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Data Sheet

August 15, 2026

BURLEIGH

Burleigh 6000-1-0-1-1 1-Axis Inchworm Controller

The Burleigh 6000-1-0-1-1 is a single-axis Inchworm controller, providing precise motion control for piezoelectric actuators. It offers closed-loop operation and high resolution for demanding positioning applications.

**MODEL****Burleigh 6000-1-0-1-1****CALIBRATION****Available on request****CONDITION****Used****STATUS****In stock****RFQ / SKU****6000-1-0-1-1****LISTING**<https://aumictechlabs.com/products/6000-1-0-1-1-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Burleigh 6000-1-0-1-1 is a single-axis Inchworm controller engineered for precision piezoelectric actuator control in high-resolution positioning applications. This model delivers high-speed motion while maintaining submicron accuracy through selectable open-loop or closed-loop operation. Open-loop configuration provides TTL-based motor control without position feedback, ideal for straightforward drive applications. Closed-loop systems incorporate encoder feedback, enabling step-size programming, position display, zero-point establishment, target positioning, and active position holding. Technical Specifications Axes: 1 axis of motion Motor Type: Piezoelectric Inchworm actuator drive Control Modes: Open-loop (TTL signals) and closed-loop (with encoder feedback) Front Panel Control: Full function access via dedicated controls Encoder Interface: Maximum 2 m cable length from encoder to controller; longer distances require Model 7006 Remote Encoder Box with differential TTL interface Compatible Encoders: TTL output devices including Heidenhain EXE 702 and Burleigh Remote Encoder Box with DS8820A

integrated circuits Manual Port: 25-pin D-type rear connector accepting TTL level signals Key Features Dual Interface Architecture: Manual port for direct TTL control; remote programming capability via TTL and RS-232 protocols PZT Drive Electronics: Integrated piezoelectric transducer electronics providing voltage, current, and timing control for Inchworm motor operation External Power Supply: Level I TTL open-loop interface supplies +5 V and +12 V for auxiliary circuits Manual Control Compatibility: Direct interface with Burleigh 6003 Joystick and 6005 Handset for manual operation Computer Integration: Optional 670 Series Computer Interface for automated control and data acquisition Typical Applications Precision scanning, automated microscopy stages, optical alignment, and laboratory positioning systems requiring high-speed, high-resolution single-axis motion control. Compatibility & Integration The 6000-1-0-1-1 integrates with standard TTL control systems, manual input devices, and computer interfaces. Encoder extension capability via the Model 7006 Remote Encoder Box accommodates systems requiring separation between controller and position feedback devices.

6000101 Characteristics / Specifications

PARAMETER	VALUE
Model	6000
Instrument Type	Inchworm motor controller
Axis Count Options	1 2 or 3
Series Family	Burleigh 6000
Related Models	6000ULN 6100 6200 7000
Handset Accessory	6005
Joystick Accessory	6003
Drive Type	piezoelectric Inchworm
Form Factor	benchtop controller
Operating Temperature Class	0 C to 40 C lab class
Power Line	AC mains class
Use Case	nanopositioning control
Interface	front panel and remote class
Resolution Class	nanometer class with Inchworm
Speed Class	mm per second class Inchworm
Travel Class	actuator dependent
Humidity Class	noncondensing
Storage Temperature Class	minus 20 C to 60 C class
Safety	high voltage piezo drive enclosed
Mounting	bench or rack shelf class
Interlock Class	enable interlock class optional
Display	axis position readout class
Storage temperature	Class: minus 20 C to 60 C class
Operating temperature	Class: 0 C to 40 C lab class
Humidity	Class: noncondensing

6000101 Specifications

PARAMETER	VALUE
Burleigh 6000 Inchworm Controller	Overview
Applications	Optical alignment, fiber coupling stages, and nanopositioning with Burleigh Inchworm actuators.
Key Features	1 2 or 3 axis controller configurations
Compatible with Burleigh Inchworm motors	Optional joystick 6003 and handset 6005
Technical Specifications	Model: 6000

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: minus 20 C to 60 C class
Operating temperature	Class: 0 C to 40 C lab class
Operating Temperature	Class: 0 C to 40 C lab class
Humidity	Class: noncondensing
Operating Temperature Class	0 C to 40 C lab class
Power Line	AC mains class
Use Case	nanopositioning control
Interface	front panel and remote class
Resolution Class	nanometer class with Inchworm
Speed Class	mm per second class Inchworm
Travel Class	actuator dependent
Humidity Class	noncondensing
Storage Temperature Class	minus 20 C to 60 C class
Safety	high voltage piezo drive enclosed
Mounting	bench or rack shelf class
Interlock Class	enable interlock class optional
Display	axis position readout class Notes Capability rows from Burleigh 6000 Inchworm controller family catalog. Exact axis voltage and step size are on the 6000 configuration datasheet matching the dash options in queue SKUs.

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	
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PARAMETER	VALUE
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Capability rows from Burleigh 6000 Inchworm controller family catalog. Exact axis voltage and step size are on the 6000 configuration datasheet matching the dash options in queue SKUs.	

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.