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Data Sheet

August 15, 2026

BURLEIGH

Burleigh 6000 2-Axis Inchworm Controller

The Burleigh 6000 is a multi-axis Inchworm piezoelectric motor controller. OEM Burleigh Inchworm controller literature lists 1 to 3 axis configurations, handset/joystick options, and precision nanopositioning drive for optics stages. Optical alignment, fiber coupling stages, and nanopositioning with Burleigh Inchworm actuators. Instrument Type: Inchworm motor controller Operating Temperature Class: 0 C to 40 C lab class Storage Temperature Class: minus 20 C to 60 C class Safety: high voltage piezo drive enclosed Interlock Class: enable interlock class optional 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.



MODEL

Burleigh 6000

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

6000

LISTING

<https://aumictechlabs.com/products/6000-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Burleigh 6000 2-Axis Inchworm Controller delivers high-resolution motion control for precision positioning applications using piezoelectric Inchworm motor technology. This controller operates two independent axes simultaneously or sequentially, eliminating the backlash and compliance issues inherent in traditional gear-driven systems. Inchworm motors achieve zero power dissipation at rest while maintaining stable position under load - critical for demanding scientific and industrial environments. Technical Specifications Axes of Control: Two-axis independent or simultaneous operation. Operating Modes: Both open-loop and closed-loop

configurations supported. Open-loop systems accept external control via handset, joystick, or TTL signals for manual or automated operation. Closed-loop mode incorporates encoder counting circuitry for position feedback, step size definition, position display, zero-point establishment, and load-holding capability. PZT Drive Electronics: Precision piezoelectric drive electronics deliver optimized voltage, current, and timing pulses for high-speed Inchworm motor actuation while maintaining high resolution. Motor Compatibility: Optimized for Burleigh 700 series and LTS/LTO series Inchworm Motors. Also compatible with motors equipped with integral shaft encoders or user-supplied position measurement devices using TTL quadrature signals in closed-loop configurations. Key Features Manual Control Options: Model 6003 Joystick: Independent or simultaneous control of two motors; speed controlled by deflection magnitude; integrated GO HOME clock signal function Model 6005 Handset: Single-axis operation per switch selection; speed range 4-40 nm/sec at full counterclockwise rotation; JOG and OFF modes Remote Control: TTL signal input for automated open-loop operation RS-232 protocol support on 6000ULN model variant; compatible with 670 Series Computer Interface for PC integration (LabVIEW, Windows 95) Compatibility & Integration The controller integrates with Burleigh's standard Inchworm motor lineup and supports third-party position feedback devices via TTL quadrature protocols. Multiple interface options - joystick, handset, TTL, RS-232 - enable deployment across benchtop, industrial automation, and PC-controlled laboratory environments.

6000 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

6000 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
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Interlock Class	enable interlock class optional
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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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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.	

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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.