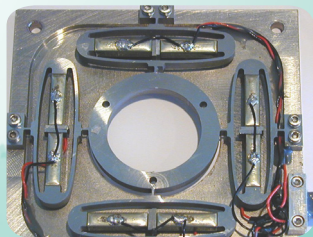


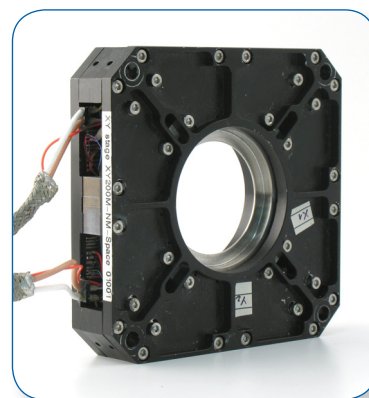
XY Piezoelectric stage XY200M



Description

The XY200M-space piezoelectric stage is designed according to space rules and is based on the qualified piezoelectric technology. The ratio between the stage mass and the payload is optimised. Its normally centred design gives a robust design, insensitive to the thermo-mechanical behaviour. Positioning sensors (Strain Gauges – SG or Capacitive Sensor – CS) can be integrated to get a high accuracy positioning system.

References	Unit	XY200M
Notes		space product
Sensors option		SG, CS
Active axis		TX, TY
Max. No-load displacement	µm	180
Max. out of plane Z	µm	1,00
Max. parasitic Z rotation	µrad	240
Max. parasitic X Y rotations	µrad	50
Voltage range	V	-20 ... 150
Stiffness	N/µm	0,66
Height	mm	22,0
Dimensions	mm	100 *100
Resolution	nm	1,8
Mass	g	180
Unloaded resonance frequency (in the actuation's direction)	Hz	550
Response time	ms	0,91
Capacitance (per electrical	µF	6,30
Mechanical interfaces		3 Ø 2,7 mm holes on [] 38
Mechanical interfaces		4 Ø 4,5 mm holes on [] 84
Electrical interfaces		2 RG178B/U coaxial cables



XY200M piezo stage.

Space evaluation program

The XY200M-space has followed a space evaluation program according to ECSS standards (European Space Agency standards).

- Thermal – vacuum: -20 / 75 °C
- Random vibration: 20 grms – Payload 100 gr,
- Lifetime: 1e6 cycles full stroke.

Radiations	ESCC n° 22900
Outgassing	PSS 01-702
ESD	ESCC n° 23800
Micro-section examination	ESCC n° 23400

Space heritage

The technology will flow on ROSETTA in 2004.

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