

LNS-100-BS-A-F-P-0-00

Precision Linear Motion Platform

Overview

Features

- Compact Low-Profile Design
- 100mm Travel
- Zero backlash, precision ground ball screws
- Optical limit switches with home
- High resolution linear encoder
- Brushless servo motor drive
- Crossed Roller Bearings

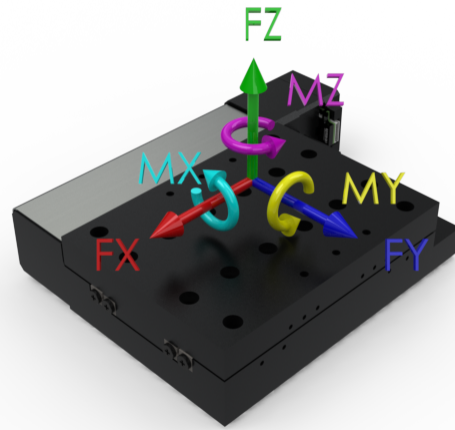


Description

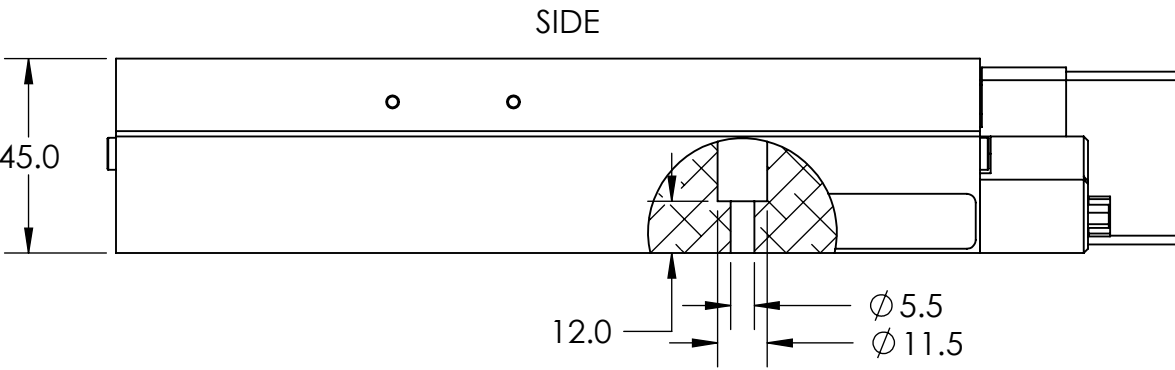
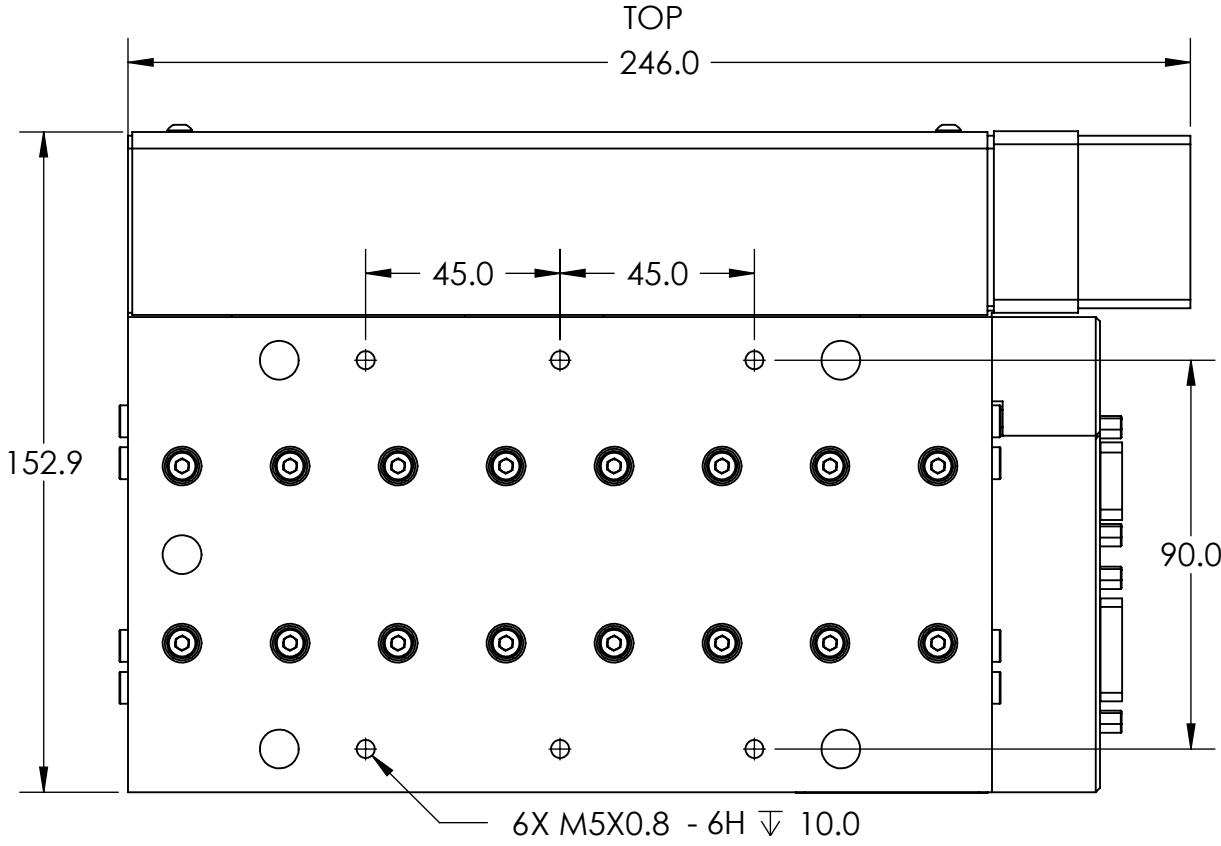
The LNS-BS Series stages are designed for a variety of applications. This compact low profile ball screw stage is built for high duty cycles and long life and can attain high velocities for factory automation and semiconductor processing equipment. This stage has exceptional levels of accuracy, repeatability, flatness and straightness. The crossed roller bearings and a precision ground ball screw offer extremely smooth operation and velocity control. The LNS-BS Series stages can be stacked to create X, Y and Z motion. The stage can operate in any orientation and has an optional brake for added safety.

Specifications

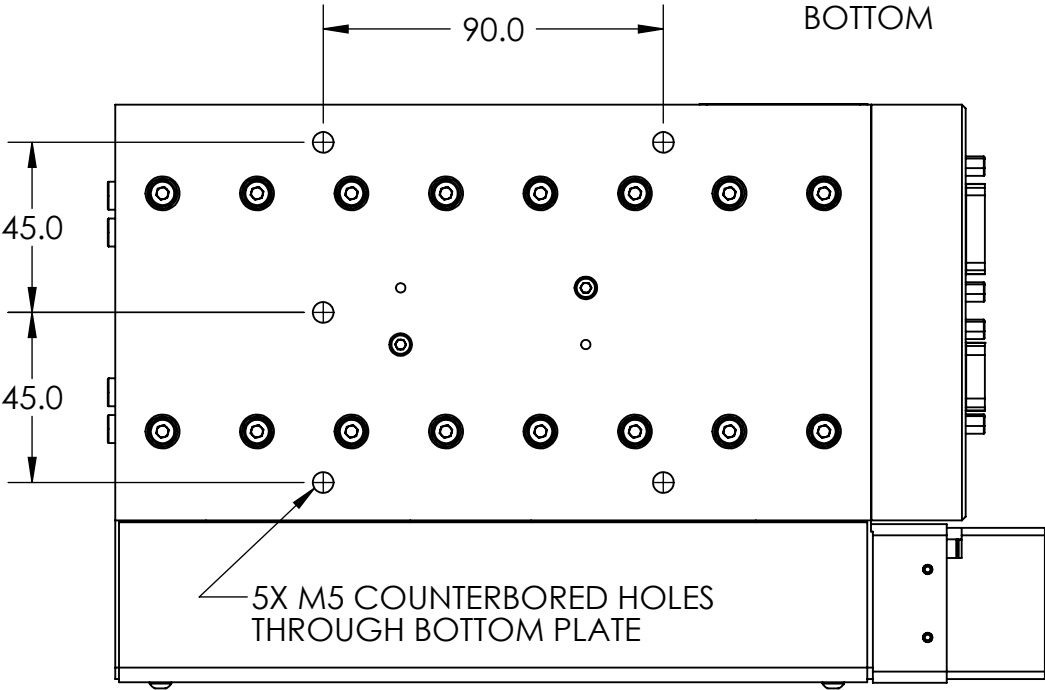
Travel(mm)	100
Drive	Ground Ball Screw
Motor	Brushless Servo
Encoder	0.1um Linear Steel
Precision	High Precision
Environmental	No Options
Encoder Output	A quad B, index
Force X (N)	200
Force Y (N)	250
Force Z (N)	500
Flatness (μm)	2
Height (mm)	45
Length (mm)	245
Limit Switches	Yes
Linear Accuracy (μm)	4
Linear Repeatability (μm)	0.5
Linear Velocity (mm/s)	150
Moment X (N-m)	60
Moment Y (N-m)	275
Moment Z (N-m)	110
Moving Mass X (kg)	1.67
Pitch (arc-sec)	4
Screw Lead (mm)	2
Stage Mass (kg)	3.67
Straightness (μm)	2
Width (mm)	153
Yaw (arc-sec)	3



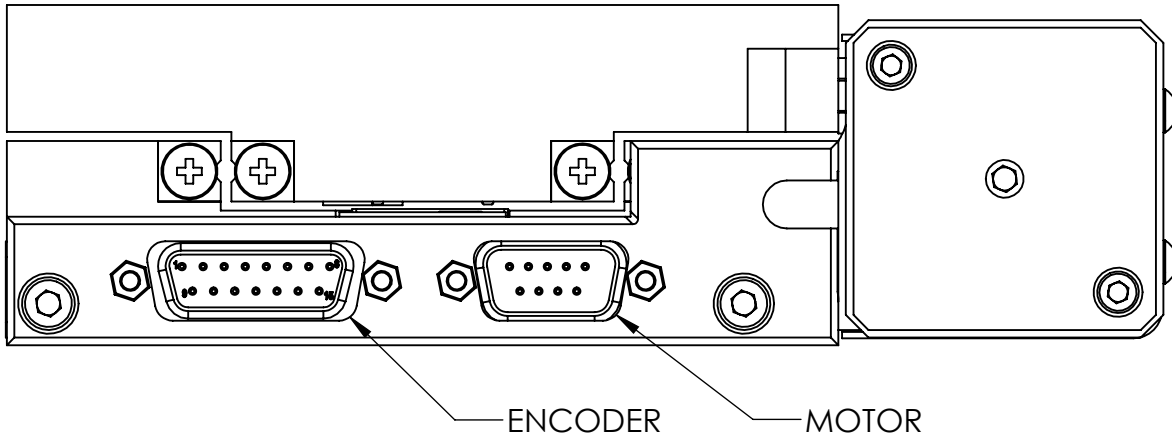
ALL DIMENTIONS IN MM
UNLESS OTHERWISE NOTED



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UNLESS OTHERWISE NOTED



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ENCODER PINOUT	
PIN	NAME
1	N/C
2	N/C
3	N/C
4	RI-
5	B-
6	A-
7	N/C
8	+5V
9	GND
10	LIMIT-
11	LIMIT+
12	RI+
13	B+
14	A+
15	N/C

MOTOR PINOUT	
PIN	NAME
1	HALL SUPPLY +5V
2	HALL "C"
3	HALL "B"
4	HALL "A"
5	HALL GROUND
6	MOTOR PHASE "A"
7	MOTOR PHASE "B"
8	MOTOR PHASE "C"
9	N/C

MOTOR SPECIFICATIONS

- 3 Phase Brushless
- Number of Poles: 6
- Terminal Resistance (+/- 12%) 1.51Ω
- Terminal Inductance (+/-30%) 0.55 mH
- Peak Current 10.0A (5 sec duration)
- Max Continuous Current 3.0A (25°C ambient temperature, decrease for higher ambient temperature)

ENCODER SPECIFICATIONS

- Supply Voltage 5V +/- 5%
- Supply Current <180mA
- Square wave output RS-422

LIMIT SWITCH OUTPUT

- Open collector output
- Recommended 5kohm pull-up resistor to +5V
- Absolute maximum current sink per switch: 20mA
- Voltage output low is < 0.8V
- Output is high impedance when switch is triggered