

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

BURLEIGH

Burleigh 6000ULN 1-Axis Inchworm Controller

The Burleigh 6000ULN is a 1-axis Inchworm controller designed for ultra-low noise and high-precision positioning. It provides precise control of Burleigh Inchworm motors for applications requiring minimal electrical noise and stable positioning.



MODEL

Burleigh 6000ULN

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

6000ULN

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Burleigh 6000ULN is a single-axis Inchworm controller engineered for ultra-low noise, open-loop positioning of Burleigh Inchworm motors. It delivers nanometer-scale resolution over millimeters of continuous travel with zero backlash or leadscrew error. The controller operates via manual handset/joystick control or remote TTL and RS-232 automation, making it ideal for applications where external systems manage position feedback. Technical Specifications Type: 1-Axis Inchworm Controller Control Mode: Open-loop Positioning Resolution: Nanometer-scale steps Motion Range: Multiple millimeters continuous travel Backlash: None Drive Electronics: Sophisticated PZT (piezoelectric) drive electronics with optimized voltage, current, and timing Performance: High-speed operation with maintained ultra-high resolution Feedback: No integrated position feedback; compatible with external feedback systems Limit Switches: Forward and reverse mechanical limit switches Display: LED display Key Features Zero backlash and leadscrew error for repeatable positioning PZT actuation for rapid, precise motor control Manual

speed control via handset: 4–40 nm/sec adjustable range TTL-level signal inputs for automated operation Simple forward/reverse limit switch architecture Designed for scenarios where position measurement is managed externally Typical Applications Manual positioning via Burleigh 6005 Handset or 6003 Joystick Automated control through TTL input signals from external devices Systems integrating position feedback in external controllers or computers Laboratory and research applications requiring ultra-low electrical noise Compatibility & Integration Manual Control: Burleigh 6005 Handset (single motor, any axis), Burleigh 6003 Joystick Remote Control: TTL signals, RS-232 protocols, 670 Series Computer Interface Software: Direct PC control via LabVIEW (Windows 95) or RS-232 communication Power: Rear panel voltage selector for line voltage matching; high-voltage power requirements

6000ULN 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

6000ULN 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	
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
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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 15, 2026

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