

## Precision Motorized Stages - 5 Phase Stepping Motor



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Piezo Stage

Precision Linear MS

High Speed MS

Motorized Goniometer

Motorized Rotation

Multiaxis Motorized

Industrial Robot

Controller & Driver & Cable

Custom-Built MS

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



- Steel body offers excellent stiffness and high load capacity.

#### Guide

- Contact our International Sales Division if you desire to change motors, etc. Or, use the motorized stage system question sheet. [Reference](#) I085

#### Specifications

Part Number		PMS-50Z	PMS-100Z	PMS-200Z	
Mechanical Specifications	Travel [mm]	50	100	200	
	Table Size [mm]	165x165	165x200	165x360	
	Feed Screw [mm]	Ball screw diameter $\phi$ 8mm, 1mm lead	Ball screw diameter $\phi$ 8mm, 1mm lead	Ball screw diameter $\phi$ 14mm, 2mm lead	
	Positioning Slide	Crossed roller	Crossed roller	Crossed roller	
	Stage Material	Steel (S50C)	Steel (S50C)	Steel (S50C)	
	Weight [kg]	12.8	14.5	27.0	
Accuracy Specifications	Resolution	(Full) [ $\mu$ m/pulse]	2	4	
		(Half) [ $\mu$ m/pulse]	1	2	
	MAX Speed [mm/sec]	10	10	20	
	Positioning Accuracy [ $\mu$ m]	5	7	8	
	Positional Repeatability [ $\mu$ m]	2	2	2	
	Load Capacity [N]	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	
	Moment Stiffness	Pitch [ $^{\circ}$ /N·cm]	0.015 (Y pitch)	0.020 (Y pitch)	0.030 (Y pitch)
		Yaw [ $^{\circ}$ /N·cm]	0.01 (X pitch)	0.015 (X pitch)	0.020 (X pitch)
		Roll [ $^{\circ}$ /N·cm]	0.005	0.015	0.015
	Lost Motion [ $\mu$ m]	1	1	1	
Backlash [ $\mu$ m]	1	1	1		
Perpendicularity of Motion [ $\mu$ m]	10	15	25		
Pitch [ $^{\circ}$ ] / Yaw [ $^{\circ}$ ]	20/15	25/20	25/25		
Sensor	Sensor Part Number	Micro photo sensor: PM-L24 (SUNX Co., Ltd.): Limit sensor, origin sensor			
	Limit Sensor	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Origin Sensor	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Proximity Origin Sensor	None	None	None	

#### Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 1.4A/phase (Oriental Motor Co., Ltd.)		
	Motor Part Number	PK564-NBW ( $\square$ 60mm)	PK566-NBW ( $\square$ 60mm)	PK569-NBW ( $\square$ 60mm)
	Step Angle	0.72 $^{\circ}$		
Sensor	Power Voltage	DC5 - 24V $\pm$ 10%		
	Current Consumption	45mA or lower (15mA or lower per sensor)		
	Control Output	NPN open collector output DC30V or lower, 50mA		
	Output Logic	When shaded: Output transistor OFF (no conduction)		

#### Compatible Driver / Controller

Control System	Compatible Driver	SD-5M, SD-55M, SD-514MSC, SD-5151, SD-525M
	Compatible Controller	ASC-302GS, ASC-304GS

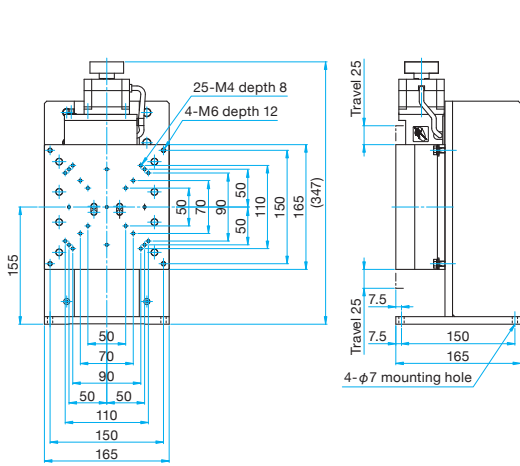
# Precision Motorized Stages - 5 Phase Stepping Motor

PMS-Z **RoHS** **CE**

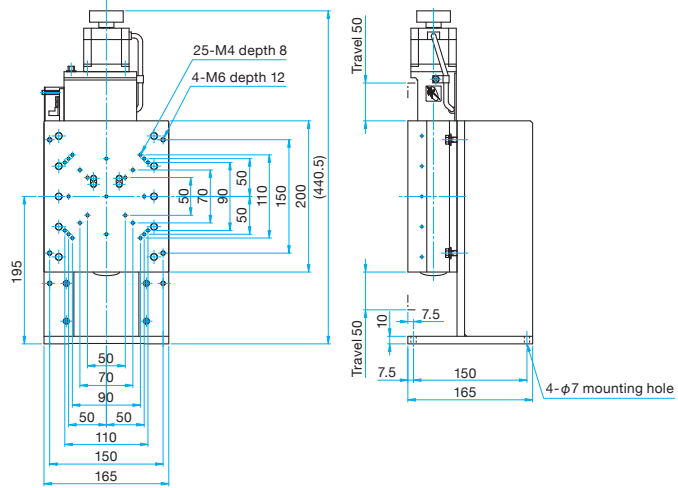


## Outline Drawing

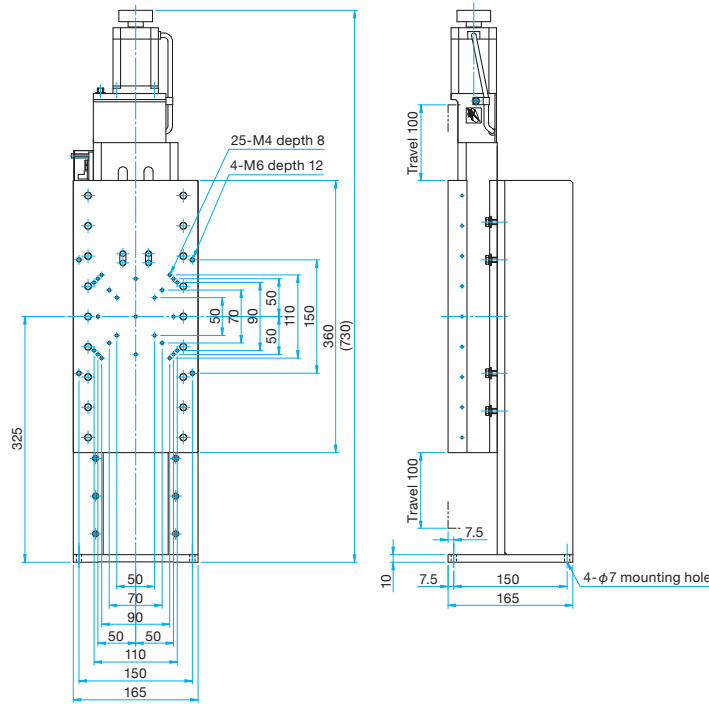
**PMS-50Z** Hexagon socket head cap screw M6x15...4 screws



**PMS-100Z** Hexagon socket head cap screw M6x15...4 screws



**PMS-200Z** Hexagon socket head cap screw M6x15...8 screws



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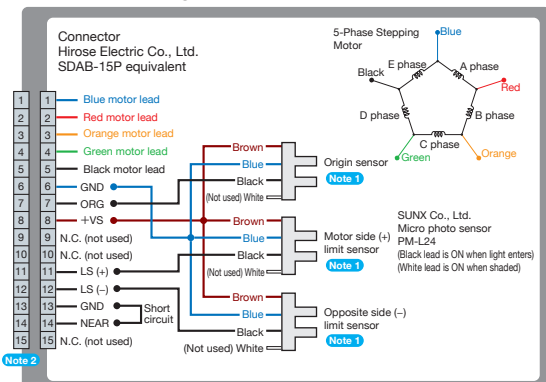
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## Connection Diagram



**Note 1** The motor side limit sensor is the + direction limit sensor. KST-50/100/200 is fitted with an origin sensor.

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

## Compatible Controllers / Drivers and Cables

