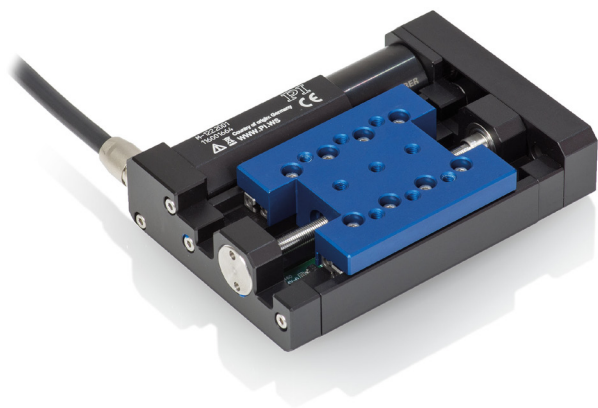


## Microtranslation Stage

Compact Linear Stage with Direct Position Measuring



### M-122.2DD1

- Travel range 25 mm
- Integrated linear encoder option for highest accuracy with 0.1  $\mu\text{m}$  Resolution
- Min. incremental motion 0.2  $\mu\text{m}$
- Max. velocity 20 mm/s
- Ball screw for high velocities and number of cycles

#### Highly accurate position measuring with incremental linear encoder

Noncontact optical encoders measure the position directly at the platform with the greatest accuracy. Nonlinearity, mechanical play or elastic deformation have no influence on the measurement.

#### Application fields

Optical alignment. Precision automation.

## Specifications

Motion and positioning	M-122.2DD1	Unit	Tolerance
Travel range	25	mm	
Integrated sensor	Linear encoder		
Sensor resolution	0.1	μm	
Design resolution	0.1	μm	Typ.
Minimum incremental motion	0.2	μm	Typ.
Backlash	0.2	μm	Typ.
Unidirectional repeatability	0.15	μm	Typ.
Pitch	±150	μrad	Typ.
Yaw	±150	μrad	Typ.
Velocity	20	mm/s	Max.
Reference switch repeatability	1	μm	Typ.

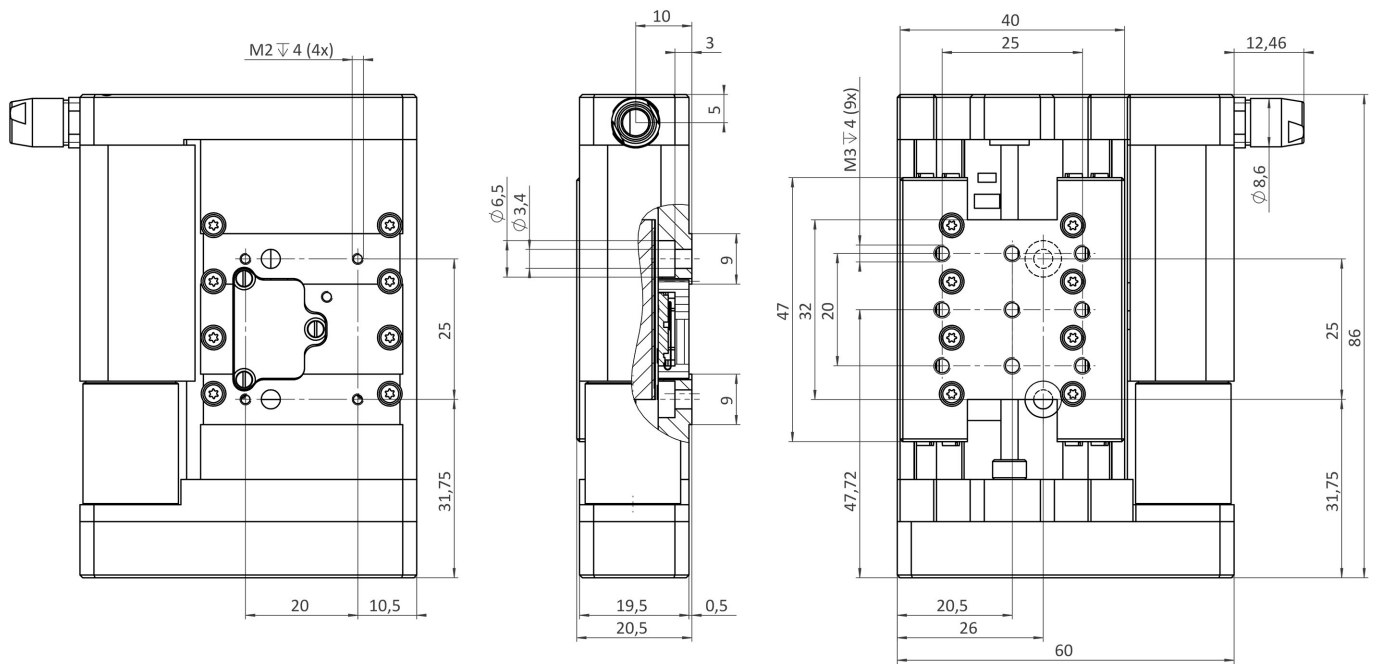
Mechanical properties	M-122.2DD1	Unit	Tolerance
Drive screw	Ball screw		
Stiffness in motion direction	0.25	N/μm	
Load capacity	50	N	Max.
Push/pull force	20	N	Max.
Lateral force	25	N	Max.

Drive properties	M-122.2DD1	Unit	Tolerance
Motor type	DC motor		
Operating Voltage	0 to ±12	V DC	
Motor power	2.25	W	
Drive screw pitch	0.5	mm	
Reference and limit switches	Hall effect		

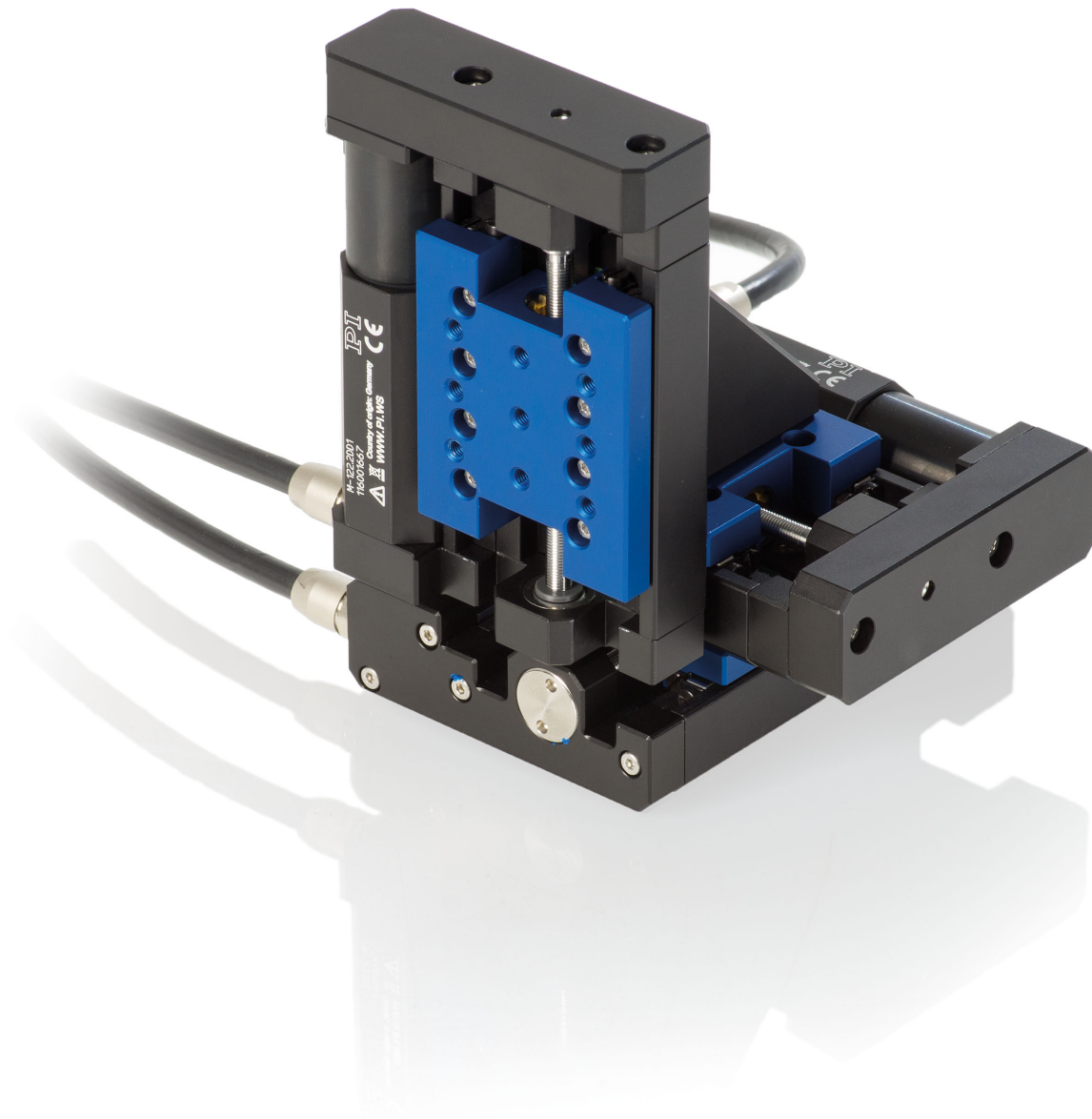
Miscellaneous	M-122.2DD1	Unit	Tolerance
Cable length	0.5	m	
Operating temperature range	10 to 50	°C	
Material	Aluminum, steel		
Mass	0.22	kg	
Recommended controllers	C-863 C-884		

Ask about customized versions.

## Drawings / Images



M-122.2DD1, dimensions in mm



*XYZ setup consisting of three M-122.2DD1 microtranslation stages.*

## Ordering Information

### **M-122.2DD1**

Compact Linear stage, 25 mm travel range, DC motor, incremental linear encoder with A/B quadrature signal transmission, 0.1  $\mu\text{m}$  sensor resolution, 0.5 m cable length