

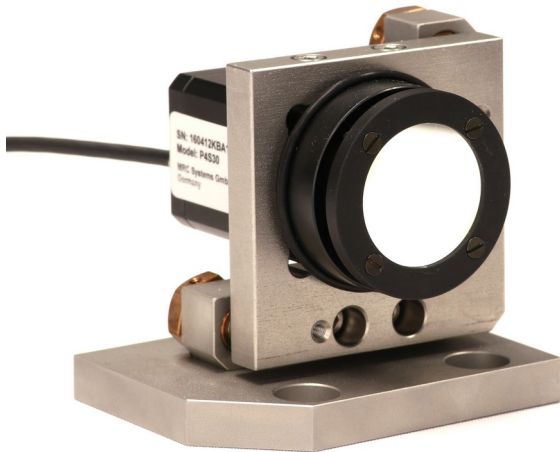
Data sheet

P4S30 Piezo steering mirror mount



P4S30

- Highest accuracy and greatest dynamics
- Large piezo tilting range (± 4 mrad optical)
- Ideal for small and large mirrors



P4S30 steering mirror mount with 1 inch mirror

Product description

The P4S30 piezo steering mirror mount is used to correct and stabilize laser beams. It consists of a piezo-driven 2D actuator and a mirror mount specially designed for dynamic applications. With four piezo stacks counter-tensioned in the actuator, the P4S30 offers highest positioning accuracy and speed. Furthermore, it has a high stiffness due to the stainless steel components used. This leads to highest resonant frequencies and consequently highest stabilization bandwidths.

The P4S30 can be equipped with adapters for different mirror sizes. This allows the user to fix common laser mirrors in a stable way as with ordinary mirror mounts. For pre-adjustment, the mirrors can also be tilted manually by means of fine-thread screws.

For applications which require a very high stabilization bandwidth, we offer an *enhanced* version with a more rigid frame and additional measures to increase the resonant frequencies (see page 3).

Clean room versions as well as versions for applications in vacuum are also available.

Specifications

Maximum tilt (mechanical)	4 mrad (± 2 mrad)
Maximum tilt (optical)	8 mrad (± 4 mrad)
Manual tilting	$\pm 4.5^\circ$
Number of piezo stacks	4
Operating voltage range	- 45 to 180 V
Capacity of piezo stacks	3.1 μ F
Resolution	optimized for use with MRC's beam stabilization
Resonant frequency / Stabilization bandwidth	> 1200Hz * / > 300Hz *
Possible mirror diameters	1, 1.5, 2,3, and 4 inch
Mirror thickness	from 3 mm
Beam height	1, 1.5, and 2 inch version: 40 mm, 3 inch version: 52 mm, 4 inch version: 59 mm
Operating temperature	- 30 to 80 °C

* measured with 1" mirror and 1/4" mirror thickness

General data (1-inch version)

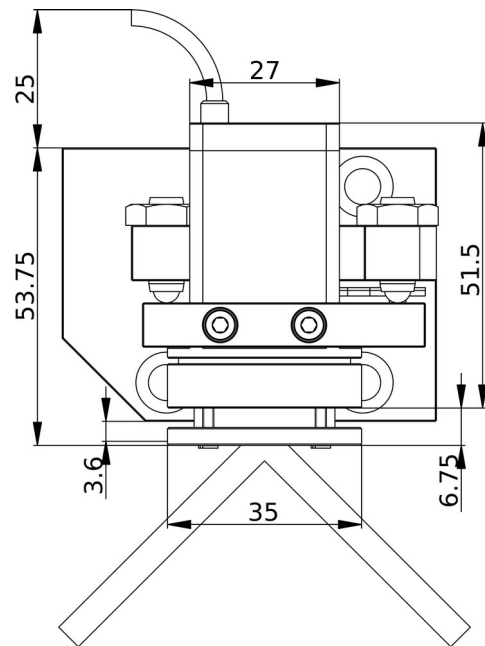
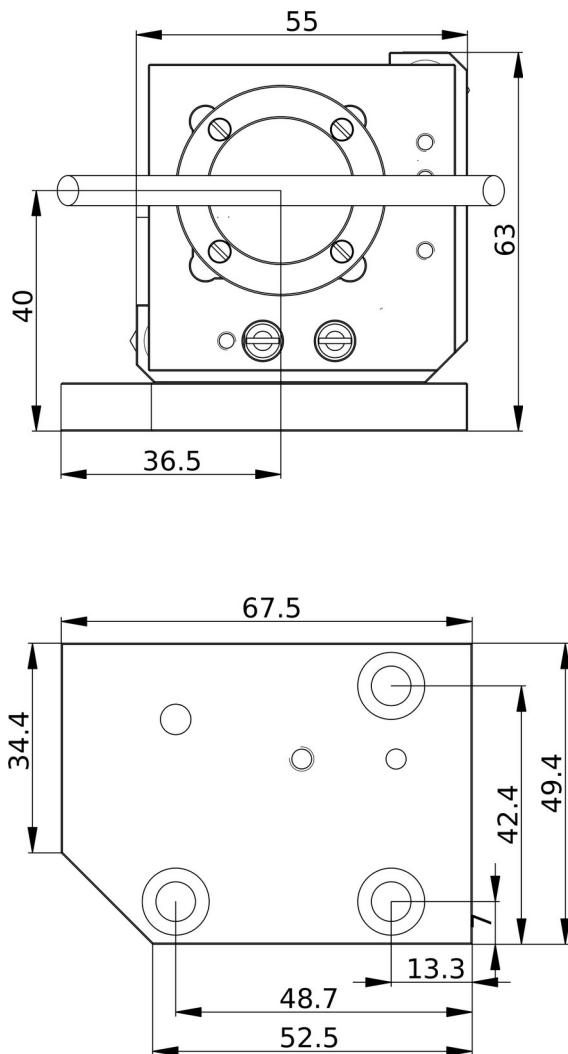
Material	Stainless steel, spring steel, etc.
Dimensions (H x W x D)	63 x 67.5 x 58.3 mm
Weight	545 g (with cable)
Cable / connector	2 m (fixed at actuator) / Lemo FFA.0S.304.CLAC32

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Technical drawings



For further details please ask for the 3D STEP files.

Pin configuration LEMO FFA.0S.304.CLAC32

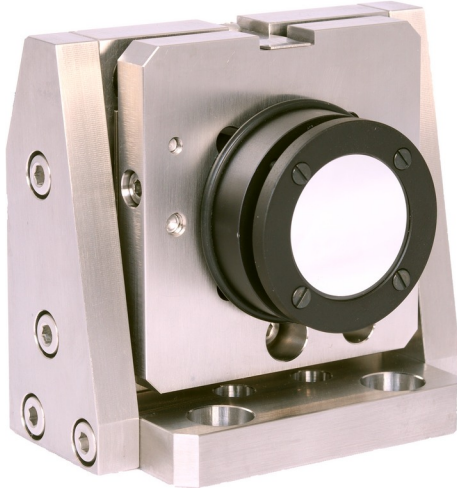
LEMO	Signal
Pin 1	Y signal
Pin 2	X signal
Pin 3	HV DC (120 V)
Pin 4	GND

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Enhanced Version



Enhanced version of P4S30 with rigid frame and additional damping elements

Description

Compared to the standard, the enhanced version includes the following changes:

- Rotation of Piezo actuator in its fixation. Hereby the fixation is at a lower height and any levers for the stimulation of oscillations are reduced.
- Fixation in a closed frame.
- Additional supports with damping at the side to increase the stiffness of the frame.
- Additional use of spring connections to obtain a damped connection between movable part and the frame.

Different data

Dimensions (H x W x D): 69.5 x 75 x 58.3 mm

Weight: 880 g (with cable)

To see the dimensions of this version, please ask for the 3D STEP files.



Contact

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Subject to change without prior notice.