

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(XY)	OSMS33-500(XY)
Part Number (-M6)			OSMS33-300(XY)-M6	OSMS33-500(XY)-M6
Part Number (-INCH)			OSMS33-300(XY)-INCH	OSMS33-500(XY)-INCH
Mechanical Specifications	Travel [mm]		300	500
	Stage Size [mm]		120×120	120×120
	Feed Screw		Ball screw diameter φ10mm, 10mm lead	Ball screw diameter φ10mm, 10mm lead
	Positioning Slide		Outer rail structure	Outer rail structure
	Stage Material		Aluminum	Aluminum
	Finish		Black anodized	Black anodized
	Weight [kg]		14.0	17.2
Accuracy Specifications	Resolution	(Full) [μm/pulse]	20	20
		(Half) [μm/pulse]	10	10
	MAX Speed [mm/sec]		80	80
	Load Capacity [N]		156 (16.0kgf)	156 (16.0kgf)
	Backlash [μm]		3	3
	Orthogonality of Motion [μm]		10	10
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 $\pm$ 10%
	Current Consumption	160mA or lower (80mA or lower a per axis 20mA or lower per a 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

(Reference) Precision Specifications of Single Axis Stage

Part Number		OSMS33-300(X)	OSMS33-500(X)
Accuracy Specifications	Positioning Accuracy [μ m]	25	20
	Positional Repeatability [μ m]	6	6
	Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.12
		Yaw [$^{\circ}$ /N·cm]	0.08
		Roll [$^{\circ}$ /N·cm]	0.1
	Lost Motion [μ m]	5	5
	Parallelism [μ m]	50	50
	Running Parallelism [μ m]	15	25

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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40 x 40 mm

60 x 60 mm

80 x 80 mm

85 x 85 mm

100 x 100 mm

120 x 120 mm

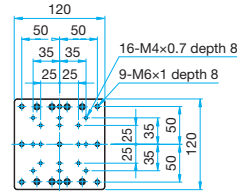
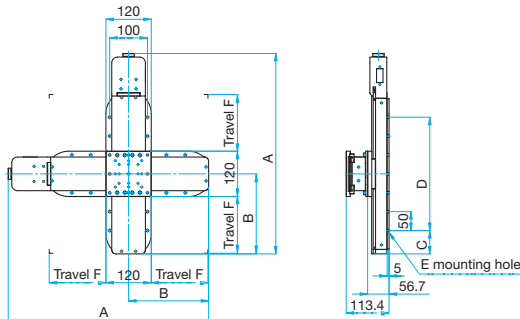
Others



Outline Drawing

OSMS33-*(XY)

- Hexagon socket head cap screw M6×12...14 screws (300)
Hexagon socket head cap screw M6×12...22 screws (500)

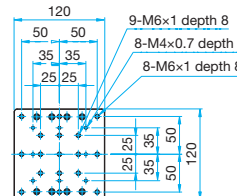
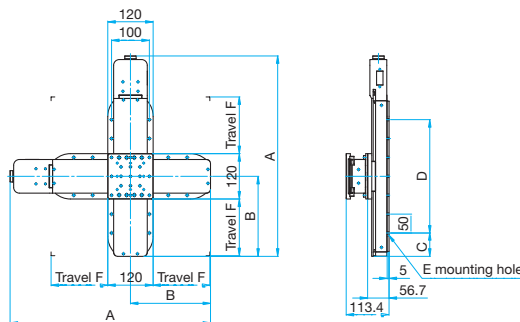


Mounting hole pattern of a top plate

Part Number	A	B	C	D	E	F
OSMS33-300(XY)	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS33-500(XY)	730.3	311.8	61.8	500 (50×10)	22-φ6.5	250

OSMS33-*(XY)-M6

- Hexagon socket head cap screw M6×12...14 screws (300)
Hexagon socket head cap screw M6×12...22 screws (500)

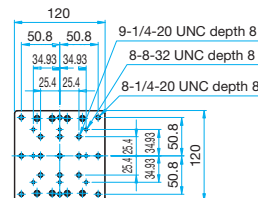
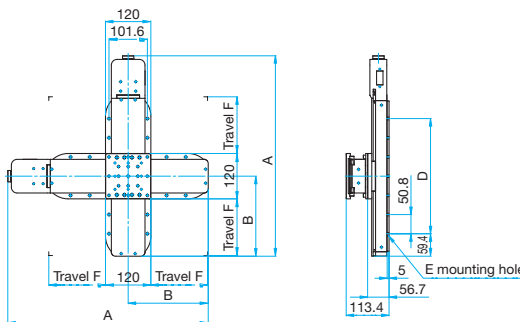


Mounting hole pattern of a top plate

Part Number	A	B	C	D	E	F
OSMS33-300(XY)-M6	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS33-500(XY)-M6	730.3	311.8	61.8	500 (50×10)	22-φ6.5	250

OSMS33-*(XY)-INCH

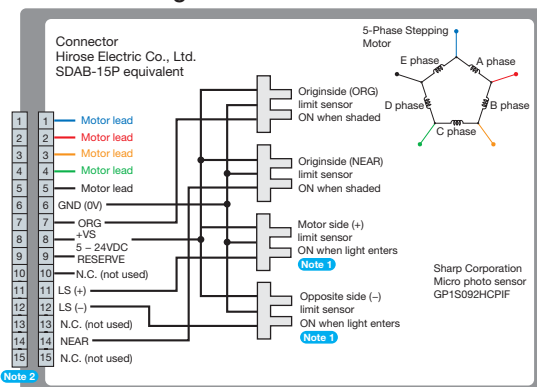
- Hexagon socket head cap screw 1/4-20UNC×1/2...14 screws (300)
Hexagon socket head cap screw 1/4-20UNC×1/2...22 screws (500)



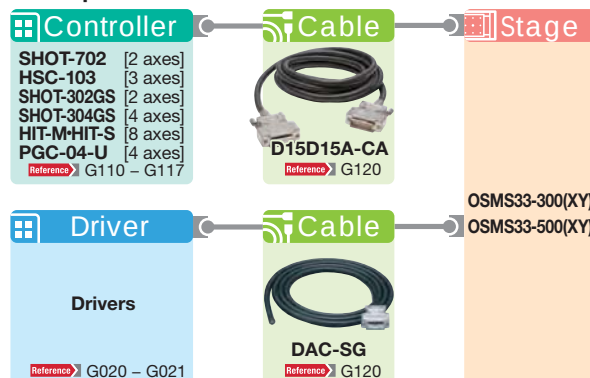
Mounting hole pattern of a top plate

Part Number	A	B	C	D	E	F
OSMS33-300(XY)-INCH	530.3	211.8	59.4	304.8 (50.8×6)	14-φ7	150
OSMS33-500(XY)-INCH	730.3	311.8	57.8	508 (50.8×10)	22-φ7	250

Connection Diagram



Compatible Controllers / Drivers and Cables



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