

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(Z)	OSMS33-500(Z)
Part Number (-M6)			OSMS33-300(Z)-M6	OSMS33-500(Z)-M6
Part Number (-INCH)			OSMS33-300(Z)-INCH	OSMS33-500(Z)-INCH
Mechanical Specifications	Travel [mm]		300	500
	Stage Size [mm]		120×120	120×120
	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]		14.5	17.3
Accuracy Specifications	Resolution	(Full) [μ m/pulse]	20	20
		(Half) [μ m/pulse]	10	10
	MAX Speed [mm/sec]		30	30
	Positioning Accuracy [μ m]		50	50
	Positional Repeatability [μ m]		6	6
	Load Capacity [N]		58.8 (6.0kgf)	58.8 (6.0kgf)
	Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.2	0.2
		Yaw [$^{\circ}$ /N·cm]	0.15	0.15
		Roll [$^{\circ}$ /N·cm]	0.15	0.15
	Lost Motion [μ m]		5	5
	Backlash [μ m]		3	3
	Orthogonality of Motion [μ m]		30	35
	Pitch [$^{\circ}$] / Yaw [$^{\circ}$]		50/25	55/25
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	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 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

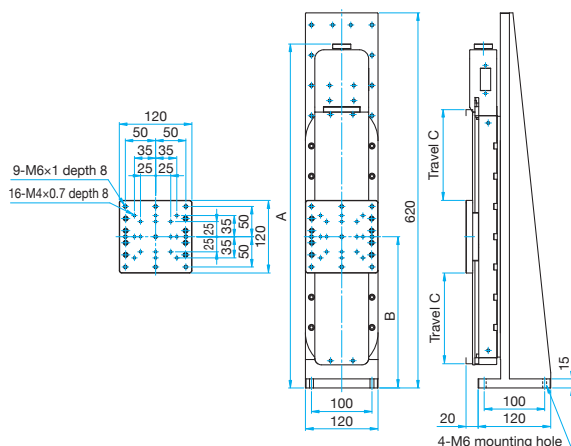
120 × 120 mm

Others



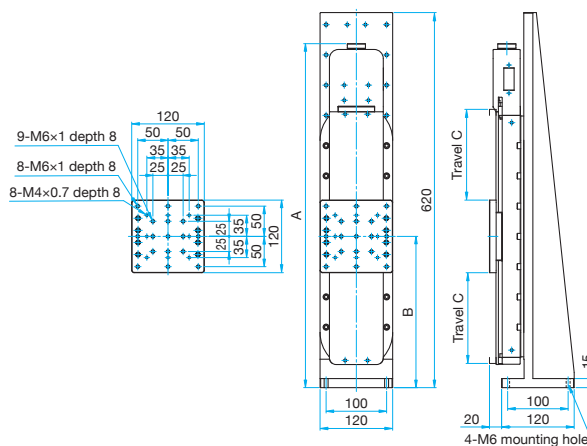
Outline Drawing

OSMS33-*(Z) Hexagon socket head cap screw M6x22...4 screws



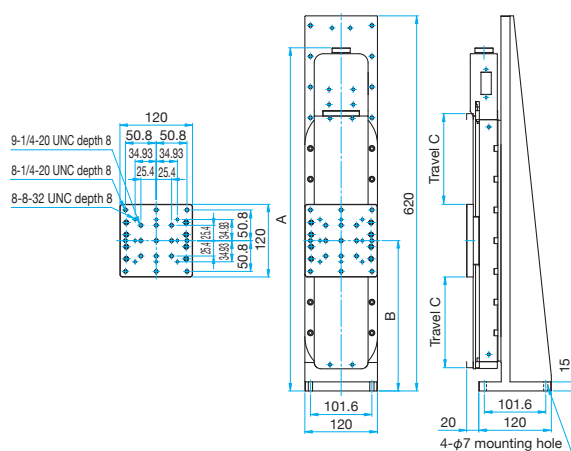
Part Number	A	B	C
OSMS33-300(Z)	568.5	250	150
OSMS33-500(Z)	768.5	350	250

OSMS33-*(Z)-M6 Hexagon socket head cap screw M6x22...4 screws



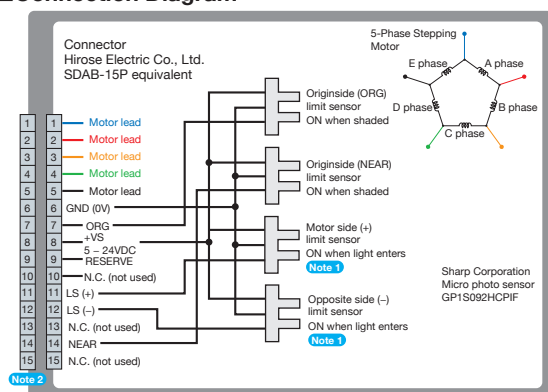
Part Number	A	B	C
OSMS33-300(Z)-M6	568.5	250	150
OSMS33-500(Z)-M6	768.5	350	250

OSMS33-*(Z)-INCH Hexagon socket head cap screw 1/4-20UNCx7/8...4 screws



Part Number	A	B	C
OSMS33-300(Z)-INCH	568.5	248.4	150
OSMS33-500(Z)-INCH	768.5	350	250

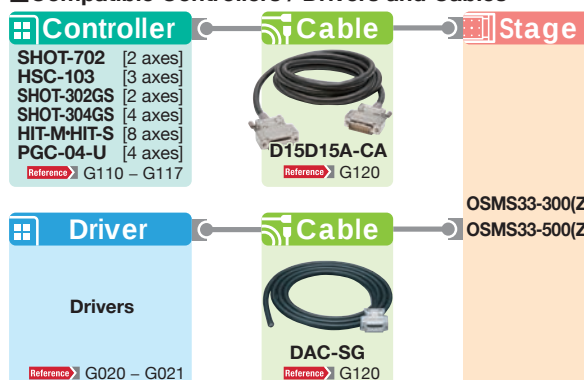
Connection Diagram



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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