

Miniature Linear Motion Series · P16

Actuonix Motion Devices unique line of Miniature Linear Actuators enables a new generation of motion-enabled product designs, with capabilities that have never before been combined in a device of this size. These linear actuators are a superior alternative to designing your own push/pull mechanisms.

The P16 actuators are complete, self-contained linear motion devices with position feedback for sophisticated position control capabilities, or end of stroke limit switches for simple two position automation. Several gear ratios are available to give you varied speed/force configurations.

The parallel design makes the P16 significantly shorter than the same stroke length L16, but the most attractive feature of this model is its high cycle life. Premium components in this model include: large sealed stainless steel bearings, planetary gearbox, stainless steel lead screw, and glass re-enforced nylon housing.



P16 Actual Size

Applications

- Robotics
- Consumer appliances
- Toys
- RC vehicles
- Industrial Automation
- Automotive

P16 Specifications

Gearing Option	22:1	64:1	256:1	
Peak Power Point	40N @26mm/s	80N @9mm/s	250N @2.5mm/s	
Peak Efficiency Point	25N @34mm/s	40N @14mm/s	150N @3.4mm/s	
Max Speed (no load)	46mm/s	18mm/s	4.8mm/s	
Max Force Lifted	50N	90N	300N	
Back Drive Force	75N	200N	>500N	
Stroke Option	50mm	100mm	150mm	200mm
Mass	95g	110g	125g	140g
Repeatability (-P & LAC)	0.3mm	0.4mm	0.6mm	0.8mm
Max Side Load	20N	15N	10N	4N
Closed Length hole to hole	97mm	147mm	197mm	247mm
Feedback Potentiometer	6kΩ±50%	11kΩ±50%	20kΩ±50%	23kΩ±50%
Feedback Linearity	Less than 2.00%			
Input Voltage	0-15 VDC. Rated at 12VDC.			
Stall Current	1000mA @ 12V			
Operating Temperature	-10°C to +50°C			
Audible Noise	62 dB @ 45cm			
Ingress Protection	IP-54			
Mechanical Backlash	0.3mm			
Limit Switches (-S)	Max. Current Leakage: 8uA			
Maximum Static Force	500N			
Maximum Duty Cycle	20%			

Basis of Operation

The P16 is designed to push or pull a load axially along its full stroke length. The speed of travel is determined by the load applied (See the Load Curves). Actuator speed can be reduced by lowering the drive voltage. When power is removed the actuator will hold its position, unless the applied load exceeds the back drive force. Repeated stalling or stalling for more than a few seconds will shorten the life of the actuator significantly. Actuators should be tested in each specific application to determine their effective life under those loading conditions and environment.

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