

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 data

PARAMETER	TYPICAL VALUE	UNIT
> Stepping mode		
Travel range ⁽⁰⁾	∞	mm
Nominal Speed ^{(1) (2)}	30	mm/s
Max speed ⁽³⁾	50	mm/s
Typical step size ^{(1) (2)}	5 ... 20	μm
> Fine positioning mode		
Stroke ^{(1) (3)}	36.0	μm
Resolution ⁽³⁾	< 1	nm
Stiffness	0.09	N/ μm

> Forces

Holding force without consumption	0.8	N
Nominal driving force ⁽¹⁾ ⁽²⁾	0.2	N
Max driving force ⁽³⁾	0.3	N

> Driver

Voltage pattern	Sawtooth-like	
Typical stepping frequency	1000.00	Hz
Max voltage range	-20 ... 150	V
Typical peak current (pulsed) ⁽²⁾	0.10	A
Capacitance	0.05	µF
Nominal driver	SPC45	

> Mechanical properties

Lifetime ⁽⁴⁾	> 2000	m
Height of module	10.00	mm
Width of module	10.00	mm
Length (in actuation direction)	20.00	mm
Mass	12.00	g
Max friction trip run-out	±50	µm
Tip stiffness (normal to surface)	1.00	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		