

# 23AV Series Linear Actuators



## FEATURES

- NEMA 23 (57mm Square)
- Anti-Backlash and Self-Compensating Nut Option
- Nuts and Bushings can be Mounted on Either Front or Back of Motor
- Zero Backlash Operation
- Long life, Predictable Operation
- No Axial or Radial Play



## DESCRIPTION

Anaheim Automation 23AV leadscrew step motors are the most versatile linear positioning motors on the market. They are available in thru-screw and fixed screw versions with a variety of drive nut and support bushing options. The 23AV motors are robust and can be easily configured to solve the most difficult application problems. Integration of a leadscrew with a motor saves space by eliminating components and reduces cost. While many standard configurations are available, custom modifications for OEM customers are available.

## BUILD A PART NUMBER

# 23AV 1 02 AX 06 - AB

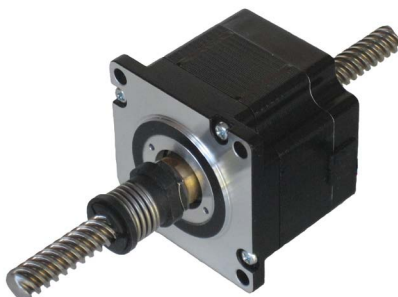
Motor Winding		Lead Screw Pitch (in)		Lead Screw Length "L" (in)		Front Attachment		Rear Attachment	
02	1.0A	A	0.050"	06	6"	A	Anti-Backlash Nut	B	Bushing
04	2.0A	B	0.100"	12	12"	S	Standard Nut	C	Cover Only
06	3.0A	D	0.250"					E	Encoder Ready
		E	0.500"					N	No Extension

### EXAMPLE:

**23AV104AX12-SB** = NEMA 23 Frame, 1 Stack, 2.0A Motor, 0.050" screw pitch resolution, 12" screw length, Standard Nut on the front of the motor along with a Bushing on the rear.

**Note:** See *Accessories* on our website for information on optional encoder and/or connector adders

## MOTOR TYPES



23 AV  
Anti-Backlash



23 AV  
Standard Nut



23 AV  
Centering Bushing

L010782

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Model Number	Series Voltage (V)	Series RMS Current (A)	Series Resistance (ohms)	Power (W)	Series Inductance (mH)	Rotor Inertia (oz/sec)	Number of Leads	Motor Weight (oz)	Length (in)
23AV102	6.4	1.0	6.4	5.3	16.4	$1.7 \times 10^{-3}$	4	18.3	1.81
23AV104	3.6	2.0	1.8	7.2	4.1	$1.7 \times 10^{-3}$	4	18.3	1.81
23AV106	2.4	3.0	0.80	7.2	1.7	$1.7 \times 10^{-3}$	4	18.3	1.81

## Screw Pitch Options

Screw Pitch	Screw Pitch (in)	Static Force (lb)	Dynamic Force (lb)	Travel per Full Step (in)	Travel per Microstep (in)	Positioning Accuracy (in/in)
A	0.050	165	150	0.00025	$.98 \times 10^{-6}$	0.0004
B	0.100	165	128	0.00050	$1.95 \times 10^{-6}$	0.0004
D	0.250	165	76	0.00125	$4.88 \times 10^{-6}$	0.0004
E	0.500	165	45	0.00250	$9.77 \times 10^{-6}$	0.0004

Anaheim Automation welcomes the opportunity to customize 23AV motors for our OEM customers to better meet application requirements or supply a drop-in solution. Here are just a few options we have had experience with:

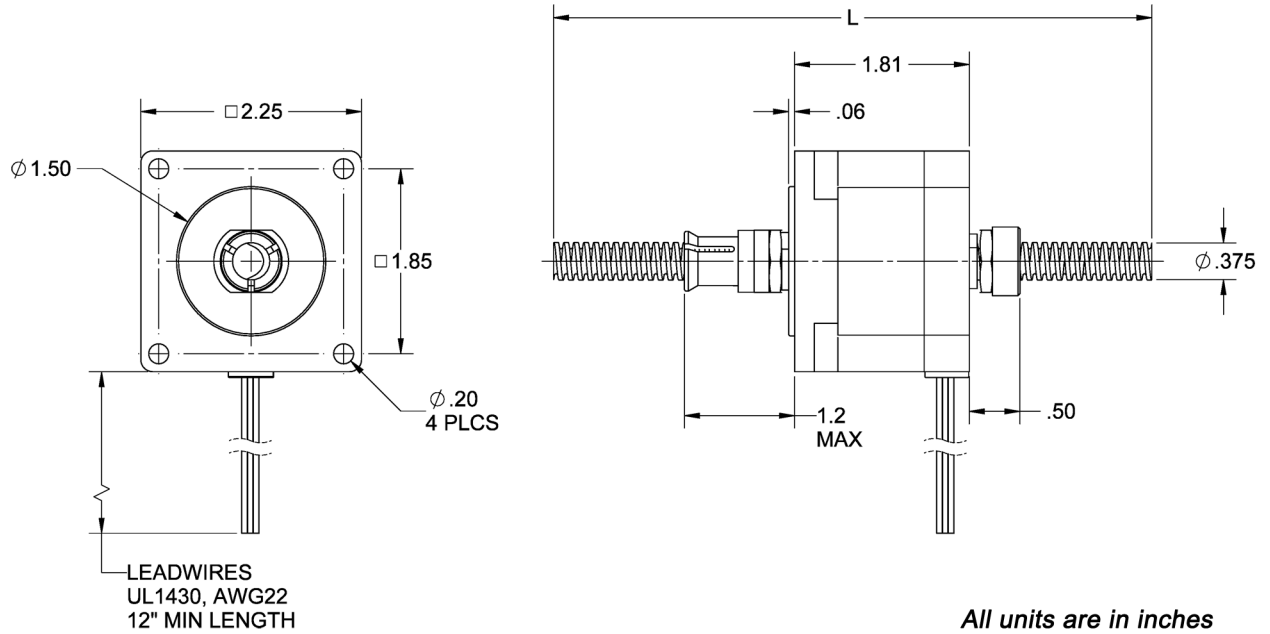
- Custom Motor Windings
- Alternate Lead Configurations - 6 lead, 8 lead
- Longer Motor Stack Lengths
- Custom Cabling and/or Connectors
- Encoder Feedback
- Alternate Screw Leads
- Machined Screw Journals to Print
- Teflon Coating on Screw
- Custom Drive Nut Materials or Design

23AV Encoder Option:

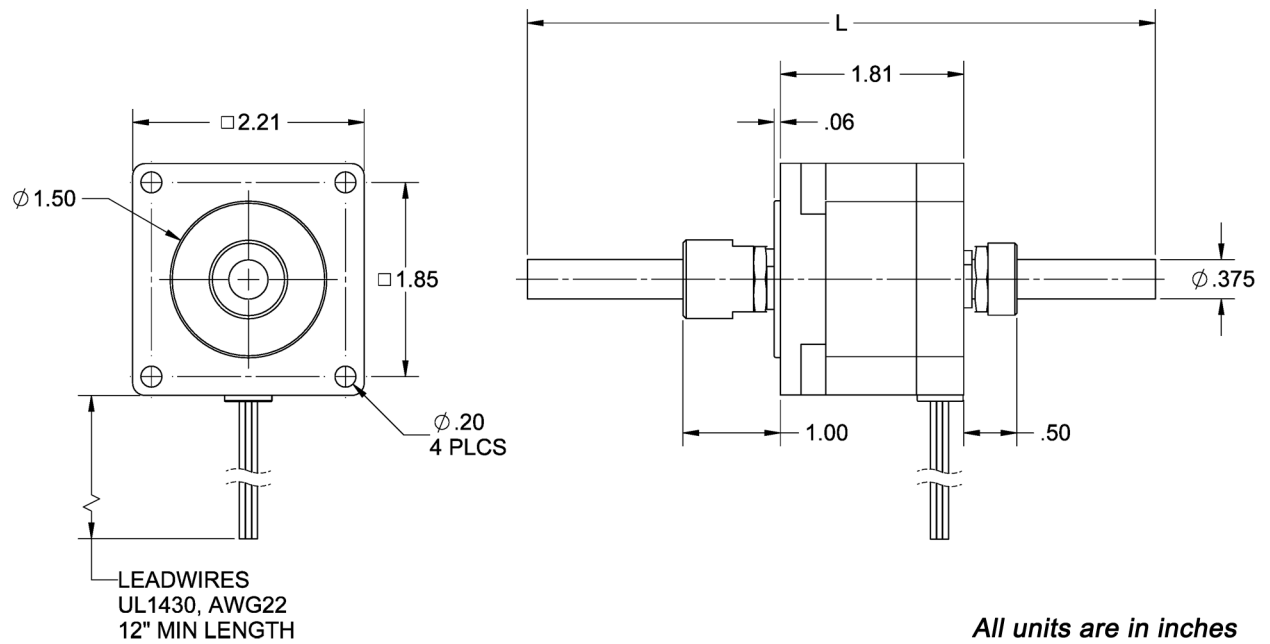


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With Anti-Backlash

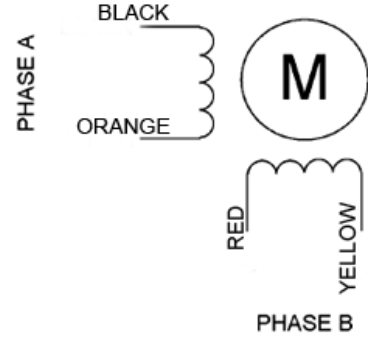


With Standard-Nut



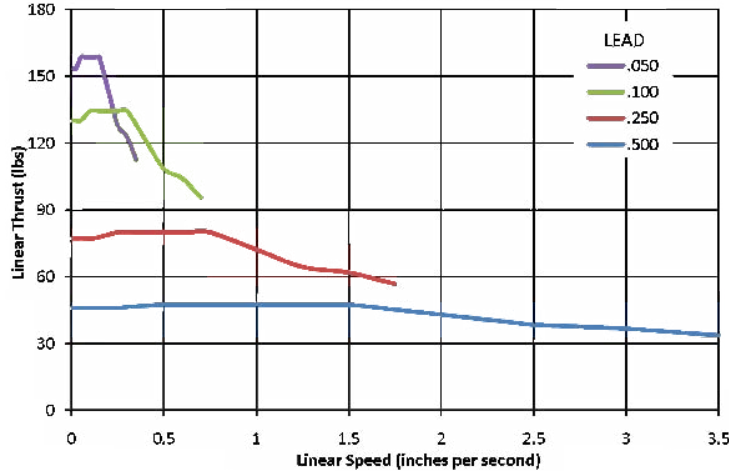
### Switching Sequence

Step	Black	Orange	Red	Yellow
1	+	-	+	-
2	-	+	+	-
3	-	+	-	+
4	+	-	-	+



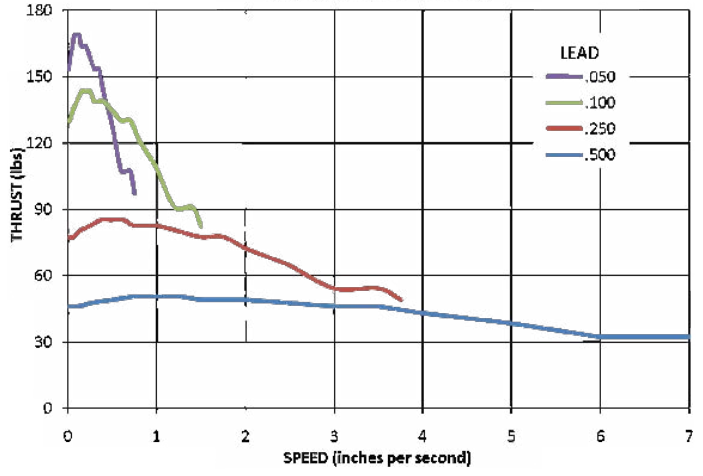
### 23AV102

40VDC, 1.0A, Series



### 23AV104

40VDC, 2.0A, Series



### 23AV106

40VDC, 3.0A, Series

