

High Performance Motorized Stages Stage Size 60 × 60 mm / 100 × 80 mm / 120 × 120 mm

HPS





Motorized stages with ball screws and extended contact bearings offer mid to upper level performance at a low price.



- Ball screws improve durability compared to the existing lead screw driven TSDM series.
- Extended contact ball guides make it possible to offer a price lower than the crossed roller guide TAMM series.

Guide

- ▶ Please contact us when assembled into XYZ axis or mounted upside down on the ceiling or vertically on wall.
- ▶ Opposite model or various motor changes are optionally available. **G030**



Specification	ons				
Part Number			HPS60-20X-M5	HPS80-50X-M5	HPS120-60X-M5
	Travel [mm]		20	50	60
	Stage Size	[mm]	60×60	100×80	120×120
Mechanical	Feed Screw		Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead
Specifications	Positioning	Slide	Ball guide	Ball guide	Ball guide
	Stage Mate	erial	Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized
	Weight [kg]		0.6	1	1.5
	Resolution	(Full) [µm/pulse]	2	2	2
		(Half) [µm/pulse]	1	1	1
	MAX Speed [mm/sec]		10	10	10
	Positioning Accuracy [µm]		15	25	25
	Positional Repeatability [µm]		±1	±2	±2
	Load Capacity [N]		49 (5kgf)	73 . 5 (7 . 5kgf)	98 (10kgf)
Accuracy		Pitch ["/N·cm]	0.4	0.5	0.5
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.4	0.5	0.5
	0	Roll ["/N·cm]	0.3	0.2	0.2
	Lost Motion	n [µm]	1	2	2
	Backlash [µ	ım]	1	2	2
	Parallelism	[µm]	30	40	50
	Running Pa	rallelism [µm]	10	10	10
	Pitch ["] / Y	'aw [″]	25/25	30/25	30/25
	Sensor Par	t Number	Micro p	hoto sensor: GP1S097HCZ(Sharp Cor	poration)
0	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Sensor	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity C	rigin Sensor	None	None	None

Motor /	Sensor Specifications				
	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)			
Motor	Motor Part Number	PK523HPB-C12 (□28mm)			
	Step Angle	0.72°			
	Power Voltage	DC5 - 24V ±10%			
	Current Consumption	60mA or lower (20mA or lower per sensor)			
Sensor	Control Output	NPN open collector output DC30V or Iower, 50mA When load current is 16mA, the residual voltage is under 0.4V When load current is 50mA, the residual voltage is under 0.7V			
	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	SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL				
Control System	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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Vacuum **Options**

40 × 40 mm 60 × 60 mm

80 × 80 mm

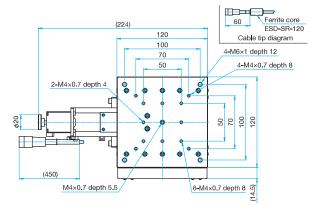
85 × 85 mm

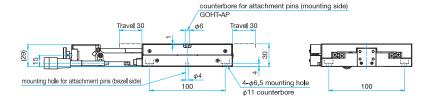
100 × 100 mm 120 × 120 mm



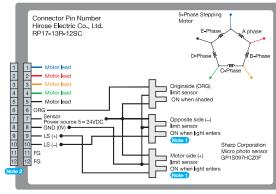


Outline Drawing HPS80-50X-M5 Hexagon socket head cap screw M4×12...4 screws (199)60 Ferrite core ESD-SR-120 60 Ferrite core ESD-SR-120 4-M4×0.7 depth 8 60 70 6-M4×0.7 depth 8 50 32 50 Cable tip diagram Cable tip diagram 6-M4×0.7 depth 8 4-M3×0.5 depth 6 0 0 00 ₫ 8 2 3 9 2 8 \blacksquare 2-M4×0.7 depth 4 шд 0 % M4×0.7 depth 5 (450)(450)M4×0.7 depth 5.5 2-M4×0.7 depth 4 counterbore for attachment pins (mounting side) GOHT-AP counterbore for attachment pins (mounting side) GOHT-AP φ6 Travel 25 Travel 10 φ6 Travel 10 Travel 25 φ6 φ4 4-φ4.5 mounting hole 50 mounting hole for attachment pins (bezel side) mounting hole for attachment pins (bezel side 50 70 φ8 counterbore φ4.5 mounting hole φ8 counterbore





■Connection Diagram



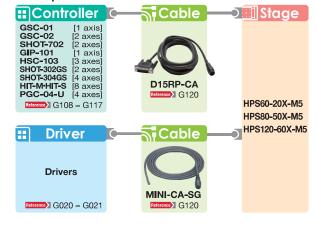
Note 1 The motor side limit sensor is the + direction limit sensor.

Motorized stages are not fitted with proximity origin sensors.

Compatible cable connector:

Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122

■Compatible Controllers / Drivers and Cables



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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

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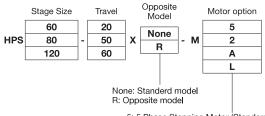
40 × 40 mm

60 × 60 mm 80 × 80 mm 85 × 85 mm 100 × 100 mm

120 × 120 mm Others

Specification Method of Option Code

■Option Code



- 5: 5 Phase Stepping Motor (Standard model)
- 2: 2 Phase Motor with DriverA: α-step Motor with Driver. Cable

Guide

- ▶ Please contact us when assembled into XYZ axis or use in reversion on the ceiling or vertical direction.
- ▶ Replacement with electromagnetic brakes or grease change is also available. Contact our Sales Division for more information.

■Example of Code Specification

HPS60-20X -M

■Features of Options

	-			
2 Phase Motor with Driver	It can reduce the total cost because a driver is equipped. On the other hand, precision is inferior to 5 phase motors.			
α Stepping Motor with Driver	Can be replaced with an a stepping motor with driver which can move fast. The motor also has built-in encoder.			
No Motor	No Motor Provide a stage without motor because the customer mounts own motor. Note that mounting and adjustment of a motor requires specialized skills.			



Specification	ons (ex. H	PS60-20X)			
Part Number			C€ HPS60-20X-M2	C€ HPS60-20X-MA	HPS60-20X-ML
	Travel [mm]		20	20	20
	Stage Size	[mm]	60×60	60×60	60×60
Mechanical	Feed Screw	ı	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead
Specifications	Positioning	Slide	Ball guide	Ball guide	Ball guide
	Stage Mate	rial	Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized
	Weight [kg]		0.6	1	0.6
	Resolution	(Full) [µm/pulse]	5	2 (500P/R)	_
	Resolution	(Half) [µm/pulse]	2.5	1 (1000P/R)	_
	MAX Speed [mm/sec]		20	40	_
	Positioning Accuracy [µm]		15	15	_
	Positional Repeatability [µm]		±2	±0.5	_
	Load Capacity [N]		49 (5kgf)	49 (5kgf)	49 (5kgf)
Accuracy	Moment Stiffness	Pitch ["/N·cm]	0.4	0.4	0.4
Specifications		Yaw ["/N·cm]	0.4	0.4	0.4
		Roll ["/N·cm]	0.3	0.3	0.3
	Lost Motion [µm]		1	1	_
	Backlash [µ	ım]	1	1	1
	Parallelism	[µm]	30	30	30
	Running Pa	rallelism [µm]	10	10	10
	Pitch ["] / Y	aw ["]	25/25	25/25	25-25
	Sensor Par	t Number	Micro photo sensor: GP1S097HCZ (Sharp Corporation)	Micro photo sensor: GP1S097HCZ (Sharp Corporation)	Micro photo sensor: GP1S097HCZ (Sharp Corporation)
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity C	rigin Sensor	None	None	None

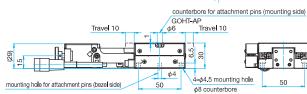
Motor / S	Sensor Specifications					
	Туре	2-phase stepping motor (Oriental Motor Co., Ltd.) 2 phase stepping motor (Oriental Motor Co., Ltd.)		(No motor)		
Motor	Motor Part Number	PKP223D15B (□28mm)	ARM26SBK (□28mm)	_		
	Step Angle	1.8°	0.72°(500P/R)	_		
Driver	Part Number	A8576-0415Y	ARD-K	_		
Driver	Power input	DC24V±10% 1A	DC24V ±10% 0.9A	_		
	Power Voltage	Power Voltage DC5 – 24V ±10%				
	Current Consumption	60mA or lower (20mA or lower per sensor)				
Sensor	Control Output	NPN open collector output DC30V or lower, 50mA When load current is 16mA, the residual voltage is under 0.4V When load current is 50mA, the residual voltage is under 0.				
	Output Logic		nielded ,output transistor OFF (No con shielded ,output transistor ON (Condu			



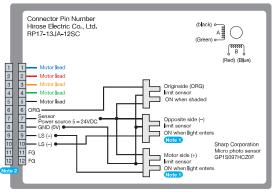




Hexagon socket head cap screw M4×12...4 screws 60 6-M4×0.7 depth 8 50 4-M3×0.5 depth 6 32 8 2 3 2-M4×0.7 depth 4 M4×0.7 depth 5



■Connection Diagram

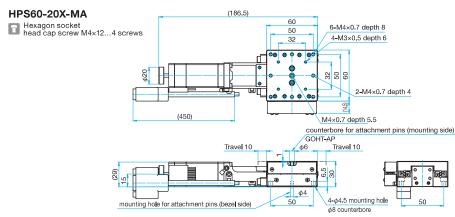


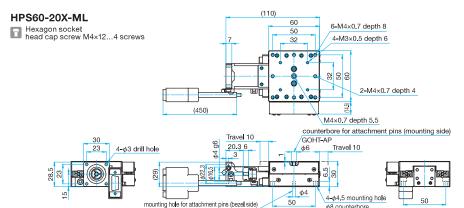
The motor side limit sensor is the + direction limit sensor.

Motorized stages are not fitted with proximity origin sensors.

Compatible cable connector:

Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122





■(Reference) Motor Comparison Table

Section	5 Phase Stepping Motor	2 Phase Stepping Motor	αSTEP Motor
Positioning Accuracy	0	0	0
Minute Feed Accuracy	0	0	0
Speed Stability	0	Δ	0
Heat Generation (Continuous Operation)	0	Δ	0
Max. Speed	0	0	0
Rising Responsiveness	0	0	0

^{*}Rough guide for when the motors are mounted on our motorized stage. (\bigcirc : goodness \bigcirc : standard \triangle : inferior)

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40 × 40 mm 60 × 60 mm 80 × 80 mm 85 × 85 mm 100 × 100 mm 120 × 120 mm Others

G031

Note 1 The motor side limit sensor is the (+) forward direction limit sensor. There is no origin proximity sensor for this motorized stage.

Note 2 Compatible cable connector: JAE Industry, Limited: DE-9P-NR

■Connection Diagram

— LS (+) ◆ — LS (-) ◆

4 LS 5 ORG 6 6 NC 7 NC

Connector Pin Number Japan Aviation Electronics Industry, Ltd. DE-9P-NR

ON when light enters

Originside (ORG)

limit sensor ON when shaded

Sharp Corporation Micro photo senso GP1S097HCZ0F







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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm 120 × 120 mm

Others



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.

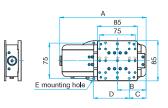
Specification Part Number			OSMS20-35(X)	OSMS20-85(X)
Part Number (-N	16)		OSMS20-35(X)-M6	OSMS20-85(X)-M6
Part Number (-INCH)			OSMS20-35(X)-INCH	OSMS20-85(X)-INCH
Tarriumber (-II	Travel [mm]		35	85
	Stage Size		85×85	85×85
	Feed Screw	· ·	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter ¢6mm, 1mm lead
Mechanical Specifications	Positioning	Slide	Outer rail structure	Outer rail structure
	Stage Mate	rial	Aluminum	Aluminum
	Finish		Black anodized	Black anodized
	Weight [kg]		1.1	1.3
	Resolution	(Full) [µm/pulse]	2	2
		(Half) [µm/pulse]	1	1
	MAX Speed [mm/sec]		25	25
	Positioning	Accuracy [µm]	5	10
	Positional Repeatability [µm]		3	3
	Load Capacity [N]		78.4 (8.0kgf)	78.4 (8.0kgf)
Accuracy	Moment Stiffness	Pitch ["/N·cm]	0.4	0.4
Specifications		Yaw ["/N·cm]	0.25	0.25
		Roll ["/N·cm]	0.35	0.35
	Lost Motion	n [µm]	3	3
	Backlash [µ	m]	3	3
	Parallelism	[µm]	30	30
	Running Pa	rallelism [µm]	10	10
	Pitch ["] / Y	aw [″]	30/20	30/20
	Sensor Part	t Number	Micro photo sensor : GP1S097HCZ0F (Sharp Corporation)	Micro photo sensor: GP1S092HCPIF (Sharp Corporation
0	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Sensor	Origin Sens	or	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity O	rigin Sensor	None	Equipped (NORMAL OPEN)

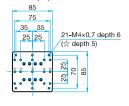
Motor / Sensor Specifications							
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)					
Motor	Motor Part Number	TS3664N4E10 (□24mm)					
	Step Angle	0.72°					
	Power Voltage	DC5 - 24V±10%					
	Current Consumption	60mA or lower (20mA or lower per sensor) 80mA or lower (20mA or lower per sensor)					
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				
Control System	Compatible Controller	GSC-01, GSC-02, SHOT-702, GIP-101, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U				



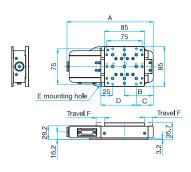
OSMS20-**(X) Hexagon socket head cap screw M4x8...8 screws (35) Hexagon socket head cap screw M4x8...10 screws (85)

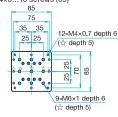




			_		
	Trave	el F			Travel F
29.5	-{		•	•	35.7
16.2				_	3.2

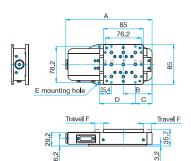
Part Number	Α	В	С	D	Е	F
OSMS20-35(X)	182.6	60.8	35.8	75 (25×3)	8-φ4.5	17.5
OSMS20-85(X)	232.6	85.8	35.8	100 (25×4)	10-φ4.5	42.5

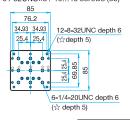




Part Number	Α	В	С	D	E	F
OSMS20-35(X)-M6	182.6	60.8	35.8	75 (25×3)	8-φ4.5	17.5
OSMS20-85(X)-M6	232.3	85.8	35.8	100 (25×4)	10-φ4.5	42.5

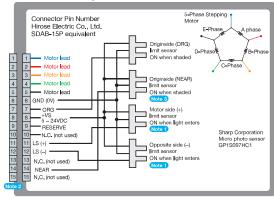
OSMS20-**(X)-INCH Hexagon socket head cap screw 8 / 32UNCx5 / 16...8 screws (35) Hexagon socket head cap screw 8 / 32UNCx5 / 16...10 screws (85)





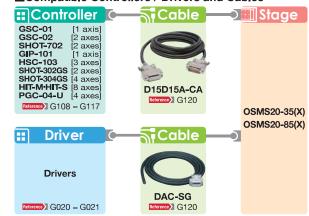
Part Number	A	В	C	D	E	F
OSMS20-35(X)-INCH	182.6	60.8	35.4	76.2(25.4×3)	8-φ4.5	17.5
OSMS20-85(X)-INCH	232.6	85.8	35	101.6(25.4×4)	10-φ4.5	42.5

■Connection Diagram



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

■Compatible Controllers / Drivers and Cables



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40 × 40 mm

60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm



for which high stiffness and high precision are required.





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40 × 40 mm

60 × 60 mm

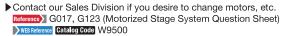
120 × 120 mm

Others

80 × 80 mm 85 × 85 mm 100 × 100 mm • U-shaped rail offers light weight, and minimized deflection to achieve high stiffness.

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Stepping motor driven stages, ideal for positioning of measuring instruments or inspection tools



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.

Specification	ons				
Part Number			OSMS20-35(XY)	OSMS20-85(XY)	
Part Number (-N	16)		OSMS20-35(XY)-M6	OSMS20-85(XY)-M6	
Part Number (-II	VCH)		OSMS20-35(XY)-INCH		
	Travel [mm]		35	85	
	Stage Size	[mm]	85×85	85×85	
	Feed Screw	,	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter ϕ 6mm, 1mm lead	
Mechanical Specifications	Positioning Slide		Outer rail structure	Outer rail structure	
	Stage Material		Aluminum	Aluminum	
	Finish		Black anodized	Black anodized	
	Weight [kg]		2.2	2.6	
	Resolution	(Full) [µm/pulse]	2	2	
	nesolution	(Half) [µm/pulse]	1	1	
Accuracy	MAX Speed	l [mm/sec]	25	25	
Specifications	Load Capa	city [N]	68.6(7.0kgf)	68.6(7.0kgf)	
	Backlash [µ	m]	3	3	
	Orthogonal	ity of Motion [µm]	5	5	
	Sensor Par	Number	Micro photo sensor : GP1S097HCZ0F (Sharp Corporation)	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)	
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
Sellsul	Origin Sens	or	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	
	Proximity C	rigin Sensor	None	Equipped (NORMAL OPEN)	

Motor / Sei	Motor / Sensor Specifications						
	Туре	5-phase stepping motor 0.75A/p	hase (Tamagawa Seiki Co., Ltd.)				
Motor	Motor Part Number	TS3664N4E10 (□24mm)					
	Step Angle	0.72°					
	Power Voltage	DC5 - 24V±10%					
	Current Consumption	120mA or lower (60mA or lower a per axis20mA or lower per a sensor)	160mA or lower (80mA or lower a per axis20mA or lower per a sensor)				
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					

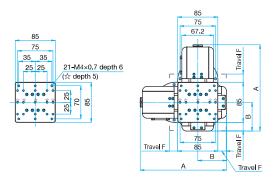
(Reference) Precision Specifications of Single Axis Stage						
Part Number			OSMS20-35(X)	OSMS20-85(X)		
	Positioning	Accuracy [µm]	5	7		
	Positional Repeatability [µm]		3	3		
	Moment Stiffness	Pitch ["/N·cm]	0.4	0.4		
Accuracy		Yaw ["/N·cm]	0.25	0.25		
Specifications		Roll ["/N·cm]	0.35	0.35		
	Lost Motion [µm]		3	3		
	Parallelism	[µm]	30	30		
	Running Pa	arallelism [µm]	10	10		

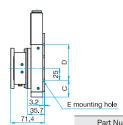
Compatible Driver / Controller					
Control System	Compatible Driver	SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL			
Control System	Compatible Controller	GSC-02, SHOT-702, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M+HIT-S, PGC-04-U			





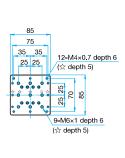
OSMS20-**(XY) Hexagon socket head cap screw M4x8...8 screws (35) Hexagon socket head cap screw M4x8...10 screws (85)

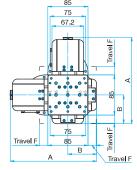


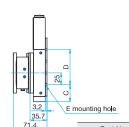


Part Number	Α	В	С	D	Е	F
OSMS20-35(XY)	182.6	60.8	35.8	75 (25×3)	8-φ4.5	17.5
OSMS20-85(XY)	232.6	85.8	35.8	100 (25×4)	10-φ4.5	42.5

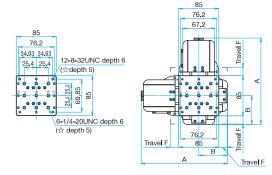
OSMS20-**(XY)-M6 Hexagon socket head cap screw M4x8...8 screws (35) Hexagon socket head cap screw M4x8...10 screws (85)

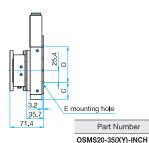






Part Number	Α	В	С	D	E	F	
OSMS20-35(XY)-M6	182.6	60.8	35.8	75 (25×3)	8-φ4.5	17.5	
OSMS20-85(XY)-M6	232.6	85.8	35.8	100 (25×4)	10-φ4.5	42.5	





Connection Diagram

■Connection Diagram	
Connector Pin Number Hirose Electric Co., Ltd. SDAB-15P equivalent 1	5-Phase Stepping Motor E-Phase Originside (ORG) Imit sensor ON when shaded C-Phase Originside (NEAR) Imit sensor ON when shaded (Notes) Motor side (+) Imit sensor ON when light enters (Notes) GP15092HCPIF ON when light enters (Notes) ON when light enters (Notes) OPposite side (-) Imit sensor ON when light enters (Notes) OPposite side (-) Imit sensor ON when light enters (Notes)
15 N.C. (not used)	

te 1) The motor side limit sensor is the + direction limit sensor.

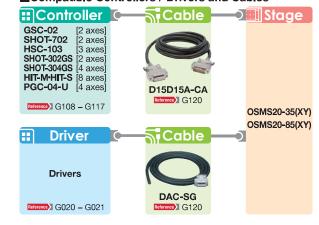
© 2 Compatible cable connector: DDK Ltd. 17JE-13150 3 OSMS20-35 is not fitted with proximity origin sensor. 6 and 14P are short-circuited

■Compatible Controllers / Drivers and Cables

OSMS20-85(XY)-INCH

В С

182.6 60.8 35.4



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76.2(25.4×3) 8-φ4.5 17.5

232.6 85.8 35 101.6(25.4×4) 10-φ4.5 42.5

Theta Rotation

Goniometer

Vacuum **Options**

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm Others





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Options

40 × 40 mm 60 × 60 mm 80 × 80 mm

85 × 85 mm

100 × 100 mm 120 × 120 mm Others

OSMS Series Translation Motorized Stages - 5 Phase Stepping Motor | OSMS20-(Z) Stage Size 85 x 85 mm | RoHS



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.

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▶ 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 WES Reference Catalog Code W9006

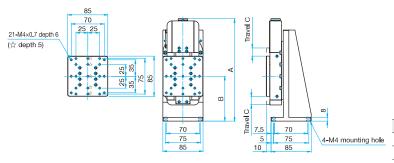
Part Number			OSMS20-35(Z)	OSMS20-85(Z)		
Part Number (-M6)			OSMS20-35(Z)-M6	OSMS20-85(Z))-M6		
Part Number (-II	NCH)		OSMS20-35(Z)-INCH	OSMS20-85(Z)-INCH		
	Travel [mm]		35	85		
	Stage Size	[mm]	85×85	85×85		
	Feed Screw	1	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead		
Mechanical Specifications	Positioning	Slide	Outer rail structure	Outer rail structure		
Орсотовного	Stage Mate	rial	Aluminum	Aluminum		
	Finish		Black anodized	Black anodized		
	Weight [kg]		2.3	2.5		
	Decelution	(Full) [µm/pulse]	2	2		
	Resolution	(Half) [µm/pulse]	1	1		
	MAX Speed [mm/sec]		5	5		
	Positioning Accuracy [µm]		10	20		
	Positional Repeatability [µm]		3	5		
	Load Capacity [N]		29.4 (3.0kgf)*1	29 . 4 (3.0kgf)*1		
Accuracy Specifications	Moment Stiffness	Pitch ["/N·cm]	0.8	0.8		
-,		Yaw ["/N·cm]	0.5	0.5		
		Roll ["/N·cm]	0.7	0.7		
	Lost Motion	n [μm]	3	3		
	Backlash [µ	m]	3	3		
	Orthogonali	ity of Motion [µm]	25	30		
	Pitch ["] / Y	aw [″]	45/20	45/20		
	Sensor Part	Number	Micro photo sensor : GP1S097HCZ0F (Sharp Corporation)	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)		
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)		
Jensur Jensur	Origin Sens	or	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)		
	Proximity O	rigin Sensor	None	Equipped (NORMAL OPEN)		

If you use the controller of ②.

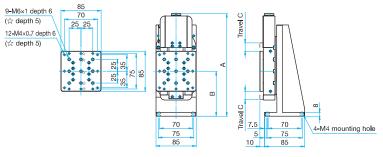
Motor / S	Sensor Specifications						
	Туре	5-phase stepping motor 0.75A/p	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)				
Motor Part Number Step Angle		TS3664N4E10(<u></u> 24mm)					
		0.72°					
	Power Voltage	DC5 - 24V±10%					
	Current Consumption	60mA or lower a per axis (20mA or lower per a sensor)	80mA or lower a per axis (20mA or lower per a sensor)				
Sensor	Control Output	NPN open collector output De	C30V 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	①: SG-5M, SG-5MA ②: MC-S0514ZU, SG-514MSC, MC-7514PCL			
	Compatible Controller	①: GSC-01, GSC-02 ②: SHOT-702, GIP-101, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U			

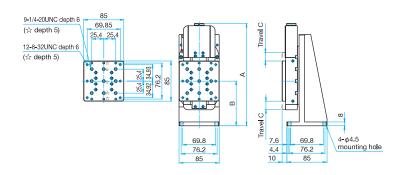




Part Number	А	В	С
OSMS20-35(Z)	216.8	95	17.5
OSMS20-85(Z)	266.8	120	42.5

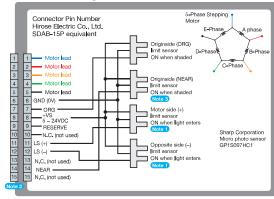


Part Number	А	В	С
OSMS20-35(Z)-M6	216.8	95	17.5
OSMS20-85(Z)-M6	266.8	120	42.5



Part Number	А	В	С
OSMS20-35(Z)-INCH	216.8	94.6	17.5
OSMS20-85(Z)-INCH	266.8	120	42.5

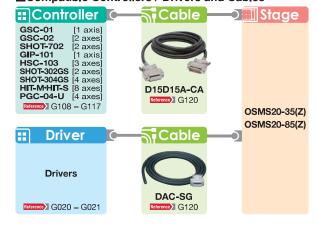
■Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

te 2 Compatible cable connector: DDK Ltd. 17JE-13150
te 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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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm 120 × 120 mm



RoHS

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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm 120 × 120 mm Others

OSMS Series Translation Motorized Stages - 5 Phase Stepping Motor | OSMS20-(XYZ) Stage Size 85 x 85 mm

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.

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▶ 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 WES Reference Catalog Code W9006

Specification	ons				
Part Number			OSMS20-35(XYZ)	OSMS20-85(XYZ)	
Part Number (-M6)			OSMS20-35(XYZ)-M6	OSMS20-85(XYZ)-M6	
Part Number (-II	VCH)		OSMS20-35(XYZ)-INCH		
	Travel [mm]		35	85	
Mechanical Specifications	Stage Size	[mm]	85×85	85×85	
	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]		4.5	5.1	
	Resolution (Full) [µm/pulse] (Half) [µm/pulse]		2	2	
			1	1	
	MAX Speed [mm/sec]		5	5	
Part Number (-M6 Part Number (-INC Mechanical Specifications Accuracy Specifications Sensor	Load Capa	city [N]	29.4 (3.0kgf)*1	29 . 4 (3.0kgf)* ¹	
	Backlash [µ	ım]	3	3	
	Orthogonal	ity of Motion [µm]	5	5	
	Straightnes	s of Motion [µm]	25	30	
	Sensor Par	t Number	Micro photo sensor : GP1S097HCZ0F (Sharp Corporation)	Micro photo sensor: GP1S092HCPIF (Sharp Corporation	
Concor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
3611201	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	
	Proximity C	rigin Sensor	None	Equipped (NORMAL OPEN)	

¹ If you use the Driver of 2.

Motor / S	Sensor Specifications	
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)
Motor	Motor Part Number	TS3664N4E10(□24mm)
	Step Angle	0.72°
	Power Voltage	DC5 - 24V±10%
Sensor	Current Consumption	180mA or lower (60mA or lower a per axis20mA or lower per a sensor) 240mA or lower (80mA or lower a per axis20mA 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

Compatible	Driver / Controller	
Control System -	Compatible Driver	①: SG-5M, SG-5MA ②: SG-514MSC, MC-7514PCL, MC-S0514ZU
	Compatible Controller	HSC-103, SHOT-304GS, HIT-M, HIT-S, PGC-04-U



G Н

42.5 33.3

> G Н

17.5 8.3

42.5 33.3

75 (25×3)

100 (25×4)

F

76.2(25.4×3) 17.5

G Н

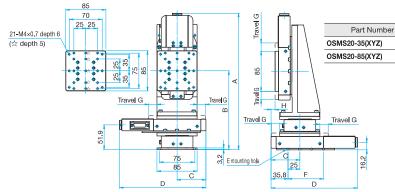
8.3

17.5 8.3

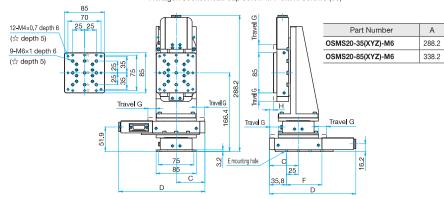
75 (25×3)

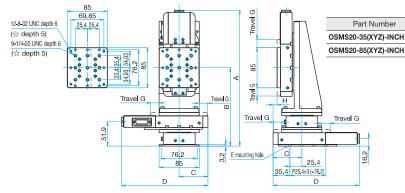
100 (25×4)

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

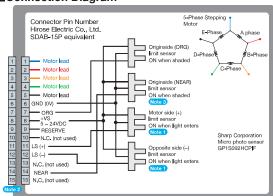


OSMS20-**(XYZ)-M6 Hexagon socket head cap screw M4×8...8 screws (35) Hexagon socket head cap screw M4×8...10 screws (85)





■Connection Diagram



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

3 OSMS20-35 is not fitted with proximity origin sensor. 6 and 14P are short-circuited

■Compatible Controllers / Drivers and Cables

Α В С D Е

287.8

166

В С

Α

288.2

338.2

Е

D

166.4 | 60.8 | 182.6 | 8-φ4.5

191.4 85.8 232.6 10-φ4.5

С

D Ε

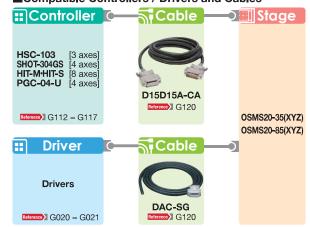
60.8 182.6 8-φ4.5

338.2 | 191.4 | 85.8 | 232.6 | $10-\phi 4.5$ | $101.6 (25.4 \times 4)$ | 42.5 | 33.3

166.4 | 60.8 | 182.6 | 8-φ4.5

191.4 85.8 232.6 10-ø4.5

В



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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Precision Motorized Stages with Built-in Compact Scale | OSMS(CS)20-(X) Stage Size 85 x 85 mm





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

• Includes a compact scale built in while keeping the installation space the same as that of the equivalent open loop OSMS series.

Precision motorized stages with built-in compact optical scales make highly accurate and reliable

full closed loop system using Sigma-Koki controllers (SHOT-302GS/304GS, HIT-M·HIT-S).

▶ Contact our Sales Division for replacement of motors or for stabilizing (drop-preventing) mechanism.

G017, G123 (Motorized Stage System Question Sheet) WEB Reference Catalog Code W9500

Grease change is optionally available.

Reference G122 WES Reference Catalog Code W9006

▶ Contact our Sales Division to use the stage as an XY axis or a Z axis stage.

Specification	ons			
Part Number			OSMS(CS)20-35(X)	OSMS(CS)20-85(X)
Part Number (-N	Part Number (-M6)		OSMS(CS)20-35(X)-M6	OSMS(CS)20-85(X)-M6
Part Number (-I	NCH)		OSMS(CS)20-35(X)-INCH	OSMS(CS)20-85(X)-INCH
	Travel [mm]		35	85
	Stage Size [m	nm]	85×85	85×85
	Feed Screw		Ball screw diameter ø6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead
Mechanical Specifications	Positioning S	lide	Outer rail structure	Outer rail structure
opeomoations	Stage Materia	al	Aluminum	Aluminum
	Finish		Black anodized	Black anodized
	Weight [kg]		1.4	1.6
	Resolution	(Full) [µm/pulse]	2	2
	Resolution	(Half) [µm/pulse]	1	1
	MAX Speed [mm/sec]		25	25
	Positioning Accuracy [µm]		5	10
	Positional Repeatability [µm]		2	2
	Load Capacity [N]		78.4 (8.0kgf)	78.4 (8.0kgf)
Accuracy	Pitch ["/N·cm]		0.4	0.4
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.25	0.25
		Roll ["/N·cm]	0.35	0.35
	Lost Motion [μm]	3	3
	Backlash [µm]	3	3
	Parallelism [µ	m]	30	30
	Running Para	llelism [µm]	10	10
	Pitch ["] / Yav	v [″]	30/20	30/20
	Sensor Part N	lumber	Micro photo sensor : GP1S097HCZ0F (Sharp Corporation)	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)
Sensor	Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
001301	Origin Sensor	•	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity Orig	gin Sensor	None	Equipped (NORMAL OPEN)
Scale head	Resolution [µ	m]	0.5	0.5

Motor / Se	ensor Specifications					
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)				
Motor	Motor Part Number	TS3664N4E	10 (□24mm)			
	Step Angle	0.72°				
Power	Power Voltage	DC5 - 24V±10%				
	Current Consumption	60mA or lower (20mA or lower per sensor)	80mA or lower (20mA or lower per sensor)			
Sensor	Control Output	NPN open collector output DC30V or lower, 50mA or lower				
	Output Logic		OFF (no conduction) : Limit Sensor ction): Origin sensor, Proximity Origin Sensor			
Scale head	Power Voltage / Current Consumption	DC5V±59	% / 50mA			

Compatible	Cable	
Driver Ca	Driver Cable	D15D15A-CA
Cable	Scale Cable	GSEF-CA-3

Compatible	Compatible Driver / Controller					
Control System	Compatible Driver	_				
Control System	Compatible Controller	SHOT-302GS, SHOT-304GS, HIT-M+HIT-S				

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

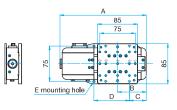
Others

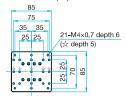
G040

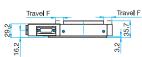




OSMS(CS)20-**(X) Hexagon socket head cap screw M4x8...8 screws (35) Hexagon socket head cap screw M4x8...10 screws (85)

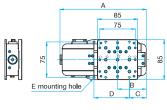


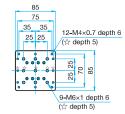


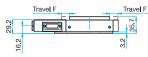


Part Number	Α	В	С	D	Е	F
OSMS(CS)20-35(X)	182.6	60.8	35.8	75 (25×3)	8-φ4.5	17.5
OSMS(CS)20-85(X)	232.6	85.8	35.8	100 (25×4)	10-φ4.5	42.5

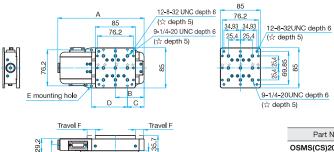
OSMS(CS)20-**(X)-M6 Hexagon socket head cap screw M4x8...8 screws (35) Hexagon socket head cap screw M4x8...10 screws (85)





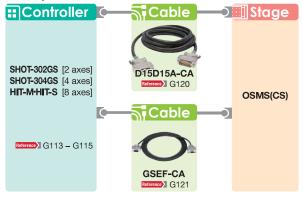


Part Number	Α	В	С	D	Е	F
OSMS(CS)20-35(X)-M6	182.6	60.8	35.8	75 (25×3)	8-φ4.5	17.5
OSMS(CS)20-85(X)-M6	232.6	85.8	35.8	100 (25×4)	10-φ4.5	42.5



Travel F	Travel F							
	<u> </u>	Part Number	Α	В	С	D	E	F
	8.	OSMS(CS)20-35(X)-INCH	182.6	60.8	35.4	76.2 (25.4×3)	8-φ4.5	17.5
	y o	OSMS(CS)20-85(X)-INCH	232.6	85.8	35	101.6 (25.4×4)	10-φ4.5	42.5
-								

■Compatible Controllers / Drivers and Cables



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40 × 40 mm

60 × 60 mm 80 × 80 mm

85 × 85 mm

100 × 100 mm 120 × 120 mm







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40 × 40 mm

60 × 60 mm 80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

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



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

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▶ 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.

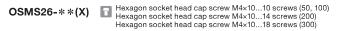
Specification	ons					
Part Number			OSMS26-50(X)	OSMS26-100(X)	OSMS26-200(X)	OSMS26-300(X)
Part Number (-M	16)		OSMS26-50(X)-M6	OSMS26-100(X)-M6	OSMS26-200(X)-M6	OSMS26-300(X)-M6
Part Number (-IN	NCH)		OSMS26-50(X)-INCH	OSMS26-100(X)-INCH	OSMS26-200(X)-INCH	OSMS26-300(X)-INCH
	Travel [mm]		50	100	200	300
	Stage Size (M6, INCH)	[mm]	100×100 (120×120)	100×100 (120×120)	100×100 (120×120)	100×100 (120×120)
Mechanical	Feed Screw	1	Ball screw diameter φ8mm, 2mm lead			
Specifications	Positioning	Slide	Outer rail structure	Outer rail structure	Outer rail structure	Outer rail structure
	Stage Mate	rial	Aluminum	Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized	Black anodized
	Weight [kg]		2.2	2.7	3.8	4.0
	Resolution	(Full) [µm/pulse]	4	4	4	4
	Resolution	(Half) [µm/pulse]	2	2	2	2
	MAX Speed	I [mm/sec]	40	40	40	40
	Positioning Accuracy [µm]		5	10	15	20
	Positional R	Repeatability [µm]	3	3	6	6
	Load Capad	city [N]	117 (12.0kgf)	117 (12.0kgf)	117 (12.0kgf)	117 (12.0kgf)
Accuracy		Pitch ["/N·cm]	0.23	0.23	0.23	0.23
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.12	0.12	0.12	0.12
		Roll ["/N·cm]	0.2	0.2	0.2	0.2
	Lost Motion	ı [µm]	3	3	5	5
	Backlash [µ	m]	3	3	3	3
	Parallelism	[µm]	50	50	50	50
	Running Pa	rallelism [µm]	10	10	10	20
	Pitch ["] / Ya	aw ["]	25/20	25/20	30/25	30/25
	Sensor Part	: Number		Micro photo sensor: GP1S09	92HCPIF (Sharp Corporation))
Sensor	Limit Senso	r	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
	Origin Sens	or	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity O	rigin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

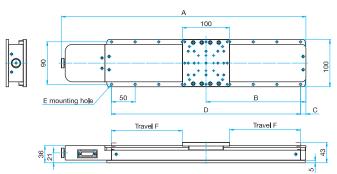
Motor / Sensor Specifications							
	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)					
Motor	Motor Part Number	PK525HPB-C4(_28mm)					
	Step Angle	0.72°					
	Power Voltage	DC5 - 24V±10%					
	Current Consumption	80mA or lower (20mA or lower per sensor)					
Sensor	Control Output	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			





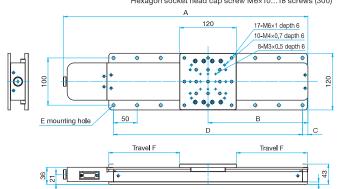


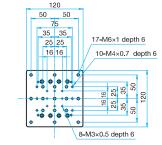


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45	45		
7	5		
35	35	27-M4×0.7	depth 6
25	25	/	
16	16	/	
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		8-M3×0.5 depth 6	3
		o moxo.o dopui o	_

Part Number	Α	В	С	D	E	F
OSMS26-50(X)	267.5	86.5	11.5	150 (25, 50×2, 25)	10-φ4.5	25
OSMS26-100(X)	317.5	111.5	11.5	200 (50×4)	10-φ4.5	50
OSMS26-200(X)	417.5	161.5	11.5	300 (50×6)	14-φ4.5	100
OSMS26-300(X)	517.5	211.5	11.5	400 (50×8)	18-φ4.5	150

OSMS26-**(X)-M6 Rexagon socket head cap screw M6x10...10 screws (50, 100) Hexagon socket head cap screw M6x10...14 screws (200) Hexagon socket head cap screw M6x10...18 screws (300)

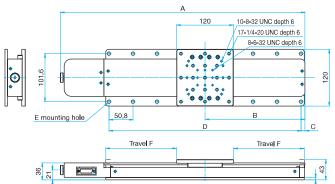


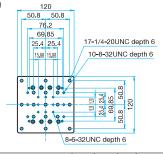


Part Number	Α	В	С	D	Е	F
OSMS26-50(X)-M6	267.5	86.5	11.5	150 (25, 50×2, 25)	$10-\phi 6.5$	25
OSMS26-100(X)-M6	317.5	111.5	11.5	200 (50×4)	10-φ6.5	50
OSMS26-200(X)-M6	417.5	161.5	11.5	300 (50×6)	14-φ6.5	100
OSMS26-300(X)-M6	517.5	211.5	11.5	400(50×8)	18-φ6.5	150

OSMS26-**(X)-INCH

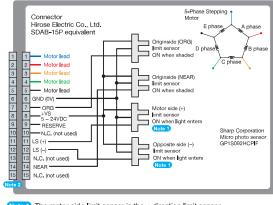
Hexagon socket head cap screw 1/4-20UNC×3/8...10 screws (50, 100)
Hexagon socket head cap screw 1/4-20UNC×3/8...14 screws (200)
Hexagon socket head cap screw 1/4-20UNC×3/8...18 screws (300)





	Part Number	Α	В	С	D	Е	F
0	SMS26-50(X)-INCH	267.5	86.5	10.3	152.4 (25.4, 50.8×2, 25.4)	10-φ7	25
0	SMS26-100(X)-INCH	317.5	111.5	9.9	203.2 (50.8×4)	10-φ7	50
0	SMS26-200(X)-INCH	417.5	161.5	9.1	304.8 (50.8×6)	14-φ7	100
0	SMS26-300(X)-INCH	517.5	211.5	8.3	406.4 (50.8×8)	18-φ7	150

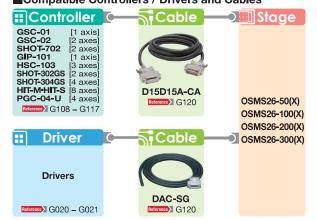
■Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

ote 2 Compatible cable connector: DDK Ltd. 17JE-13150

■Compatible Controllers / Drivers and Cables



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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm 120 × 120 mm

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40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm

Others

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.

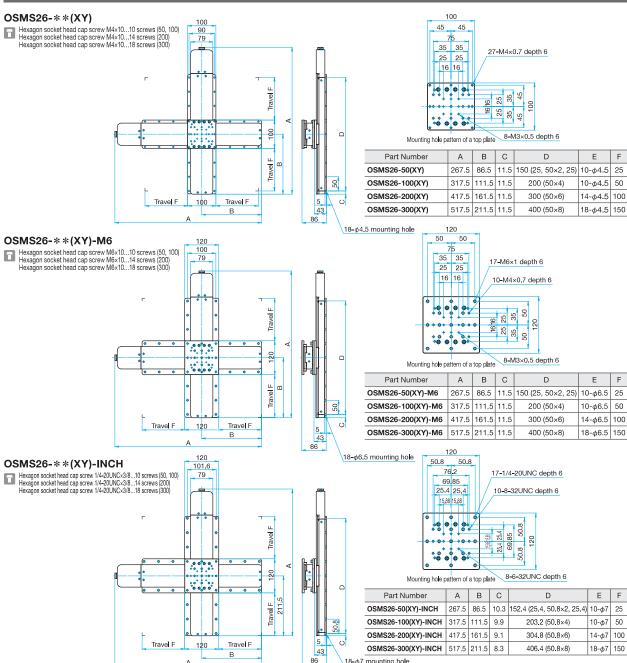
Specification	ons					
Part Number			OSMS26-50(XY)	OSMS26-100(XY)	OSMS26-200(XY)	OSMS26-300(XY)
Part Number (-M	16)		OSMS26-50(XY)-M6	OSMS26-100(XY)-M6	OSMS26-200(XY)-M6	OSMS26-300(XY)-M6
Part Number (-II)	NCH)		OSMS26-50(XY)-INCH	OSMS26-100(XY)-INCH	OSMS26-200(XY)-INCH	OSMS26-300(XY)-INCH
	Travel [mm]		50	100	200	300
	Stage Size (M6, INCH)	[mm]	100×100 (120×120)	100×100 (120×120)	100×100 (120×120)	100×100 (120×120)
Mechanical	Feed Screw	1	Ball screw diameter φ8mm, 2mm lead			
Specifications	Positioning	Slide	Outer rail structure	Outer rail structure	Outer rail structure	Outer rail structure
	Stage Material		Aluminum	Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized	Black anodized
	Weight [kg]		4.4	5.4	7.6	8.0
	Resolution	(Full) [µm/pulse]	4	4	4	4
	Resolution	(Half) [µm/pulse]	2	2	2	2
Accuracy	MAX Speed	d [mm/sec]	40	40	40	40
Specifications	Load Capa	city [N]	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)
	Backlash [µ	ım]	3	3	3	3
	Orthogonal	ity of Motion [µm]	5	5	10	5
	Sensor Par	t Number		Micro photo sensor: GP1S09	92HCPIF (Sharp Corporation)	
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity C	rigin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor / Sensor Specifications							
	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)					
Motor	Motor Part Number	PK525HPB-C4 (□28mm)					
	Step Angle	0.72°					
	Power Voltage	DC5 - 24V±10%					
	Current Consumption	160mA or lower (80mA or lower a per axis20mA or lower per a sensor)					
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			OSMS26-50(X)	OSMS26-100(X)	OSMS26-200(X)	OSMS26-300(X)			
	Positioning	Accuracy [µm]	5	10	15	15			
	Positional Repeatability [µm]		3	3	6	6			
	Moment Stiffness	Pitch ["/N·cm]	0.23	0.23	0.23	0.23			
Accuracy		Yaw ["/N·cm]	0.12	0.12	0.12	0.12			
Specifications		Roll ["/N·cm]	0.2	0.2	0.2	0.2			
	Lost Motio	n [µm]	3	3	5	5			
	Parallelism	[µm]	50	50	50	50			
	Running Pa	arallelism [µm]	10	10	10	10			

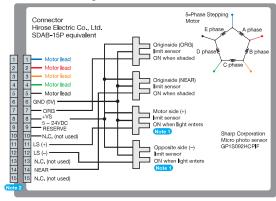
Compatible	Compatible Driver / Controller							
Control System	Compatible Driver	SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL						
Control System	Compatible Controller	GSC-02, SHOT-702, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M+HIT-S, PGC-04-U						





■Connection Diagram

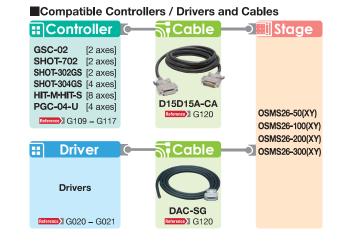
Outline Drawing



Note 1) The motor side limit sensor is the + direction limit sensor.

2 Compatible cable connector: DDK Ltd. 17JE-13150

18-φ7 mounting hole



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40 × 40 mm

60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm







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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm

Others

OSMS Series Translation Motorized Stages - 5 Phase Stepping Motor | OSMS26-(Z) Stage Size 100 x 100 mm | RoHS

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

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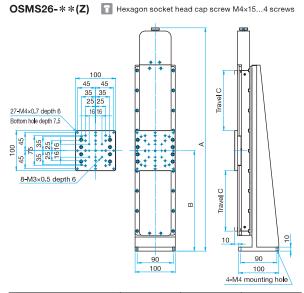
Specification	ons					
Part Number			OSMS26-50(Z)	OSMS26-100(Z)	OSMS26-200(Z)	OSMS26-300(Z)
Part Number (-N	16)		OSMS26-50(Z)-M6	OSMS26-100(Z)-M6	OSMS26-200(Z)-M6	OSMS26-300(Z)-M6
Part Number (-II	NCH)		OSMS26-50(Z)-INCH	OSMS26-100(Z)-INCH	OSMS26-200(Z)-INCH	OSMS26-300(Z)-INCH
	Travel [mm]		50	100	200	300
	Stage Size (M6, INCH)	[mm]	100×100 (120×120)	100×100 (120×120)	100×100 (120×120)	100×100 (120×120)
Mechanical	Feed Screw	1	Ball screw diameter φ8mm, 2mm lead	Ball screw diameter φ8mm, 2mm lead	Ball screw diameter ϕ 8mm, 2mm lead	Ball screw diameter φ8mm, 2mm lead
Specifications	Positioning	Slide	Outer rail structure	Outer rail structure	Outer rail structure	Outer rail structure
	Stage Mate	rial	Aluminum	Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized	Black anodized
	Weight [kg]		4.4	4.9	7.2	7.4
	Resolution	(Full) [µm/pulse]	4	4	4	4
		(Half) [µm/pulse]	2	2	2	2
	MAX Speed [mm/sec]		10	10	10	10
	Positioning Accuracy [µm]		15	20	30	40
	Positional Repeatability [µm]		3	3	6	6
	Load Capacity [N]		39.2 (4.0kgf)	39.2 (4.0kgf)	39.2 (4.0kgf)	39.2 (4.0kgf)
Accuracy Specifications		Pitch ["/N·cm]	0.4	0.4	0.4	0.4
оростоинопо	Moment Stiffness	Yaw ["/N·cm]	0.15	0.15	0.15	0.15
	01	Roll ["/N·cm]	0.20	0.20	0.20	0.20
	Lost Motion	n [μm]	3	3	5	5
	Backlash [µ	m]	3	3	3	3
	Orthogonal	ity of Motion [µm]	30	40	50	50
	Pitch ["] / Y	aw ["]	50/20	50/20	55/20	55/20
	Sensor Parl	Number		Micro photo sensor: GP1S09	92HCPIF (Sharp Corporation)	
Sensor	Limit Senso	pr	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
	Origin Sens	or	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity O	rigin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor / S	Motor / Sensor Specifications		
	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)	
Motor	Motor Part Number	PK525HPB-C4 (□28mm)	
	Step Angle	0.72°	
	Power Voltage	DC5 - 24V±10%	
	Current Consumption	80mA or lower (20mA or lower per sensor)	
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	Compatible Driver / Controller		
0	Compatible Driver SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL		
Control System	Compatible Controller	GSC-01, GSC-02, SHOT-702, GIP-101, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U	



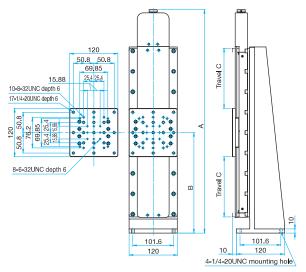




OSMS26-**(Z)-M6	Hexagon socket head	cap screw M6×154 screws
120 50 50 35 35 26 25 10-M4x0.7 depth 6 17-M6x1 depth 6 17-M6x1 depth 6 19 98 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		Diagonal Control of Co

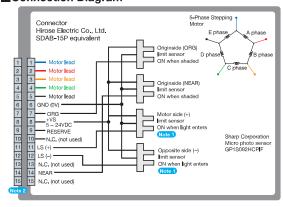
Part Number	A	В	С
OSMS26-50(Z)	306	125	25
OSMS26-100(Z)	356	150	50
OSMS26-200(Z)	463	200	100
OSMS26-300(Z)	556	250	150

Part Number	Α	В	С
OSMS26-50(Z)-M6	306	125	25
OSMS26-100(Z)-M6	356	150	50
OSMS26-200(Z)-M6	463	200	100
OSMS26-300(Z)-M6	556	250	150



Part Number	А	В	С
OSMS26-50(Z)-INCH	305.6	124.6	25
OSMS26-100(Z)-INCH	356	150	50
OSMS26-200(Z)-INCH	463	199.2	100
OSMS26-300(Z)-INCH	556	250	150

■Connection Diagram



Note 1) The motor side limit sensor is the + direction limit sensor.

2 Compatible cable connector: DDK Ltd. 17JE-13150

■Compatible Controllers / Drivers and Cables

⊃ Stage **::** Controller GSC-01 GSC-02 SHOT-702 GIP-101 HSC-103 SHOT-302GS SHOT-304GS HIT-M-HIT-S PGC-04-U [1 axis] [2 axes] [2 axes] [1 axis] [8 axes] [2 axes] [4 axes] D15D15A-CA OSMS26-50(Z) **№** G120 🔰 G108 – G117

Driver Cable Drivers

■ G020 – G021



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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

<u>120 × 120 mm</u>

Others

OSMS26-100(Z)

OSMS26-200(Z)

OSMS26-300(Z)



OSMS Series Translation Motorized Stages - 5 Phase Stepping Motor | OSMS26-(XYZ) Stage Size 100 x 100 mm

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Vacuum **Options**

40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm Others

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



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Guide

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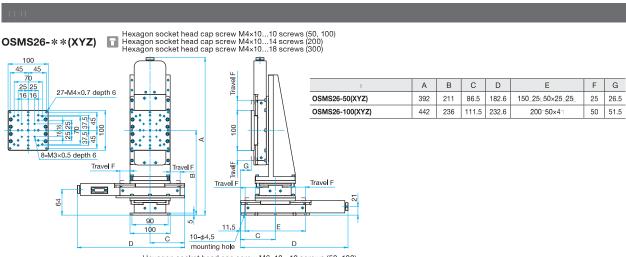
OSMS26-200* or 300** into XYZ axis.

Specification	ons				
Part Number	Part Number		OSMS26-50(XYZ)	OSMS26-100(XYZ)	
Part Number (-N	Л6)		OSMS26-50(XYZ)-M6	OSMS26-100(XYZ)-M6	
Part Number (-I	NCH)		OSMS26-50(XYZ)-INCH	OSMS26-100(XYZ)-INCH	
	Travel [mm]		50	100	
	Stage Size	[mm]	100×100 (120×120)	100×100 (120×120)	
Mechanical	Feed Screw	/	Ball screw diameter ϕ 8mm, 2mm lead	Ball screw diameter φ8mm, 2mm lead	
Specifications	Positioning	Slide	Outer rail structure	Outer rail structure	
	Stage Mate	rial	Aluminum	Aluminum	
	Finish		Black anodized	Black anodized	
	Weight [kg]		8.8	10.3	
	Resolution -	(Full) [µm/pulse]	4	4	
		(Half) [µm/pulse]	2	2	
	MAX Speed [mm/sec]		10	10	
Accuracy Specifications	Load Capa	city [N]	39.2 (4.0kgf)	39.2 (4.0kgf)	
opsomodiiss	Backlash [µ	ım]	3	3	
	Orthogonal	ity of Motion [µm]	5	5	
	Straightness of Motion [µm]		30	40	
	Sensor Par	t Number	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)		
Caman	Limit Senso	or	Equipped (NORMAL CLOSE)		
Sensor	Origin Sens	or	Equipped (NC	DRMAL OPEN)	
	Proximity C	rigin Sensor	Equipped (NC	DRMAL OPEN)	

Motor / S	Motor / Sensor Specifications			
	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)		
Motor	Motor Part Number	PK525HPB-C4 (□28mm)		
	Step Angle	0.72°		
	Power Voltage	DC5 - 24V±10%		
	Current Consumption	240mA or lower (80mA or lower a per axis20mA or lower per a sensor)		
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		

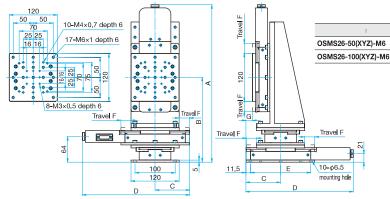
Compatible	Compatible Driver / Controller		
Control System	Compatible Driver	SG-5M, SG-5MA, SG-514MSC, MC-7514PCL, MC-S0514ZU	
	Compatible Controller	HSC-103, SHOT-304GS, HIT-M, HIT-S, PGC-04-U	





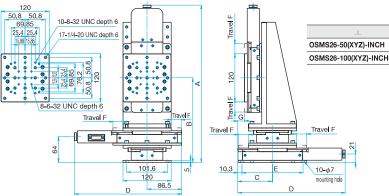
OSMS26-**(XYZ)-M6

Hexagon socket head cap screw M6×10...10 screws (50, 100)
Hexagon socket head cap screw M6×10...14 screws (200)
Hexagon socket head cap screw M6×10...18 screws (300)

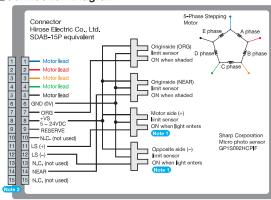


OSMS26-**(XYZ)-INCH

Hexagon socket head cap screw 1/4-20UNCx3/8...10 screws (50, 100)
Hexagon socket head cap screw 1/4-20UNCx3/8...14 screws (200)
Hexagon socket head cap screw 1/4-20UNCx3/8...18 screws (300)

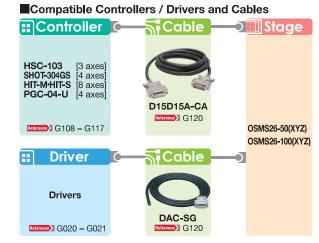


■Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

Note 2 Compatible cable connector: DDK Ltd. 17JE-13150



B C D

B C D

391.6 210.6

442 236 111.5 317.5

392

442 236 111.5 232.6

Ε

150_25_50×2_25

200 50×4

152.4-25.4-50.8×2-25.4-

203.2 50.8×4

182.6

267.5

86.5

211 86.5

F G

25 16.5

50 41.5

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25 16.5

50 41.5

X Translation

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Vacuum

Options

40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm

Precision Motorized Stages with Built-in Compact Scale | OSMS(CS)26-(X) Stage Size 100 x 100 mm | RoHS





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Vacuum **Options**

40 × 40 mm

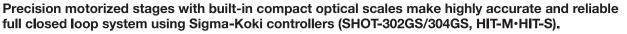
60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm 120 × 120 mm

Others





- U-shaped guide rail offers light weight, and minimized deflection to achieve high stiffness.
- Includes a compact scale built in while keeping the installation space the same as that of the equivalent open loop OSMS series.

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▶ Contact our Sales Division for replacement of motors or for stabilizing (drop-preventing) mechanism.

Reference G017, G123 (Motorized Stage System Question Sheet)
WES Reference Catalog Code W9500

- Grease change is optionally available.

 Reference G122 WEB Reference Catalog Code W9006
- \blacktriangleright Contact our Sales Division to use the stage as an XY axis or a Z axis stage.

Specification	ons			
Part Number			OSMS(CS)26-100(X)	OSMS(CS)26-200(X)
Part Number (-M6)			OSMS(CS)26-100(X)-M6	OSMS(CS)26-200(X)-M6
Part Number (-I	Part Number (-INCH)		OSMS(CS)26-100(X)-INCH	OSMS(CS)26-200(X)-INCH
	Travel [mm]		100	200
	Stage Size [m (M6, INCH)	nm]	100×100 (120×120)	100×100 (120×120)
Mechanical	Feed Screw		Ball screw diameter φ8mm, 2mm lead	Ball screw diameter $\phi 8$ mm, 2mm lead
Specifications	Positioning SI	lide	Outer rail structure	Outer rail structure
	Stage Materia	al	Aluminum	Aluminum
	Finish		Black anodized	Black anodized
	Weight [kg]		3.2	4.3
	Decolution	(Full) [µm/pulse]	4	4
	Resolution	(Half) [µm/pulse]	2	2
	MAX Speed [mm/sec]		40	40
	Positioning A	ccuracy [µm]	10	15
	Positional Rep	peatability [µm]	2	3
	Load Capacity [N]		117 (12.0kgf)	117 (12.0kgf)
Accuracy		Pitch ["/N·cm]	0.23	0.23
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.12	0.12
	Cumooo	Roll ["/N·cm]	0.2	0.2
	Lost Motion [μm]	3	5
	Backlash [µm]	3	3
	Parallelism [µ	m]	50	50
	Running Para	ıllelism [µm]	10	10
	Pitch ["] / Yav	v [″]	25/20	30/25
	Sensor Part N	lumber	Micro photo sensor: GP1S09	92HCPIF (Sharp Corporation)
0	Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Sensor	Origin Sensor	•	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity Orig	gin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
Scale head	Resolution [µr	m]	0.5	0.5

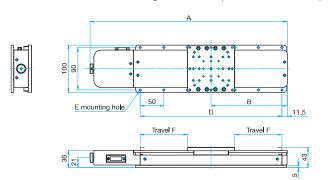
Motor / Sensor Specifications			
	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)	
Motor	Motor Part Number	PK525HPB-C4 (<u></u> 28mm)	
	Step Angle	0.72°	
	Power Voltage	DC5 - 24V±10%	
	Current Consumption	80mA or lower (20mA or lower per sensor)	
Sensor	Control Output	NPN open collector 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	
Scale head	Power Voltage / Current Consumption	DC5V±5% / 50mA	

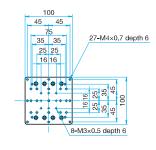
Compatible Cable					
Cabla	Driver Cable	D15D15A-CA			
Cable	Scale Cable	GSEF-CA-3			

Compatible Driver / Controller					
Control System	Compatible Driver	_			
Control System	Compatible Controller	SHOT-302GS, SHOT-304GS, HIT-M+HIT-S			



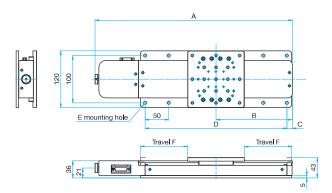
OSMS(CS)26-**(X) Rexagon socket head cap screw M4×10...10 screws (100) Hexagon socket head cap screw M4×10...14 screws (200)

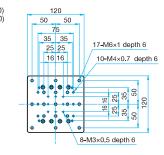




Part Number	Α	В	С	D	Е	F
OSMS(CS)26-100(X)	317.5	111.5	11.5	200 (50×4)	10-φ4.5	50
OSMS(CS)26-200(X)	417.5	161.5	11.5	300 (50×6)	14-φ4.5	100

OSMS(CS)26-**(X)-M6 Hexagon socket head cap screw M6×10...10 screws (100) Hexagon socket head cap screw M6×10...14 screws (200)

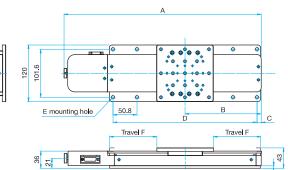


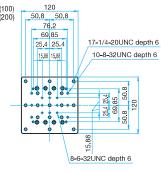


Part Number	Α	В	С	D	E	F
OSMS(CS)26-100(X)-M6	317.5	111.5	11.5	200 (50×4)	10-φ6.5	50
OSMS(CS)26-200(X)-M6	417.5	161.5	11.5	300 (50×6)	14-φ6.5	100

OSMS(CS)26-**(X)-INCH

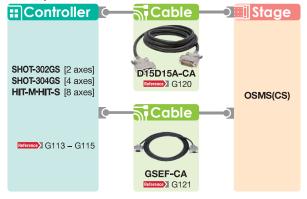
Hexagon socket head cap screw 1/4-20UNC×3/8...10 screws (100)
Hexagon socket head cap screw 1/4-20UNC×3/8...14 screws (200)





Part Number	Α	В	С	D	Е	F
OSMS(CS)26-100(X)-INCH	317.5	111.5	9.9	203.2 (50.8×4)	10-φ7	50
OSMS(CS)26-200(X)-INCH	417.5	161.5	9.1	304.8 (50.8×6)	14-φ7	100

■Compatible Controllers / Drivers and Cables



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40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm







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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

<u>120</u> × 120 mm

Others

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

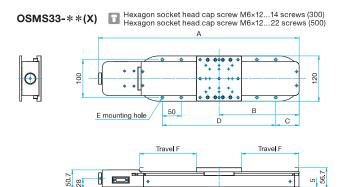
▶ We will assemble your X axis stage with a newly purchased X axis stage at a separate cost.

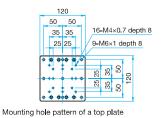
Specification	ons			
Part Number Part Number (-M6)			OSMS33-300(X)	OSMS33-500(X)
			OSMS33-300(X)-M6	OSMS33-500(X)-M6
Part Number (-I	NCH)		OSMS33-300(X)-INCH	OSMS33-500(X)-INCH
	Travel [mm]		300	500
	Stage Size	[mm]	120×120	120×120
	Feed Screv	V	Ball screw diameter ϕ 10mm, 10mm lead	Ball screw diameter ϕ 10mm, 10mm lead
Mechanical Specifications	Positioning	Slide	Outer rail structure	Outer rail structure
	Stage Mate	erial	Aluminum	Aluminum
	Finish		Black anodized	Black anodized
	Weight [kg]		7.0	8.6
	Resolution	(Full) [µm/pulse]	20	20
		(Half) [µm/pulse]	10	10
	MAX Speed [mm/sec]		120	120
	Positioning Accuracy [µm]		25	25
	Positional Repeatability [µm]		6	6
	Load Capacity [N]		196 (20 . 0kgf)	196 (20.0kgf)
Accuracy		Pitch ["/N·cm]	0.12	0.12
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.08	0.08
		Roll ["/N·cm]	0.1	0.1
	Lost Motion	n [µm]	5	5
	Backlash [µ	ım]	3	3
	Parallelism	[µm]	50	50
	Running Pa	arallelism [µm]	15	25
	Pitch ["] / Y	'aw [″]	40/25	40/25
	Sensor Par	t Number	Micro photo sensor: GP1S09	92HCPIF (Sharp Corporation)
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Gerisui	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity C	rigin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor / S	Motor / Sensor Specifications							
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)						
Motor	Motor Part Number	TS3667N43E967 (□42mm)						
	Step Angle	0.72°						
	Power Voltage	DC5 - 24V±10%						
	Current Consumption	80mA or lower (20mA or lower per sensor)						
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	Compatible Driver / Controller						
Control System	Compatible Driver	MC-S0514ZU, SG-514MSC, MC-7514PCL					
Control System	Compatible Controller	SHOT-702, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M+HIT-S, PGC-04-U					



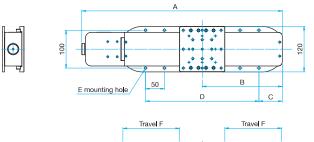


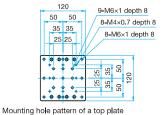


Part Number	Α	В	С	D	Е
OSMS33-300(X)	530.3	211.8	61.8	300 (50×6)	14-φ6.5

730.3 311.8 61.8 500 (50×10) 22-φ6.5 250



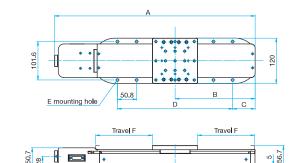


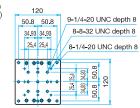


OSMS33-500(X)

Part Number	Α	В	С	D	Е	F
OSMS33-300(X)-M6	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS33-500(X)-M6	730.3	311.8	61.8	500 (50×10)	22-φ6.5	250

OSMS33-**(X)-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)



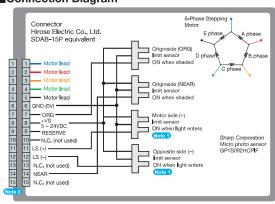


Mounting hole pattern of a top plate

Part Number	Α	В	С	D	Е	F
OSMS33-300(X)-INCH	530.3	211.8	59.4	304.8 (50.8×6)	14-φ7	150
OSMS33-500(X)-INCH	730.3	311.8	57.8	508 (50.8×10)	22-φ7	250

■Connection Diagram

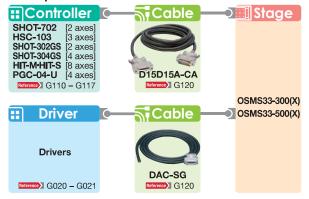
20.7



Note 1 The motor side limit sensor is the + direction limit sensor.

Note 2 Compatible cable connector: DDK Ltd. 17JE-13150

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40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm

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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

<u>120 × 120 mm</u>

Others

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.

Specification	ons					
Part Number			OSMS33-300(XY)	OSMS33-500(XY)		
Part Number (-N	16)		OSMS33-300(XY)-M6	OSMS33-500(XY)-M6		
Part Number (-II)	NCH)		OSMS33-300(XY)-INCH	OSMS33-500(XY)-INCH		
	Travel [mm]		300	500		
	Stage Size	[mm]	120×120	120×120		
	Feed Screv	V	Ball screw diameter ϕ 10mm, 10mm lead	Ball screw diameter ϕ 10mm, 10mm lead		
Mechanical Specifications	Positioning Slide		Outer rail structure	Outer rail structure		
ороспосного	Stage Material		Aluminum	Aluminum		
	Finish		Black anodized	Black anodized		
	Weight [kg]		14.0	17.2		
	Resolution	(Full) [µm/pulse]	20	20		
		(Half) [µm/pulse]	10	10		
Accuracy	MAX Speed [mm/sec]		80	80		
Specifications	Load Capa	city [N]	156 (16.0kgf)	156 (16 . 0kgf)		
	Backlash [µ	ım]	3	3		
	Orthogonal	ity of Motion [µm]	10	10		
	Sensor Par	t Number	Micro photo sensor: GP1S09	92HCPIF(Sharp Corporation)		
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)		
Selisui	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)		
	Proximity C	rigin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)		

Motor / Sensor Specifications					
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)			
Motor	Motor Part Number	TS3667N43E967 (□42mm)			
	Step Angle	0.72°			
	Power Voltage	DC5 - 24V±10%			
	Current Consumption	160mA or lower (80mA or lower a per axis20mA or lower per a sensor)			
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	Part Number		OSMS33-300(X)	OSMS33-500(X)		
	Positioning Accuracy [µm]		25	20		
	Positional Repeatability [µm]		6	6		
	Moment Stiffness	Pitch ["/N·cm]	0.12	0.12		
Accuracy		Yaw ["/N·cm]	0.08	0.08		
Specifications		Roll ["/N·cm]	0.1	0.1		
	Lost Motio	n [µm]	5	5		
	Parallelism	[µm]	50	50		
	Running Pa	arallelism [µm]	15	25		

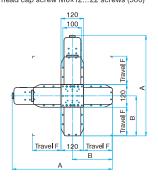
Compatible Driver / Controller					
Control System	Compatible Driver MC-S0514ZU, SG-514MSC, MC-7514PCL				
Control System	Compatible Controller	SHOT-702, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U			

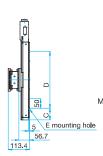


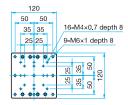


OSMS33-**(XY)

Hexagon socket head cap screw M6x12...14 screws (300) Hexagon socket head cap screw M6x12...22 screws (500)





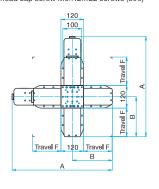


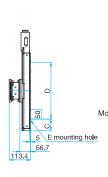
Mounting hole pattern of a top plate

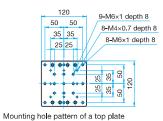
Part Number	Α	В	С	D	Е	F
OSMS33-300(XY)	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS33-500(XY)	730.3	311.8	61.8	500 (50×10)	22-φ6.5	250

OSMS33-**(XY)-M6

Hexagon socket head cap screw M6x12...14 screws (300)
Hexagon socket head cap screw M6x12...22 screws (500)



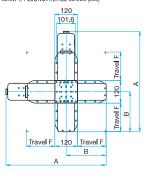


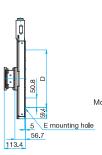


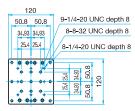
Part Number	А	В	С	D	Е	F
OSMS33-300(XY)-M6	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS33-500(XY)-M6	730.3	311.8	61.8	500 (50×10)	22-φ6.5	250

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)



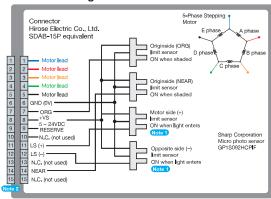




Mounting hole pattern of a top plate

Part Number	А	В	С	D	Е	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

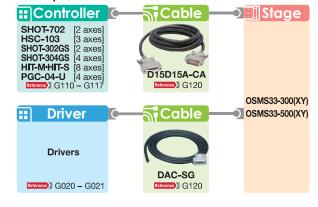
■Connection Diagram



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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40 × 40 mm

60 × 60 mm 80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm







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Options

40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

<u>120</u> × 120 mm

Others

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

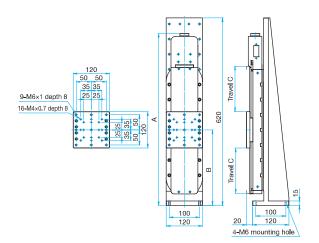
▶ We will assemble your X axis stage with a newly purchased X axis stage at a separate cost.

Specific	cations			
Part Numb	per		OSMS33-300(Z)	OSMS33-500(Z)
Part Numb	oer (-M6)		OSMS33-300(Z)-M6	OSMS33-500(Z)-M6
Part Numb	art Number (-INCH)		OSMS33-300(Z)-INCH	OSMS33-500(Z)-INCH
	Travel [mm]		300	500
	Stage Size [m	m]	120×120	120×120
Mechani-	Feed Screw		Ball screw diameter φ10mm, 10mm lead	Ball screw diameter ϕ 10mm, 10mm lead
cal Specifica-	Positioning SI	ide	Outer rail structure	Outer rail structure
tions	Stage Materia	I	Aluminum	Aluminum
	Finish		Black anodized	Black anodized
	Weight [kg]		14.5	16.1
	Resolution	(Full) [µm/pulse]	20	20
		(Half) [µm/pulse]	10	10
	MAX Speed [mm/sec]		30	30
	Positioning Accuracy [µm]		50	50
	Positional Repeatability [µm]		6	6
Accuracy	Load Capacity [N]		58.8 (6.0kgf)	58.8 (6.0kgf)
Specifica-		Pitch ["/N·cm]	0.2	0.2
ions	Moment Stiffness	Yaw ["/N·cm]	0.15	0.15
	Cumooo	Roll ["/N·cm]	0.15	0.15
	Lost Motion [µ	ım]	5	5
	Backlash [µm]		3	3
	Orthogonality	of Motion [µm]	30	35
	Pitch ["] / Yaw ["]		50/25	55/25
	Sensor Part N	umber	Micro photo sensor: GP1S09	2HCPIF(Sharp Corporation)
Sensor	Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Gerisor	Origin Sensor		Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity Orig	in Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

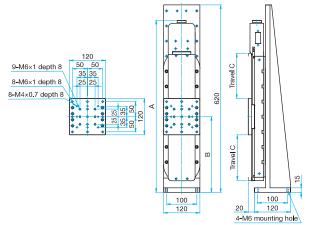
Motor	Motor / Sensor Specifications					
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)				
Motor	Motor Part Number	TS3667N43E967 (42mm)				
	Step Angle	0.72°				
	Power Voltage	DC5 - 24V±10%				
	Current Consumption	80mA or lower (20mA or lower per sensor)				
Sensor	Control Output	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			



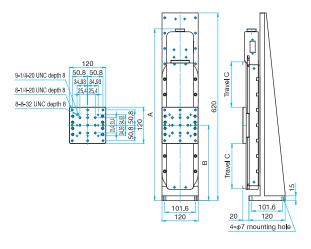






Part Number	А	В	С
OSMS33-300(Z)	568.5	250	150
OSMS33-500(Z)	768.5	350	250

Part Number	А	В	С
OSMS33-300(Z)-M6	568.5	250	150
OSMS33-500(Z)-M6	768.5	350	250



Part Number	А	В	С
OSMS33-300(Z)-INCH	568.5	248.4	150
OSMS33-500(Z)-INCH	768.5	350	250

■ Compatible Controllers / Drivers and Cables

D15D15A-CA

™ G120

Cable

DAC-SG

◎ G120

:: Controller

Driver

Drivers

■ G020 – G021

[2 axes] [3 axes] [2 axes]

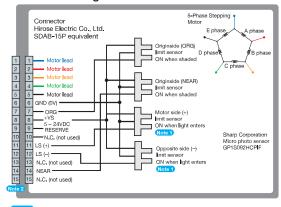
[4 axes

[8 axes] [4 axes]

SHOT-702 HSC-103 SHOT-302GS SHOT-304GS

HIT-M·HIT-S PGC-04-U

■Connection Diagram



ote 1) The motor side limit sensor is the + direction limit sensor.

Note 2 Compatible cable connector: DDK Ltd. 17JE-13150

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→ Stage

OSMS33-300(Z)

OSMS33-500(Z)

Options

40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm



Precision Motorized Stages with Built-in Compact Scale | OSMS(CS)33-(X) Stage Size 120 × 120 mm | RoHS





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Vacuum **Options**

40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

Long travel, high stiffness precision motorized stages with built-in compact optical scales make highly accurate and reliable full closed loop system using Sigma-Koki controllers (SHOT-302GS/304GS, HIT-M·HIT-S)



- U-shaped guide rail offers light weight, and minimized deflection to achieve high stiffness.
- Includes a compact scale built in while keeping the installation space the same as that of the equivalent open loop OSMS series.

Guide

▶ Contact our Sales Division for replacement of motors or for stabilizing (drop-preventing) mechanism.

G017, G123 (Motorized Stage System Question Sheet) WEB Reference Catalog Code W9500

▶ Grease change is optionally available. Reference G122 WEB Reference Catalog Code W9006

▶ Contact our International Sales Division to use the stage as an XY axis or a Z axis stage.

Specification	ons				
Part Number			OSMS(CS)33-300(X)	OSMS(CS)33-500(X)	
Part Number (-N	Л6)		OSMS(CS)33-300(X)-M6	OSMS(CS)33-300(X)-M6	
Part Number (-I	NCH)		OSMS(CS)33-300(X)-INCH	OSMS(CS)33-500(X)-INCH	
Mechanical	Travel [mm]		300	500	
	Stage Size [m	m]	120×120	120×120	
	Feed Screw		Ball screw diameter φ10mm, 10mm lead	Ball screw diameter φ10mm, 10mm lead	
Mechanical Specifications	Positioning SI	ide	Outer rail structure	Outer rail structure	
ороспосного	Stage Materia	ıl	Aluminum	Aluminum	
	Finish		Black anodized	Black anodized	
	Weight [kg]		7.8	9.6	
	Resolution	(Full) [µm/pulse]	20	20	
	Resolution	(Half) [µm/pulse]	10	10	
	MAX Speed [mm/sec]		100	100	
	Positioning A	ccuracy [µm]	25	25	
	Positional Repeatability [µm]		5	5	
	Load Capacity [N]		196 (20.0kgf)	196 (20 . 0kgf)	
Accuracy		Pitch ["/N·cm]	0.12	0.12	
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.08	0.08	
		Roll ["/N·cm]	0.1	0.1	
	Lost Motion [um]	5	5	
	Backlash		3	3	
	Parallelism [µ	m]	50	50	
	Running Para	llelism [µm]	15	25	
	Pitch ["] / Yav	/ ["]	40/25	40/25	
	Sensor Part N	lumber	Micro photo sensor: GP1S09	2HCPIF (Sharp Corporation)	
Sensor	Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
Sellsul	Origin Sensor		Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	
	Proximity Orig	gin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	
Scale head	Resolution [µr	n]	0.5	0.5	

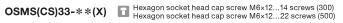
Motor / Sensor Specifications					
	Туре	5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)			
Motor	Motor Part Number	TS3667N43E967 (□42mm)			
	Step Angle	0.72°			
	Power Voltage	DC5 - 24V±10%			
	Current Consumption	80mA or lower (20mA or lower per sensor)			
Sensor	Control Output	NPN open 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			
Scale head	Power Voltage / Current Consumption	DC5V±5% / 100mA			

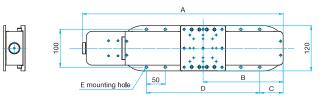
Compatible Cable					
Cable	Driver Cable	D15D15A-CA			
	Scale Cable	GSEF-CA-3			

Compatible Driver / Controller					
Control System	Compatible Driver	_			
Control System	Compatible Controller	SHOT-302GS, SHOT-304GS, HIT-M+HIT-S			

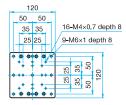






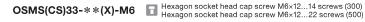


Travel F

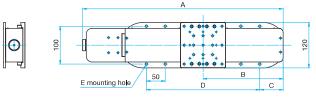


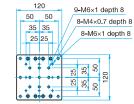
Mounting	hole	pattern	of a	top	plate

Part Number	Α	В	С	D	Е	F
OSMS(CS)33-300(X)	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS(CS)33-500(X)	730.3	311.8	61.8	500 (5×10)	22-φ6.5	250



Travel F

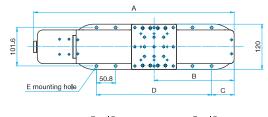


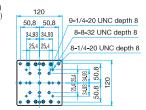


Mounting hole pattern of a top plate

	Travel F	Trave	-
28 28 28	+	bigggggggg	\$6.7
			ro.

Part Number	Α	В	С	D	E	F
OSMS(CS)33-300(X)-M6	530.3	211.8	61.8	300 (50×6)	14-φ6.5	150
OSMS(CS)33-500(X)-M6	730.3	311.8	61.8	500 (5×10)	22-φ6.5	250

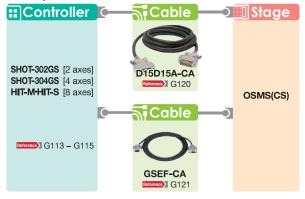




	Travel F	1 .	Travel F	-	
28	+			*	56.7
				2	

Part Number	Α	В	С	D	Е	F
OSMS(CS)33-300(X)-INCH	530.3	211.8	59.4	304.8 (50.8×6)	14-φ7	150
OSMS(CS)33-500(X)-INCH	730.3	311.8	57.8	508 (50.8×10)	22-φ7	250

■Compatible Controllers / Drivers and Cables



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40 × 40 mm

60 × 60 mm 80 × 80 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm



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40 × 40 mm

60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm Others

Aluminum Crossed Roller Guide Motorized Stage Stage Size 40 × 40 mm / 60 × 60 mm / 100 × 100 mm / 100 × 175 mm

TAMM

Motorized crossed roller stages offer small foorprint, low-profile and high durability.



These linear stages utilize

- anti-creep crossed roller bearings
- a special nut-shape ball screw.
- black anodized aluminum body.

Guide

- \blacktriangleright Due to the motor offset, a spacer is required when mounting the stage on a flat surface (MSP-40) WEB Reference Catalog Code W6035, WEB Reference Catalog Code W6036 or Contact our Sales Division for custom spacers) Refe **ጬ**∑ D041 −
- ▶ After purchasing two X axis stages, to assemble them into an XY axis stage, assembly adjustment cost and performance inspection cost will be charged separately.
- ▶ Contact our Sales Division for other customization options including alternate motors. Or, use the motorized stage system question sheet. Reference G123 WEB Reference Catalog Code W9500

Specifications								
Part Number			C€ TAMM40-10C	C€ TAMM60-15C	TAMM100-50C	TAMM100-100C		
Opposite Model	Part Number		C€ TAMM40-10CR	C€ TAMM60-15CR	TAMM100-50CR	TAMM100-100CR		
Mechanical Specifications	Travel [mm]		10	15	50	100		
	Stage Size	[mm]	40×40	60×60	100×100	100×175		
	Feed Screw	V	Ball screw diameter φ4mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ8mm, 1mm lead	Ball screw diameter φ8mm, 1mm lead		
	Positioning	Slide	Crossed roller guide	Crossed roller guide	Crossed roller guide	Crossed roller guide		
	Stage Mate	erial	Aluminum	Aluminum	Aluminum	Aluminum		
	Finish		Black anodized	Black anodized	Black anodized	Black anodized		
	Weight [kg]		0.33	0.48	1.9	2.9		
	Decelution	(Full) [µm/pulse]	2	2	2	2		
	Resolution	(Half) [µm/pulse]	1	1	1	1		
	MAX Speed	d [mm/sec]	10	10	10	10		
	Positioning Accuracy [µm]		6	6	6	10		
	Positional Repeatability [µm]		1	1	1	1		
Accuracy	Load Capacity [N]		29.4 (3.0kgf)	49 (5.0kgf)	98 (10.0kgf)	98 (10.0kgf)		
Specifications	Moment Stiffness["/N·cm]		1.5	0.5	0.05	0.03		
	Lost Motion	ր [µm]	1	1	1	1		
	Backlash [µ	ım]	1	1	1	1		
	Parallelism	[µm]	30	30	30	30		
	Running Pa	rallelism [µm]	10	10	10	10		
	Pitch ["] / Y	'aw [″]	25/25	20/20	20/15	20/15		
	Sensor Par	t Number	Micro photo	sensor: GP1S097HCZ (Shar	Corporation) Limit Sensor,	Origin Sensor		
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)		
Selisui	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)		
	Proximity C	rigin Sensor	None	None	None	None		

Motor / Sensor Specifications					
Motor	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)			
	Motor Part Number	PK523HPB-C12 (□28mm)	PK544NBW (□42mm)		
	Step Angle	0.72°			
Sensor	Power Voltage	DC5 - 24V±10%			
	Current Consumption	60mA or lower (20mA 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			

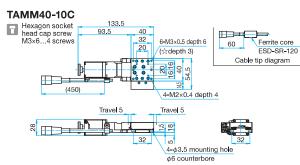
Compatible Driver / Controller					
0	Compatible Driver	SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL		
Control System	Compatible Controller	GSC-01, GSC-02, SHOT-702, GIP-101, HSC-103 SHOT-302GS, SHOT-304GS, HIT-M+HIT-S, PGC-04-U	SHOT-702, HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U		

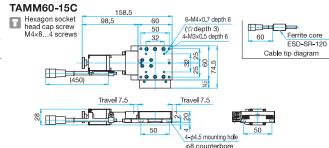




⊙ Stage







√ Cable

D15RP-CA

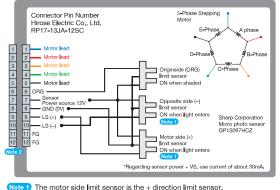
G120

■Connection Diagram ■Compatible Controllers / Drivers and Cables

:: Controller

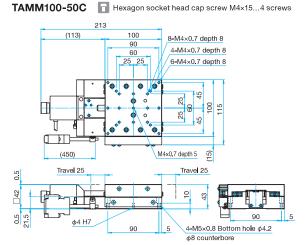
[1 axis] [2 axes] [2 axes] [1 axis] [3 axes] [2 axes] [4 axes]

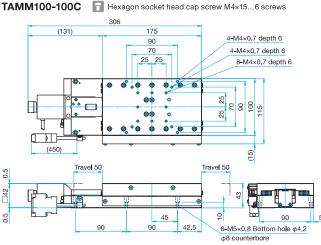
3 G020 − G021



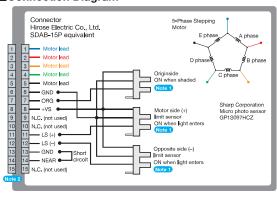


The motor side limit sensor is the + direction limit sensor.
Motorized stages are not fitted with proximity origin sensors.
Compatible cable connector:
Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122





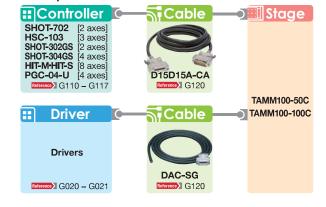
■Connection Diagram



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



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40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm



Aluminum Crossed Roller Guide Motorized Stage Stage Size 40×40 mm / 60×60 mm / 100×100 mm / 100×175 mm

TAMM-XY

RoHS

Motorized crossed roller stages offer small foorprint, low-profile and high durability.

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40 × 40 mm

60 × 60 mm 80 × 80 mm

85 × 85 mm 100 × 100 mm 120 × 120 mm

Others



These linear stages utilize

- anti-creep crossed roller bearings
- a special nut-shape ball screw.
- black anodized aluminum body.

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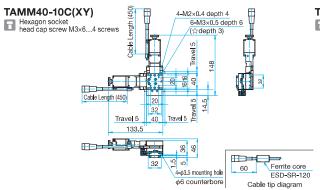
- ► Due to the motor offset, a spacer is required when mounting the stage on a flat surface (MSP-40) WEB Reference Catalog Code W6035, MSP-60 | WEB Reference Catalog Code W6036 or Contact our Sales Division for custom spacers) Reference D055 -
- After purchasing two X axis stages, to assemble them into an XY axis stage, assembly adjustment cost and performance inspection cost will be charged separately.
- ► Contact our Sales Division for other customization options including alternate motors. Or, use the motorized stage system question sheet. Reference G123 ► WES Reference Catalog Code W9500

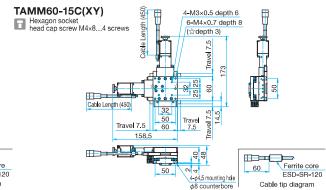
Specifications						
Part Number		TAMM40-10C(XY)	TAMM60-15C(XY)	TAMM100-50C(XY)	TAMM100-100C(XY)	
Mechanical Specifications	Travel [mm]		10	15	50	100
	Stage Size [mm]		40×40	60×60	100×100	100×175
	Feed Screw		Ball screw diameter φ4mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ8mm, 1mm lead	Ball screw diameter φ8mm, 1mm lead
	Positioning Slide		Crossed roller guide	Crossed roller guide	Crossed roller guide	Crossed roller guide
	Stage Material		Aluminum	Aluminum	Aluminum	Aluminum
	Finish		Black anodized	Black anodized	Black anodized	Black anodized
	Weight [kg]		0.66	0.96	3.8	5.8
	Resolution	(Full) [µm/pulse]	2	2	2	2
		(Half) [µm/pulse]	1	1	1	1
Accuracy	MAX Speed [mm/sec]		10	10	10	10
Specifications	Load Capacity [N]		24.5 (2.5kgf)	39.2 (4.0kgf)	78.4 (8.0kgf)	68.6 (7.0kgf)
	Backlash [µm]		1	1	1	1
	Orthogonality of Motion [µm]		5	5	5	5
Sensor	Sensor Part Number		Micro photo sensor: GP1S092HCPIF(Sharp Corporation)			
	Limit Sensor		Equipped (NORMAL CLOSE)			
	Origin Sensor		Equipped (NORMAL OPEN)			
	Proximity Origin Sensor		None			

Motor / Sensor Specifications					
Motor	Туре	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)			
	Motor Part Number	PK523HPB-C12 (<u></u> 28mm)	PK544NBW (□42mm)		
	Step Angle	0.72°			
Sensor	Power Voltage	DC5 - 24V±10%			
	Current Consumption	120mA or lower (60mA or lower a per axis20mA or lower per a 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			

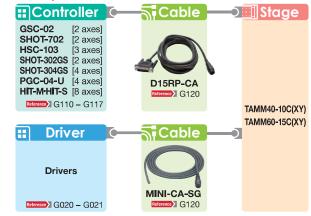
Compatible Driver / Controller					
0	Compatible Driver	SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL		
Control System	Compatible Controller	GSC-02, SHOT-702, SHOT-302GS, SHOT-304GS, HIT-M, HIT-S, PGC-04-U, HSC-103	SHOT-702, SHOT-302GS, SHOT-304GS, HIT-M, HIT-S, PGC-04-U, HSC-103		



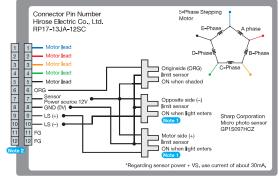




■Compatible Controllers / Drivers and Cables



■Connection Diagram

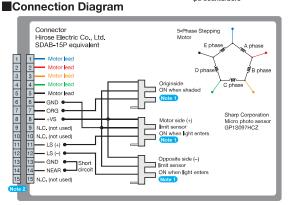


Note 1 The motor side limit sensor is the + direction limit sensor.

Motorized stages are not fitted with proximity origin sensors.

Compatible cable connector:

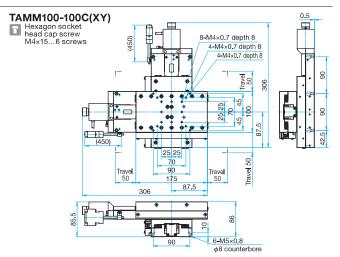
Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122



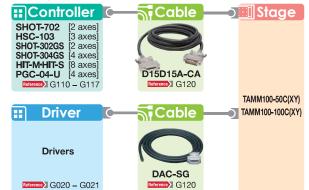
Note 1 The motor side limit sensor is the + direction limit sensor.

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



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60 × 60 mm 80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm



Precision Motorized Stages - 5 Phase Stepping Motor Stage Size 165 × 165 mm / 165 × 220 mm /165 × 420 mm

HST-X





High precision X axis stages fitted with precision ball screws and precision crossed roller.

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 The combination of HST Series and 3 axis Stage Controllers HSC-103 can perform low-noise and low-vibration operation, compared with conventional products.

 Steel body offers excellent stiffness and high load capacity.

Guide

Two single axis stages can be sent to OptoSigma to be assembled, aligned and tested for a nominal cost.

Specificati	ons				
Part Number		HST-50X	HST-100X	HST-200X	
	Travel [mm]]	50	100	200
	Stage Size	[mm]	165×165	165×220	165×420
Mechanical	Feed Screw	v	Ball screw diameter ϕ 10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead
Specifications	Positioning	Slide	Crossed roller	Crossed roller	Crossed roller
	Stage Mate	erial	Steel	Steel	Steel
	Weight [kg]		8.7	10.6	18.7
	Resolution	(Full) [µm/pulse]	4	4	4
	Resolution	(Half) [µm/pulse]	2	2	2
	MAX Speed [mm/sec]		10	10	20
	Positioning Accuracy [µm]		5	7	8
	Positional Repeatability [µm]		2	2	2
	Load Capacity [N]		392 (40.0kgf)	392 (40.0kgf)	392 (40.0kgf)
Accuracy	Moment Stiffness	Pitch ["/N•cm]	0.01	0.01	0.01
Specifications		Yaw ["/N·cm]	0.01	0.01	0.01
		Roll ["/N+cm]	0.005	0.005	0.005
	Lost Motion [µm]		1	1	1
	Backlash [µ	ım]	1	1	1
	Parallelism	[µm]	50	70	100
	Running Pa	arallelism [µm]	10	10	20
	Pitch ["] / Yaw ["]		15/15	20/20	20/20
	Sensor Par	t Number	Micro ph	oto sensor: GP1S092HCPIF (Sharp Co	orporation)
C	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Sensor	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity C	Origin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor / Sensor Specifications 5-phase stepping motor 1.4A/phase (Oriental Motor Co., Ltd.) Motor Motor Part Number PKP544N18B (□42mm) PKP544N18B (□42mm) PKP546N18B (□42mm) Step Angle 0.72° Power Voltage DC5 - 24V ±10% **Current Consumption** 80mA or lower (20mA or lower per sensor) Sensor Control Output NPN open collector output DC30V or lower, 50mA or lower When shaded: Output transistor OFF (no conduction): Limit sensor Output Logic When shaded: Output transistor ON (conduction): Origin sensor, Proximity Origin Sensor

Compatible	e Cable	
Cable	Driver Cable	D15D15A-CA

Compatible Driver / Controller				
Control System	Compatible Driver	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL		
Control System	Compatible Controller	HSC-103, SHOT-302GS, SHOT-304GS, HIT-M·HIT-SH, PGC-04-U		

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40 × 40 mm 60 × 60 mm

80 × 80 mm

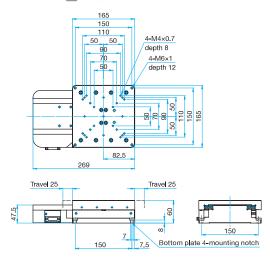
85 × 85 mm

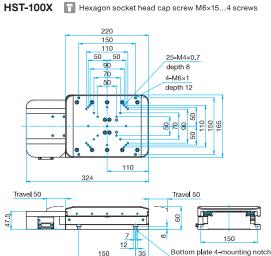
100 × 100 mm

120 × 120 mm

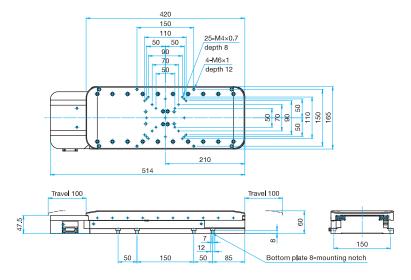




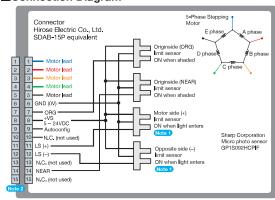




HST-200X Hexagon socket head cap screw M6×15...8 screws

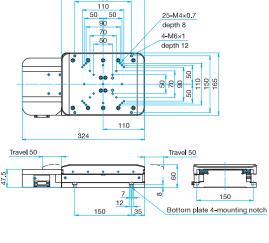


■Connection Diagram



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

D15D15A-CA

№ G120

Cable

DAC-SG

™ G120

:: Controller

SHOT-302GS [4 axes]

SHOT-304GS [3 axes]

HIT-M·HIT-SH [8 axes]

PGC-04-U [4 axes]

Driver

Drivers

Reference G020 - G021

■ G112 – G115

[3 axes]

HSC-103

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> ■ Stage

HST-X

40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm



HST-XY

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85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

Precision Motorized Stages - 5 Phase Stepping Motor Stage Size 165 \times 165 mm / 165 \times 220 mm /165 \times 420 mm

High precision XY axis stages fitted with precision ball screws and precision crossed roller.



- The combination of HST Series and 3 axis Stage Controllers HSC-103 can perform low-noise and low-vibration operation, compared with conventional products.
- Steel body offers excellent stiffness and high load capacity.

Guide

▶ Contact our sales team for more information regarding customization. rence G123 WEB Reference Catalog Code W9500

Specificati	ons				
Part Number		HST-50XY	HST-100XY	HST-200XY	
	Travel [mm]		50	100	200
	Stage Size	[mm]	165×165	165×220	165×420
Mechanical	Feed Screw	V	Ball screw diameter ϕ 10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead	Ball screw diameter ϕ 10mm, 2mm lead
Specifications	Positioning	Slide	Crossed roller	Crossed roller	Crossed roller
	Stage Mate	erial	Steel	Steel	Steel
	Weight [kg]		17.4	21.2	40.0
	Resolution	(Full) [µm/pulse]	4	4	4
		(Half) [µm/pulse]	2	2	2
	MAX Speed	d [mm/sec]	10	10	20
	Positioning Accuracy [µm]		10	12	15
Accuracy Specifications	Positional Repeatability [µm]		2	2	2
орозиновино	Load Capacity [N]		196 (20 . 0kgf)	196 (20.0kgf)	196 (20.0kgf)
	Lost Motion [µm]		1	1	1
	Backlash [µ	ım]	1	1	1
	Orthogonali	ity of Motion [µm]	5	5	10
	Sensor Part	t Number	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)		
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
06/150/	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity O	rigin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor /	Sensor Specifications			
	Туре	5-phase ste	epping motor 1.4A/phase (Oriental Mo	otor Co., Ltd.)
Motor	Motor Part Number	PKP544N18B (□42mm)	PKP544N18B (□42mm)	PKP546N18B (□42mm)
	Step Angle	0.72°		
Sensor	Power Voltage		DC5 - 24V ±10%	
	Current Consumption	160mA or lower	(80mA or lower a per axis20mA or lo	wer per a sensor)
	Control Output	NPN oper	n 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)	(Reference) Precision Specifications of Single Axis Stage						
Part Number			HST-50X	HST-100X	HST-200X		
		Pitch ["/N•cm]	0.01	0.01	0.01		
	Moment Stiffness	Yaw ["/N·cm]	0.01	0.01	0.01		
Accuracy Specifications		Roll ["/N·cm]	0.005	0.005	0.005		
	Parallelism [µm]		50	70	100		
	Running Pa	arallelism [µm]	10	10	20		

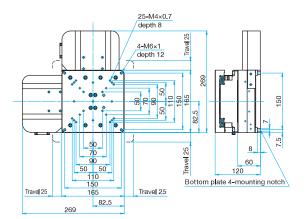
Compatible	e Cable	
Cable	Driver Cable	D15D15A-CA

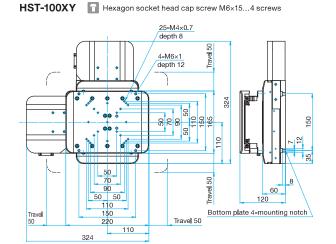
Compatible	Compatible Driver / Controller				
Control System	Compatible Driver	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL			
Control System	Compatible Controller	HSC-103, SHOT-302GS, SHOT-304GS, HIT-M∙HIT-SH, PGC-04-U			

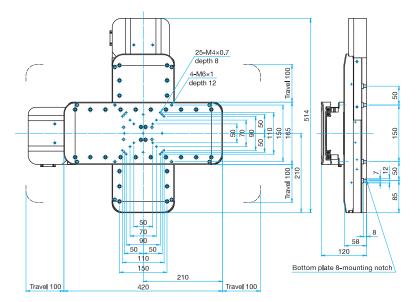




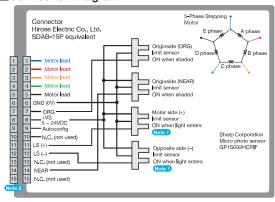
HST-50XY Hexagon socket head cap screw M6x15...4 screws







■Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

Note 2 Compatible cable connector: DDK Ltd 17.JE-13150

■Compatible Controllers / Drivers and Cables



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40 × 40 mm

60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm



Precision Motorized Stages - 5 Phase Stepping Motor Stage Size 165 \times 165 mm / 165 \times 220 mm /165 \times 420 mm

HST-Z

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High precision Z axis stages fitted with precision ball screws and precision crossed roller.

 The combination of HST Series and 3 axis Stage Controllers HSC-103 can perform low-noise and low-vibration operation, compared with conventional products.

 Steel body offers excellent stiffness and high load capacity.

Guide

Contact our sales team for more information regarding customization.

Reference G123 WES Reference Catalog Code W9500

Specificati	ons				
Part Number		HST-50Z	HST-100Z	HST-200Z	
	Travel [mm]]	50	100	200
	Stage Size	[mm]	165×165	165×220	165×420
Mechanical	Feed Screw	v	Ball screw diameter ϕ 10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead
Specifications	Positioning	Slide	Crossed roller	Crossed roller	Crossed roller
	Stage Mate	erial	Steel	Steel	Steel
	Weight [kg]		13	14.9	25.7
	Decelution	(Full) [µm/pulse]	4	4	4
	Resolution	(Half) [µm/pulse]	2	2	2
	MAX Speed	d [mm/sec]	10	10	10**
	Positioning	Accuracy [µm]	5	7	8
	Positional Repeatability [µm]		2	2	2
	Load Capacity [N]		98 (10 . 0kgf)	98 (10.0kgf)	98 (10 . 0kgf)
Accuracy Specifications		Pitch ["/N·cm]	0.015 (Y pitch)	0.020 (Y pitch)	0.030 (Y pitch)
opeomediene.	Moment Stiffness	Yaw ["/N·cm]	0.01 (X pitch)	0.015 (X pitch)	0.020 (X pitch)
	Othinicoo	Roll ["/N+cm]	0.005	0.015	0.015
	Lost Motion	n [µm]	1	1	1
	Backlash [µ	ım]	1	1	1
	Perpendicul	arity of Motion [µm]	10	15	25
	Pitch ["] / Yaw ["]		25/15	25/20	25/25
	Sensor Par	t Number	Micro ph	oto sensor: GP1S092HCPIF (Sharp Co	orporation)
0	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Sensor	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity C	Origin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor /	Sensor Specifications				
	Туре	5-phase ste	5-phase stepping motor 1.4A/phase (Oriental Motor Co., Ltd.)		
Motor	Motor Part Number	PKP544N18B (□42mm)	PKP544N18B (□42mm)	PKP546N18B (□42mm)	
	Step Angle	0.72°			
	Power Voltage	DC5 – 24V ±10%			
	Current Consumption	80mA or lower (20mA or lower per sensor)			
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 Cable				
Cable	Driver Cable	D15D15A-CA		

Compatible	Compatible Driver / Controller				
Control System	Compatible Driver	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL			
Control System	Compatible Controller	HSC-103, SHOT-302GS, SHOT-304GS, HIT-M∙HIT-SH, PGC-04-U			

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Theta Rotation Goniometer

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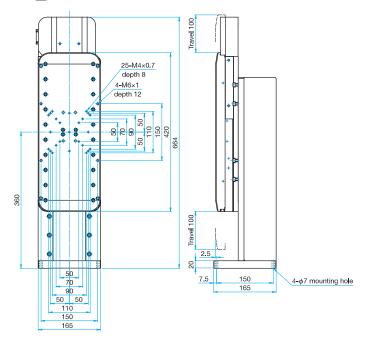
40 × 40 mm 60 × 60 mm 80 × 80 mm

85 × 85 mm 100 × 100 mm

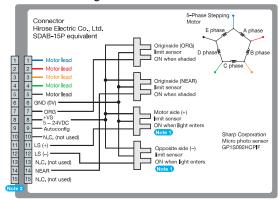
120 × 120 mm



Outline Drawing HST-100Z Hexagon socket head cap screw M6×25...4 screws 25**-**M4×0.7 25-M4×0.7 depth 8 depth 8 4-M6×1 4-M6×1 depth 12 depth 12 50 90 90 110 150 220 419 20 110 150 165 341.5 50 70 90 50 5 110 25 ф 155 205 Trave 50 2.5 50 70 90 50 50 4-φ7 mounting hole 15 50 70 90 150 4-φ7 mounting hole 50 50 110 150



■Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

Note 2 Compatible cable connector: DDK Ltd. 17JE-13150

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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm

Others

■Compatible Controllers / Drivers and Cables

D15D15A-CA

™ G120

Cable

DAC-SG

G120

:: Controller

SHOT-302GS [4 axes]

SHOT-304GS [3 axes]

HIT-M·HIT-SH [8 axes]

PGC-40-U [4 axes]

Driver

Drivers

Reference G020 - G021

MG112 − G115

[3 axes]

HSC-103



Precision Motorized Stages - 5 Phase Stepping Motor Stage Size 165 × 165 mm / 165 × 220 mm

HST-XYZ

RoHS

High precision XYZ axis stages fitted with precision ball screws and precision crossed roller.

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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm

Others



- The combination of HST Series and 3 axis Stage Controllers HSC-103 can perform low-noise and low-vibration operation, compared with conventional products.
- Steel body offers excellent stiffness and high load capacity.

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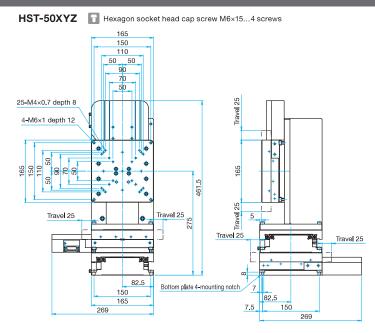
Specification	ons				
Part Number			HST-50XYZ	HST-100XYZ	
	Travel [mm]		50	100	
	Stage Size	[mm]	165×165	165×220	
	Feed Screw	/	Ball screw diameter ϕ 8mm, 2mm lead	Ball screw diameter φ8mm, 2mm lead	
Mechanical Specifications	Positioning	Slide	Crossed roller	Crossed roller	
9,000,000,000	Stage Mate	rial	Steel	Steel	
	Finish		Black anodized	Black anodized	
	Weight [kg]		30.4	36.1	
	Resolution	(Full) [µm/pulse]	4	4	
		(Half) [µm/pulse]	2	2	
	MAX Speed [mm/sec]		10	10	
	Positional Repeatability [µm]		2	2	
Accuracy Specifications	Load Capacity [N]		39.2 (4.0kgf)	39.2 (4.0kgf)	
-,	Lost Motion [µm]		1	1	
	Backlash [µ	ım]	1	1	
	Orthogonality of Motion [µm]		5	5	
	Straightness of Motion [µm]		10 15		
	Sensor Par	t Number	Micro photo sensor: GP1S092HCPIF (Sharp Corporation)		
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)		
Sensor	Origin Sens	sor	Equipped (NORMAL OPEN)		
	Proximity C	rigin Sensor	Equipped (NC	DRMAL OPEN)	

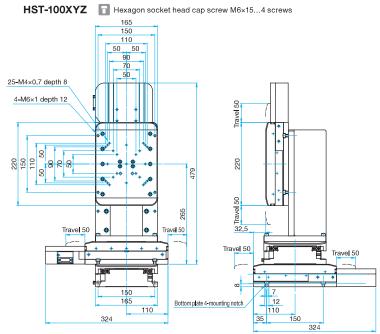
Motor / Sensor Specifications					
	Туре	5-phase stepping motor 1.4A/phase (Oriental Motor Co., Ltd.)			
Motor	Motor Part Number	PK544N18B (□42mm)			
	Step Angle	0.72°			
	Power Voltage	DC5 - 24V±10%			
	Current Consumption	240mA or lower (80mA or lower a per axis20mA or lower per a sensor)			
Sensor	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, MC-S0514ZU, SG-514MSC, MC-7514PCL		
Control System	Compatible Controller	HSC-103, SHOT-304GS, HIT-M, HIT-SH, PGC-04-U		

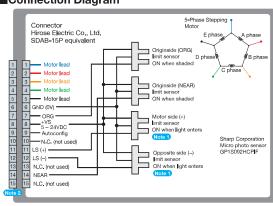








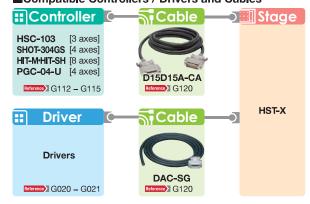
■Connection Diagram



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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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm



Precision Motorized Stages with built in Glass-scale Encoder Stage Size 165 × 165 mm / 165 × 220 mm /165 × 420 mm

HST(GS)





Linear scales consist of "scales" used as a ruler and a "detector" which obtains positional information from the scales.



• Linear scales are used in indispensable processes in many fields, and mainly used in equipment for manufacturing electronic devices such as semiconductors, flat panel displays (FPD), and printed wiring boards, electronic component mounting machine, machine tools, and carrier machine.

Guide

- ▶ Interpolated resolution of the glass scale is set to 0.05µm.
- ▶ Contact our sales team about custom configurations.

Attention

 \blacktriangleright When operating the HST(GS) series with closed loop control, in order to use it within the specifications listed in the catalog, the number of motor divisions of the controller is recommended to be set to 100 or higher (travel per pulse is $0.05\mu m$ or less).

Specification	JII5				
Part Number		HST(GS)-50X	HST(GS)-100X	HST(GS)-200X	
	Travel [mm]		50	100	200
	Stage Size	[mm]	165×165	165×220	165×420
Mechanical	Feed Screv	v	Ball screw diameter φ10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead	Ball screw diameter φ10mm, 2mm lead
Specifications	guide		Crossed roller guide	Crossed roller guide	Crossed roller guide
	Stage Mate	erial	Steel	Steel	Steel
	Weight [kg]		8.8	10.7	18.9
	Deselvation	(Full) [µm/pulse]	4	4	4
	Resolution	(Half) [µm/pulse]	2	2	2
	MAX Speed [mm/sec]		10	10	20
	Positioning Accuracy [µm]		3	4	5
	Positional Repeatability [µm]		0.5	0.5	0.8
	Load Capa	city [N]	392 (40.0kgf)	392 (40.0kgf)	392 (40.0kgf)
Accuracy		Pitch ["/N·cm]	0.01	0.01	0.01
Specifications	Moment Stiffness	Yaw ["/N·cm]	0.01	0.01	0.01
	Otimiess	Roll ["/N+cm]	0.005	0.005	0.005
	Lost Motion [µm]		0.5	0.5	0.5
	Backlash [µ	ım]	1	1	1
	Parallelism	[µm]	50	70	100
	Running Pa	arallelism [µm]	10	10	20
	Pitch ["] / Yaw ["]		15/15	20/20	20/20
	Sensor Par	t Number	Micro ph	oto sensor: GP1S092HCPIF (Sharp Co	orporation)
0	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
Sensor	Origin Sens	sor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)
	Proximity Origin Sensor		Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)

Motor / Sensor Specifications					
	Туре	5-phase stepping motor 1.4A/phase (Oriental Motor Co., Ltd.)			
Motor	Motor Part Number	PKP544N18B (□42mm)	PKP544N18B (□42mm)	PKP546N18B (□42mm)	
	Step Angle	0.72°			
	Power Voltage	DC5 – 24V ±10%			
	Current Consumption	80mA or lower (20mA or lower per sensor)			
Sensor	Control Output	NPN oper	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			
Scale head	Power Voltage / Current Consumption	DC5V±5% / 100mA			

Compatible	Compatible Cable				
Cablo	Driver Cable	D15D15A-CA			
Cable	Scale Cable	GSEF-CA-3			

Compatible Controller			
Compatible Controller	SHOT-302GS, SHOT-304GS, HIT-M+HIT-SH		

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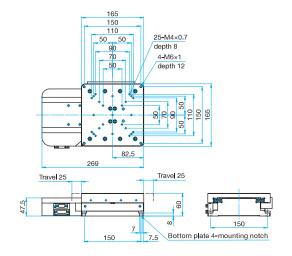
40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

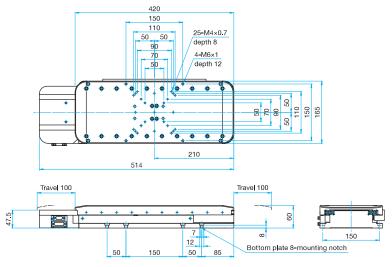
100 x 100 mm 120 × 120 mm



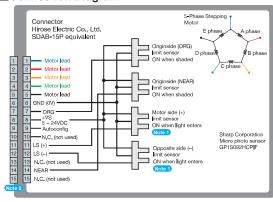




150 110 50 50 90 70 50 25**-**M4×0.7 depth 8 4-M6×1 depth 12 50 90 50 50 110 150 110 324 Travel 50 Travel 50 9

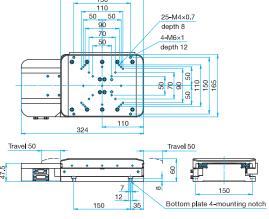


■Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

2 Compatible cable connector: DDK Ltd. 17JE-13150



■Compatible Controllers / Cables

D15D15A-CA

GSEF-CA-3

■ G120

:: Controller

SHOT-302GS [2 axes]

SHOT-304GS [4 axes]

HIT-M·HIT-SH [8 axes]

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⊃≣ Stage

HST(GS)-50X

HST(GS)-100X

HST(GS)-200X

Options

40 × 40 mm 60 × 60 mm

80 × 80 mm

85 × 85 mm 100 × 100 mm

120 × 120 mm



OSMS-ZF RoHS



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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 x 100 mm 120 × 120 mm Others

Translation Motorized Stages, Flat Z axis - 5 Phase Stepping Motor Stage Size 40 × 40 mm / 60 × 60 mm / 80 × 80 mm

Z axis stepping motor driven stages for measurement and inspection, offering high stiffness and high precision.

The mounting platform is oriented parallel to the base and is perpendicular to the direction of travel.



- Unconventional design incorporates a horizontal platform Z axis stage which mounts the motor in the main body to minimize footprint.
- Minimized protrusions make these stages ideal for system assembly

Specification	ons						
Part Number		OSMS40-5ZF-0B	OSMS60-5ZF	OSMS60-10ZF	OSMS80-20ZF-0B		
	Travel [mm]		5	5	10	20	
	Stage Size	[mm]	40×40	60×60	60×60	80×80	
Mechanical	Feed Screw	,	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ6mm, 1mm lead	Ball screw diameter φ8mm, 2mm lead	
Specifications	Positioning	Slide	Outer rail structure	Outer rail structure	Outer rail structure	Outer rail structure	
	Stage Mate	rial	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish		Black anodized	Black anodized	Black anodized	Black anodized	
	Weight [kg]		0.35	0.6	0.6	1.6	
	Resolution	(Full) [µm/pulse]	1.0	2.0	2.0	0.2	
	Resolution	(Half) [µm/pulse]	0.5	1.0	1.0	0.1	
	MAX Speed [mm/sec]		2	4	4	1	
	Positional F	Repeatability [µm]	5	5	5	5	
	Load Capa	city [N]	19.6 (2.0kgf)	39.2 (4.0kgf)	39.2 (4.0kgf)	147 (15.0kgf)	
Accuracy	Moment Stiffness	Pitch ["/N·cm]	2.0	0.4	0.4	0.2	
Specifications		Yaw ["/N·cm]	2.0	1.0	1.0	1.0	
		Roll ["/N·cm]	1.0	1.0	1.0	1.0	
	Lost Motion [µm]		5	5	5	5	
	Parallelism	[µm]	50	50	50	50	
	Running Pa	rallelism [µm]	15	15	15	15	
	Pitch ["]		25	20	20	25	
	Sensor Part Number		Micro photo sensor: GP1S097HCZ0F (Sharp Corporation): Limit Sensor (60-5ZF/60-10ZF) Micro photo sensor: PM-U25 (SUNX Co.,Ltd.): Limit Sensor (40-5ZF/80-20ZF)				
Sensor	Limit Senso	or	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Origin Sens	or	None	None	None	None	
	Proximity O	rigin Sensor	None	None	None	None	

Motor / Sensor Specifications						
	Туре	5-phase stepping motor 0.35A/ phase (Oriental Motor Co., Ltd.)	5-phase stepping	g motor 0.75A/phase (Orient	al Motor Co., Ltd.)	
Motor	Motor Part Number	PK513PA-C21 (□20mm)	PK523HPB-C12 (□28mm)	PK523HPB-C12 (□28mm)	A7177-90215KTG (□28mm)	
	Step Angle	0.72°			0.036°	
	Power Voltage	DC5 – 24V ±10% or lower				
Sensor	Current Consumption	30mA or lower (15mA or lower per sensor)	40mA or lower (20m/	A or lower per sensor)	30mA or lower (15mA or lower per sensor)	
	Control Output	1	NPN open collector output DC30V or lower, 50mA or lower			
	Output Logic		When shaded: Output transistor OFF (no conduction)			

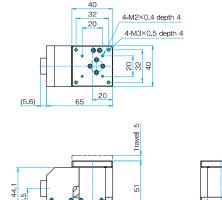
Compatible Driver / Controller								
Control System	Compatible Driver	MC-S0514ZU, SG-514MSC	SG-5M, SG-5MA, MC-S0514ZU, SG-514MSC, MC-7514PCL	MC-S0514ZU, SG-514MSC, MC-7514PCL				
,	Compatible Controller	GSC-01, GSC-02,	GSC-01, GSC-02, SHOT-702, HSC-103*, SHOT-302GS, SHOT-304GS, HIT-M·HIT-S, PGC-04-U					



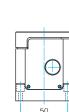


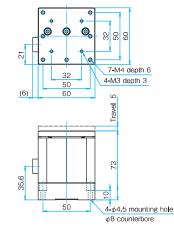
OSMS40-5ZF-0B Hexagon socket head cap screw M3×15...4 screws OSMS60-5ZF

Hexagon socket head cap screw M4×15...4 screws



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(6)

35.6

4-φ3.5 mounting hole

φ6.2 counterbore

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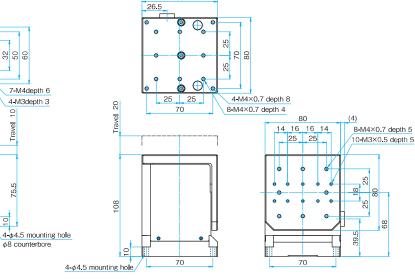
8 22 8

10

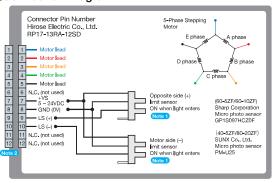
7-M4depth 6

4-M3depth 3

φ8 counterbore



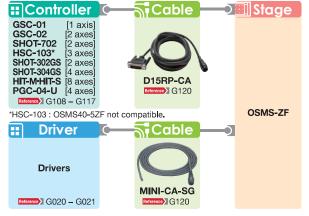
■Connection Diagram



The motor side limit sensor is the + direction limit sensor. Motorized stages are not fitted with proximity origin sensors.

Limit sensors are used as origin detection sensors.
Compatible cable connector:
Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122

■Compatible Controllers / Drivers and Cables



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40 × 40 mm 60 × 60 mm

80 × 80 mm 85 × 85 mm

100 × 100 mm

120 × 120 mm