

PSA Motorized Stages

(Version 1.2 2011-06-16)

Operation Manual



Zolix Instruments Co., Ltd.

Thanks for using Zolix products !

Please read this introduction carefully before using. And kindly please contact Zolix office in Beijing or local office if you have any questions and suggestions.

Directory

1. PSA Series Motorized Stages.....	1
1.1. Introduction	1
1.2. Model Explain.....	3
1.3. Specifications	4
1.4. Wiring Diagram	6
2. PSAG Motorized Goniometric Stages	7
2.1. Introduction	7
2.2. Model Explain.....	8
2.3. Specifications	8
2.4. Wiring Diagram	8
3. PSAV Series Motorized lift Stages	9
3.1. Introduction	9
3.2. Mode	9
3.3. Specifications	9
3.4. Wirings	10
4. Unpacking Procedures.....	11
5. Warning.....	11
6. Certifications and Warranty.....	12
7. CE Declaration of Conformity	13
8. Packing List	14

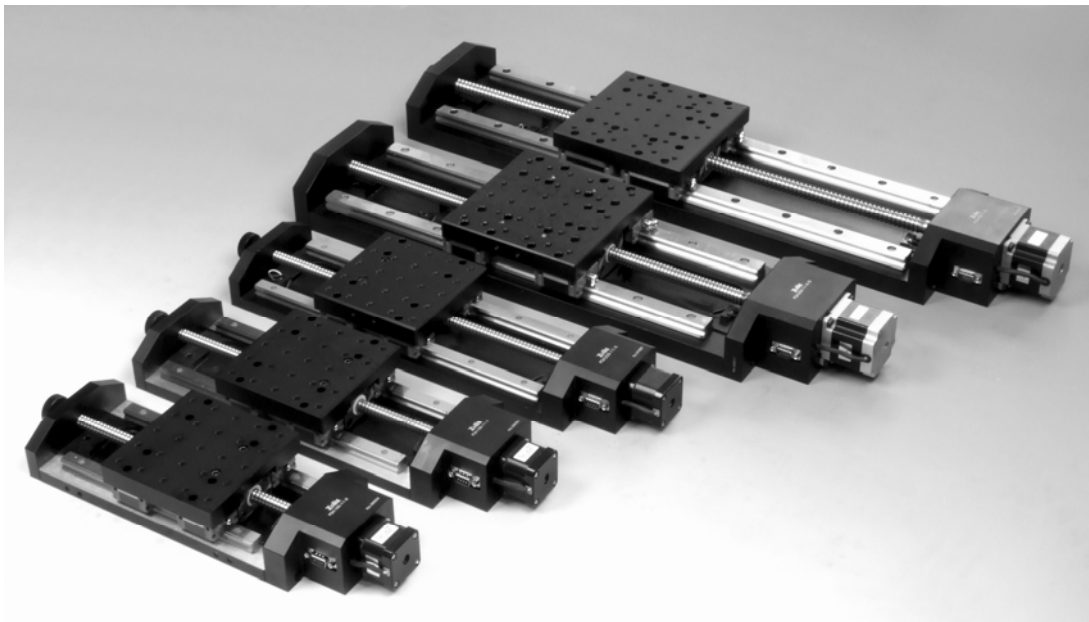
1. PSA Series Motorized Stages

1.1. Introduction

PSAXXX-11 series motorized stages are upgraded from TSA series stages. The special structure and abrasive ball screw are for repeating accurate orientation. The ball screw, shaft coupling and guide rail are all import. Moving linearity and parallel are added into calibrations.

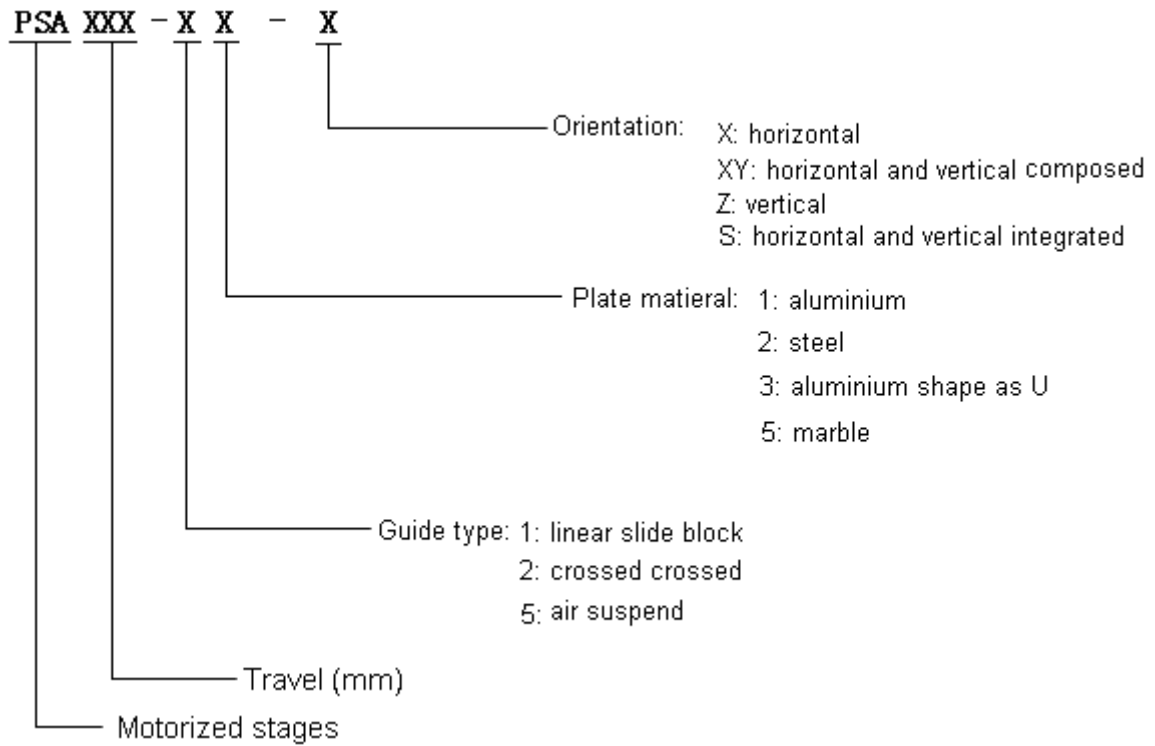
There are expert products for moving at Z axis. The handwheel fixed on the back of the motor is for manual operation. The left and right limiting switch and zero switch are all for safety use. Different stages can be mounted together along the different axis. Step motor can be replaced by the servo motor. The grating ruler is the accessory.

PSAXXX-13 series high-precision motorized stages adopt new configuration and new technology. Key specifications reach the advanced standards of international similar products. PSAXXX-13 series high-precision motorized stages are designed for Industrial Applications, the reliability and Airtight reach the industrial grade.





1.2. Model Explain



1.3. Specifications

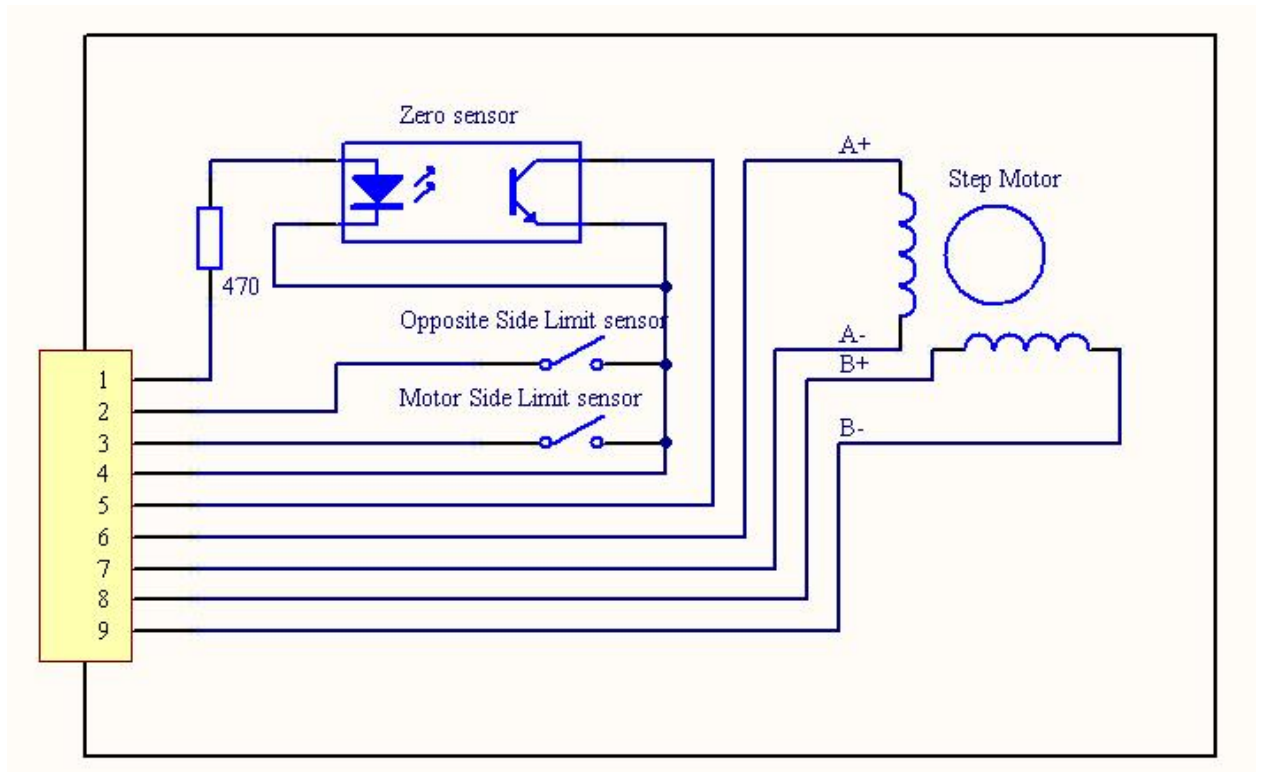
	PSA050-11-X	PSA100-11-X	PSA150-11-X	PSA200-11-X	PSA300-11-X	PSA400-11-X
Table dimension	120mmX120mm				160mmX160mm	
Travel	4mm				5mm	
Resolution	0.01mm				0.0125mm	
Maxim speed	40mm/Sec				50mm/Sec	
linearity	10μm	10μm/100mm				
parallel	15μm	15μm/100mm				
Repeatability	<3μm					
Interstice	<5μm					
Step motor	42M-1.8S				57M-1.8S	
Maxim torque	0.4 Nm				1.0 Nm	
Operating current	1.7A				2.4A	
Load capacity	30 Kg				50 Kg	

	PSA050-11-Z	PSA100-11-Z	PSA150-11-Z	PSA200-11-Z	PSA300-11-Z	PSA400-11-Z
Table dimension	120mmX120mm				160mmX160mm	
Travel	4mm				5mm	
Resolution	0.01mm				0.0125mm	
Maxim speed	5mm/Sec				5mm/Sec	
linearity	10μm	10μm/100mm				
parallel	15μm	15μm/100mm				
Repeatability	<3μm					
Interstice	<5μm					
Step motor	42M-1.8S				57M-1.8S	
Maxim torque	0.4 Nm				1.0 Nm	
Operating current	1.7A				2.4A	
Load capacity	5 Kg				10 Kg	

Note: The less the load there is, the more the speed is.

	PSA050-13-X	PSA100-13-X	PSA200-13-X	PSA300-13-X	PSA400-13-X
Table dimension	150mmX150mm				
Travel	4mm				5mm
Resolution	0.01mm				0.0125mm
Maxim speed	40mm/Sec				50mm/Sec
linearity	10 μ m	10 μ m/100mm			
parallel	15 μ m	15 μ m/100mm			
Repeatability	<3 μ m				
Interstice	<5 μ m				
Step motor	57M-1.8S				
Maxim torque	1.0 Nm				
Operating current	2.4A				
Load capacity	50 Kg				70 Kg

1.4. Wiring Diagram



2. PSAG Motorized Goniometric Stages

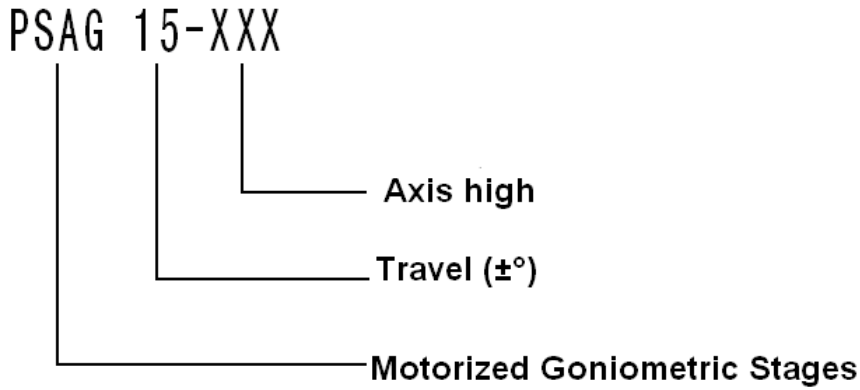
2.1. Introduction

PSAG15-XXX series Motorized Goniometric Stages are suitable for heavy load (more than 50Kg). Can make the optical device or testing instrument etc to take inclination adjustment. Use the step motor as the driver. The inclination angle of the stage can be adjust automatically. Handwheel is standard configuration, and users can control the stage manually. They are designed so that orthogonal mounting of two adjacent-size stages provides two perpendicular axes of rotation about the same point in space. Mounting a rotation stage under the assembly adds a third orthogonal rotation axis through the same point.

The flexible clutch, which is import product, connects the motor and the ball bearing screw. It ensures the high performance. The motion system is the worm and the screw. The relative motion construction has the arc guide. They all have the limit switch.



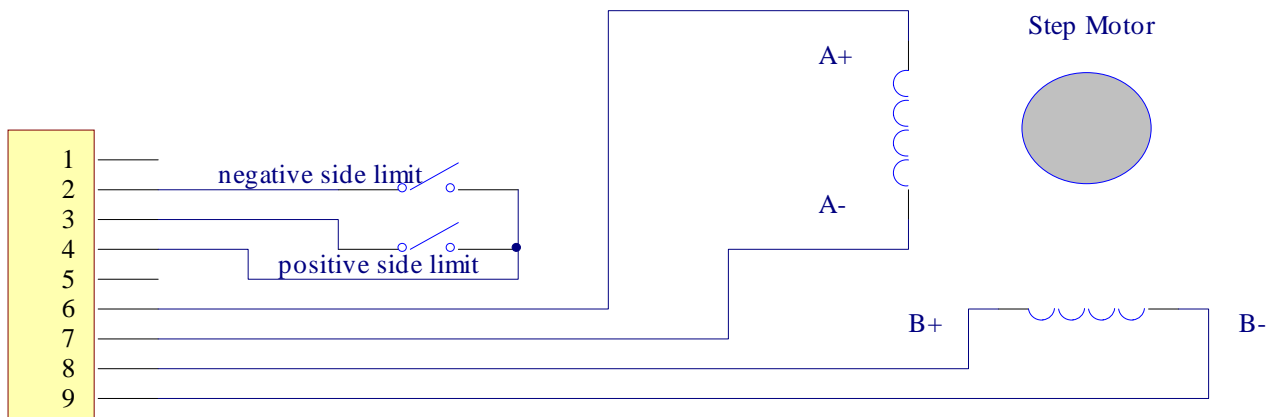
2.2. Model Explain



2.3. Specifications

Mode	PSAG15-250	PSAG15-370
Travel range ($^\circ$)	± 15	± 15
Table dimension (mm)	280×250	340×250
High of Rotation Center (mm)	250	370
Guide	Arc	
Reduction Gear	610:1	870:1
Resolution (Subdivision=8) ($^\circ$)	0.00037	0.00026
Step motor (step angle $^\circ$)	57(1.8)	57(1.8)
Operating Current (A)	2.4	2.4
Load Capacity (kg)	50	50

2.4. Wiring Diagram



3. PSAV Series Motorized lift Stages

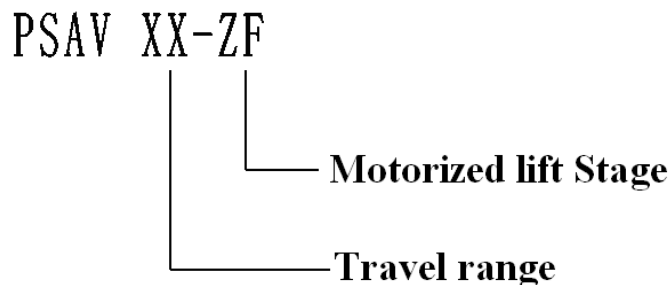
3.1. Introduction

PSAVXX-ZF series Motorized lift Stages are suitable for heavy load (more than 80Kg). Can make the optical device or testing instrument etc to take vertical adjustment. PSAVXX-ZF series adopt step motor as the driver, and handwheel is standard configuration, and users can control the stage manually.

There are excellent quality spring couplings between the motors and the driving section, and there is worm and worm wheel reduction gear, which increases transmission torque. For the relative motion, liner bearing is used. Limit switch is used to protect the products. Standard interface for signal transmission. The motor can be changed into servo motor. Stage with standard installation screw holes can be assembled into multi-axis system.



3.2. Mode



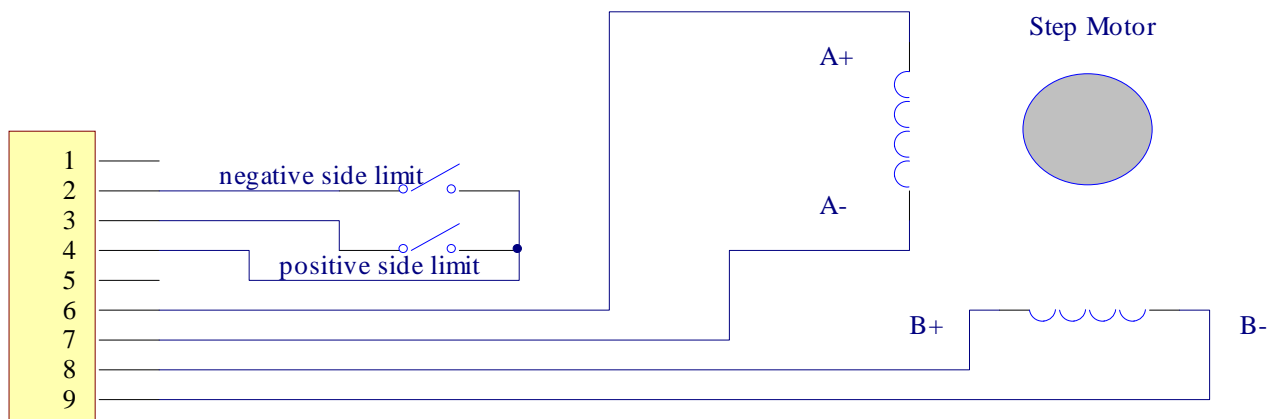
3.3. Specifications

Mode	PSAV30-ZF	PSAV100-ZF
Stage size (mm)	238X238	238X238

Mix height (mm)	238	308
Lift travel range (mm)	30	100
travel (mm)	4	4
Resolution(Subdivision=8)(um)	0.24	0.24
Gear ratio	21: 2	21:2
Max speed (mm/sec)	3.8.	3.8
Step motor (step angle°)	57 (1.8°)	57 (1.8°)
Load Capacity (kg)	80	80

NOTE:If the load is less, the maximum speed will increases.

3.4. Wirings



4. Unpacking Procedures

(1) **Visual examination**

Please do the following inspection for all packing box

Check whether the packaging is intact outside the equipment, there are situations, such as damage, soaks, out of shape, etc..

Have above-mentioned situation please report immediately to Zolix. Or Representatives

(2) **Unpacking procedures**

Please open the packing box and make sure Do-Not uses the heavy-duty tool or opens rudely. With the proper tool according to the direction shown on the packing box so as not to cause inside equipment to be damaged.

(3) **After ununpacks**

Please check equipment have appearance damage or corrosion, etc..

Based on contract and packing list, check specification, mode, and quantity.

Have above-mentioned situation please report immediately to Zolix or representatives

Please keep the packing box at least half year in order to return and transport needing.

5. Warning

Warning!!!

Never touch the stage when it is in operation expect under manual!

6. Certifications and Warranty

Zolix Instruments Corporation (Zolix) certifies that this instrument was thoroughly tested and inspected and found to meet the specifications furnished by Zolix when it was shipped from the factory.

Zolix Instruments Corporation (Zolix) instruments and accessories are warranted for a period of one full year from date of delivery to be free from defects in material and to conform to the specifications furnished by Zolix. The corporation's obligation under this warranty is limited to servicing or adjusting an instrument returned to the factory, prepaid, and to repairing at the factory any part or parts thereof. All purchased items carry the original manufacturers' warranty.

Zolix Corporation shall not be liable for consequential damages resulting from accident, alteration, and improper installation, operation on low or excessive voltages or use in violation of the operating instructions furnished by Zolix.

If any defect appears within the warranty period, the purchaser shall promptly notify Zolix. No material will be accepted for repair or replacement without prior authorization from Zolix. Upon such authorization and in accordance with instructions of Zolix, parts, materials or equipment for which repair or replacement is requested shall be returned to Zolix for examination, with shipping charges prepaid by the purchaser. Final determination as to whether a product or part is actually defective rests with Zolix Instruments Corporation,

In such cases where necessary repairs are not covered by this warranty, an estimate of repair charges will be submitted to the purchaser before servicing the equipment.

Zolix Instrument Corporation reserves the right to make changes or improvement upon its products without imposing any obligations upon it to install the same upon its products previously manufactured.

This warranty is expressly in lieu of all other obligations or liabilities on the part of Zolix, and Zolix neither assumes, nor authorizes any other person to assume for then other obligations or liability in connection with the sale of equipment manufactured by Zolix Instruments Corporation.

7. CE Declaration of Conformity



Manufactured by: Zolix Instrument Co., Ltd

Applicable Standards:	Generic Immunity	EN 50082-1 : 1992
	Generic Emission	EN 50081-1 : 1992
	Electrical Safety Standards	EN 61010-1 : 1993

Zolix Instrument Co., Ltd **certifies that this equipment conforms to the protection requirements of the above Directives.**

8. Packing List

Model: **PSA** _____Name: **Motorized Stage**

Serial Number: _____

Products List

No.	Product Name	Amount
1	<input type="checkbox"/> PSA _____ Motorized stage	1
No.	Accessories	Amount
No.	Tools and Facilities	Amount
No.	Documents	Amount
1	PSA Motor Stages Operation Manual	1
2	Conformity certificate	1

Checker Name and Checking Date:

Zolix Instruments Co., Ltd.

**Add: LDUV 68B, No. 16 Huanke Middle Rd, Golden Bridge
Science and Technology Industrial Base, Zhongguancun
Science Park Tongzhou Zone, Tongzhou District, Beijing
China(101102).**

TEL: +86 10 56370168

FAX: +86 10 56370118

Email: info@zolix.com.cn <http://www.zolix.com.cn>