Ceramic Linear Drive for Automation

FAST AND SELF-LOCKING WITH PILINE® PIEZOMOTOR

M-272

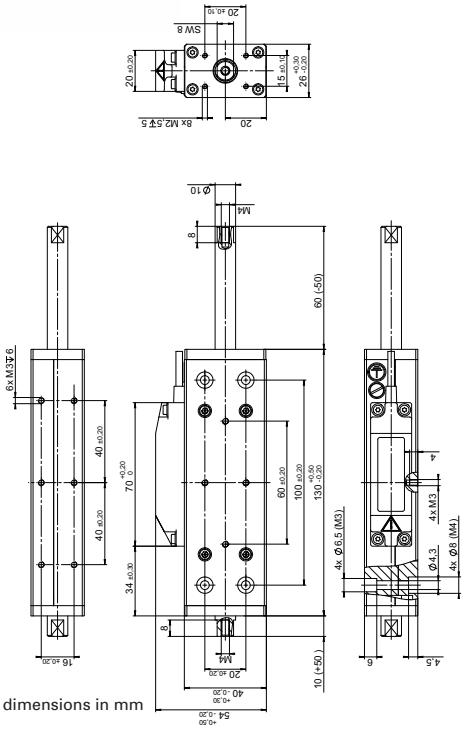
- Velocity up to 150 mm/s
- Self-locking at rest
- Integrated linear encoder
- Integrated linear guiding system

Compact standard-class linear drive
Fast, maintenance-free and easy to integrate. Integrated ball bearing guidance

PILine® ultrasonic drive
Cost effective alternative to the conventional combination of electric motor and spindle. Ceramic direct drive, self-locking at rest, no heat generation

Integrated linear scale encoder
Reliable position control, repeatable accuracy. Optical reference point switch

Application fields
Automation, handling, micromanipulation, metrology



M-272.20, dimensions in mm

Related Products
N-310 NEXACT® OEM Miniature Linear Motor / Actuator
M-664 Precision Stage with Linear Drive
M-228 • M-229 Linear Actuator Series with Stepper Motor
C-867 Controller for PILine®
C-867.OE Controller Board for PILine®

	M-272.20	Tolerance
Active axes	X	
Motion and positioning		
Travel range	50 mm	
Integrated sensor	Linear encoder	
Sensor resolution	0.6 µm	
Min. incremental motion	1.8 µm	typ.
Unidirectional repeatability	2 µm	typ.
Bidirectional repeatability	3 µm	typ.
Velocity	150 mm/s	max.
Mechanical properties		
Guiding	Ball bearings	
Push/pull force	8 N	max.
Holding force	8 N	max.
Lateral force	10 N	max.
Drive properties		
Motor type	U-164 PILine® ultrasonic piezo drive	
Current consumption	800 mA*	
Reference point switch	Optical	
Miscellaneous		
Operating temperature range	-20 to +50 °C	
Material	Aluminum	
Mass	0.47 kg	± 5%
Cable length	1.5 m	± 10 mm
Connector	MDR, 14-pin	

Recommended controller/driver: C-867.OE
Power for the motor is supplied by the drive electronics, which requires 24 V DC.
* For drive electronics

Cost-effective combination: M-272 Closed-loop Linear Pusher and C-867.OE Controller Card