Zaber Technologies Inc.
#2 - 605 West Kent Ave.
Vancouver, BC

1-604-569-3780 *Direct*
1-888-276-8033 *Toll Free*
1-604-648-8033 *Fax*

X-ASR205B205B-SD12 Datasheet



- 50 mm to 305 mm travel per axis
- Up to 2 µm repeatability; 85 mm/s speed
- Easily adjustable non-contact hall sensor limit switches
- Built-in controller saves space and simplifies cable management. Easily connect via USB and daisy chain to other Zaber products
- Simple standalone control with X-JOY joysticks
- Digital IO for triggering external systems
- Custom versions available

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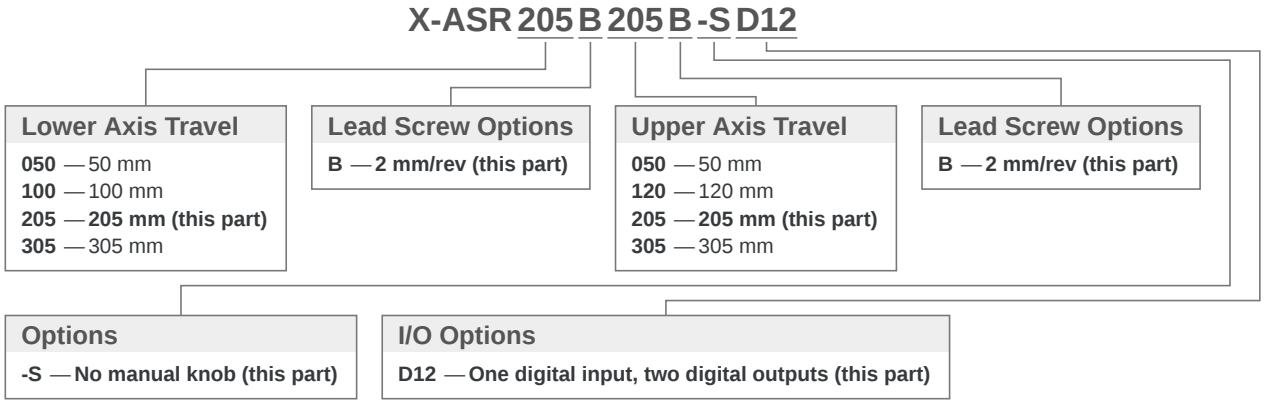
X-ASR205B205B-SD12 Overview

Zaber's X-ASR Series microscope stages are designed as replacements for manual stages on upright and inverted microscopes or for stand-alone operation as scanning stages. Compact, built-in controllers save bench space and allow the stages to be powered and controlled through a single, flex rated cable. X-ASR devices also include a digital input and two digital outputs for interfacing with external systems. An event-driven trigger system allows devices to be programmed for stand-alone operation based on I/O, time, or movement stimuli.
Mounting adapters are available for breadboards and most common microscopes. Custom adapters and plates are available upon request.

For more information visit: https://www.zaber.com/products/scanning-microscope-stages/X-ASR?part=X-ASR205B205B-SD12

X-ASR205B205B-SD12 Part Numbering & Options

Part number: X-ASR205B205B-SD12



X-ASR205B205B-SD12 Drawings

• View all drawings and documents at zaber.com

X-ASR205B205B-SD12 Specifications

Overview

Specification	Value
Built-in Controller	Yes
Lower Travel Range	205 mm (8.071 ")

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Upper Travel Range	205 mm (8.071 ")
Manual Control	No
Axes of Motion	2
LED Indicators	Yes
Weight	6.9 kg (15.212 lb)

Positioning Performance

Specification	Value
Accuracy (unidirectional)	60 µm (0.002362 ")
Repeatability	<2 µm (<0.000079 ")
Flatness of Travel	<25 µm (<0.001 ")
Backlash	<10 µm (<0.000394 ")
Straightness of Travel	<16 µm (<0.00063 ")
Pitch Error	0.05 ° (0.873 mrad)
Roll Error	0.02 ° (0.349 mrad)
Yaw Error	0.03 ° (0.523 mrad)
Microstep Size (Default Resolution)	0.15625 µm
Default Resolution	1/64 of a step

Load Performance

Specification	Value
Peak Thrust	95 N (21.3 lb)
Maximum Continuous Thrust	95 N (21.3 lb)
Maximum Centred Load	100 N (22.4 lb)

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Speed

Specification	Value
Maximum Speed	85 mm/s (3.346 "/s)
Minimum Speed	0.000095 mm/s (0.000004 "/s)
Speed Resolution	0.000095 mm/s (0.000004 "/s)

Encoder & Sensing

Specification	Value
Limit or Home Sensing	Magnetic, adjustable home and away sensors

Motor

Specification	Value
Linear Motion Per Motor Rev	2.00 mm (0.079 ")
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	1500 mA/phase
Motor Winding Resistance	2.05 ohms/phase
Motor Winding Inductance	1 mH/phase

Power and Communication

Specification	Value
Communication Interface	RS-232, USB 2.0
Communication Protocol	Zaber ASCII (default), RS-232
Data Cable Connection	Locking 4-pin M8
Power Supply	24-48 VDC
Maximum Current Draw	2600 mA

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Analog & Digital I/O

Specification	Value
Digital Input	1
Digital Output	2

Mechanical

Specification	Value
Guide Type	Crossed roller bearing
Mechanical Drive System	Precision lead screw
Mounting Interface	Separate mounting adapters available

Environmental & Compliance

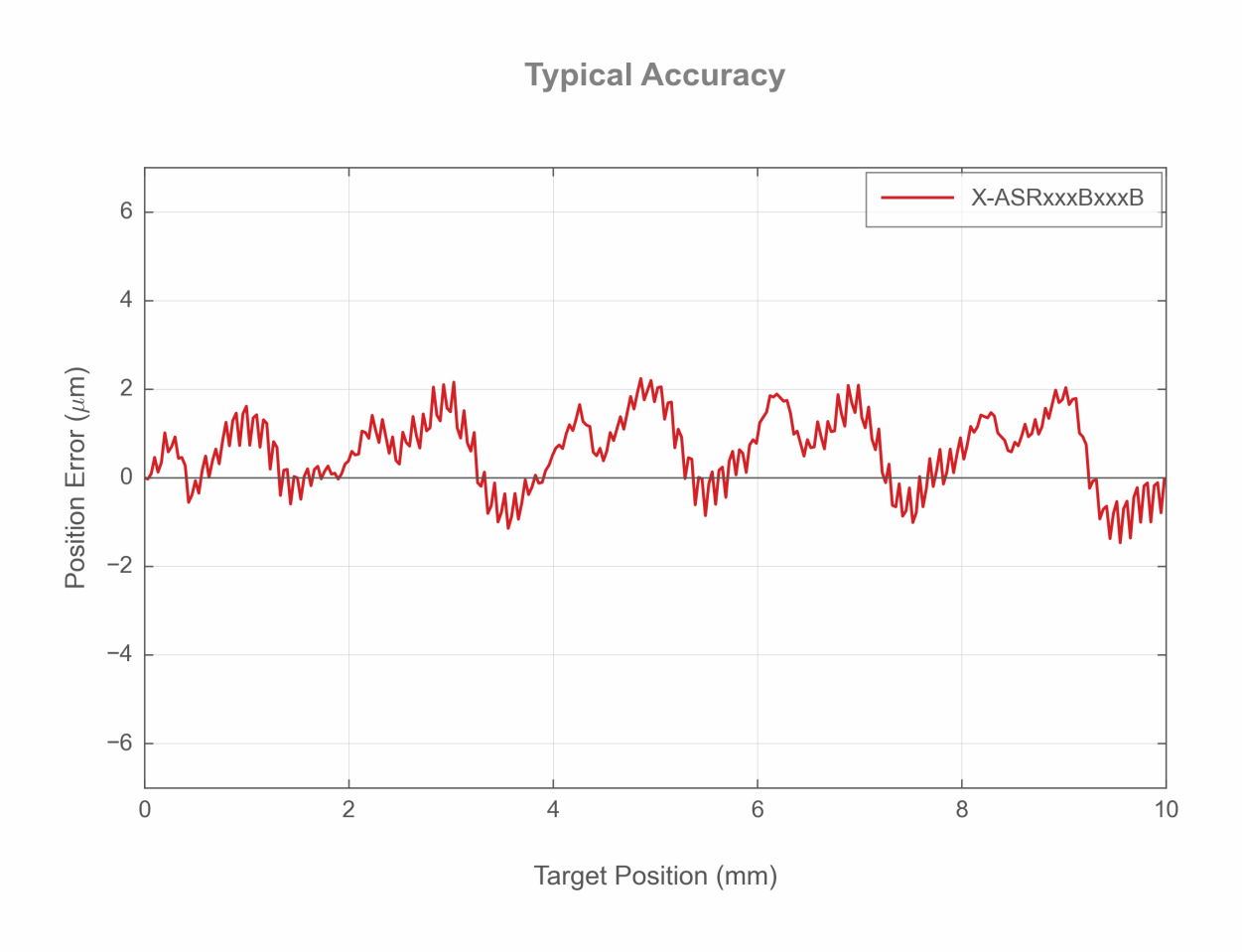
Specification	Value
Operating Temperature Range	0 to 50 °C
CE Compliant	Yes
Vacuum Compatible	No

X-ASR205B205B-SD12 Charts

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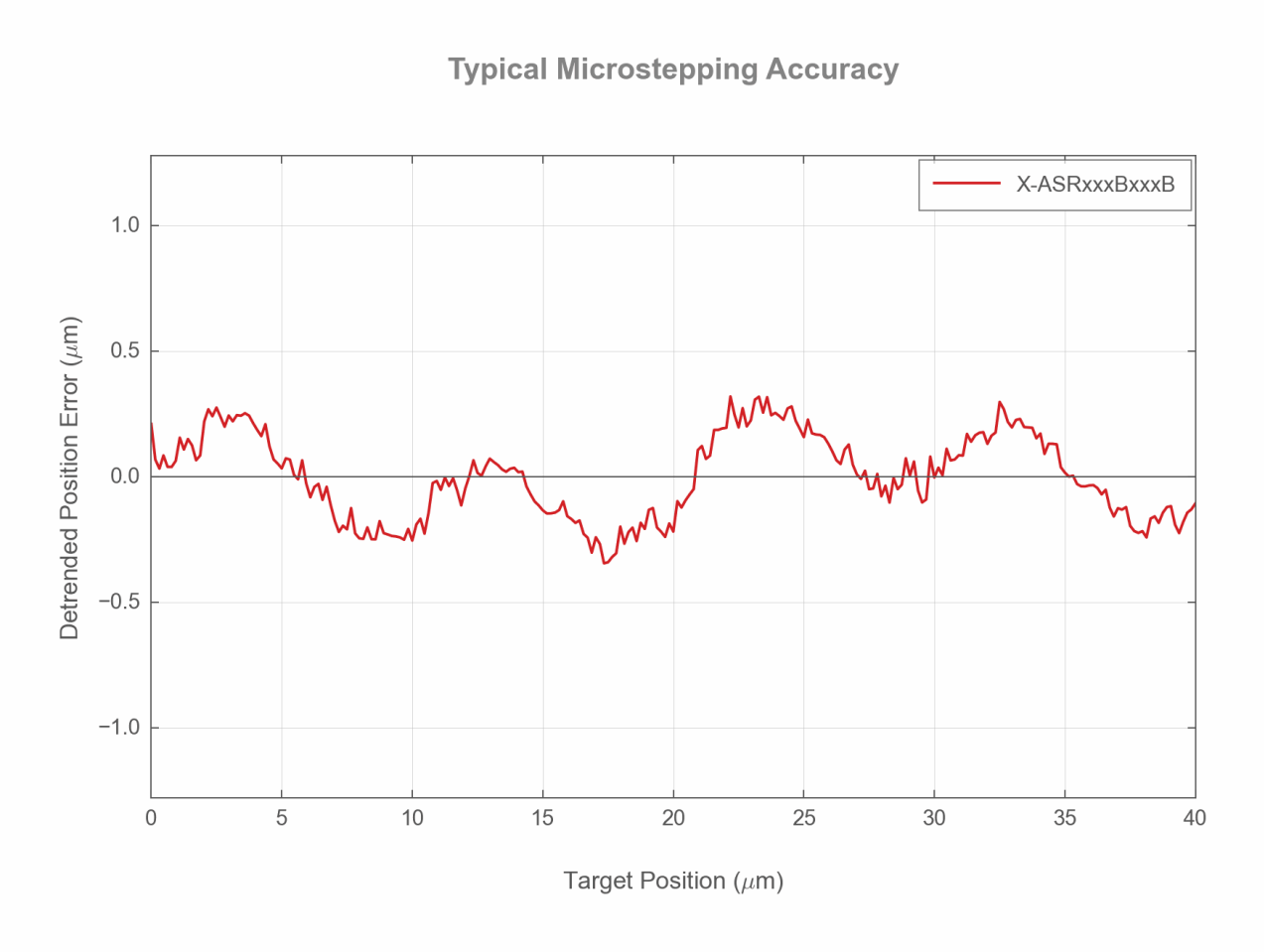
Accuracy



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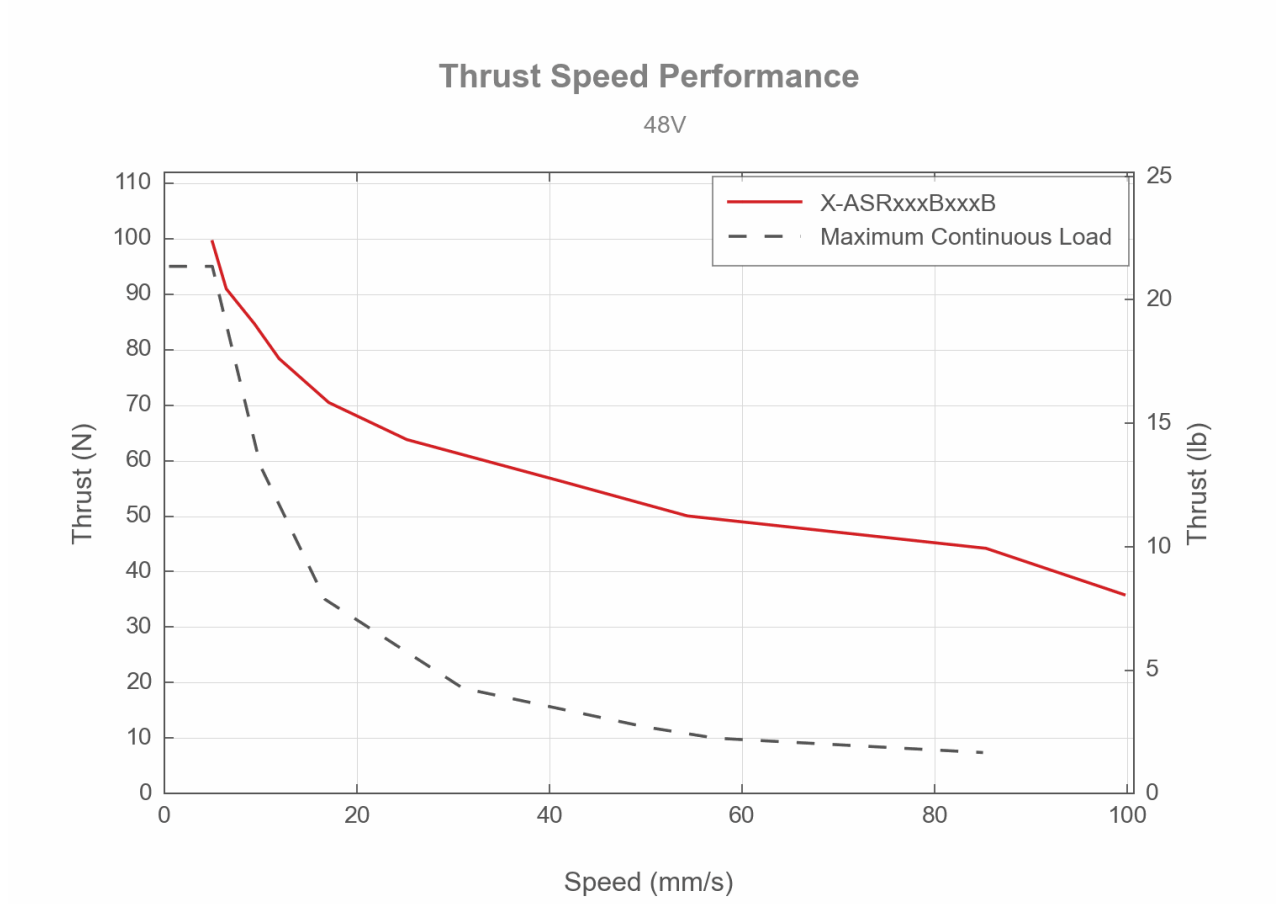
Microstepping Accuracy



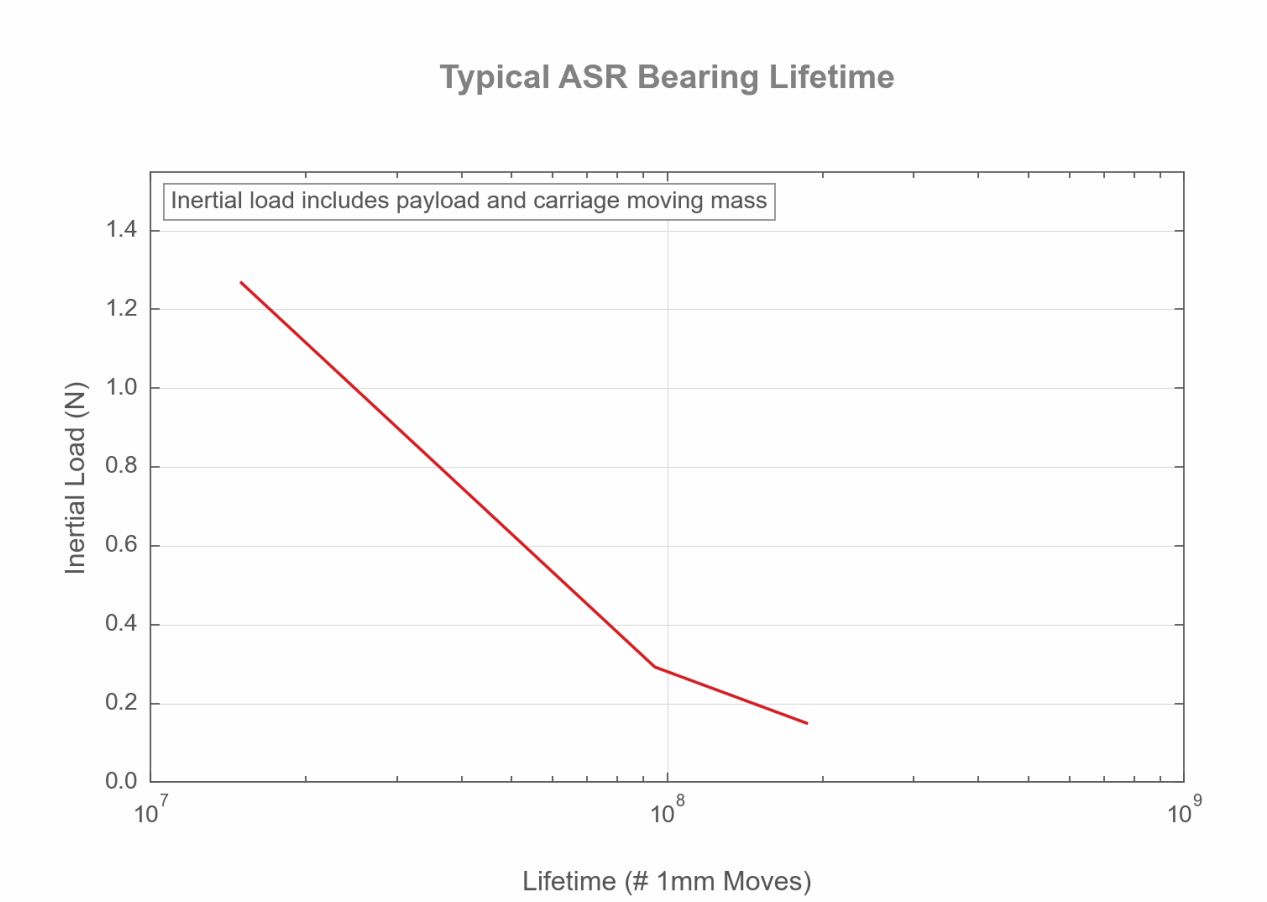
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Speed Performance



Typical ASR Bearing Lifetime



Contact

Email: contact@zaber.com

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