

# Lens Positioners | LACR/LACS

RoHS

Catalog Code

W2016

Motorized objective lens positioners designed for accuracy and repeatability using technology developed for our precision motorized stages.

## Application Systems

Optics &amp; Optical Coatings

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### <Motorized Lens Turret: LACR-4H>

- Motorized turret has better accuracy and durability than traditional turrets due to elimination of mechanical detents.
- Includes 5-phase micro stepping motor and can achieve a resolution of less than a micron at the tip of objective lens.
- When used with the GIP-101 controller, objectives can be switched quickly and accurately either manually, using the push buttons on the controller, or automatically, using the computer interface.

### <Lens switching slider: LACS-2H-A>

- Motorized lens switcher is designed to hold 2 objective lenses, to provide precise movements and feasible speed.
- Using our proprietary extended contact bearing design to improve straightness.

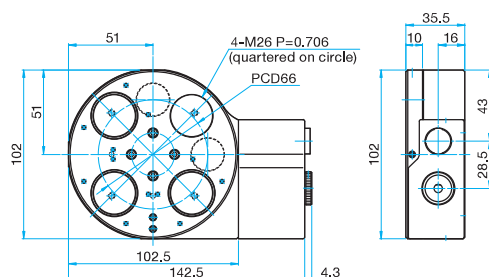
## Specifications

Part Number	LACR-4H	LACS-2H-A
Number of switched lens	4 holes (90°×4) (1hole: datum hole, 3holes: one-directional center core adjustment)	2 holes (1hole: datum hole, 1holes: one-directional center core adjustment)
Travel	∞ for both of clockwise and anticlockwise directions	35mm (Switching distance)
Motor	5-phase stepping motor (0.75A/phase)	5-phase stepping motor (0.75A/phase)
Guide Method	Bearing system	Extended contact bearing
Feeding Mechanism	Worm and worm wheel	Ball screw $\phi 4$ (1mm lead)
Travel per 1 pulse	0.01° (FULL) / 0.0002° (1/50 DIV)	2 $\mu$ m (FULL) / 0.1 $\mu$ m (20 divided)
Total pulse per table rotation	36,000 pulse (FULL)	—
Positional repeatability	≤0.02deg.	—
Switching reproducibility	≤ ±3 $\mu$ m (at the tip of objective lens)	≤ ±3 $\mu$ m (by the tip of objective lens)
Maximum travel speed (switch)	60°/sec (A⇒B, about 2.0sec)	35mm/sec (A⇒B, about 1.0sec)
Objective lens size	M26 P=0.706	M26 P=0.706
Load capacity [kg]	2	2
Weight [kg]	0.85	0.7

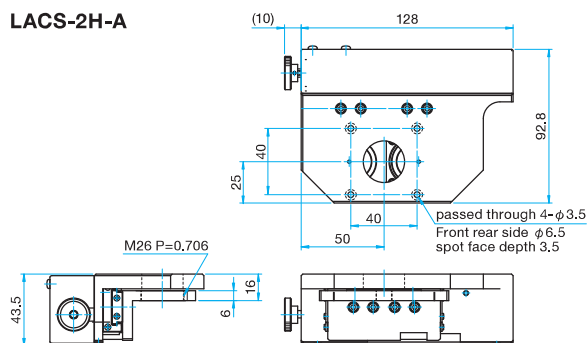
## Outline Drawing

(in mm)

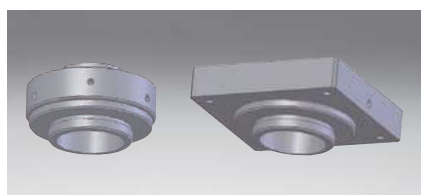
LACR-4H



LACS-2H-A



## Adapter | AOR-M26.0/AOS-M26.0

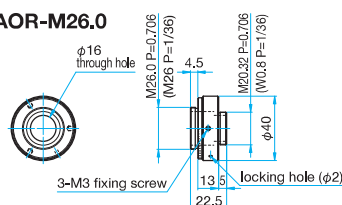


This adapter is for connecting the lens positioners (electric revolver/lens switching slider) to OUCI family microscope bodies .

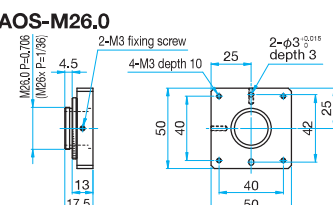
## Outline Drawing

(in mm)

AOR-M26.0



AOS-M26.0



## Specifications

Part Number	AOR-M26.0	AOS-M26.0
Compatible models	Motorized Lens Turret	Lens switching slider
Weight [kg]	0.1	0.08

**A single axis controller with built-in micro-step driver having a 5-point preset function.**

- Compatible with objective lens turrets and other LASER accessory units in addition to motorized stages fitted with 5-phase stepping motor.

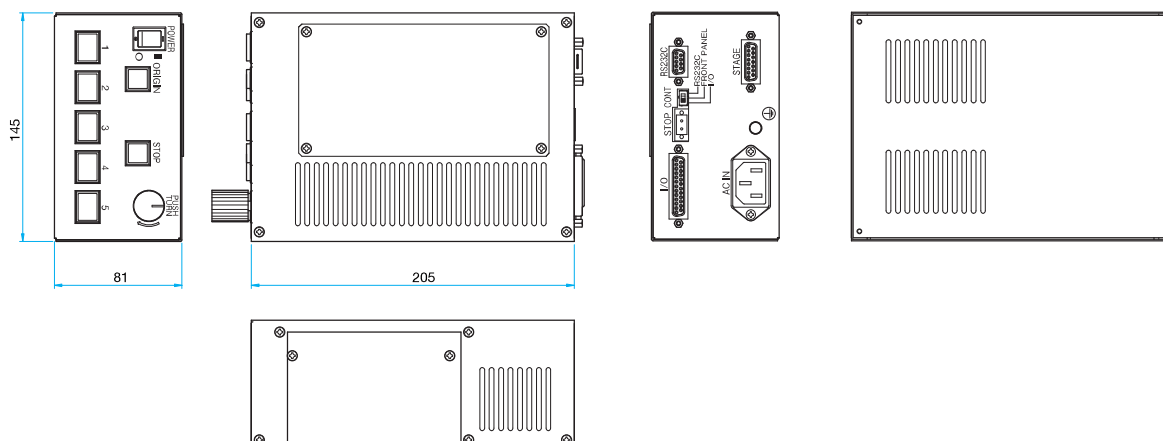


## Specifications

Part Number	GIP-101
Model	5 Phase Stepping Motor
Motor	0.23 – 0.75 A/phase (Stop Current)
Excitation Method	Micro-step (16 divisions setting of 1 – 250)
Maximum Operating Pulse Rate	22,000
Minimum Operating Pulse Rate	50
Acceleration/Deceleration Time [ms]	20 – 1,000(16 steps)
Interface	RS232C (D sub 9pin: female)
I/O	D-Sub25pin: female (I/O 24V)
Power Supply	AC 100 – 240V $\pm$ 10% 50/60Hz apparent power 100VA
Operating Environment	Temperature: 0 – 40°C Humidity: 20 – 80% RH (non-condensing)
Weight [kg]	2.0

## Outline Drawing

(in mm)



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