

# LAR31 Series

## Linear & Rotary Actuator

Linear (moving coil) & Rotary (brushless motor) motion

Prevent common dust problem in the nozzle

100 million life cycle without maintenance

# SMAC

## Moving Coil Actuators

### LAR31 Series

Stroke [mm]	30 +1/-0 mm
Peak Force [N]	11 @1.5A
Rotary Encoder Resolution	40,960cout/rev (0.0088°)

#### RELIABILITY

- The vacuum passage built in the shaft through the rotary motor prevents dust build up in the unit
- > 10,000 units sold
- > 100 million cycles
- Linear (moving coil) & Rotary (brushless motor) motion

#### PRECISE FORCE & POSITION CONTROL

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

#### PROGRAMMABILITY

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

Custom shaft & mounting location available

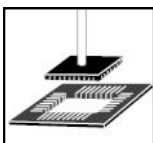


'Direct' vacuum passage runs through the shaft and rotary motor.

### Applications



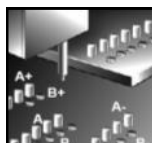
Pick, Orient & Press



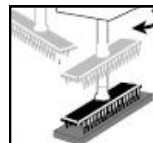
IC Handling



Screw Driver



Gauging & Sorting Parts



High Resolution Rotary



Chip Bonding

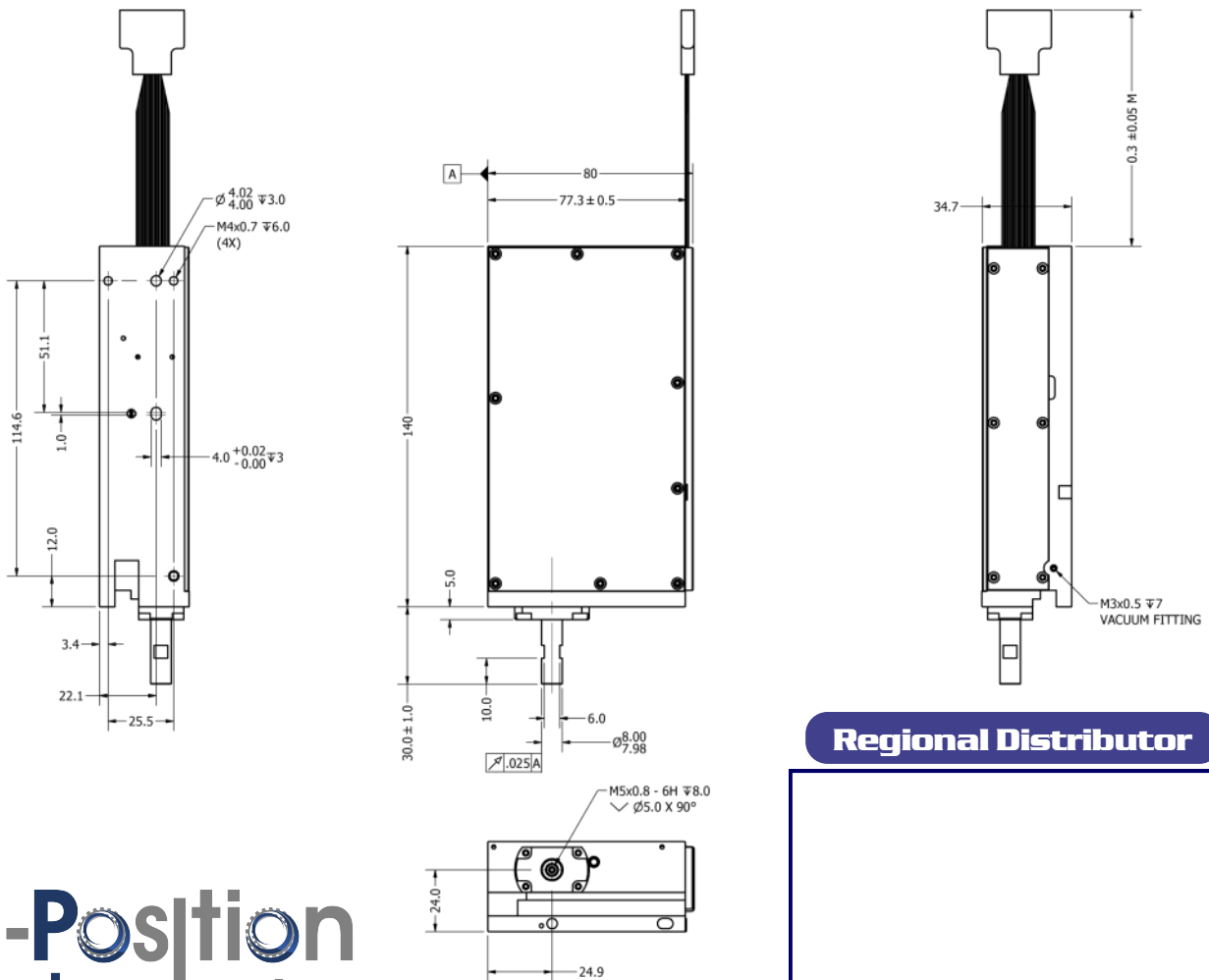
## PART NUMBERING

MODEL SERIES	STROKE	VOLT	ENCODER	SHAFT	VACUUM	SPRING							
LAR 3 1	0 3 0	5			V	S	M	O	D				
	5 = 24VDC SINGLE COIL 7 = 48VDC SINGLE COIL	1 = 1.0µm 2 = 0.1µm 5 = 5.0µm	B = BLANK F = FEMALE M = MALE C = CUSTOM										

## SPECIFICATION

Dimension [mm]:	80 x 140 x 34.7 (LAR31-030-5)	Linear stroke [mm]:	30 (+2/-0mm)
Encoder resolution [µm]:	5.0 standard (1.0 and 0.1 option)	Encoder accuracy:	±2 encoder counts
Peak force [N]:	11 @ 1.5A (24VDC)	Force constant [N/A]:	7 (24VDC)
Moving mass [kg]:	0.19	Total mass [kg]:	0.84
Operation voltage [VDC]:	24	Operating temperature[°C]:	5 to 40
Shaft run-out [µm]:	≤30	Vacuum port:	M3
Maximum torque [Nm]:	0.06 (brushless motor standard)@3A	Rotary encoder resolution:	40,960 count/rev (0.0088°)

## DIMENSIONS (LAR31-030-5)



## Regional Distributor

**In-Position  
Technologies**  
www.iptech1.com

**SMAC**

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Specifications subject to change without notice.