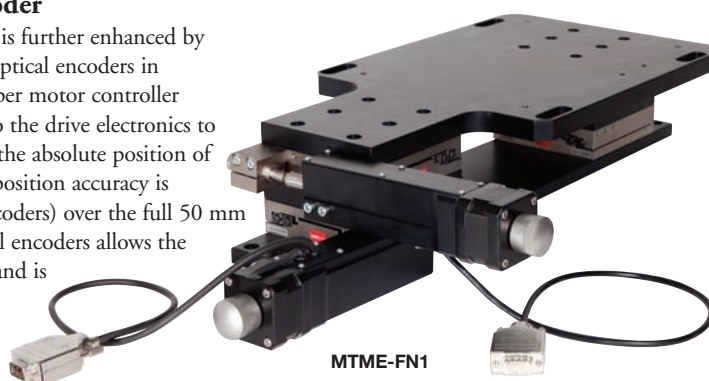


Microscope Translators (Page 2 of 2)

Motorized Microscope Translator with Encoder

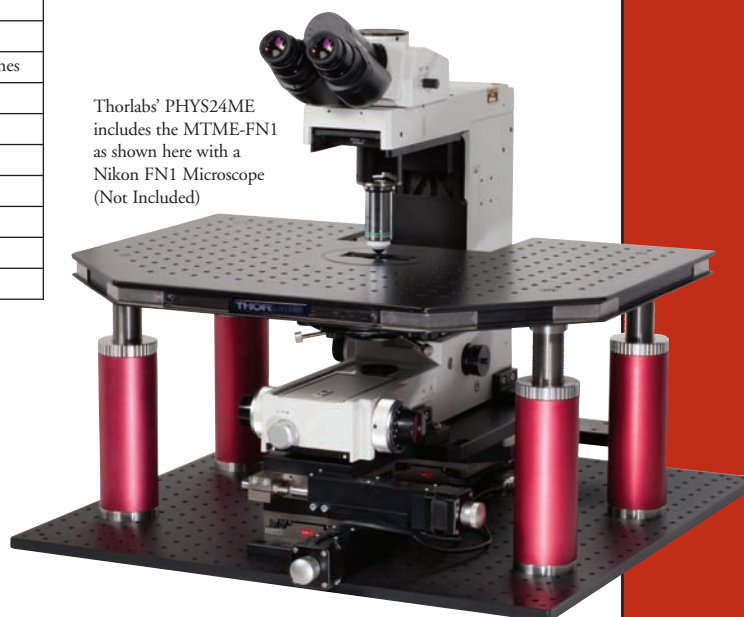
The performance of the Motorized Microscope Translator is further enhanced by utilizing XY stages with high-resolution integrated linear optical encoders in combination with Thorlabs' two-channel closed-loop stepper motor controller (BSC102). The linear optical encoder provides feedback to the drive electronics to ensure accurate positioning and allows a direct readout of the absolute position of the stage. With a resolution of 0.1 μm , the bi-directional position accuracy is greater than 0.3 μm (compared to 0.5 μm without the encoders) over the full 50 mm of travel. The motorized microscope translator with optical encoders allows the user to return to a previous position within the specimen and is the ideal solution for applications where stability, long microscope travel, and high-load capacity need to be achieved with absolute position accuracy.



MTME-FN1

BSC102
Two-Channel Model

Thorlabs' PHYS24ME includes the MTME-FN1 as shown here with a Nikon FN1 Microscope (Not Included)



SPECIFICATIONS	MTME-FN1
Travel Range	2" (50 mm)
Max Acceleration	3.0 mm/s ²
Max Velocity	4.0 mm/s
Max Load Capacity	110 lbs (50 kg)
Incremental Movement	0.05 μm (Min Achievable)
Percent Accuracy	0.02% (Max)
Home Location Accuracy	$\pm 1.0 \mu\text{m}$
Drive	DRV014
Runout (Over Full Range)	$\pm 0.0004"$ ($\pm 10 \mu\text{m}$)
Leadscrew Pitch	1 mm
Limit Switches	Ceramic-Tipped Electro-Mechanical Switches
Included Controllers*	BSC102
Controller Interface	USB
Absolute On-Axis Accuracy	3 μm Over the Full Travel
Bidirectional Repeatability	0.3 μm
Encoder	Optical Grating Incremental Encoder
Encoder Resolution	0.1 μm
Bearings	Crossed Roller

*Specifications for the BSC102 Controllers can be found on pages 632 - 633

Controller Features

- Two-Channel Models Available
- Supports 2-Phase Bipolar Steppers up to 50 W
- Differential Encoder Feedback (QEP) Inputs for Closed-Loop Positioning
- USB Plug-and-Play Plus Multi-Axis Expansion
- Motor Control I/O Port (Jogging, Interlocks)



- Full Software GUI Control Suite
- High-Resolution Microstepping Control (For Very Fine Positioning Applications)
- Stable and Predictable Low-Speed Operation (For Velocity-Sensitive Applications)
- ActiveX® Programming Interfaces
- Seamless Software Integration with apt™ Family

See Page 632

ITEM #	\$	£	€	RMB	DESCRIPTION
MTME-FN1	\$ 11,500.00	£ 8,280.00	€ 10,005.00	¥ 91,655.00	Motorized-Encoded Microscope Translator