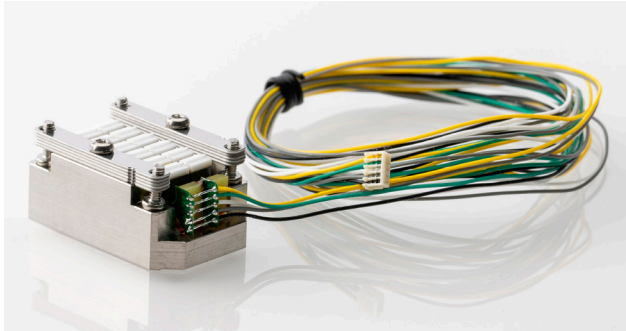




## Acuvi LEGS<sup>®</sup> LS40 Piezo Linear Actuator (preliminary)



### Key features

- Motor for linear stage mount
- Direct drive - backlash free
- Nanometer resolution
- No power draw in hold position
- Quick response & high speed dynamics
- Vacuum compatible

### Product Description

The Piezo LEGS LS40 linear motor is intended for a large range of OEM applications. Design focus has been for ease of integration. The very high speed dynamics and nanometer resolution makes it ideal for numerous applications.

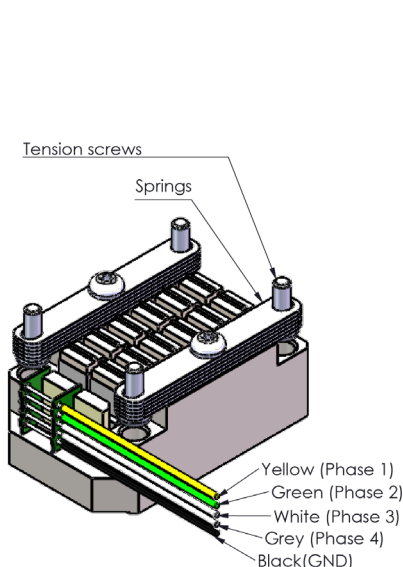
The LEGS technology is characterized by its outstanding precision. The motor is for for integration into linear stage mounts . In combination with

the nanometer resolution the technology is quite unique.

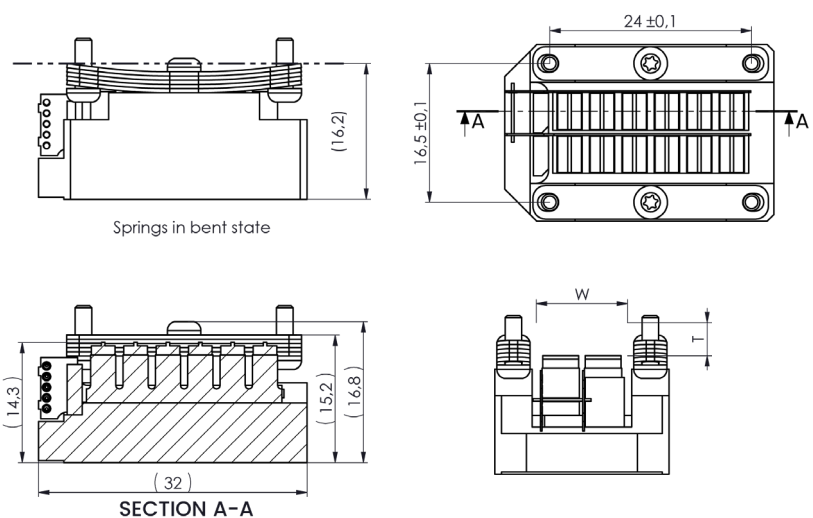
The motor is ideally suited for move and hold applications or for automatic adjustments of a linear stage unit. When the motor is in hold position it does not consume any power.

The drive technology is direct, meaning no gears or lead screws are needed to create linear motion. This means the motor has no mechanical play or backlash. The Piezo LEGS LS40 linear motor is vacuum compatible.

### Product Dimensions



Length of cables unless otherwise stated 1m ±5cm



Springs in bent state

Drive rod is supplied by Piezomotor.

Alumina (Al<sub>2</sub>O<sub>3</sub>) rod with cross section 4x11mm and with flatness to match performance specification.

Thickness T = 4 ± 0,05mm With high performance lapped surface  
Width W = 11 ± 0,1mm  
Length L = L ± 0,1mm



## Acuvi LEGS® LS40 Piezo Linear Actuator (preliminary)

TYPE	Stainless Steel Vacuum
Maximum stroke (mounting dependency)	90 mm
Maximum speed (driver dependent)	12 mm/s
Minimum speed (driver dependent)	1 nm/s
Max operating frequency	3 kHz
Minimal incremental motion	0.5 nm
Stall force	40 N
Holding force	>40 N
Vacuum	10 <sup>-7</sup> torr
Non-magnetic	No
Operating voltage	42-48 V
Power consumption	20 mW/Hz
Mechanical size L x H x D	32 x 16.8 x 21 mm
Weight without drive rod	70 g
Operating temperature	-20 to +70°C
Storage temperature	-50 to +85°C
Material in motor housing	Stainless steel

All specifications are subject to change without notice. Latest data sheets are available for download at [acuvi.com](http://acuvi.com)

## Controllers

PMD301 1-axis micro-step driver/controller - max 3 kHz, RS485 or USB  
PMD401 1-axis micro-step driver/controller - stackable PCB, max 1.5 kHz, RS485 or SPI

## Accessories

Starter Kit PMD401 controller, USB-to-RS485 cable, and power supply  
Piezo Drive lab software downloadable from [acuvi.com](http://acuvi.com)

