

MICROSLIDE SERIES

LINEAR STAGE

FEATURES

- Resolution: 0.02 μm
- Speed: 8 mm/sec
- Compact Size
- Lightweight



Microslide Design

Microslide linear slides are designed for space limited applications and can be configured in compact multi-axis assemblies. The Microslide linear stages offer very high resolution when driven by the NSC-A1 or NSC-G controllers.

All Microslide series stages are machined from 6061 aluminum alloy to provide a light and stable construction. For more reliability and durability, the guide rods, lead screw and switches are protected by a strong aluminum cover. The use of linear guide rod bearings provide a smooth motion.

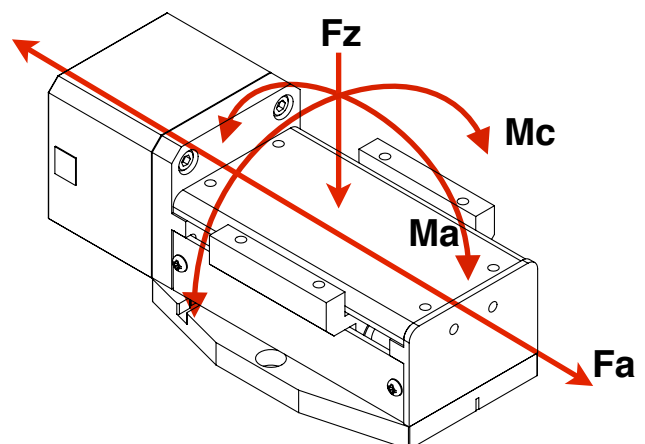
Separate connectors for motor power and limit switch signals are provided for ease of operation. Integrated limit switches and a high torque size 17 stepper motor are supplied as standard items.

Specifications

Travel Range	25 (1 inch), 50 mm (2 inches)
Resolution	Up to 0.02 μm (based on 250 microstep resolution)
Accuracy	20 μm
Max. Speed	8 mm/sec
Repeatability	5 μm
Max Load	2.3 kg (5 lbs)
Encoder (optional)	Optical rotary encoder mounted to rear of motor, 4000 CPR with Index
Limit Switches	Mechanical
Lead screw Pitch	1.0583 mm/rev
Stage Weight	0.58 kg (1.3 lbs)
Material	Aluminum Alloy Construction
Finish	Black Anodize

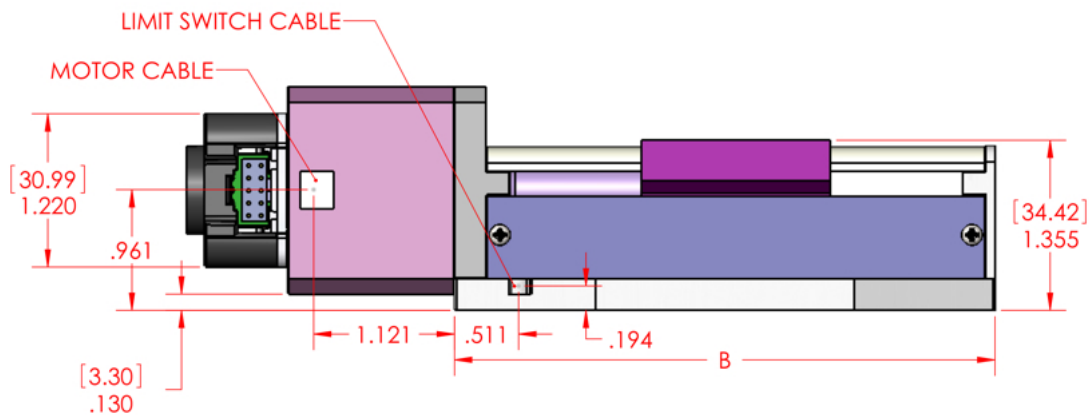
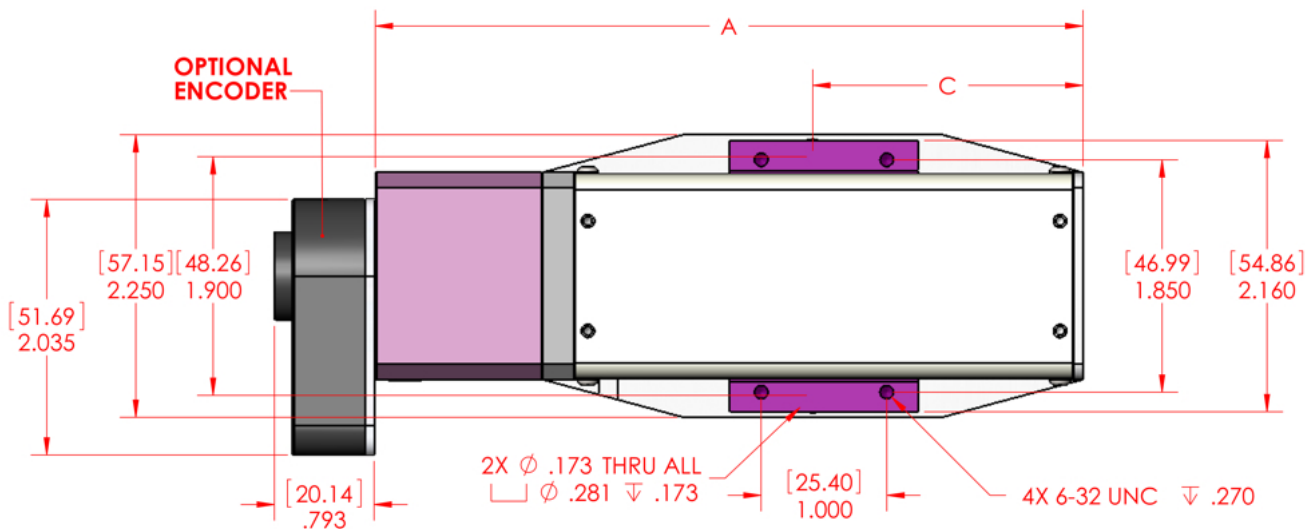
Load Characteristics

Axial Load F_a	2.3 kg (5 lbs)
Normal Load F_z	2.3 kg (5 lbs)
Moment Load M_a	0.9 Nm (8 lb-in)
Moment Load M_c	0.67 Nm (6 lb-in)



Dimensions

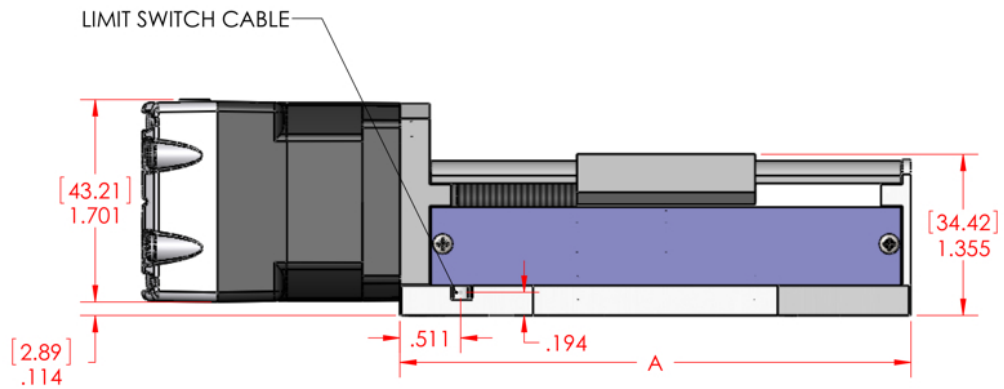
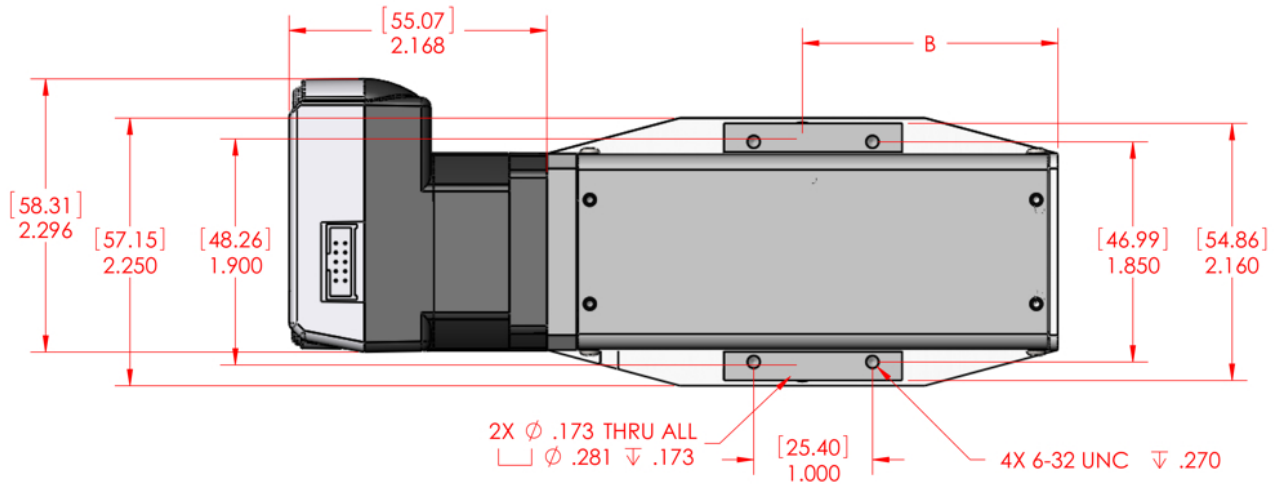
Stepper Motor Version



TRAVEL	DIM "A"	DIM "B"	DIM "C"
1"	[109.22] 4.30	[83.82] 3.30	[41.91] 1.65
2"	[143.26] 5.64	[117.86] 4.64	[54.61] 2.15

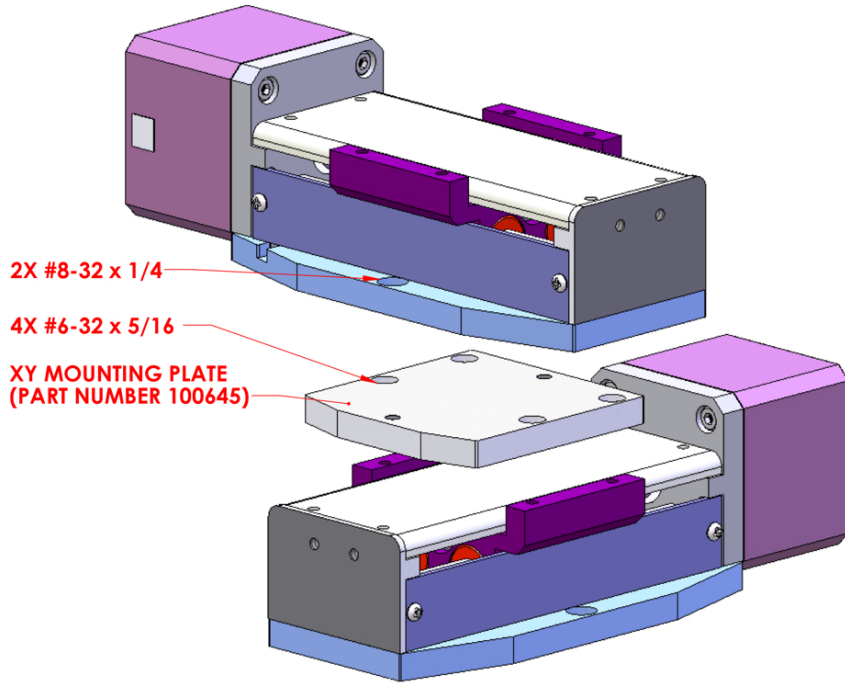
Dimensions

MDrive Motor Version

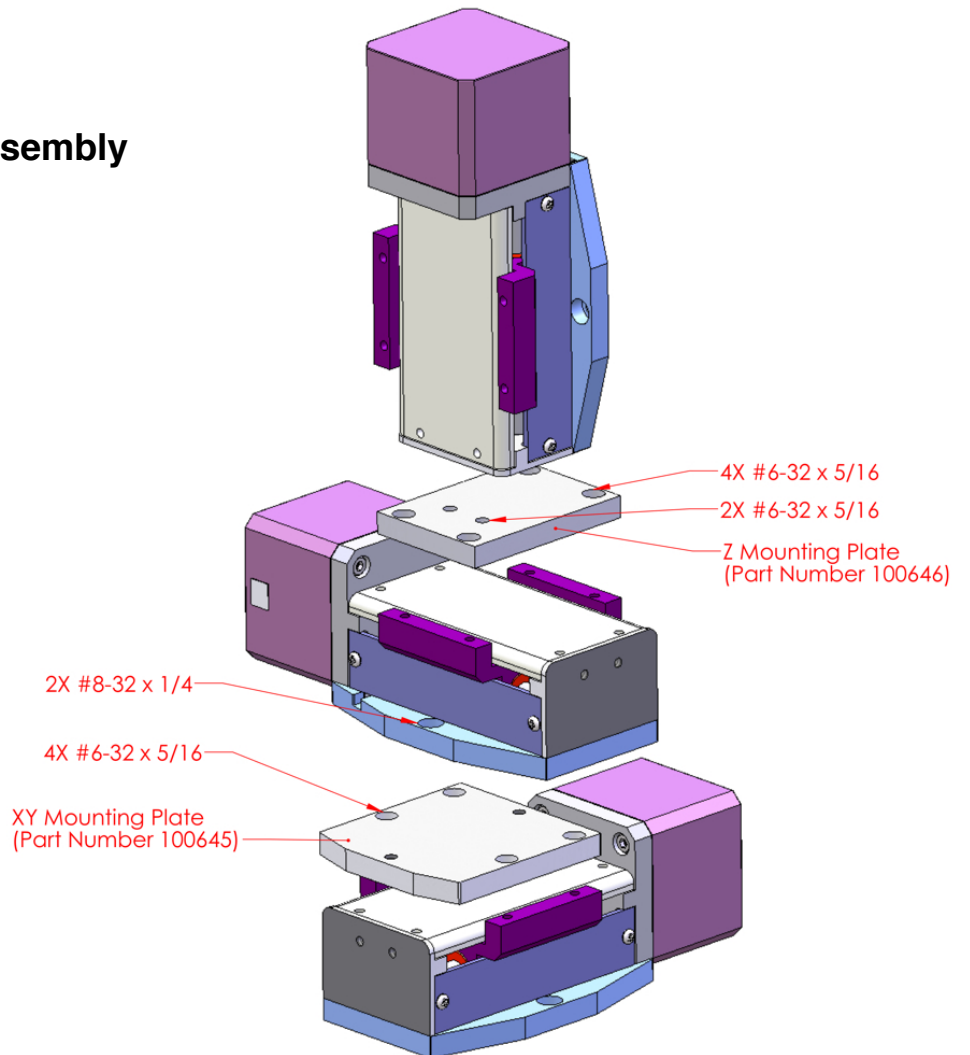


TRAVEL	DIM "A"	DIM "B"
1"	[83.82] 3.30	[41.91] 1.65
2"	[117.86] 4.64	[54.61] 2.15

XY Assembly



XYZ Assembly



Pin Assignment

Standard Stepper Motor Version

Motor

DB-9 Male	Description
1.	Phase A
2.	Phase A'
3.	Phase B
4.	Phase B'
5.	Phase A Center
6.	Phase B Center

Motor Specifications

Step Size: 1.8°/step

Amps/Phase: 0.95

Resistance: 4.0 Ohm/Phase

Inductance: 3.1 mH/Phase

Signals (Encoder Option)

DB-9 Female	Description
1.	+ Limit Switch
2.	- Limit Switch (motor side)
3.	Limit Switch Ground

Limit switch wired normally open

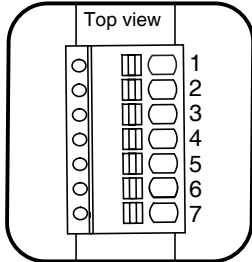
Signals (Encoder Option)

HD-15 Female	Description
1.	+ Limit Switch
2.	- Limit Switch
3.	Limit Switch Ground
4.	Encoder Ground
5.	+5V Encoder Power
6.	Ch. A
7.	Ch. A-
8.	Ch. B
9.	Ch. B-
10.	Index +
11.	Index -

Limit switch wired normally open

Pin Assignment

MDrive Motor Version



7-Pin Pluggable Terminal

Power and I/O

7-Pin Terminal	Description
1	I/O 1
2	I/O 2
3	I/O 3
4	I/O 4
5	Analog Input
6	Power GND
7	+24V Motor Power

The forward limit switch is connected to I/O 1.
The reverse limit switch is connected to I/O 2.
Limit switches are wired normally closed.

RS-422 Communications

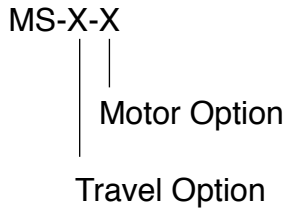
10-Pin IDC	Description
1	TX+
2	TX-
3	RX+
4	RX-
5	Aux-Logic
6	RX+
7	RX-
8	TX-
9	TX+
10	COMM GND

Connected to 7-Pin Terminal

DC Jack, 2.1 mm	Description
Center	+24 VDC
Outside	Power Ground

Ordering Information

Part Number Configuration



Travel Length

- 1 1 inch (50 mm)
- 2 2 inch (25 mm)

Motor Options

- 1 Stepper Motor
- 2 Stepper Motor with Encoder
- 3 MDrive Motor with Encoder

Motion Controllers

The following Newmark Systems, Inc. controllers are compatible with the Microslide Stage.

[NCS-A1 Series](#) | [NSC-A2L Series](#) | [NSC-G Series](#)