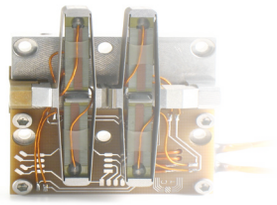
www.cedrat-technologies.com | actuator@cedrat-tec.com



NONCONTRACTUAL PICTURE

## TABLE OF STANDARD PROPERTIES OF USE AND MEASUREMENT

The properties defined in the table below, are set up according to the technical conditions of use and measurement. These properties are warranted within their variation range and in compliance with the standard technical conditions of use.

| PROPERTIES | STANDARD TECHNICAL CONDITIONS | UNIT | NOMINAL VALUES | MIN. VALUES | MAX. VALUES |
|---|---|---|---|---|---|
| Notes | | | - | - | - |
| Sensors option | | | SG | - | - |
| Active axis | TX | | - | - | - |
| Max. No-load displacement | Quasistatic excitation, blocked-free | µm | 1600 | 1440 | 1840 |
| Max. beam diameter | Quasistatic excitation, blocked-free | mm | 1.1 | - | - |
| Stiffness | Quasistatic excitation, blocked-free | N/µm | 0.02 | 0.02 | 0.02 |
| Heigth ( Z axis) | Quasistatic excitation, blocked-free | mm | 23 | 22.80 | 23.20 |
| Dimensions (X & Y axis) | | mm | 60 * 44 | - | - |
| Mass | | g | 150.0 | 142.5 | 157.5 |
| Unloaded resonance frequency (in the actuation's direction) | Harmonic excitation, blocked-free, on the admittance curve | Hz | 200 | 180 | 230 |
| Response time | Quasistatic excitation, blocked-free | ms | 2.50 | 2.25 | 2.88 |
| Capacitance (per electrical port) | Quasistatic excitation, blocked-free | µF | 3.15 | 2.84 | 4.10 |
| Mechanical interfaces (payload) | 4 slits (width 0.6 mm) | | | - | - |
| Mechanical interfaces (frame) | 4 holes Ø 2.7mm on [] 24*38 mm | | | - | - |
| Electrical interfaces | 2 RG178B/U coaxial cables | | | - | - |

## PROPERTIES STANDARD TECHNICAL CONDITIONS OF USE AND MEASUREMENT

| | |
|---|---|
| Free-free : | The actuator is not fixed |
| Blocked-free : | The actuator is fixed to a mechanical support assumed infinitely stiff |
| Quasistatic excitation : | AC voltage between –20 and 150 V at 1 Hz |
| Harmonic excitation : | Voltage of 0.5 Vrms, sinusoidal mode from 0 to 100 kHz |
| Max. harmonic excitation : | Voltage defined by the measurement of max. displacement, sinus at resonance frequency |
| Displacement measurement : | Laser interferometer, capacitive displacement sensor |
| Admittance measurement : | HP 4194 A or Cypher C60 electrical impedance analyser |
| Environment : | Ambient temperature (15-25°C) and dry air (Humidity < 50 % rH) |

Any technical conditions of use, different from those defined above, can lead to temporary or definitive alterations of properties. Thank you to contact CEDRAT TECHNOLOGIES before using actuators under non standard technical conditions.

## FACTORY TESTS CARRIED OUT

- ☑ Test 1 : Electrical admittance vs. Frequency, free-free
- ☑ Test 2 : Displacement vs. input voltage

## OPTIONAL EXTRA FACTORY TESTS

- ☑ Test 3 : Gain and linearity of the sensor
- ☑ Test 4 : Step response in closed loop
- ☑ Test 5 : Stability in closed loop

## AVAILABLE OPTIONS

- ☑ [ SG ] Strain gauges
- ☐ [ NM ] Non-magnetic
- ☑ [ SIW ] Slits in tungstene alloy
- ☐ [ ECS ] Eddy current displacement sensor
- ☑ [ VAC ] Vacuum
- ☑ [ SIW ] Double Slits in tungstene alloy
- ☑ [ SI ] Specific interface
- ☑ [ SV ] Specific version / customization

## 2D CONFIGURATION