

## Precision Rotation Stage

Compact, for Multi-Axis Combinations with M-110



### M-116

- Compact Design
- Unlimited travel range
- Clear aperture for transmitted-light applications
- Backlash-compensated worm drive
- Compact multi-axis combinations with M-110
- Noncontact reference point switch

### Application fields

Automated test and production processes, microscopy, transmitted-light applications.

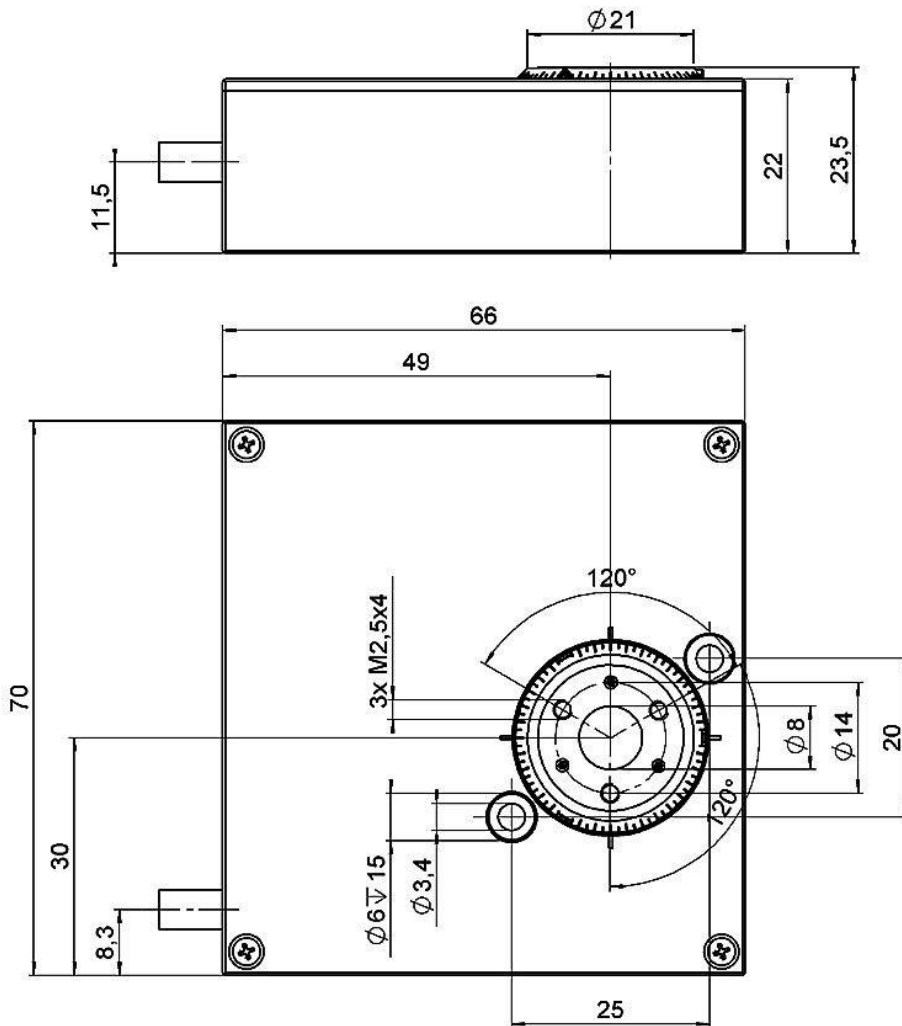
### Specifications

	M-116.DG	M-116.DGH	Unit	Tolerance
Active axes	Rotation	Rotation		
<b>Motion and positioning</b>				
Rotation range	>360	>360	°	
Integrated sensor	Rotary encoder	Rotary encoder		
Sensor resolution	2,048	2,048	Cts./rev.	
Design resolution	2.45 (0.00013)	3.16 (0.00018)	μrad (°)	
Minimum incremental motion	50	25	μrad	
Backlash	1,000	500	μrad	
Unidirectional repeatability	12	10	μrad	
Velocity	20	20	°/s	max.
<b>Mechanical properties</b>				
Worm gear ratio	44:1	44:1		
Gear ratio	28.444:1	22.0335:1		

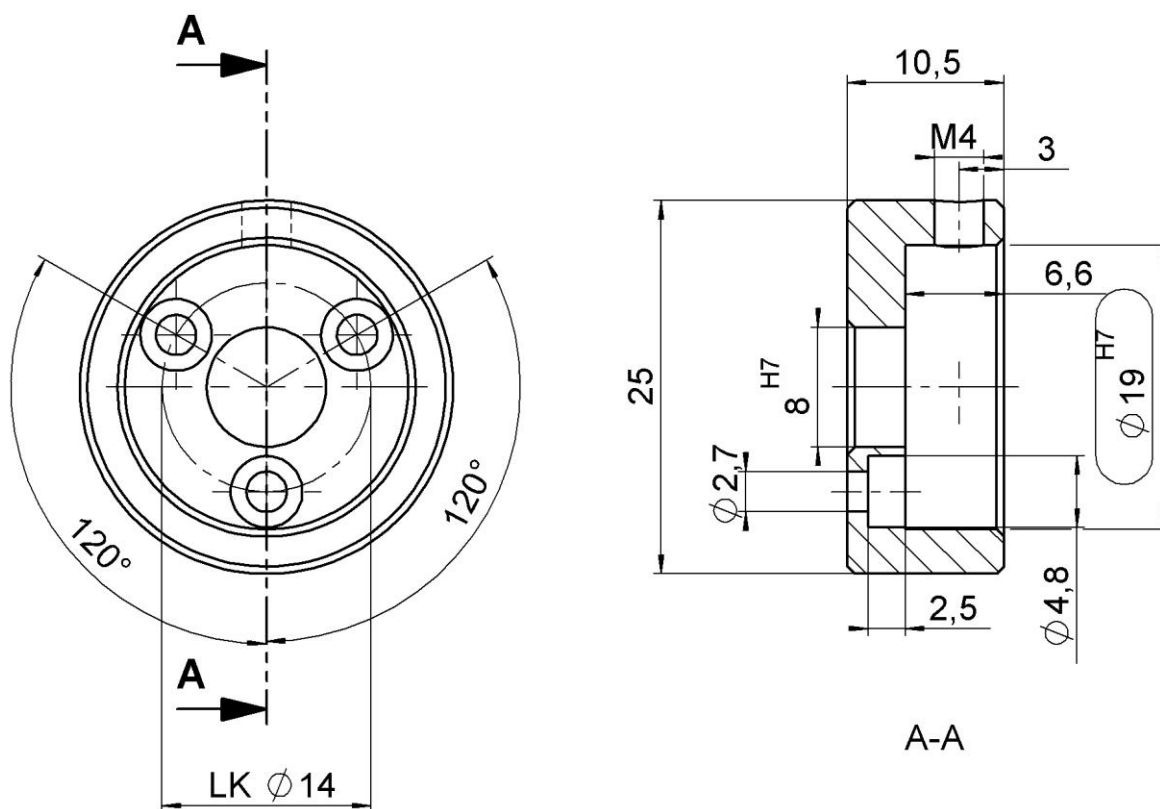
Load capacity / axial force	±15	±15	N	
Max. torque ( $\theta_x, \theta_y$ )	±1.5	±1.5	Nm	max.
Max. torque clockwise ( $\theta_z$ )	0.4	0.4	Nm	max.
Max. torque counterclockwise ( $\theta_z$ )	0.8	0.8	Nm	max.
<b>Drive properties</b>				
Motor type	DC gear motor	DC gear motor		
Operating voltage	0 to ±12	0 to ±12	V	
Motor power	1.75	1.75	W	
Reference point switch	Optical	Optical		
<b>Miscellaneous</b>				
Operating temperature range	-20 to 65	-20 to 65	°C	
Material	Aluminum	Aluminum		
Mass	0.4	0.4	kg	
Recommended controllers/drivers	C-863 C-884	C-863 C-884		

Ask about custom designs!

## Drawings and Images



M-116, dimensions in mm



Dimensions of the M-116.AL1 lens adapter for 0.5" optic devices such as polarizers. Dimensions in mm. Note that the decimal places are separated by a comma in the drawings.

## Ordering Information

### M-116.DG

Precision rotation stage, 360°, closed-loop DC gear motor

### M-116.DGH

Precision rotation stage, 360°, closed-loop backlash-free DC gear motor

### M-116.AL1

Lens adapter for 0.5" optics