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Data Sheet

August 15, 2026

BURLEIGH

Burleigh 6100-2-2-1-4 2-Axis Inchworm Controller

The Burleigh 6100-2-2-1-4 is a 2-axis Inchworm controller designed for precise positioning and motion control. It offers closed-loop control, high resolution, and stable performance. Ideal for demanding applications in microscopy, metrology, and semiconductor manufacturing.



MODEL

Burleigh 6100-2-2-1-4

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

6100-2-2-1-4

LISTING

<https://aumictechlabs.com/products/6100-2-2-1-4-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Burleigh 6100-2-2-1-4 is a 2-axis Inchworm controller engineered for precision linear motion control across demanding positioning applications. It delivers sophisticated PZT drive electronics that generate the voltage, current, and timing signals required for rapid actuation of piezoelectric drive elements, enabling high-speed operation without sacrificing resolution. The controller operates from one to three axes independently or simultaneously in both open-loop and closed-loop control modes. Manual operation is supported via handset or joystick interfaces, while remote operation leverages TTL signals or RS-232 protocols for integration into larger automation frameworks. The programmable architecture provides engineers with flexible motion control without the complexity of external timing circuits. Technical Specifications Number of Axes: 2-axis controller; capable of managing 1-3 axes independently or simultaneously Control Modes:

Open-loop and closed-loop operation Drive Electronics: Sophisticated PZT drive electronics optimized for rapid actuation and high-speed performance Performance: High-speed operation with exceptional resolution Communication Protocols: TTL signals, RS-232 Key Features Programmable multi-axis control with independent or simultaneous axis operation Dual manual and remote control interfaces Optimized PZT drive architecture for precision piezoelectric actuation No backlash, no leadscrew errors - characteristic of piezoelectric linear motion Typical Applications Precision positioning systems requiring sub-micron resolution Multi-axis motion control in laboratory and research environments Automated alignment and scanning applications Systems demanding rapid, repeatable positioning without mechanical play Compatibility & Integration The 6100-2-2-1-4 is optimized for Burleigh's 700 series and LTS/LTO series Inchworm Motors. Manual control accessories include the Burleigh 6005 Handset and Burleigh 6003 Joystick. The controller belongs to the 6000 series family of Inchworm controllers, ensuring compatibility with related Burleigh motion control modules and piezoelectric motor products.

6100221 Characteristics / Specifications

PARAMETER	VALUE
Model Family	Burleigh 6100
Instrument Type	Inchworm motion controller
Axis Options	1 2 or 3 axes
Motor Type	Inchworm piezoelectric
Control Mode	closed loop class
Accessory Handset	Burleigh 6005
Accessory Joystick	Burleigh 6003
Related Series	6200 and 7000 controllers
Form Factor	benchtop controller
Interface	front panel plus remote accessories
Operating Temperature Class	0 C to 40 C
Line Power	100/120/220/240 V class
Position Resolution Class	nanometer Inchworm class
Travel Range	stage dependent
Vacuum Compatible Stages	supported with Inchworm
Manufacturer	Burleigh
Use Case	precision optical alignment
Drive Channels	one per axis
Status Display	axis position and fault
Emergency Stop	front panel disable
Cable Interface	Burleigh Inchworm motor cables
Storage Temperature Class	minus 20 C to 60 C class
Storage temperature	Class: minus 20 C to 60 C class
Operating temperature	Class: 0 C to 40 C

6100221 Specifications

PARAMETER	VALUE
Burleigh 6100 Series Inchworm Controller	Overview
Applications	Nanometer-class optical alignment, vacuum chamber positioning, and multi-axis Inchworm stage control.
Key Features	1 2 or 3 axis configurations
Technical Specifications	Model Family: Burleigh 6100

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: minus 20 C to 60 C class
Operating temperature	Class: 0 C to 40 C
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Operating Temperature Class	0 C to 40 C
Line Power	100/120/220/240 V class
Position Resolution Class	nanometer Inchworm class
Travel Range	stage dependent
Vacuum Compatible Stages	supported with Inchworm
Manufacturer	Burleigh
Use Case	precision optical alignment
Drive Channels	one per axis
Status Display	axis position and fault
Emergency Stop	front panel disable
Cable Interface	Burleigh Inchworm motor cables
Storage Temperature Class	minus 20 C to 60 C class Notes Axis options and accessory models from Burleigh 6100/6200/7000 Inchworm controller catalog descriptions. Exact force/speed limits are stage-model specific.

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	
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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.