PXY 16 OEM line

compact 2-axis piezo scanner

- **16 x 16 µm² positioning / scanning range**
- **compact design**
- **sub-nm resolution**
- **excellent guidance accuracy**
- **flexure hinges design**
- **advanced robustness and reliability**

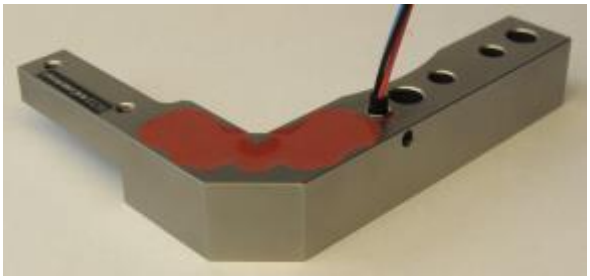

fig.: PXY 16 OEM S-612-00

applications:

- fast scanning tasks as well as nanopositioning and adjustment in the wide field of scanning microscopy, image processing, semiconductor, automation etc.

Concept

The PXY 16 OEM two axes piezo actuating system offers a scanning and positioning range of 16 x 16 µm². The FEA optimized flexure hinges system provides higher stiffness and a response time in the µ-sec range compared to a conventional construction. Therefore the PXY 16 OEM meets very high dynamical performance and excellent trajectory accuracy.

Specials

The system is especially designed for the needs of pixel shifting applications.
The raster tapped and thru holes allow easy integration of the scanner system into any application or mechanical setup.
Vacuum and cryogenic versions are available on demand as well as body material variations of invar, superinvar, aluminum or titanium.

Mounting/Installation

Piezoactuators generate a pressure force to effect the resulting motion based on a solid state phenomena. The resolution is only limited by the noise of the amplifier and metrology. Such devices are neither affected by magnetic fields nor do they produce them.
Piezoactuators can be used under vacuum conditions. They should not be operated in the pressure range from 100 to 0.01hPa(mbar) due to the greatly reduced dielectric breakdown strength of air.
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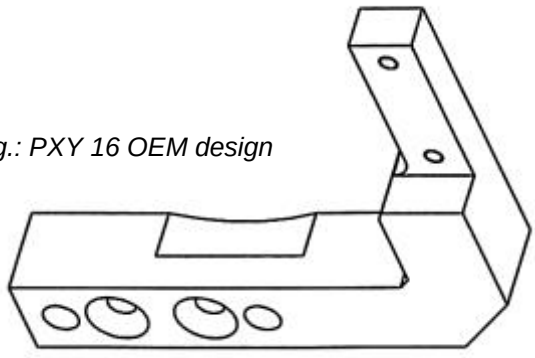

fig.: PXY 16 OEM design

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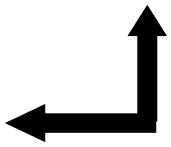
technical data:

		unit	PXY 16 OEM
part no.		-	S-612-00
axes		-	X and Y
stroke open loop (±10%)* @90V		µm	16
electrical capacitance (±20%)**		µF	0.75 per axis
feedback sensor		-	-
resolution*** open loop		nm	0.04
typ. hysteresis @100V		%	14
resonant frequency	0g load	Hz	649
	20g load	Hz	575
stiffness (x / y / z)		N/µm	10
max. push / pull force open loop		N	20/2
dimensions (l x w x h)		mm³	78 x 62 x 14
voltage range		V	0V... +90
connector****	voltage	-	LEMO.0S
	sensor	-	-
cable length****		m	0.2
temperature range		°C	-20 … +80
material		-	stainless steel
total mass		g	<100

* measured with 30V300
** typical small signal strength behavior
*** resolution is only limited by the noise of the amplifier and metrology
****after customer request



motion

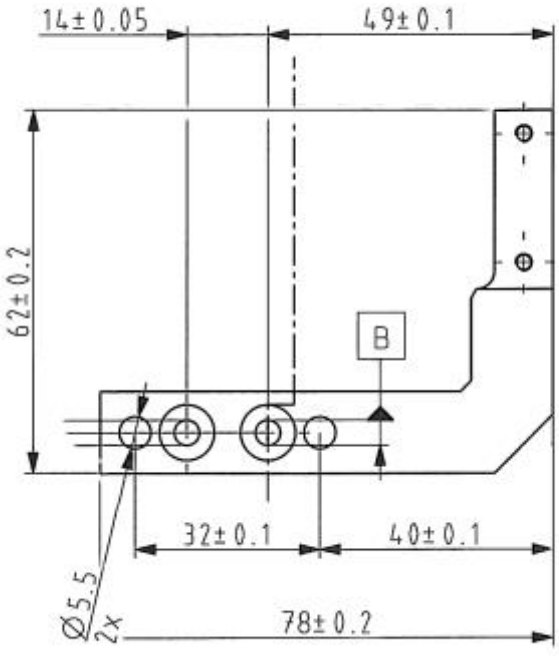


fig.: PXY 16 OEM S-612-00

Pay attention please to the "handling instructions" you can download from our homepage.

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