X-G-RST500-E03SR10 Datasheet

- 360° continuous travel on both azimuth and elevation axes
- Speed up to 24°/s; max torque 10 N-m; max payload 15 kg
- Encoder position feedback with slip/stall detection and automatic recovery
- 300 and 500 mm width frame options
- Adjustable elevation offset for optimizing alignment and performance
- Built-in controllers & slip ring for effortless cable management
- Custom versions available

X-G-RST-E Series Overview

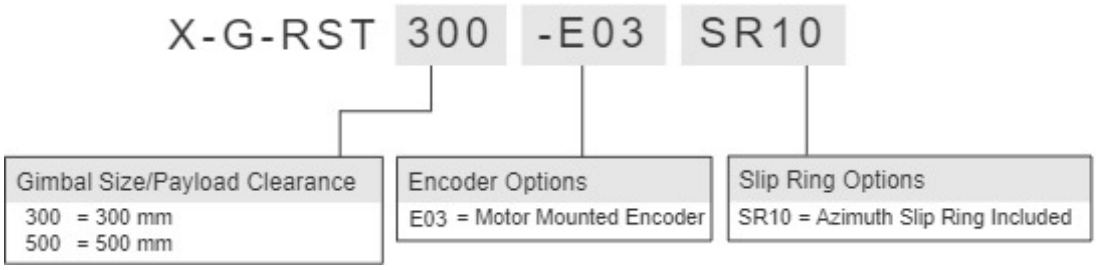
Zaber's X-G-RST-E series products are motorized two-axis rotation stage gimbal mount devices with built-in controllers and motor encoders allowing closed-loop operation and slip/stall recovery features. Rated for up to 15 kg load capacity centered about the elevation axis and 10 N-m of torque, they are ideal for high-load, high-precision, angular positioning in optics, telecom, scanning, and tracking applications.

These gimbals ship assembled, making them 'plug and play'. They are easy to set up and operate. A variety of standard crossmembers for both metric and imperial mounting are available: AP193M, AP193E, AP194M & AP194E; custom versions are also available. The adjustable height of the elevation assembly provides a versatile solution for centering different size payloads.

Zaber's X-RST-E rotary stages with built-in controllers allow daisy-chaining power and communication. This means only one standard 48 V power supply is needed to power the gimbal. A single RS-232 or USB port from a computer can be used for convenient control of both axes of the system. The rotary stages are daisy-chained via slip ring offering tangle free cable management with unlimited rotation. Four additional signal wires are included through the slip ring, available for your convenience.

For more information visit: https://www.zaber.comproducts/gimbal-stages/X-G-RST-E

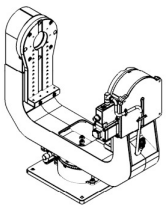
X-G-RST-E Series Part Numbering & Options



X-G-RST500-E03SR10 Drawings

ZABER

X-G-RST-E, X-G-RST-DE
Motorized Gimbal With Built-in Controllers, Encoder And Slip-ring Wiring Options
dimensions in mm

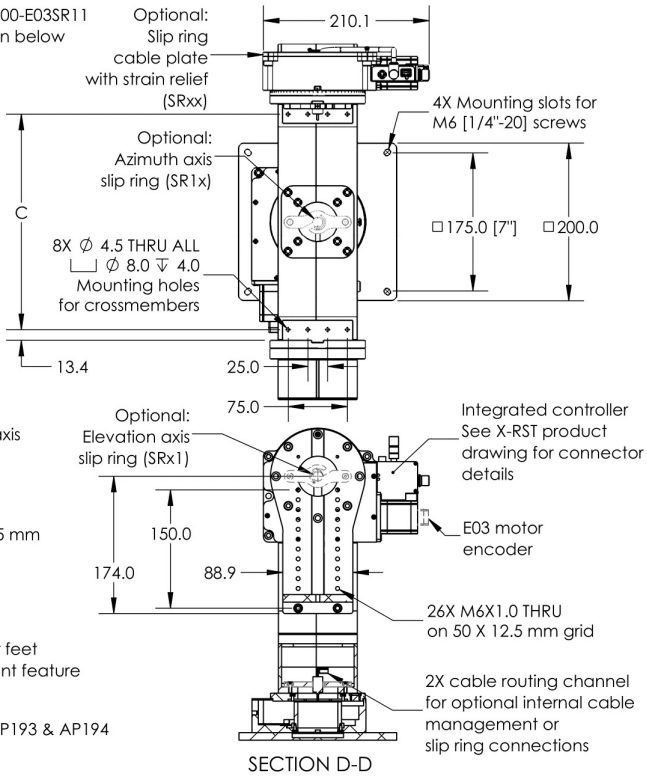


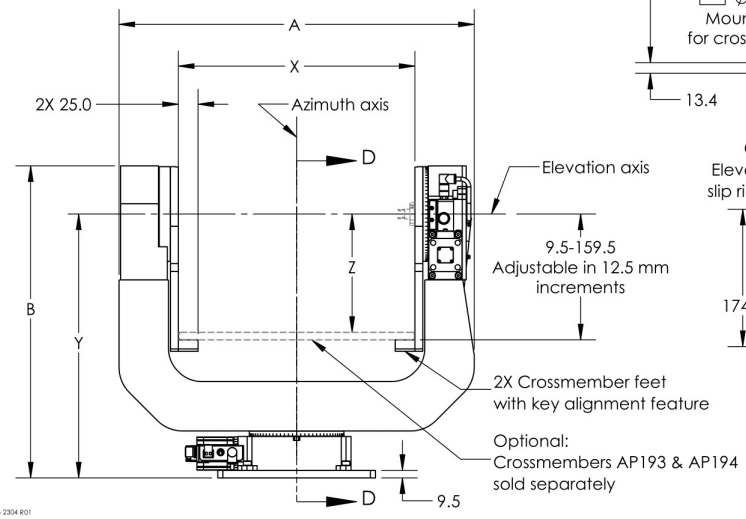
Model Number*	X	Y	Z	A	B	C
X-G-RST300-E03(SRxx)	300	334.5	0-175	450.4	395.5	273.2
X-G-RST500-E03(SRxx)	501.7	436.5	0-175	652.1	497.5	474.9
X-G-RST300-DE50(SRxx)	300	334.5	0-175	450.4	395.5	273.2
X-G-RST500-DE50(SRxx)	501.7	436.5	0-175	652.1	497.5	474.9

*See product page for complete list of available models at www.zaber.com

Please contact Sales Department for further inquiries

X-G-RST300-E03SR11 shown below





X-G-RST500-E03SR10 Specifications

Microstep Size (Default Resolution)	**0.00015625° (2.727 µrad)**
Built-in Controller	Yes
Range	360°
Accuracy (unidirectional)	0.16° (2.792000 mrad)
Repeatability	< 0.005° (< 0.087 mrad)
Backlash	< 0.05° (< 0.873 mrad)
Maximum Speed	24°/s (4 rpm)
Minimum Speed	0.000095°/s (1.658 µrad/s)
Speed Resolution	0.000095°/s (1.658 µrad/s)
Encoder Resolution	200 CPR (800 states/rev)
Encoder Type	Rotary quadrature encoder
Communication Interface	RS-232
Communication Protocol	Zaber ASCII (Default), Zaber Binary
Data Cable Connection	Locking 4-pin M8
Maximum Continuous Torque	1000 N-cm (1416.1 oz-in)
Maximum Centered Load	150 N (See Spec Definition) (33.6 lb)
Maximum Cantilever Load	2000 N-cm (2832.2 oz-in)
Aperture Diameter	50.8 mm (2.000")
Power Supply	48 VDC
Power Plug	2-pin Screw Terminal
Maximum Current Draw	2200 mA
Angular Motion Per Motor Rev	2°
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	1500 mA/phase
Inductance	6.6 mH/phase
Default Resolution	1/64 of a step
Maximum Angular Momentum	0.4 kg-m2/s
Mechanical Drive System	Precision Worm Gear
Limit or Home Sensing	Magnetic home sensor
Gear Ratio	180:1

Microstep Size (Default Resolution)	**0.00015625° (2.727 µrad)**
Manual Control	Yes
Operating Temperature Range	0-50 °C
RoHS Compliant	Yes
CE Compliant	Yes
Vacuum Compatible	No
Weight	13.8 kg (30.424 lb)

Contact

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