

# MIPOS 600 SG

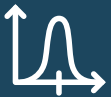
## Lens Positioning System



**600  $\mu\text{m}$  Focusing Range**



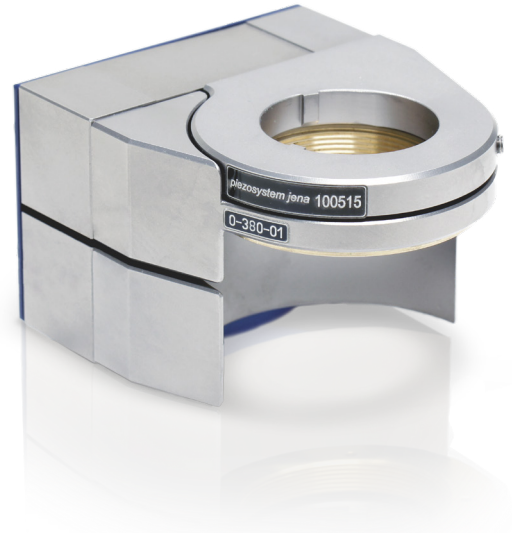
**Typ. Step Resolution 12 nm  
in Closed-Loop**



**Resonant Frequency up to  
190 Hz**



**Standard Integrated Strain  
Gauge Sensor**



The systems of the MIPOS 600SG OEM series offer a nano-positioning and scanning range up to 600  $\mu\text{m}$  in open-loop operation, and 500  $\mu\text{m}$  in closed-loop. They can be assembled with objectives with a diameter of up to 40 mm.

Unique parallelogram design guarantees high parallel motion without influencing the optical axis. The precise positioning repeatability of the MIPOS 600SG OEM can be guaranteed by the use of the integrated measurement system. The design which includes an integrated preload of the actuator offers high resonant frequency and highly parallel motion. The MIPOS 600 is available in an upside down version for inverted microscopes.

Due to the unique features of the MIPOS 600 series, fast scanning applications can be accurately realized with the shortest settling times.

### Variants:

- With strain gauge (SG)

### Recommended Controller:

NV200/D Net

### Applications

- Surface scanning and analysis
- AFM microscopy
- Biotechnology (e.g. cell scanning)
- Beam focusing for printing processes
- Semiconductor testing

# MIPOS 600 SG

## Technical Data

	Unit	MIPOS 600 SG
Part #	-	0-380-01D
Axis	-	Z
Motion in Open-Loop ( $\pm 10\%$ )*	$\mu\text{m}$	600
Motion in Closed-Loop ( $\pm 0,2\%$ )*	$\mu\text{m}$	500
Capacitance ( $\pm 20\%$ )**	$\mu\text{F}$	21.0
Integrated Measurement System	-	SG
Resolution Open-Loop***	nm	0.9
Resolution Closed-Loop***	nm	12
typ. Repeatability	nm	13
Resonant Frequency	unloaded	190
	additional load = 80g	161
	additional load = 105g	134
	additional load = 300g	118
Stiffness	N/ $\mu\text{m}$	0.144
Rotational Error (full motion)	$\mu\text{rad}$	<20
Voltage Range	V	-20...+130
Connector ****	Voltage	d-sub
	Sensor	d-sub
Cable Length	m	2
Dimensions (LxWxH)	mm	60.5 x 50 x 40.1
Weight	g	370
Max. Lens Diameter	mm	40
Max. Lens Weight	g	500
Option für Standardmikroskope		yes
Option für inverse Mikroskope		yes

\* typical value measured with 0.3 mV Controller

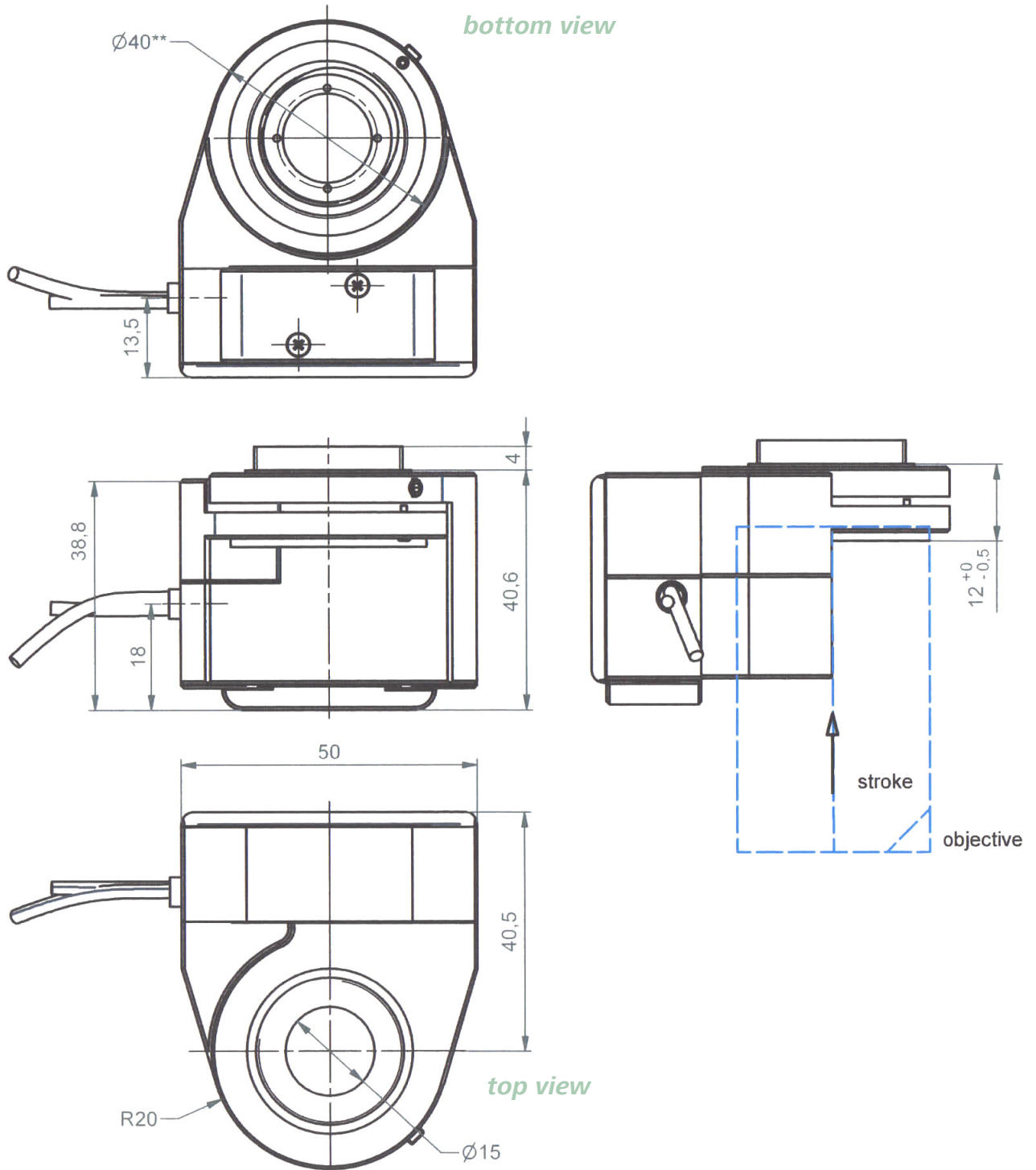
\*\* typical value for small electrical field strength

\*\*\* the resolution is only limited by the noise of the power amplifier and metrology

\*\*\*\* in combination with a digital controller unit, the system comes with a sub-D 15 connector. The part number is extended by the suffix "D"

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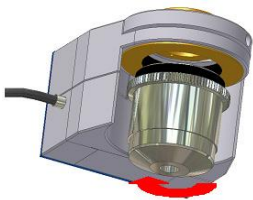
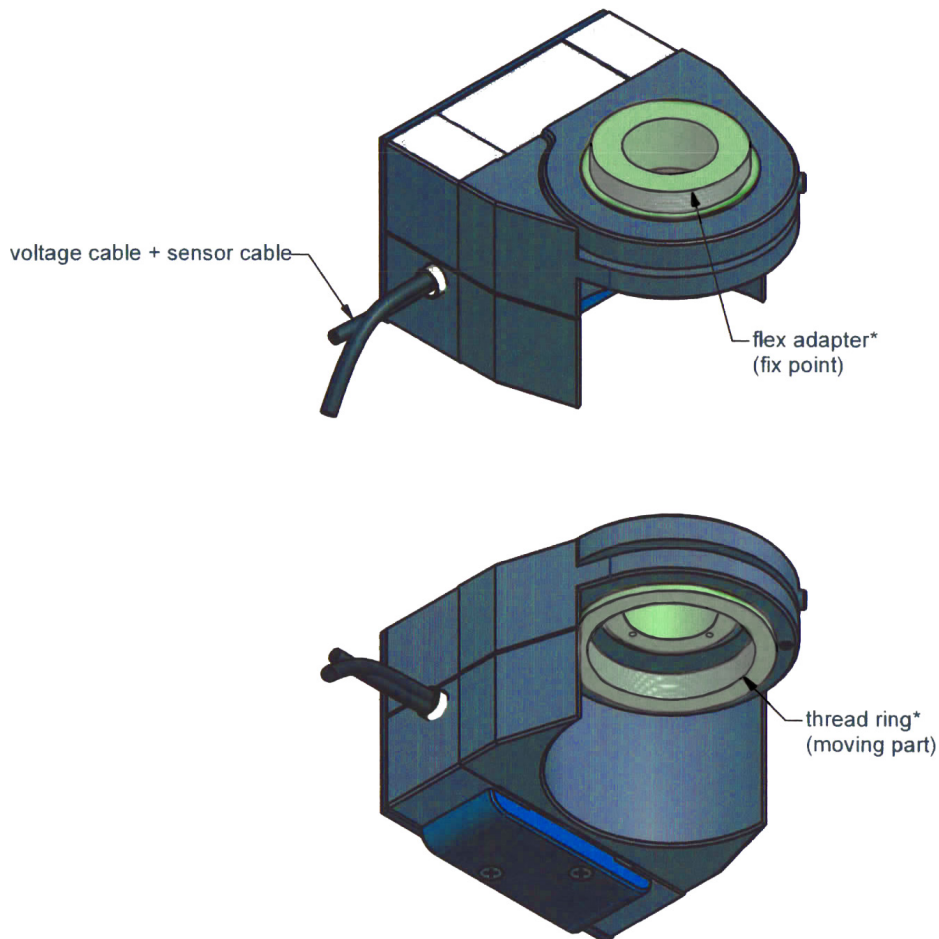
Technical Drawing



Dimensions given in mm.

# MIPOS 600 SG

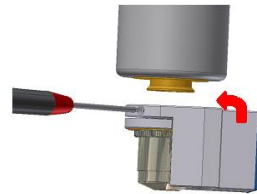
## Technical Drawing



**1. Screw the objective into the MIPOS**



**2. Screw the Flex-Adapter into the microscope**



**3. Clamp the MIPOS on the Flex-Adapter using the attachment**

*Rights reserved to change specifications as progress occurs without notice!*

**piezosystem jena GmbH**  
Tel: +49 (3641) 66880  
E-Mail: [info@piezोजना.com](mailto:info@piezोजना.com)

**piezosystem jena, Inc.**  
Tel: +1-508-634-6688  
E-Mail: [contact@psj-usa.com](mailto:contact@psj-usa.com)

[www.piezosystem.com](http://www.piezosystem.com)