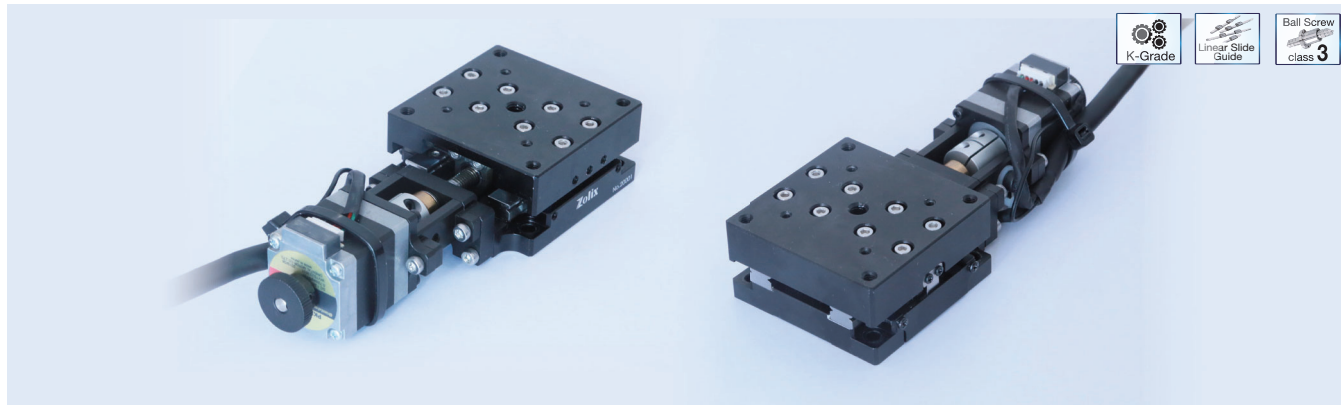


Motorized Linear Stages

LAK Series Submicron Motorized Linear Stages

FAstage



Description:

LAK series submicron motorized linear stages are high precision specially designed by Zolix for the special situation of compact size and high frequency of operation. The main material of this stage is high rigidity, anodized black aluminium alloy which is with high wear resistance and nice appearance. The slide rail adopts linear slide way to ensure high rigidity, heavy load capacity and good durability.

Features:

- Low backlash ball screw provides outstanding durability and smooth motion.
- 1mm lead screw provides the fundamental of precise positioning.
- Minimum incremental motion of 1 μm .
- Equipped with a 5-phase stepper motor, which offers higher accuracy and features a compact structure.

Naming rules:

LAK 20-60

Series code:
LAK: High precision,
aluminum alloy, ball screw,
linear slider guides

Effective travel
range:
20:20mm

Table dimension:
60:60mm×60mm

Selection chart:

Model		LAK20-60
Mechanical specifications	Travel range(mm)	20
	Stage surface size(mm)	60×60
	Transmission mechanism	Imported C3 ball screw, Φ6×1
	Guide mechanism	linear-slider guides
	Main body material, surface treatment	Black anodized aluminum alloy
	Weight(Kg)	0.58
	Shaft coupling(OD - OD1- OD2)(mm)	16-03-05
Accuracy specifications	Resolution(step/half-step)(μm)	2/1
	20-fine-subdivision resolution(μm)	0.1
	Highest speed(mm/s)*	20
	Single-direction positioning accuracy(μm)	≤20
	Repositioning accuracy(μm)	≤±1
	Backlash(μm)	≤1
	Static parallelism(mm)	≤0.05
	Dynamic straightness(μm)	≤10
	Dynamic parallelism(μm)	≤10
	Yaw(")	≤25
Pitch(")	≤30	
Specialty specifications	Minimum incremental motion(μm)	≤1
Allowable torque load	Up and down swing(N·m)	9.31
	Left and right swing(N·m)	9.8
	Axial rotation(N·m)	9.31
Torque rigidity	Up and down swing(μm/90N·cm)	≤6
	Left and right swing(μm/90N·cm)	≤6
Electrical specifications	Motor and its stepping angle(°)	5 phase 28 stepping, 0.72
	Brand and model number of motor	Oriental Motor, PKP523N12B-L
	Working current(A)	1.2
	Holding torque(N.m)	52.5
	Brand and model number of stepping driver(optional)	Oriental Motor, CVD512BR-K
	Type of plug for stage	10pin connector
	Type of cable for stage	High flexibility cable
	Length of connection cable(m)	0.2
	Position-limit sensors(built-in)	2×EE-SX4320(Japan OMRON)
	Origin-point sensors(built-in)	1×EE-SX4320(Japan OMRON)
	Voltage of power supply for sensors(V)	DC5 ~ 24V ± 10%
	Control output	NPN open collector output DC5 ~ 24V 8mA or less Residual voltage 0.3V or less(when load current is 2mA)
	Status of output ports	output OFF when sensor is blocked
Maximum load capacity	Horizontal direction(Kg)	8
	Vertical direction(Kg)	3
	Inverted direction(Kg)	4

*Note: Highest speed is measured under zero-load conditions with the motor running at 600 RPM.

Dimensions:

LAK20-60

