

Piezo Motor Rod Drive

Inexpensive and Easy to Integrate



N-412

- Silent: Operating frequency to >20 kHz
- Velocity 3 mm/s
- Submicron resolution
- Holding force to 10 N
- Low operating voltage to 48 V_{pp}
- Self-locking, no heat generation at rest

Piezo motor direct drive

OEM linear drive without position sensor. Continuous motion with step frequencies in the ultrasound range. Front mounting with M10x1 thread or 9.5 mm clamping shank.

Inertia drive

Self-locking at rest, no heat generation. Noiseless rod drive with operating frequencies over 20 kHz. Resolution in step mode approx. 300 nm, open loop.

Application fields

Industry and research. Alignment of optical elements, micromanipulation, biotechnology, cell manipulation, medical technology.

Motion	Unit	Tolerance	N-412.50	N-412.51
Active axes			X	X
Travel range in X	mm		13	13
Maximum velocity in X, unloaded	mm/s		3	3
Maximum step frequency	kHz		23	23
Step size in full step mode	nm	Typ.	300	300

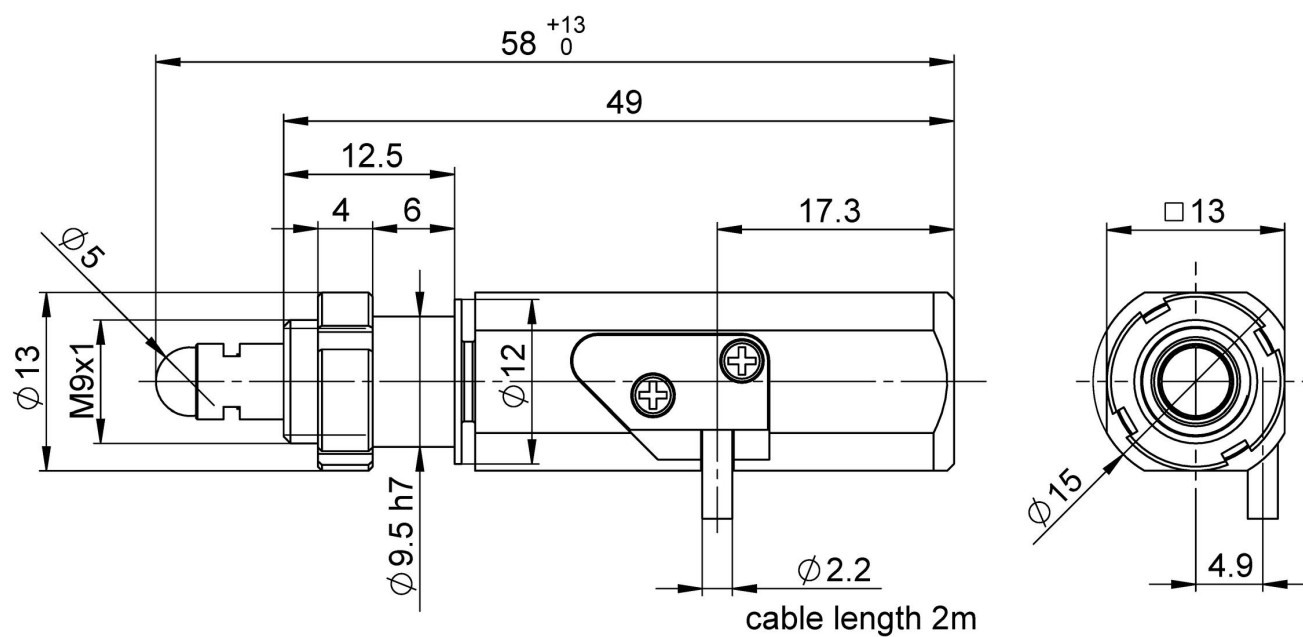
Drive Properties	Unit	Tolerance	N-412.50	N-412.51
Operating voltage	V _{pp}	Max.	48	48
Drive type			Piezoelectric inertia drive	Piezoelectric inertia drive
Drive force in X	N	Max.	7	7

Mechanical Properties	Unit	Tolerance	N-412.50	N-412.51
Stiffness in X	N/μm	±20%	>4	>4
Holding force in X, passive	N	Min.	10	10
Mechanical interface			Clamping shank 9.5 mm	Thread M10x1
Overall mass	g	±5%	25	25
Material			Stainless steel; ceramic (runner)	Stainless steel; ceramic (runner)

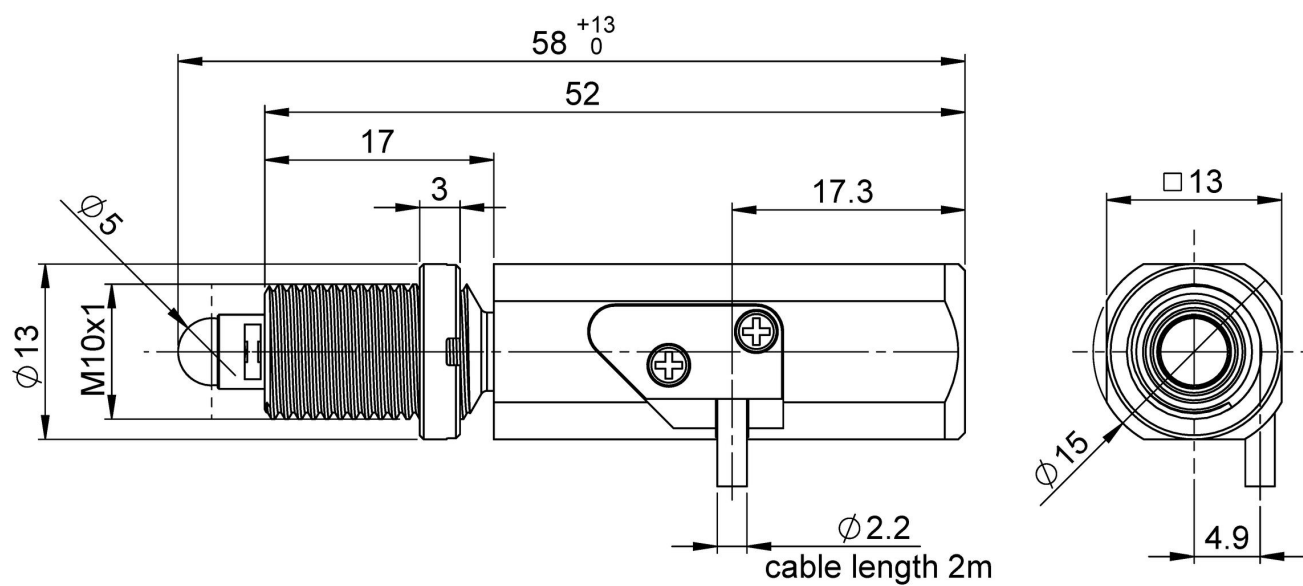
Miscellaneous	Unit	Tolerance	N-412.50	N-412.51
Operating temperature range	°C		0 to 50	0 to 50
Connector			LEMO FFA.0S.303.CLAC27	LEMO FFA.0S.303.CLAC27
Cable length	m	+30 / -0 mm	2	2
Recommended controllers / drivers			E-872.401	E-872.401

Maximum step frequency and maximum velocity depending on the drive electronics.

Drawings / Images



N-412.50, dimensions in mm



N-412.51, dimensions in mm

Order Information

N-412.50

Piezo motor rod drive; piezoelectric inertia drive; 13 mm travel range; 7 N feed force; 3 mm/s maximum velocity; silent operation; 9.5 mm (0.375") clamping shank; 2 m cable length

N-412.51

Piezo motor rod drive; piezoelectric inertia drive; 13 mm travel range; 7 N feed force; 3 mm/s maximum velocity; silent operation; M10x1 thread; 2 m cable length