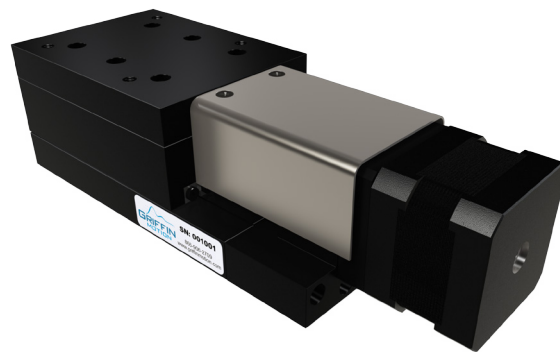


Precision Linear Motion Platform

FEATURES

- Compact Low-Profile Design
- 50mm Travel
- Lead screw
- Optical limit switches with home
- Stepper motor drive
- Crossed Roller Bearings



The MLS-HS Series stages are designed for a variety of applications. This compact low profile stage offers cost effective motion for laboratory and automation needs. This stage offers the same levels of flatness and straightness as the BS series tables. The hybrid stepper drive and crossed roller bearings provide smooth motion. The drive has an inherent braking action allowing it to maintain position when the motors are not powered. The MLS-HS Series stages can be stacked to create X, Y and Z motion. The stage can operate in any orientation and the optional tooling plate is easily customized for different mounting options.



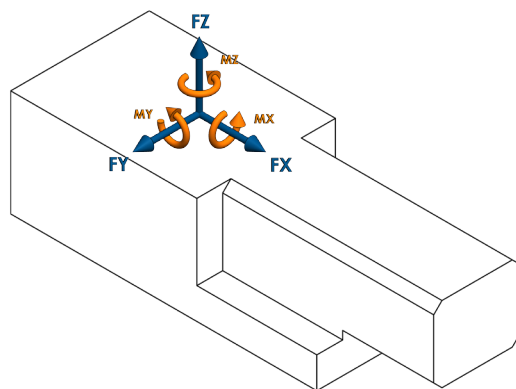
1040 CLASSIC ROAD | APEX, NC 27539
P: 866.906.2709 | F: 919.882.1430
www.griffinmotion.com

MLS-050-HS-C-N-S-0-00

Motion Specifications

Product Specifications

Force X (N)	75
Force Y (N)	75
Force Z (N)	75
Flatness (μm)	8
Height (mm)	51
Length (mm)	193
Limit Switches	Yes
Linear Accuracy (μm)	20
Linear Repeatability (μm)	5
Linear Velocity (mm/s)	25
Moment X (N·m)	2
Moment Y (N·m)	2
Moment Z (N·m)	2
Moving Mass X (kg)	0.54
Pitch +/- (arc-sec)	15
Screw Lead (mm)	3.175
Stage Mass (kg)	1.3
Stepper Motor Resolution (Whole Steps/rev)	200
Straightness (μm)	8
Width (mm)	67
Yaw +/- (arc-sec)	12



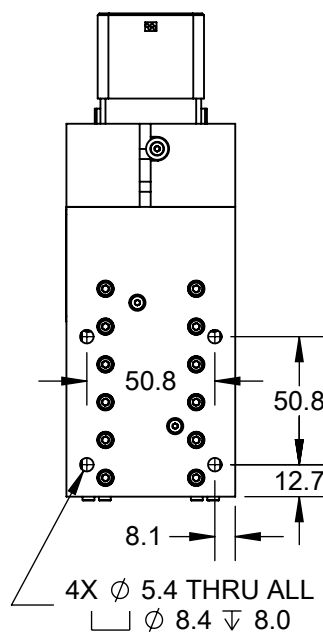
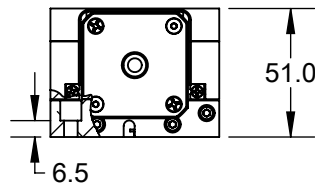
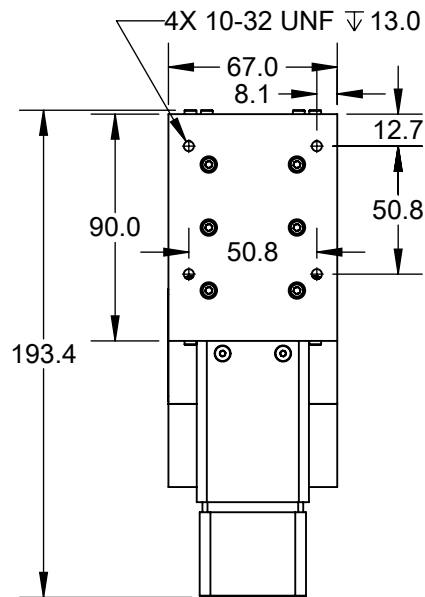
LOAD DIRECTIONS

Part Number Description

MLS	MLS Series
050	50mm Travel
HS	Hybrid Stepper Leadscrew
C	Hybrid Stepper Leadscrew
N	Limit and Home Switch Only
S	Standard Precision
0	No Additional Options
00	Standard Product (Call for custom)

MLS-050-HS-C-N-S-0-00

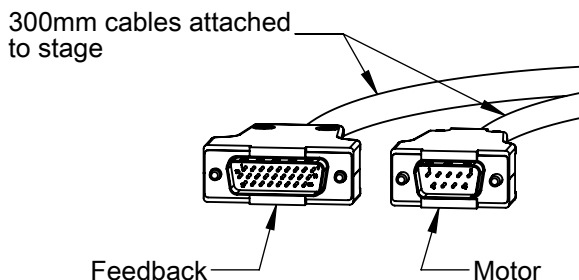
Mechanical Specifications



MLS-050-HS-C-N-S-0-00

Rev 7

Feedback Connector (DSUB26HD MALE)	
PIN	NAME
1	+5V
2	*
3	*
4	*
5	LIM+
6	*
7	*
8	*
9	*
10	*
11	*
12	*
13	*
14	LIM-
15	*
16	*
17	*
18	*
19	GND
20	*
21	*
22	*
23	HOME
24	*
25	*
26	*
* Reserved	



Motor Connector (DSUB9 MALE)	
PIN	NAME
1	*
2	*
3	*
4	*
5	*
6	PHASE A+
7	PHASE A-
8	PHASE B+
9	PHASE B-
* Reserved	



MLS-050-HS-C-N-S-0-00

Electrical Specifications

Motor Specifications	
Motor Type	Bipolar Stepper
Winding Voltage (VDC)	2.33
Current/phase (A)	1.5
Resistance/phase (Ω)	1.56
Induction/phase(mH)	1.9
Power Consumption (W)	7.0

Feedback Specifications	
Supply Voltage (V)	5.0 \pm 10%
Supply Current (mA)	250
Encoder Feedback	No
Limit Switches	Yes
Limit Switch Output Type	CMOS
Limit Switch Output current (mA)	\pm 20.0
Home Switch	Yes
Home Switch Output Type	CMOS
Home Switch Output current (mA)	\pm 20.0

A home switch is provided near center mechanical travel and a limit switch at each end of travel. The limit switches will be pulled low throughout the travel range of the stage. The output will swing high at the end of travel and remain high until the mechanical limit is reached.