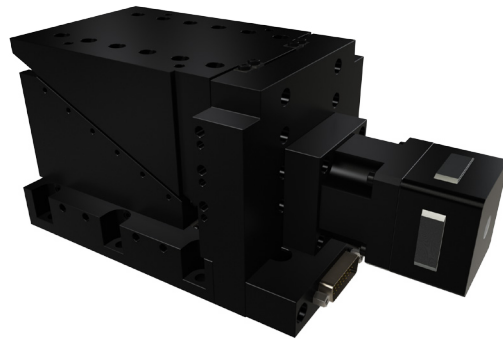


Precision Z Motion Platform

FEATURES

- 20mm Z Travel
- High rigidity wedge design
- Zero backlash, precision ground ball screw
- Optical limit switches with home
- Stepper motor
- Crossed Roller Bearings



The ELV-BS series stages are designed for a variety of applications. These reliable ball screw stages combine high speed and high accuracy and are built for high duty cycles and long life for laboratory, factory automation and semiconductor processing equipment. They are safe for upright or inverted use and can be configured with custom payload mounting holes. The wedge design and crossed roller bearings offer an extremely rigid Z stage.



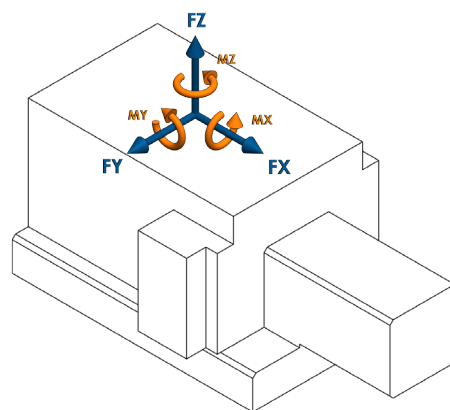
1040 CLASSIC ROAD | APEX, NC 27539
P: 866.906.2709 | F: 919.882.1430
www.griffinmotion.com

ELV-020-BS-B-N-S-0-00

Motion Specifications

Product Specifications

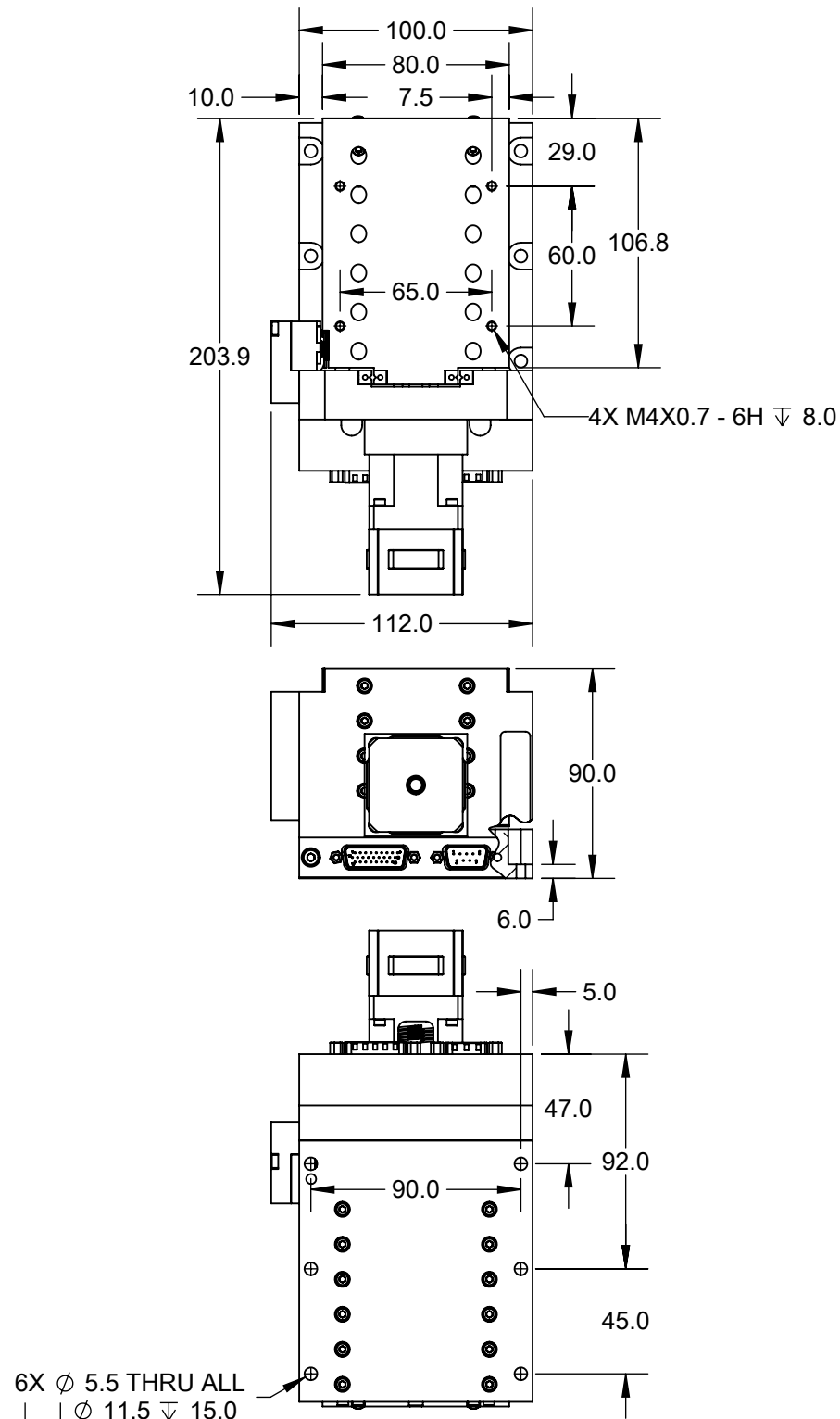
Force X (N)	100
Force Y (N)	100
Force Z (N)	100
Height (mm)	90
Length (mm)	204
Limit Switches	Yes
Linear Accuracy (μm)	12
Linear Repeatability (μm)	3
Linear Velocity (mm/s)	25
Moment X (N·m)	5
Moment Y (N·m)	5
Moment Z (N·m)	5
Moving Mass Z (kg)	0.6
Pitch +/- (arc-sec)	10
Screw Lead (mm)	2
Stage Mass (kg)	2.32
Stepper Motor Resolution (Whole Steps/rev)	400
Width (mm)	112
Yaw +/- (arc-sec)	10



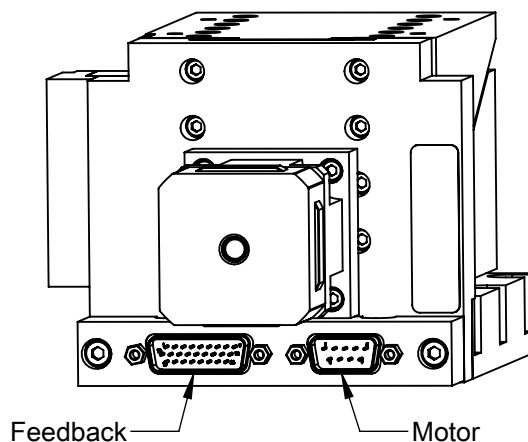
LOAD DIRECTIONS

Part Number Description

ELV	ELV Series
020	20mm Travel
BS	Ball Screw Drive
B	Stepper Motor
N	Limit and Home Switch Only
S	Standard Precision
0	No Additional Options
00	Standard Product (Call for custom)



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	



ELV-020-BS-B-N-S-0-00

Electrical Specifications

Motor Specifications	
Motor Type	Bipolar Stepper
Current/phase (A)	0.8
Resistance/phase (Ω)	10.0
Induction/phase(mH)	6.9

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.