

DMA10A-AE55T10A Datasheet



- 10 mm travel
- High repeatability (50 nm), with 10 nm minimum incremental move
- Direct position measurement from 1 nm resolution linear encoder
- Non-contact direct-drive motor for high precision, high dynamic performance & reliability
- Designed for use with an X-MCC Series controller for coordinated multi-axis motion
- With AutoDetect, the X-MCC controller configures its settings automatically for the connected peripheral

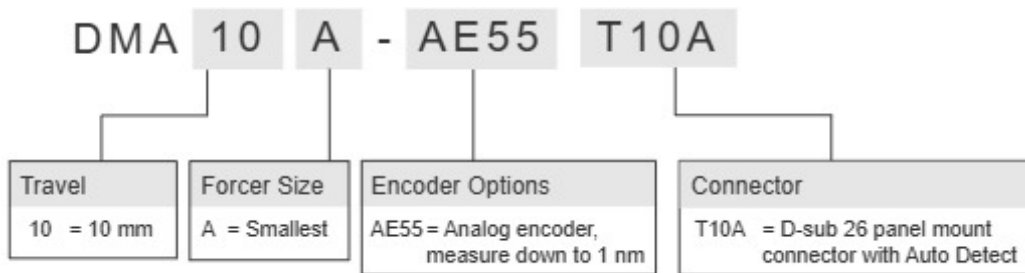
DMA-AE Series Overview

Zaber's DMA-AE Series devices are direct-drive linear stages delivering high speed, precision, and reliability in a compact size. A high resolution linear encoder results in repeatability less than 50 nm and consistent movement steps down to 10 nm. Low-friction high-rigidity crossed roller bearings allow for fast step and settle times and anti-creep bearing cages eliminate cage creep during vertical or high acceleration operation. Both the drive and encoder are non-contact, and have no moving cables, resulting in an extremely robust system.

The stages are designed to connect directly to our X-MCC using a single cable. Set-up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the DMA-AE.

For more information visit: <https://www.zaber.com/products/linear-stages/DMA-AE>

DMA-AE Series Part Numbering & Options



DMA10A-AE55T10A Drawings

- [DMA-AE.pdf \(Drawing for the DMA-AE\)](#)

DMA10A-AE55T10A Specifications

Built-in Controller	
Recommended Controller	X-MCC (48 V) Recommended
AutoDetect	Yes
Travel Range	10 mm (0.394")
Accuracy (unidirectional)	8 μ m (0.000315")
Repeatability	< 0.05 μ m (< 0.000002")
Minimum Incremental Move	10 nm
Minimum Speed	0.61 nm/s
Speed Resolution	0.61 nm/s
Encoder Type	Linear analog encoder
Encoder Count Size	1 nm
Peak Thrust	15 N (3.4 lb)
Maximum Continuous Thrust	5 N (1.1 lb)
Motor Type	Moving Magnet Voice Coil
Force Constant	2.23 N/A (0.5 lbs/A)
Motor Connection	D-sub 26
Guide Type	Anti-Creep Crossed-Roller Bearing
Limit or Home Sensing	Optical Index Mark
Axes of Motion	1
Mounting Interface	M3 and M6 threaded holes
Moving Mass	0.18 kg (0.396 lbs)
Operating Temperature Range	0-50 °C
Vacuum Compatible	No
Typical Move and Settle Time (100 nm move, < 15 nm, 250 g load)	< 15 ms
Typical Move and Settle Time (250 nm move, < 15 nm, 250 g load)	< 15 ms
Weight	0.5 kg (1.102 lb)

Contact

Email: contact@zaber.com

Phone (toll free Canada/USA): 1-888-276-8033

Phone (direct): 1-604-569-3780

Fax: 1-604-648-8033

Zaber Technologies Inc.

#2 - 605 West Kent Ave. N.

Vancouver, British Columbia

Canada, V6P 6T7

<https://www.zaber.com>