

## M-228 Stepper-Mike Linear Actuator

### Compact & Cost-Effective with Limit Switches

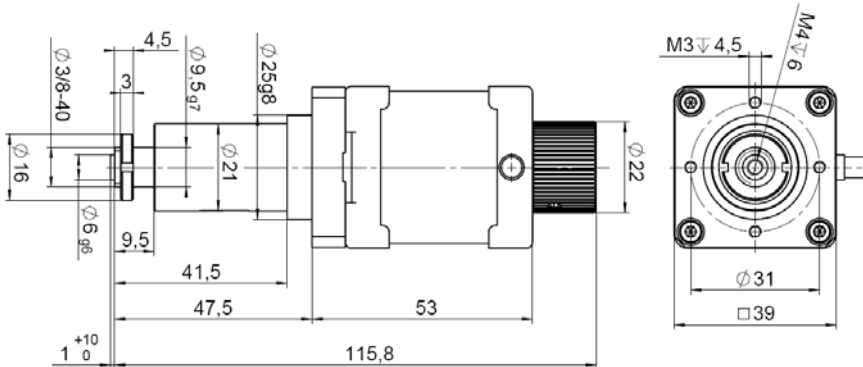
#### Ordering Information

M-228.11S  
Stepper-Mike Linear Actuator,  
10 mm, Limit Switches



M-228.11S (above) and M-228.10S linear actuators

- Compact & Cost-Effective Design
- 10 mm Travel Range
- Cost-Effective Combination with C-663 Controller
- Non-Rotating Tip
- Non-contact Limit and Reference Switches



Dimensions of the M-228.11S linear actuator in mm. Decimal places are separated by commas

	M-228.11S (preliminary data)
Active axes	X
<b>Motion and positioning</b>	
Travel range	10 mm
Design resolution	0.078* $\mu\text{m}$
Minimum incremental motion	0.2* $\mu\text{m}$
Backlash	<10** $\mu\text{m}$
Unidirectional repeatability	2 $\mu\text{m}$
Accuracy	10 $\mu\text{m}$
Max. velocity	5* mm/s
Origin repeatability	1 $\mu\text{m}$
<b>Mechanical properties</b>	
Spindle	Leadscrew
Spindle pitch	0.5 mm/rev
Motor resolution	6400* steps/rev.
Max. load	20 N
Max. push / pull force	20 N
Max. lateral force	0,1 N
<b>Drive properties</b>	
Motor type	2-phase stepper motor
Operating voltage	24***V
Limit and reference switches	Hall-effect
<b>Miscellaneous</b>	
Operating temperature range	-20 to +65°C
Material	Aluminium anodized, stainless steel
Mass	0.36 kg
Cable length	0.5 m
Connector	Sub-D connector 15-pin
Recommended controller/driver	C-663 (single-channel)

\* with C-663 stepper motor controller

\*\* preloaded

\*\*\* 2-phase stepper motor, 24 V chopper voltage, max. 1.2 A / phase, 400 full-steps / rev.