

Thin Long Travel Stage

Stage Size 80 × 80 mm / 120 × 120 mm

KLSA/KLSS

RoHS

Designed for high stiffness while minimizing the height of the stage.



- Four linear guide blocks are located at optimal positions to improve positional repeatability.
- For lower cost, the KLSA has an aluminum body. For maximum rigidity, the KLSS has a steel body.

Guide

- ▶ Please contact us when assembled into XYZ axis or use in reversion on the ceiling or vertical direction.
- ▶ Opposite model or various motor changes are optionally available.
Reference G030

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motorized Stages

Light Sources & Laser Safety

Index

Guide

Controllers/Drivers

Softwares

Stepping Motor

AC Servo Motor

Cables

Piezo

X Translation

Theta Rotation

Goniometer

Vacuum

Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

Specifications

Part Number		KLSA-100X-0B	KLSS-100X-0B	KLSA-200X-0B	KLSS-200X-0B	
Mechanical Specifications	Travel [mm]	100	100	200	200	
	Stage Size [mm]	80×80	80×80	120×120	120×120	
	Feed Screw	Ball screw diameter ϕ 8mm, 2mm lead	Ball screw diameter ϕ 8mm, 2mm lead	Ball screw diameter ϕ 10mm, 5mm lead	Ball screw diameter ϕ 10mm, 5mm lead	
	Positioning Slide	Liner guide	Liner guide	Liner guide	Liner guide	
	Stage Material	Aluminum	Steel	Aluminum	Steel	
	Finish	Black anodized	Black chromium oxide	Black anodized	Black chromium oxide	
	Weight [kg]	2.2	3.5	5.1	7.7	
Accuracy Specifications	Resolution	(Full) [μ m/pulse]	4	4	10	10
		(Half) [μ m/pulse]	2	2	5	5
	MAX Speed [mm/sec]	30	30	50	50	
	Positioning Accuracy [μ m]	15	15	20	20	
	Positional Repeatability [μ m]	\pm 1	\pm 1	\pm 1	\pm 1	
	Load Capacity [N]	147 (15kgf)	147 (15kgf)	294 (30kgf)	294 (30kgf)	
	Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.05	0.05	0.02	0.02
		Yaw [$^{\circ}$ /N·cm]	0.05	0.05	0.02	0.02
		Roll [$^{\circ}$ /N·cm]	0.1	0.1	0.02	0.02
	Lost Motion [μ m]	4	4	4	4	
	Backlash [μ m]	1	1	1	1	
	Parallelism [μ m]	50	50	50	50	
	Orthogonality of Motion [μ m]	10	10	10	10	
	Pitch [$^{\circ}$] / Yaw [$^{\circ}$]	20/15	20/15	40/20	40/20	
Sensor	Sensor Part Number	Micro photo sensor: PM-L25 (SUNX Co.,Ltd.): Limit sensor, origin sensor				
	Limit Sensor	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Origin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	
	Proximity Origin Sensor	None	None	None	None	

Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)
	Motor Part Number	PK545-NBW (□42mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 - 24V \pm 10%
	Current Consumption	45mA or lower (15mA or lower per sensor)
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	In the case of light shielded ,output transistor OFF (No conduction): Limit sensor In the case of light shielded ,output transistor ON (Conduction): Origin sensor

Compatible Driver / Controller

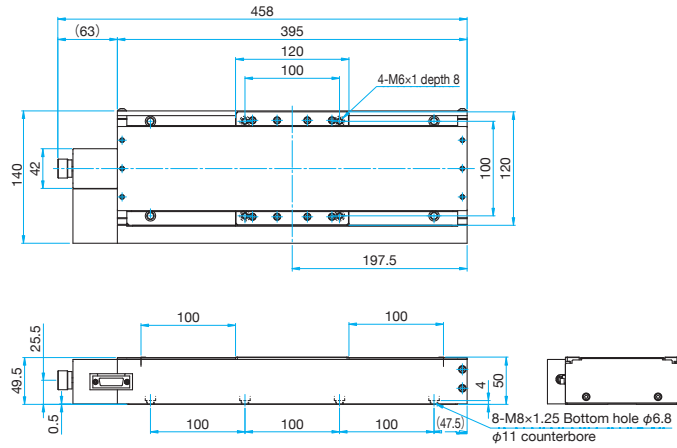
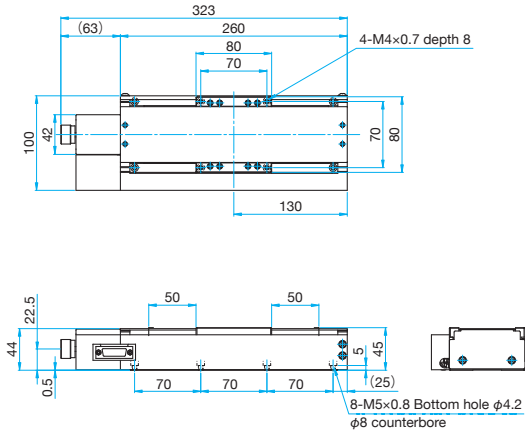
Control System	Compatible Driver	MC-S0514ZU, SG-514MSC, MC-7514PCL
	Compatible Controller	HSC-103, SHOT-302GS, SHOT-304GS, HIT-M-HIT-S, PGC-04-U



Outline Drawing

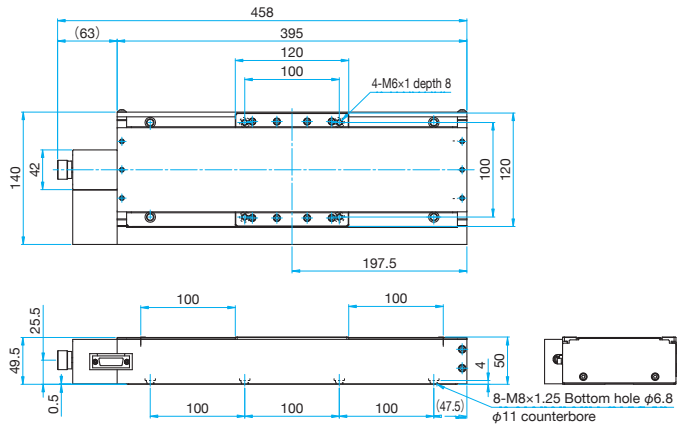
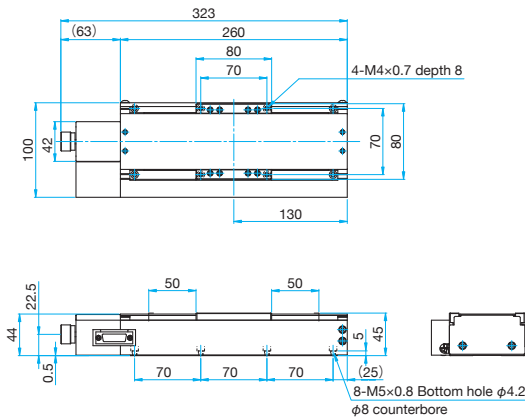
KLSS-100X-0B Hexagon socket head cap screw M4×10...8 screws

KLSS-200X-0B Hexagon socket head cap screw M6×12...8 screws

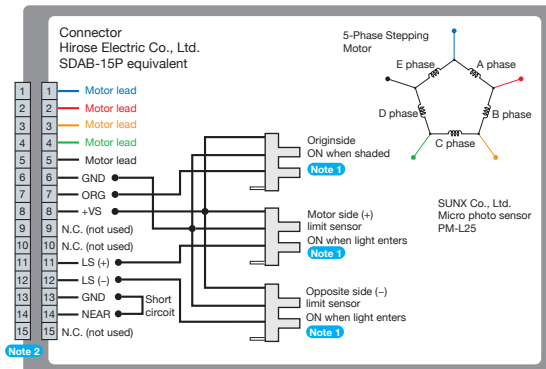


KLSS-100X-0B Hexagon socket head cap screw M4×10...8 screws

KLSS-200X-0B Hexagon socket head cap screw M6×12...8 screws

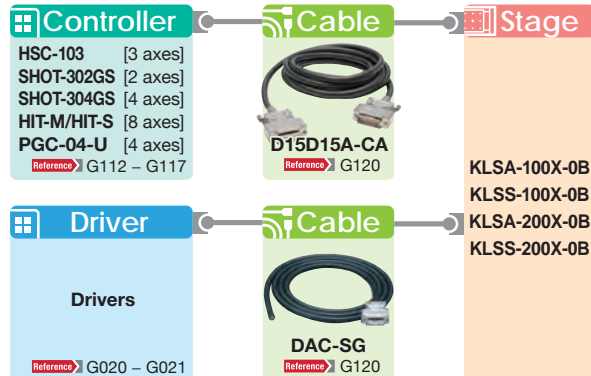


Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.
 Motorized stages are not fitted with origin and proximity origin sensors.
Note 2 Compatible cable connector: DDK Ltd. 17JE-13150

Compatible Controllers / Drivers and Cables



Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Guide

Controllers/Drivers

Softwares

Stepping Motor

AC Servo Motor

Cables

Piezo

X Translation

Theta Rotation

Goniometer

Vacuum

Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others