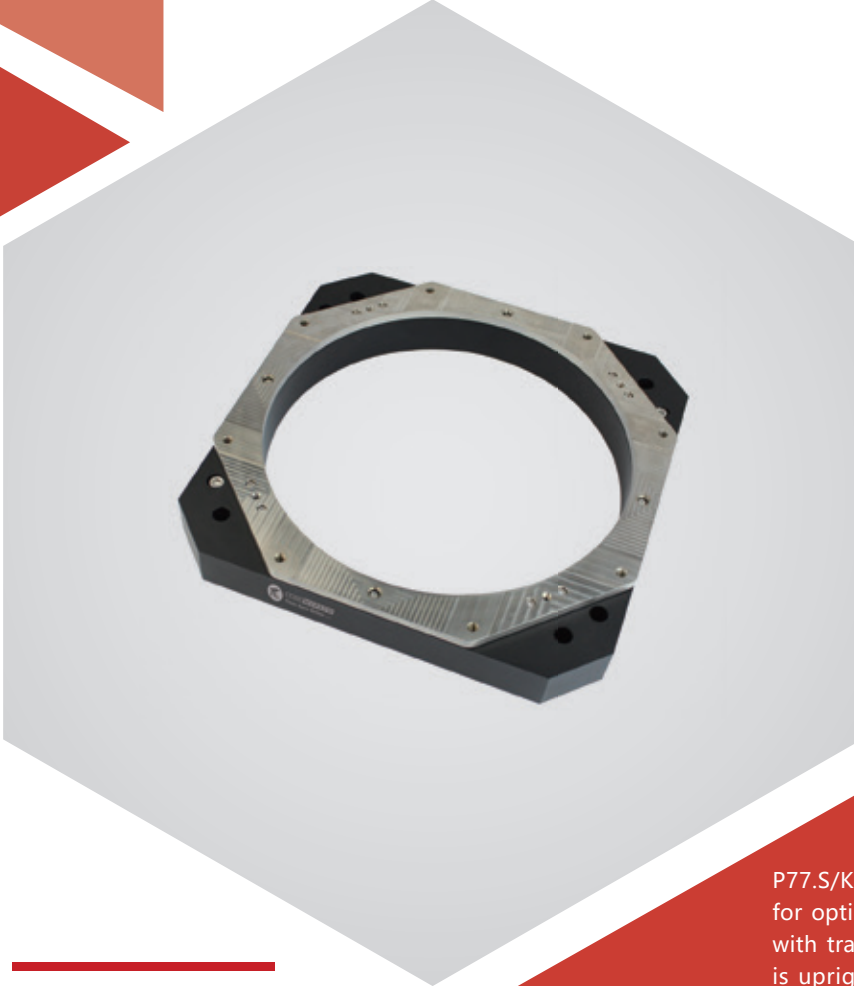


# Z axis | P77.S/K242

## Piezo Phase Shifter



### Characteristics >>

- Active axes Z
- Stroke to 17.5 $\mu$ m
- Max load to 15kg
- Aperture size:  $\Phi$ 242mm
- Custom versions are available

### Applications >>

- Optical trapping
- Surface inspection
- Precision positioning
- Microscopic imaging
- Phase shifter
- Phase shifting/interference/metering

## Introduction

P77.S/K242 piezo phase shifter is specially designed for optical detection and phase shifting applications, with travel range of up to 17.5 $\mu$ m and load capacity is upright 15kg, lateral 1kg, inverted 10kg, which is very suitable for large-aperture optical inspection equipment, like laser interferometer, for various lenses. Custom versions are available.



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## Technical Data >>

Type	S-Closed loop K-Open loop	P77.S242	P77.K242	Units
Active axis		Z	Z	
Travel range(0~120V)		14	14	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		17.5	17.5	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Aperture		$\Phi 242$	$\Phi 242$	mm
Resolution		0.5	0.2	nm
Pitch/yaw/roll		< 15		$\mu\text{rad}$
Push/pull force capacity		100/20		N
Unloaded resonant frequency		3090		Hz $\pm 20\%$
Unloaded Step time		20	20	ms $\pm 20\%$
Load capacity		upright 15, lateral 1, inverted 10		kg
El. capacitance		5.4		$\mu\text{F}\pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80		$^{\circ}\text{C}$
Material		Aluminum, steel		
Size(L×W×H)		280×280×40		mm
Mass		3800(not include cable)		g $\pm 5\%$
Cable length <sup>[2]</sup>		1.5		m $\pm 10\text{mm}$
Sensor/voltage connector <sup>[2]</sup>		-		

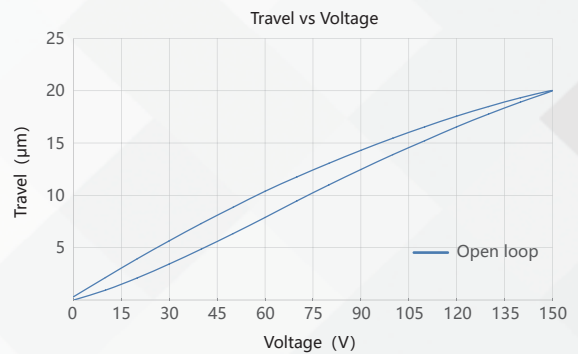
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$ .

[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

[2] Custom cable length and connector is available.

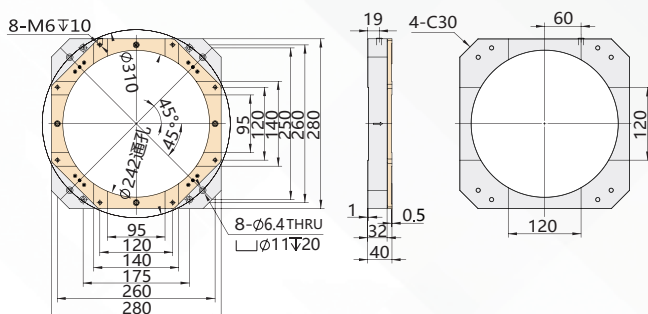
Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

## Curves >>



Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

## Drawing >>



## Recommended Controllers >>



**E53**  
Small size, 60mA  
RS-232/RS-422/USB interface  
Software secondary development



**E70**  
Small size, ave current 70mA/channel  
RS-232/RS-422/USB interface  
Software secondary development



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