

# NEXLINE<sup>®</sup> Linear Actuator

## High-Force PiezoWalk® Drive for Long-Range Nanopositioning



## N-216

- Force generation up to 600 N
- Holding force up to 800 N
- Travel range 20 mm
- Integrated linear encoder with resolution 5 nm

## Specifications

	N-216.101 / N-216.1A1	N-216.201 / N-216.2A1	Tolerance
Active axes	x	х	
Motion and positioning			
Travel range	20 mm	20 mm	
Travel range in analog mode	±3 μm	±3 μm	
Integrated sensor	N-216.101: none N-216.1A1: linear encoder	N-216.201: none N-216.2A1: linear encoder	
Open-loop resolution	0.03 nm	0.03 nm	typ.
Closed-loop resolution	- / 5 nm (N-216.1A1)	- / 5 nm (N-216.2A1)	
Velocity (10 % duty cycle, full step mode)*	1.0 mm/s	1.0 mm/s	max.
Velocity (100 % duty cycle, full step mode)*	0.6 mm/s	0.6 mm/s	max.
Velocity (100 % duty cycle, nanostepping mode)**	0.4 mm/s	0.4 mm/s	max.
Mechanical properties			
Drive force (active)***	300 N	600 N	max.
Holding force (passive)	400 N	800 N	min.
Drive properties			
Motor type	NEXLINE®	NEXLINE <sup>®</sup>	
Operating voltage	-250 V to +250 V	-250 V to +250 V	
Miscellaneous			
Operating temperature range	0 to 55 °C	0 to 55 °C	
Material	Aluminum, stainless steel	Aluminum, stainless steel	
Mass	1150 g	1250 g	



	N-216.101 / N-216.1A1	N-216.201 / N-216.2A1	Tolerance
Cable length	2.0 m	2.0 m	
Connector	Sub-D 25 (m)	Sub-D 25 (m)	
Recommended electronics	E-712.1AM	E-712.1AM	

\* Depending on drive electronics. Data refer to operation together with E-712 controller.

\*\* Depending on drive electronics. Data refer to operation together with E-712 controller. The maximum velocity in nanostepping mode is designed for the best possible constancy so that no velocity variations occur when executing the steps.

\*\*\* Data refer to full step mode operation.

All specifications based on room temperature (22 °C ±3 °C).

Ask about custom designs!

### **Drawings and Images**



*N-216, dimensions in mm. Mounting flanges for side or front mounting are included in the delivery.* 



Motion mode comparison of a NEXLINE<sup>®</sup> actuator: The nanostepping mode provides a very smooth motion. Full step mode allows higher speed.

## **Ordering Information**

#### N-216.101

NEXLINE® piezo-walking high-load actuator , 20 mm, 300 N, open loop

### N-216.1A1

NEXLINE® piezo-walking high-load actuator, 20 mm, 300 N, linear encoder, 5 nm resolution

#### N-216.201

NEXLINE® piezo-walking high-load actuator , 20 mm, 600 N, open loop

### N-216.2A1

NEXLINE® piezo-walking high-load actuator, 20 mm, 600 N, linear encoder, 5 nm resolution

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