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Data Sheet

August 12, 2026

MELLES GRIOT

Melles Griot 17MST001 Single Axis Stepper Motor Controller Module

Melles Griot 17MST001 Single-Axis Stepper Motor Control Module The Melles Griot (CVI / later Profile–Thorlabs lineage) 17MST001 is a modular single-axis stepper-motor control module for optoelectronic production stages. Provides full microstep control of drive and park parameters in a Eurocard-style modular rack system. Automated / semi-automated mechanical stage control; modular multi-axis racks with companion piezo and NanoTrak modules. The Melles Griot (CVI / later Profile–Thorlabs lineage) 17MST001 is a modular single-axis stepper-motor control module for optoelectronic production stages. Provides full microstep control of drive and park parameters in a Eurocard-style modular rack system. Automated / semi-automated mechanical stage control; modular multi-axis racks with companion piezo and NanoTrak modules.



MODEL

**Melles Griot
17MST001**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

17MST001

LISTING

<https://aumictechlabs.com/products/17mst001-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Melles Griot 17MST001 is a single-axis stepper motor controller module engineered for precise positioning and motion control in automated and semi-automated environments. Built as part of Melles Griot's modular control electronics ecosystem, this module delivers full microstep

control of stepper motor drive and park parameters with factory defaults optimized for most applications. Advanced users gain access to fundamental low-level parameter adjustment: initial velocity, final velocity, acceleration, deceleration, backlash correction, and park position drive current. Technical Specifications Output Current: 1 A Dimensions: 12 HP (61 mm) width × 3U (134 mm) height × 220 mm depth Motor Drive: Full microstep control for stepper motor positioning Limit Switch Inputs: Supported User-Adjustable Parameters: Initial velocity, final velocity, acceleration, deceleration, backlash correction, park position drive current Key Features Lead screw error compensation uses stage-specific calibration data measured with 1-nm resolution laser interferometry. Multi-point calibration tables correct for repeatable mechanical errors, delivering absolute accuracy comparable to linear encoder systems without the added cost. Typical Applications Optoelectronic production and manufacturing environments requiring automated multi-axis positioning and motion coordination. Compatibility & Integration The 17MST001 drives stepper-motor stages in Melles Griot's nanopositioning product range and integrates into modular system architectures. A single controller manages up to 16 racks, expandable to 64 racks, supporting up to 448 individual modules via high-speed CAN interface. Compatible with companion modules including the 17MPZ001 (Piezoelectric Control Module) and 17MNA001 (Nanotrak Autoalignment Module). Installs in main racks such as the 17MMR001.

Features & description

From manufacturer datasheet

Features

- Axes: single-axis stepper control
- Microstepping: full microstep control of drive and park parameters
- User-settable parameters: initial/final velocity, acceleration, deceleration, backlash correction, park-position drive current
- Default parameters suitable for most applications (OEM claim)
- Form factor: modular rack module; published envelope ~61 mm W (12 HP) × 134 mm H (3U) × 220 mm D (reseller literature)
- Output current: ~1 A class (reseller literature)
- System: pairs with modular mainframes and related 17-series drivers (e.g. 17DRV001 class)

17MST001 Characteristics / Specifications

PARAMETER	VALUE
The Melles Griot (CVI / later Profile	Thorlabs lineage) 17MST001 is a modular single-axis stepper-motor control module for optoelectronic production stages. Provides full microstep control of drive and park parameters in a Eurocard-style modular rack system.
Model	17MST001
Manufacturer	Melles Griot
Instrument Type	Single-Axis Stepper Motor Controller Module
Alias	17MST001; CVI Melles Griot 17MST001 Control Single axis; microstep drive/park; velocity/accel/backlash/park current programmable Mechanical ~12 HP × 3U × 220 mm D (literature) Notes Verified from Melles Griot modular controller product descriptions and reseller dimensional notes. Finer current/step-rate/communication limits are not densely published—confirm on unit faceplate/manual and with matching driver module.
Axes	single-axis stepper control
Microstepping	full microstep control of drive and park parameters
User-settable parameters	initial/final velocity, acceleration, deceleration, backlash correction, park-position drive current
Form factor	modular rack module; published envelope ~61 mm W (12 HP) × 134 mm H (3U) × 220 mm D (reseller literature)
Output current	~1 A class (reseller literature)
System	pairs with modular mainframes and related 17-series drivers (e.g. 17DRV001 class)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

Specifications

PARAMETER	VALUE
Model	17MST001
Manufacturer	Melles Griot
Instrument Type	Single-Axis Stepper Motor Controller Module
Alias	17MST001; CVI Melles Griot 17MST001

Control

Single axis; microstep drive/park; velocity/accel/backlash/park current programmable

Mechanical

~12 HP × 3U × 220 mm D (literature)

Notes

Verified from Melles Griot modular controller product descriptions and reseller dimensional notes. Finer current/step-rate/communication limits are not densely published-confirm on unit faceplate/manual and with matching driver module.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.