

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		OSMS20-35(X)	OSMS20-85(X)	
Part Number (-M6)		OSMS20-35(X)-M6	OSMS20-85(X)-M6	
Part Number (-INCH)		OSMS20-35(X)-INCH	OSMS20-85(X)-INCH	
Mechanical Specifications	Travel [mm]	35	85	
	Stage Size [mm]	85x85	85x85	
	Feed Screw	Ball screw diameter ϕ 6mm, 1mm lead	Ball screw diameter ϕ 6mm, 1mm lead	
	Positioning Slide	Outer rail structure	Outer rail structure	
	Stage Material	Aluminum	Aluminum	
	Finish	Black anodized	Black anodized	
	Weight [kg]	1.1	1.3	
Accuracy Specifications	Resolution	(Full) [μ m/pulse]	2	2
		(Half) [μ m/pulse]	1	1
	MAX Speed [mm/sec]	25	25	
	Positioning Accuracy [μ m]	5	10	
	Positional Repeatability [μ m]	3	3	
	Load Capacity [N]	78.4 (8.0kgf)	78.4 (8.0kgf)	
	Moment Stiffness	Pitch [$^{\circ}$ /N \cdot cm]	0.4	0.4
		Yaw [$^{\circ}$ /N \cdot cm]	0.25	0.25
		Roll [$^{\circ}$ /N \cdot cm]	0.35	0.35
	Lost Motion [μ m]	3	3	
	Backlash [μ m]	3	3	
	Parallelism [μ m]	30	30	
	Running Parallelism [μ m]	10	10	
	Pitch [$^{\circ}$] / Yaw [$^{\circ}$]	30/20	30/20	
Sensor	Sensor Part Number	Micro photo sensor : GP1S097HCZ0F (Sharp Corporation)	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	None	Equipped (NORMAL OPEN)	

Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)	
	Motor Part Number	TS3664N4E10 (□24mm)	
	Step Angle	0.72 $^{\circ}$	
Sensor	Power Voltage	DC5 - 24V \pm 10%	
	Current Consumption	60mA or lower (20mA or lower per sensor)	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-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL
	Compatible Controller	GSC-01, GSC-02, SHOT-702, GIP-101, 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

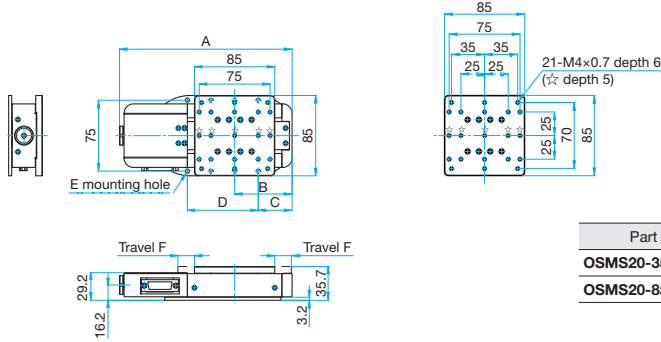
120 x 120 mm

Others



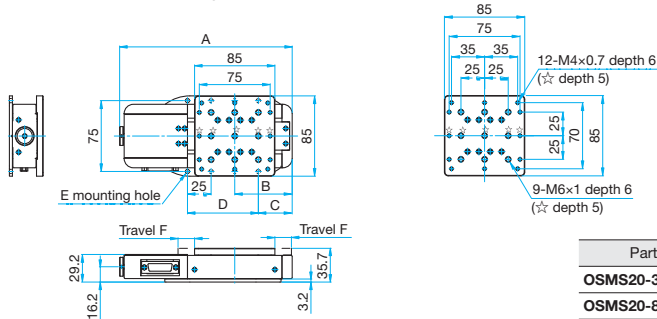
Outline Drawing

OSMS20-*(X) Hexagon socket head cap screw M4x8...8 screws (35)
Hexagon socket head cap screw M4x8...10 screws (85)



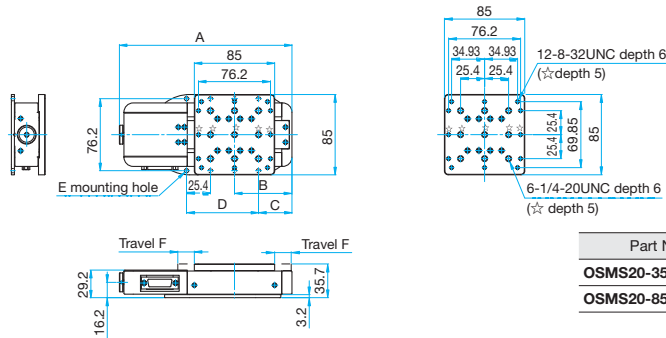
Part Number	A	B	C	D	E	F
OSMS20-35(X)	182.6	60.8	35.8	75 (25x3)	8-φ4.5	17.5
OSMS20-85(X)	232.6	85.8	35.8	100 (25x4)	10-φ4.5	42.5

OSMS20-*(X)-M6 Hexagon socket head cap screw M4x8...8 screws (35)
Hexagon socket head cap screw M4x8...10 screws (85)



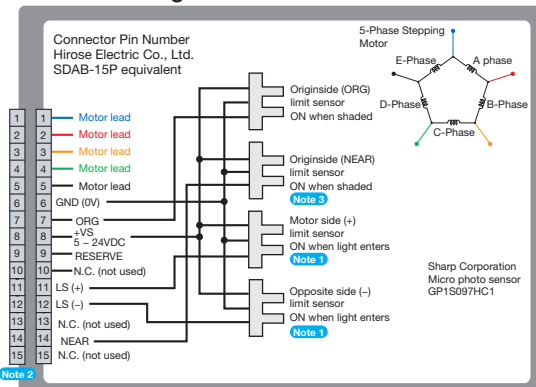
Part Number	A	B	C	D	E	F
OSMS20-35(X)-M6	182.6	60.8	35.8	75 (25x3)	8-φ4.5	17.5
OSMS20-85(X)-M6	232.3	85.8	35.8	100 (25x4)	10-φ4.5	42.5

OSMS20-*(X)-INCH Hexagon socket head cap screw 8 / 32UNCx5 / 16...8 screws (35)
Hexagon socket head cap screw 8 / 32UNCx5 / 16...10 screws (85)



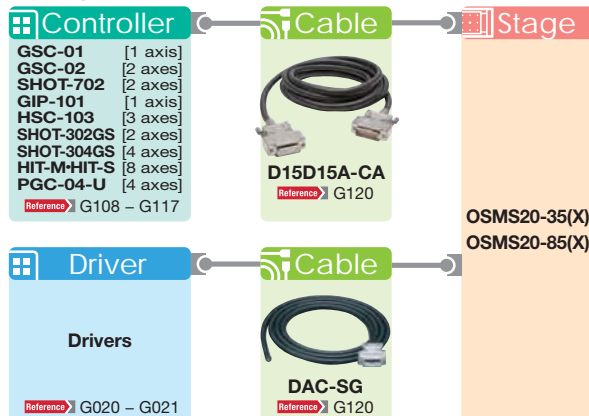
Part Number	A	B	C	D	E	F
OSMS20-35(X)-INCH	182.6	60.8	35.4	76.2(25.4x3)	8-φ4.5	17.5
OSMS20-85(X)-INCH	232.6	85.8	35	101.6(25.4x4)	10-φ4.5	42.5

Connection Diagram



- Note 1** The motor side limit sensor is the + direction limit sensor.
- Note 2** Compatible cable connector: DDK Ltd. 17JE-13150
- Note 3** OSMS20-35 is not fitted with proximity origin sensor. 6 and 14P are short-circuited

Compatible Controllers / Drivers and Cables



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