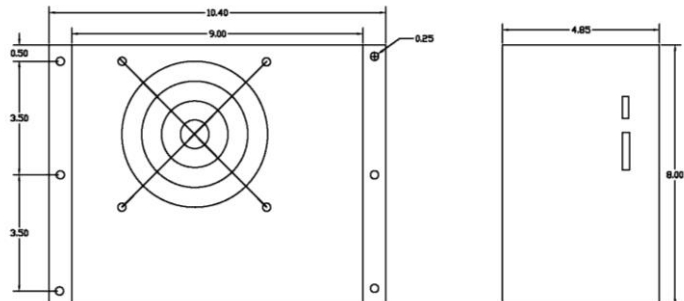### Indexer connector: 25 pin D

1. Limit CW+
2. Limit CCW+
9. Fault+
11 RxD
12 RS232 Ret
14 Limit CW-
15 Limit CCW-
16 Home+
17 Home-
21 Fault-
24 TxD

Motor connector: 5 pin terminal block

1. A+
2. A-
3. Gnd
4. B+
5. B-

LN3 dimension: inch

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