



Rotation Stage

M101

Features

Hall-sensor controlled automatic zero-positioning

Standard SM1-compatible mount for optical elements

Angular resolution $\leq 0.01^\circ$

Low backlash $\leq 0.1^\circ$

Applications

Mirror positioning

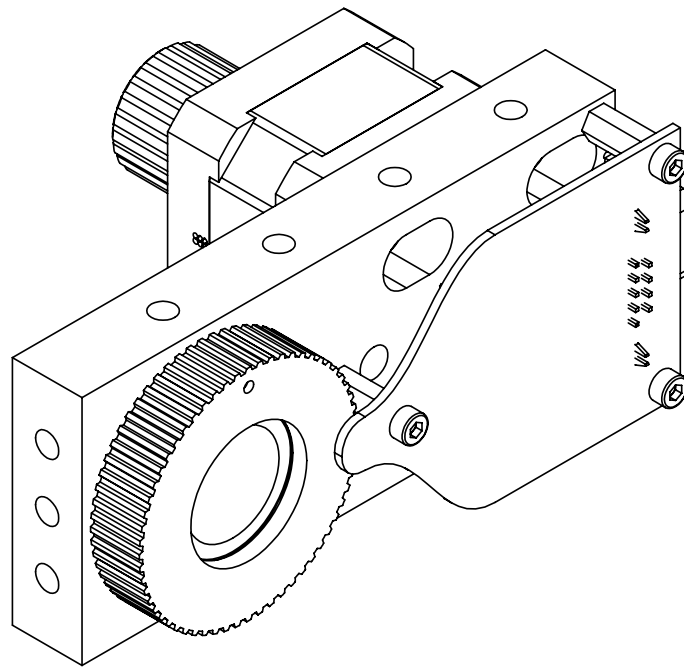
Polarization adjustment

Grating positioning

Neutral density filter positioning

Description

The LK-Instruments M101 is a robust and ball bearing mounted rotation stage designed for carrying optical elements. It can be mounted to the experimental setup from any axis with standard M6 screws, headless screws, posts and post holders.



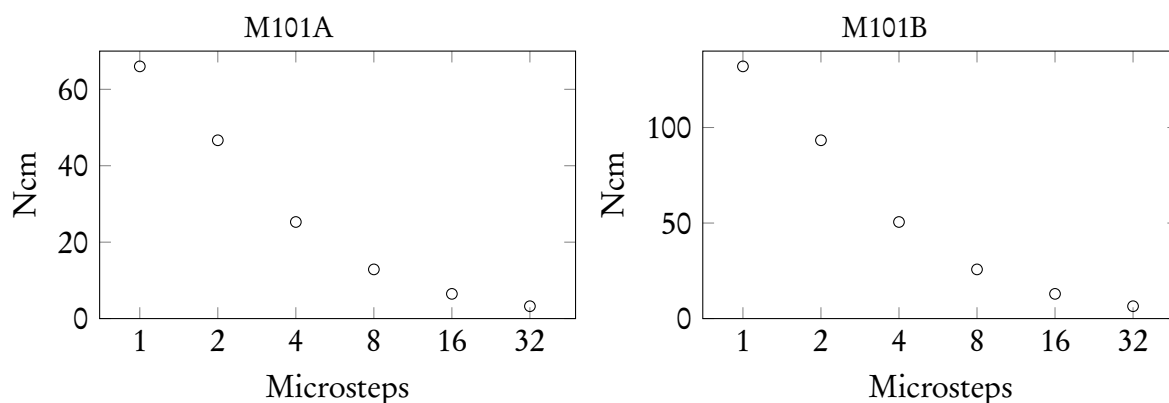
LK-Instruments
Unterbrüden Str. 14
71549 Auenwald
Germany
www.lk-instruments.com

Specifications

$T_A = 25^\circ\text{C}$ and 50% RH unless otherwise noticed.

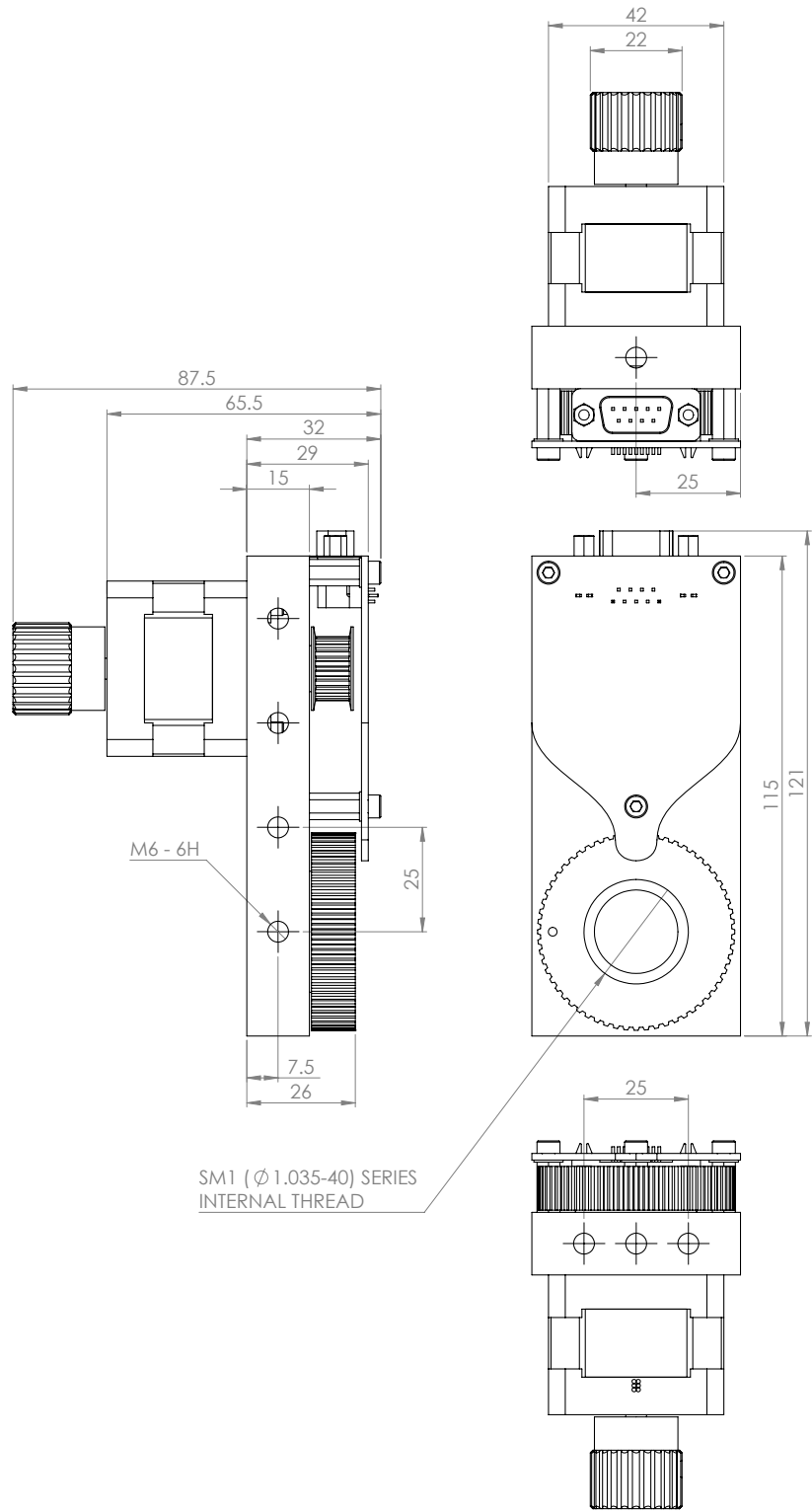
Parameter	Conditions	M101A			M101B			Unit
		Min	Typ	Max	Min	Typ	Max	
Current		0.1	1.3	1.33	0.1	1.65	1.68	A/Phase
Holding torque	Microst. = 1, Curr. = Max		66			132		Ncm
Step angle	Microst. = 1		0.3			0.3		deg
Step angle accuracy			1.7			1.7		%
Backlash			0.1			0.1		deg
Gear ratio			3			3		
Velocity	Microst. = 1, 2 ms/step		150			150		deg/s
Load capacity	radial/axial		5/2.5			5/2.5		kg
Weight			0.504			0.634		kg
Temperature range		0		40	0		40	$^\circ\text{C}$

Microstepping. A physical property of stepper motors is that the holding torque decreases heavily with the amount of adjusted microsteps. For the M101A and M101B rotation stages the decrease is shown in the diagrams below.

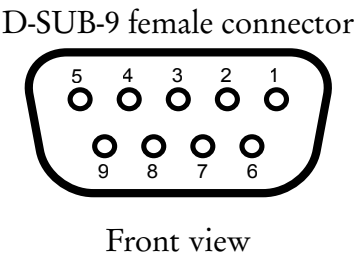


Outline Dimensions

All dimensions in millimeters.



Pin Configuration



Pin	Function
1	Phase B1
2	Phase B2
3	Phase A2
4	Phase A1
5	Ground
6	+5V
7	Zero sens
8	NC
9	NC
Shield	NC

Ordering Information

Model	Description
M101A	66 Ncm holding torque, with rotary knob
M101ANK	66 Ncm holding torque, without rotary knob
M101B	132 Ncm holding torque, with rotary knob
M101BNK	132 Ncm holding torque, without rotary knob