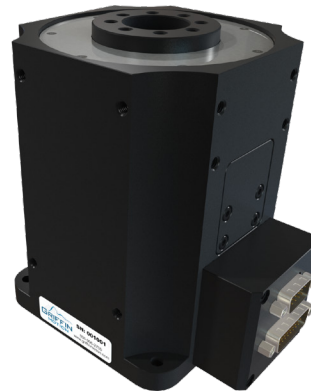


Precision Rotary Stage

FEATURES

- Narrow Profile Design
- Continuous 360° rotation
- 26mm through bore
- High resolution encoder
- Precision index mark for homing
- Direct drive brushless servo motor



The SRS-DD Series Rotary stages are compact, direct drive, precision positioning stages designed for laboratory, factory automation and semiconductor processing equipment. The brushless direct drive technology eliminates backlash and improves reliability by eliminating sliding friction throughout the stage. The bore allows convenient routing of vacuum lines or electrical signals for a wide range of applications. Encoder resolution can be configured at the factory to best meet the needs of the application.



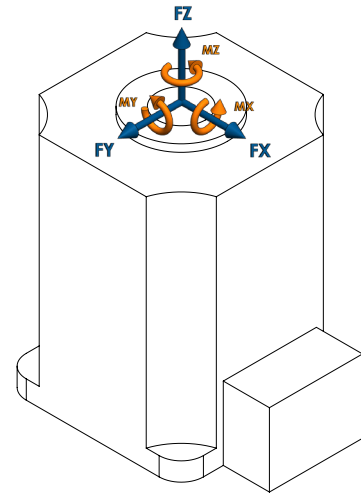
SRS-DD-100-M-E-A-S-0-00

Motion Specifications

Product Specifications

Angular Accuracy (arc-sec)	40*
Angular Repeatability (arc-sec)	3*
Angular Velocity (deg/s)	9000
Axial Runout (μm)	5
Continuous Torque (N-m)	1.90
Encoder Output	1Vp-p Sine and Cosine, Index
Force X (N)	150
Force Y (N)	150
Force Z (N)	300
Height (mm)	132
Length (mm)	125.2
Limit Switches	Optional
Moment X (N-m)	10
Moment Y (N-m)	10
Moment Z (N-m)	1.90
Encoder Resolution (arc-sec)	10000 Sine Periods / rev
Peak Torque (N-m)	5.7
Radial Runout (μm)	5
Rotational Inertia ($\text{kg}\cdot\text{m}^2$)	0.001154
Stage Mass (kg)	3.06
Travel Range (deg)	360 continuous
Width (mm)	96
Wobble (arc-sec)	10

*Controls Dependent



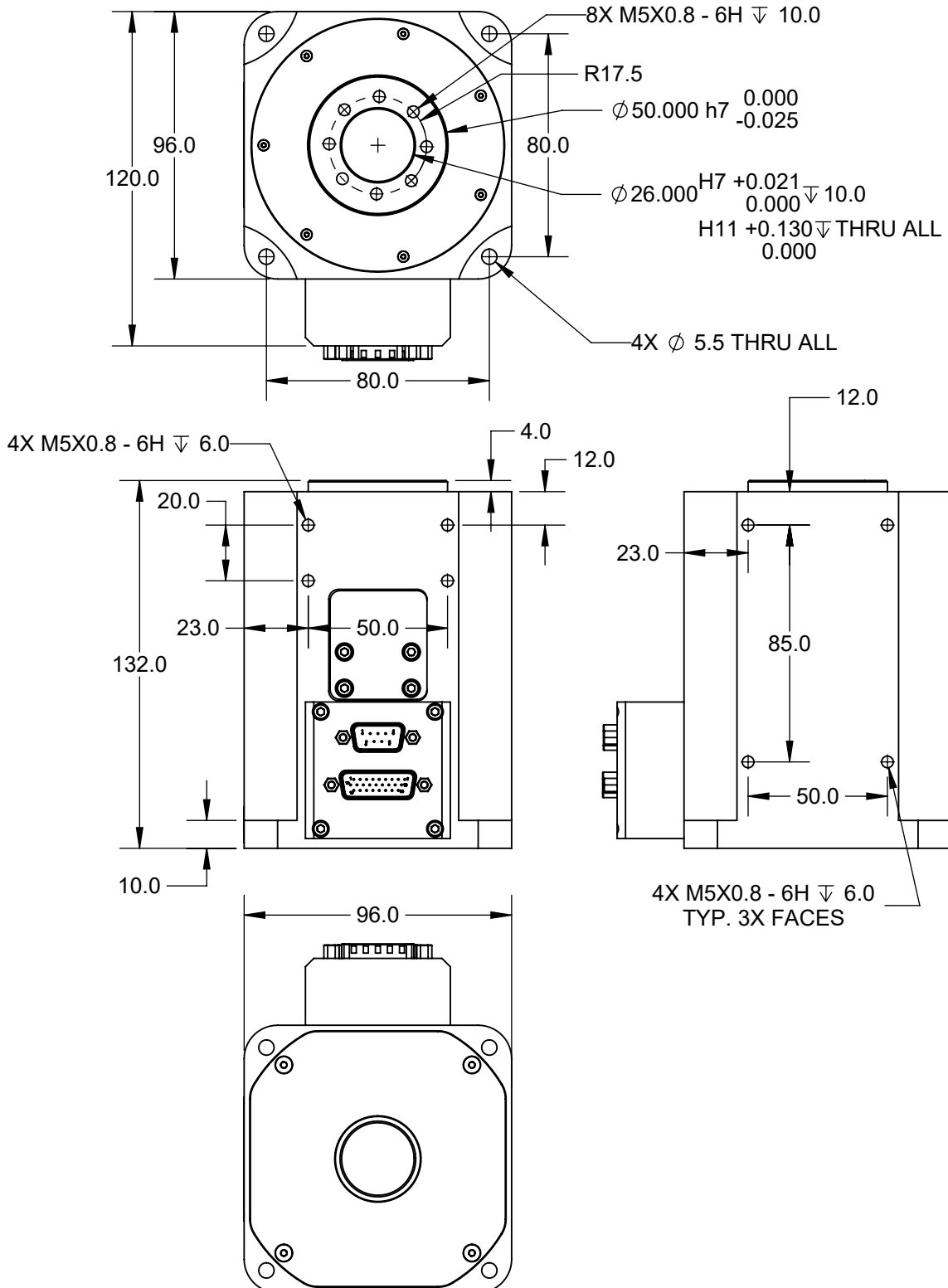
LOAD DIRECTIONS

Part Number Description

SRS	SRS Series
DD	Direct Drive
100	100mm Diameter
M	Glass Disk, 10000 Line Pairs
E	Sinusoidal Output
A	Aluminum Hub
S	Standard Precision
0	No Additional Options
00	Standard Product (Call for custom)

SRS-DD-100-M-E-A-S-0-00

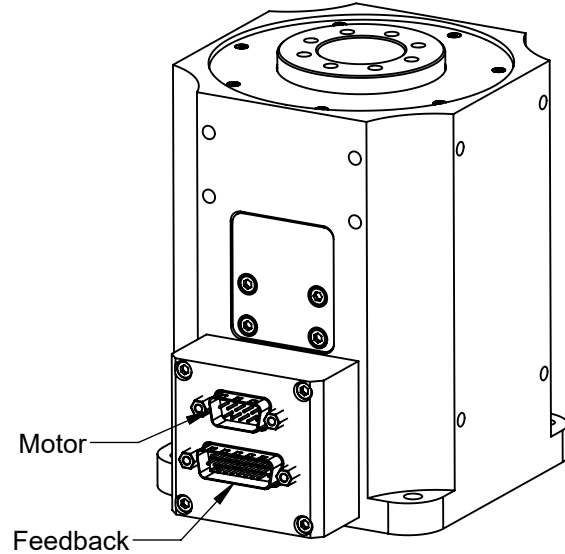
Mechanical Specifications



SRS-DD-100-M-E-A-S-0-00

Rev 2

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



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



Motor Specifications	
Motor Type	3 Φ Brushless DC
BEMF Constant (V/KRPM)	81.0
Electrical Time Constant (ms)	0.740
Max Bus Voltage (VDC)	340
Max Continuous Current (A)	2.85
Motor Torque Constant (N·m/A)	0.667
Peak Current (A)	8.56
Pin to Pin Inductance (mH)	4.03
Pin to Pin Resistance (ohm)	5.44
Poles per Revolution	16

Feedback Specifications	
Supply Voltage (V)	5.0 \pm 10%
Supply Current (mA)	250
Encoder Feedback	Yes
Encoder Type	Incremental
Encoder Output	1Vpp Sinusoidal; Sin, Cos, Index; Differential Pairs
Hall Switch Output	Internal 1k pullup
Hall Switch max current (mA)	-20
Limit Switches	Optional

The encoder has one index mark. It will output a pulse once per revolution when this index mark is passed. This pulse is highly repeatable and can be used to find an absolute position (within one revolution of the output shaft) upon power-up.