

# LAR31B Series

Precise Pick & Place Linear Rotary Actuator

Prevent common dust problem in the nozzle  
Over 10,000 units sold  
100 million life cycle without maintenance

# SMAC

## Moving Coil Actuators

### LAR31B Series

Stroke [mm]: 31, 50  
Peak Force [N]: 11@1.5A, 16@1.5A  
Rotary Resolution: 40,960count/rev  
(0.0088°)

#### RELIABILITY

- The vacuum passage built in the shaft through the rotary motor prevents dust build up in the unit
- Sold more than 10,000 units
- 100 million+ life cycle
- Linear (moving coil) & Rotary (brushless motor) actuator

#### PRECISE FORCE CONTROL

- Resolution: 5µm standard (1, 0.5 & 0.1 µm option)
- Force resolution: 0.04N
- Ability to "Soft-Land" onto delicate parts to avoid damage

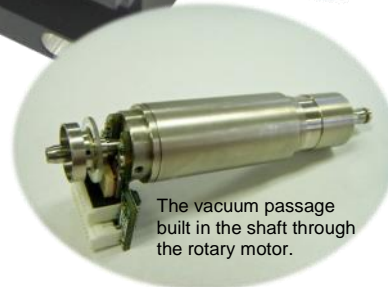
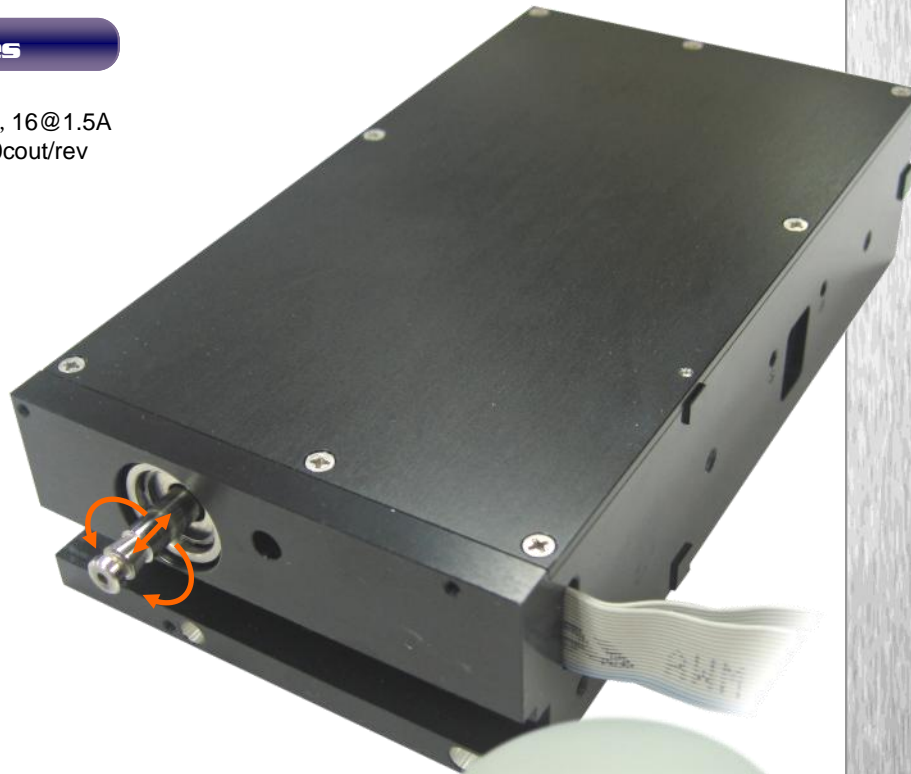
#### REPEATABILITY

- Shaft run-out 10µm
- Accurate repeatable positioning to +/- 2 encoder counts

#### PROGRAMMABILITY

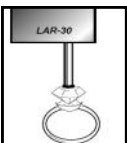
- Programmable force/torque, position, velocity in all axes

Custom shaft & mounting location available

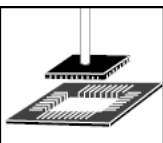


The vacuum passage built in the shaft through the rotary motor.

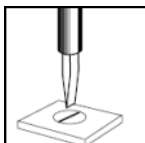
### Applications



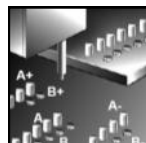
Pick, Orient & Press



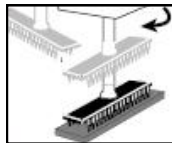
IC Handling



Screw Driver



Gauging & Sorting Parts



High Resolution Rotary



Chip Bonding

[www.smac-mca.com](http://www.smac-mca.com)

# LAR31B series Linear Rotary Actuator

## PART NUMBERING

MODEL SERIES	STROKE	VOLT	ENCODER	SHAFT	VACUUM	SPRING	MOD
LAR 31B	-	5	-	V	S	-	M O D

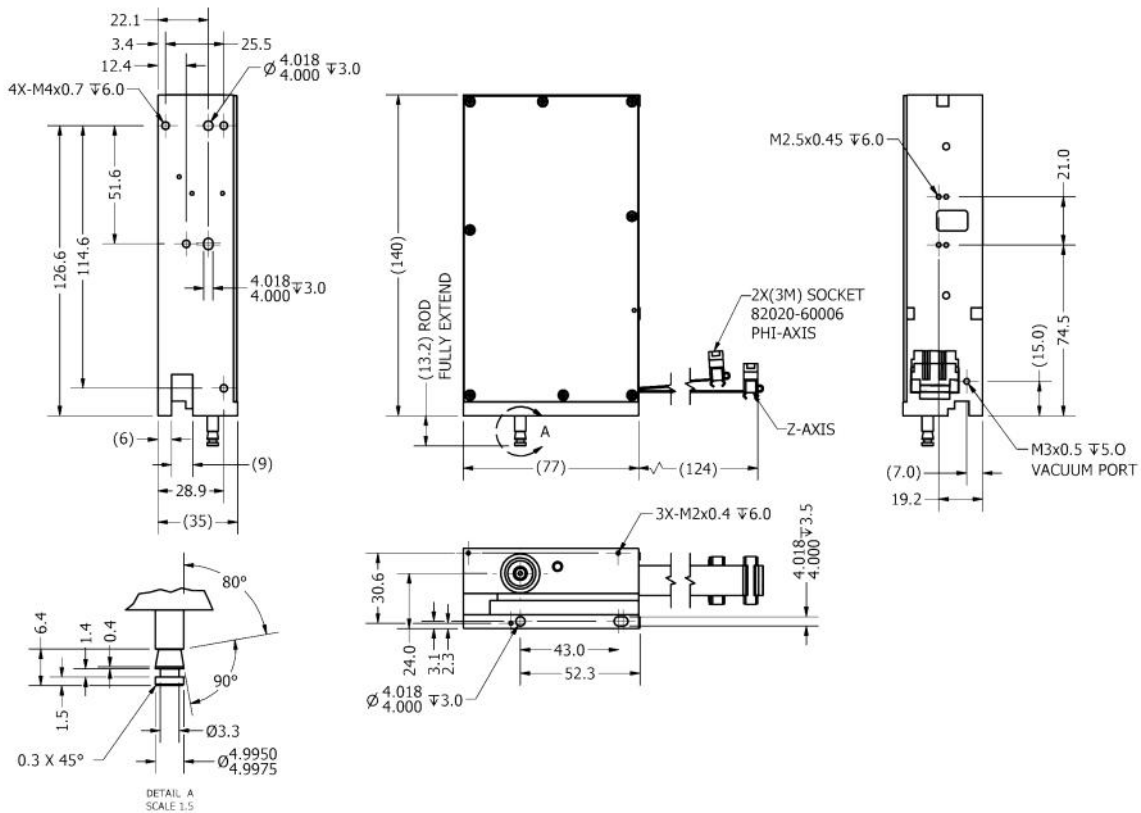
  

5 = DC24V SINGLE COIL	0 = 0.5µm	B = BLANK
6 = DC24V DOUBLE COIL	1 = 1.0µm	F = FEMALE
	5 = 5.0µm	M = MALE
	2 = 0.1µm	C = CUSTOM

## SPECIFICATION

Dimension [mm]:	140x77x35 (31mm stroke), 170x77x35 (50mm stroke)
Linear stroke [mm]:	31, 50
Position accuracy:	±2 counts
Encoder resolution [µm]:	5 standard (1, 0.5 & 0.1 option)
Peak force [N]:	11 @ 1.5A, 16 @ 1.5A
Force constant [N/A]:	7, 11
Moving mass [kg]:	0.19, 0.22
Total mass [kg]:	0.84, -
Operation voltage [V DC]:	24
Operating temperature[°C] :	10 ... 50
Shaft run-out [µm]:	≤10
Vacuum port:	M3
Maximum torque [Nm]:	0.06 (brushless motor standard)
Rotary encoder resolution:	40,960 cout/rev (0.0088°)
Custom designs available	

## DIMENSIONS (LAR31B-031-5)



5807 Van Allen Way, Carlsbad, CA 92008  
 Tel: 760-929-7575 Fax: 760-929-7588  
 Web: [www.smac-mca.com](http://www.smac-mca.com) Email: [info@smac-mca.com](mailto:info@smac-mca.com)