

Stepping motor driven stages, ideal for positioning of measuring instruments or inspection tools for which high stiffness and high precision are required.



- U-shaped rail offers light weight, and minimized deflection to achieve high stiffness.

Guide

- ▶ Contact our Sales Division if you desire to change motors, etc.
[Reference](#) G017, G123 (Motorized Stage System Question Sheet)
[WEB Reference](#) [Catalog Code](#) W9500
- ▶ Grease change is optionally available.
[Reference](#) G122 [WEB Reference](#) [Catalog Code](#) W9006
- ▶ We will assemble your X axis stage with a newly purchased X axis stage at a separate cost.

Specifications

Part Number		OSMS33-300(X)	OSMS33-500(X)	
Part Number (-M6)		OSMS33-300(X)-M6	OSMS33-500(X)-M6	
Part Number (-INCH)		OSMS33-300(X)-INCH	OSMS33-500(X)-INCH	
Mechanical Specifications	Travel [mm]	300	500	
	Stage Size [mm]	120x120	120x120	
	Feed Screw	Ball screw diameter ϕ 10mm, 10mm lead	Ball screw diameter ϕ 10mm, 10mm lead	
	Positioning Slide	Outer rail structure	Outer rail structure	
	Stage Material	Aluminum	Aluminum	
	Finish	Black anodized	Black anodized	
	Weight [kg]	7.3	10.1	
Accuracy Specifications	Resolution	(Full) [μ m/pulse]	20	20
		(Half) [μ m/pulse]	10	10
	MAX Speed [mm/sec]	120	120	
	Positioning Accuracy [μ m]	25	25	
	Positional Repeatability [μ m]	6	6	
	Load Capacity [N]	196 (20.0kgf)	196 (20.0kgf)	
	Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.12	0.12
		Yaw [$^{\circ}$ /N·cm]	0.08	0.08
		Roll [$^{\circ}$ /N·cm]	0.1	0.1
	Lost Motion [μ m]	5	5	
	Backlash [μ m]	3	3	
	Parallelism [μ m]	50	50	
	Running Parallelism [μ m]	15	25	
	Pitch [$^{\circ}$] / Yaw [$^{\circ}$]	40/25	40/25	
Sensor	Sensor Part Number	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)		
	Limit Sensor	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Origin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	
	Proximity Origin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	

Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)
	Motor Part Number	TS3667N43E967 (□42mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 - 24V±10%
	Current Consumption	80mA or lower (20mA or lower per sensor)
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF (no conduction) : Limit Sensor When shaded: Output transistor ON (conduction): Origin sensor, Proximity Origin Sensor

Compatible Driver / Controller

Control System	Compatible Driver	MC-S0514ZU, SG-514MSC, MC-7514PCL
	Compatible Controller	SHOT-702, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U

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Options

40 x 40 mm

60 x 60 mm

80 x 80 mm

85 x 85 mm

100 x 100 mm

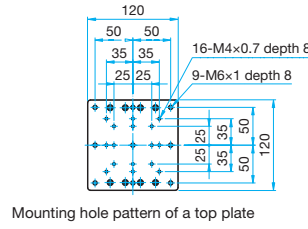
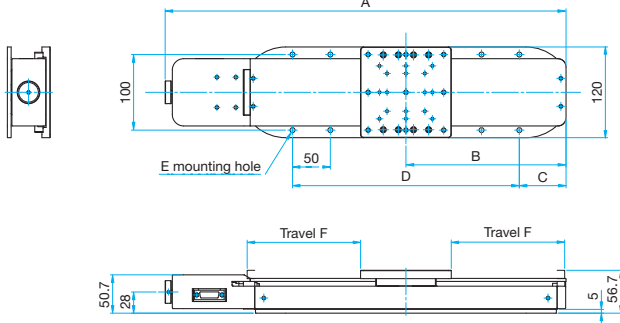
120 x 120 mm

Others



Outline Drawing

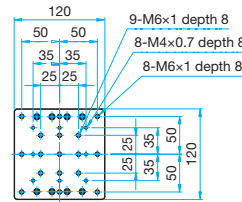
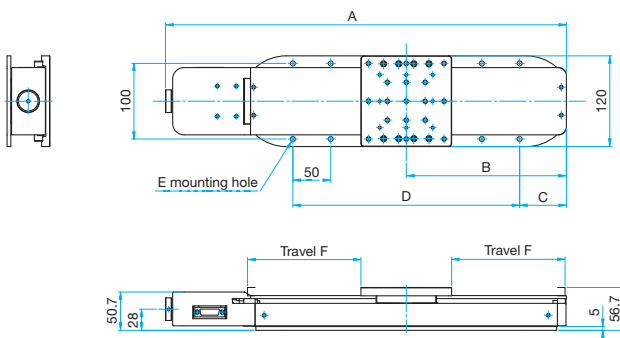
OSMS33-*(X) Hexagon socket head cap screw M6x12...14 screws (300)
Hexagon socket head cap screw M6x12...22 screws (500)



Mounting hole pattern of a top plate

Part Number	A	B	C	D	E	F
OSMS33-300(X)	530.3	211.8	61.8	300 (50x6)	14-φ6.5	150
OSMS33-500(X)	730.3	311.8	61.8	500 (50x10)	22-φ6.5	250

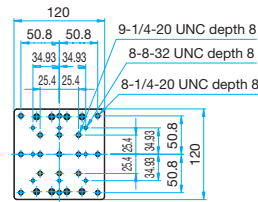
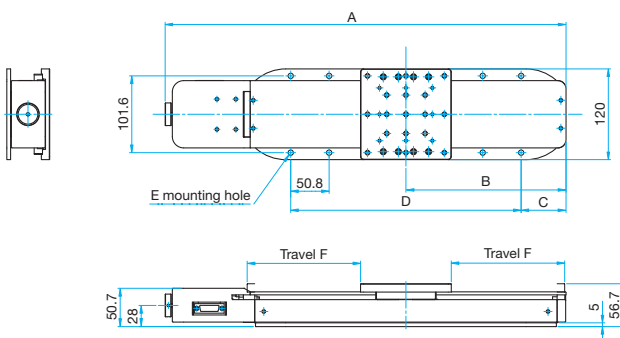
OSMS33-*(X)-M6 Hexagon socket head cap screw M6x12...14 screws (300)
Hexagon socket head cap screw M6x12...22 screws (500)



Mounting hole pattern of a top plate

Part Number	A	B	C	D	E	F
OSMS33-300(X)-M6	530.3	211.8	61.8	300 (50x6)	14-φ6.5	150
OSMS33-500(X)-M6	730.3	311.8	61.8	500 (50x10)	22-φ6.5	250

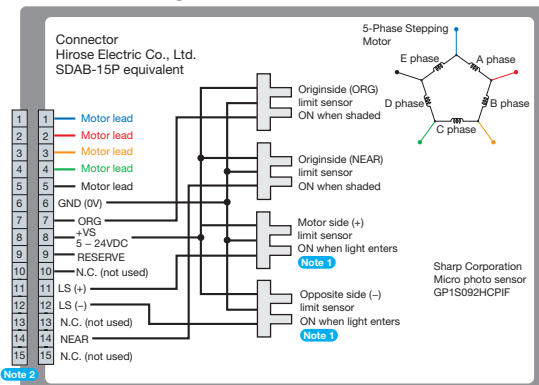
OSMS33-*(X)-INCH Hexagon socket head cap screw 1/4-20UNCx1/2...14 screws (300)
Hexagon socket head cap screw 1/4-20UNCx1/2...22 screws (500)



Mounting hole pattern of a top plate

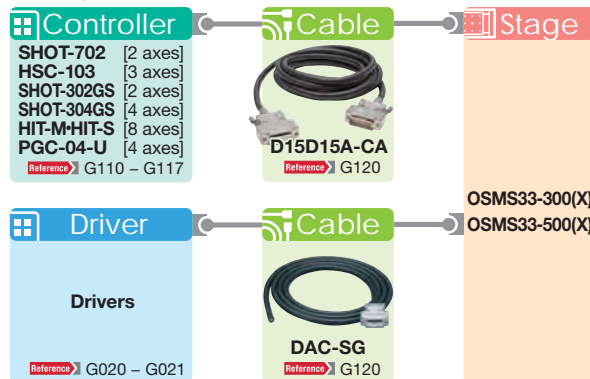
Part Number	A	B	C	D	E	F
OSMS33-300(X)-INCH	530.3	211.8	59.4	304.8 (50.8x6)	14-φ7	150
OSMS33-500(X)-INCH	730.3	311.8	57.8	508 (50.8x10)	22-φ7	250

Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.
Note 2 Compatible cable connector: DDK Ltd. 17JE-13150

Compatible Controllers / Drivers and Cables



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