

## APPLICATIONS

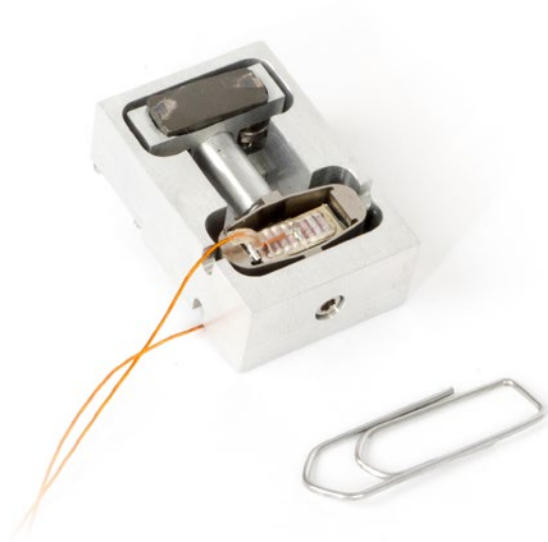
- > Biotechnology
- > Medical devices
- > Defence
- > Microscopy
- > Laboratory automation
- > Materials characterization
- > Digital imaging
- > Recreational equipment
- > Photonics

## KEY FEATURES

- > High versatility: adaptation to existing moving part
- > Large run-out tolerance
- > Blocking at rest. The power can be removed when the motor is positioned
- > Resistance to external forces (shock, vibrations). It is ideal for embedded applications
- > Strong miniaturisation possibilities
- > Non magnetic. The motor is MRI compatible and does not generate magnetic fields
- > High resolution within the nanometre range if required
- > Life time greater than  $10^6$  cycles
- > Severe environment compatibility (vacuum, cryogenic, clean environment...)

## RELATED PRODUCT

- > Stepping Piezo Controller SPC45



## SPECIFICATIONS

- > Preliminary

PARAMETER	TYPICAL VALUE	UNIT
<b>&gt; Stepping mode</b>		
Travel range <sup>(0)</sup>	$\infty$	mm
Nominal Speed <sup>(1) (2)</sup>	10	mm/s
Max speed <sup>(3)</sup>	20	mm/s
Typical step size <sup>(1) (2)</sup>	5 ... 20	$\mu\text{m}$
<b>&gt; Fine positioning mode</b>		
Stroke <sup>(1) (3)</sup>	54.0	$\mu\text{m}$
Resolution <sup>(3)</sup>	< 1	nm
Stiffness	0.50	N/ $\mu\text{m}$

**> Forces**

Holding force without consumption	3	N
Nominal driving force <sup>(1) (2)</sup>	0.5	N
Max driving force <sup>(3)</sup>	1	N

**> Driver**

Voltage pattern	Sawtooth-like	
Typical stepping frequency	300.00	Hz
Max voltage range	-20 ... 150	V
Typical peak current (pulsed) <sup>(2)</sup>	0.10	A
Capacitance	0.25	μF
Nominal driver	SPC45	

**> Mechanical properties**

Lifetime <sup>(4)</sup>	> 2000	m
Height of module	10.00	mm
Width of module	20.00	mm
Length (in actuation direction)	30.00	mm
Mass	20.00	g
Max friction trip run-out	±100	μm
Tip stiffness (normal to surface)	3.60	N/mm

**ANNOTATIONS**

*Guaranteed in lab environment*

*(0) Limited by moving part*

*(1) Unloaded*

*(2) With nominal driver*

*(3) Custom version and driver*

*(4) Unloaded, nominal speed, 50% duty-cycle, ambient conditions*

**MISCELLANEOUS**

Operating temperature :	-40 °C ... +70 °C	
Connector :	2x Ø 1mm banana plug	
Cable :	PTFE insulated AWG30	
Cable length :	50mm long	

**OPTIONS**

Longer stroke :	Please contact CTEC for more detail	
Non magnetic :	Please contact CTEC for more detail	
Magnetic Incremental sensor		