



- 40 mm and 60 mm centre of rotation options allow for two axes of motion about a common centre of rotation
- 30 N load capacity
- Low profile, small footprint
- Built-in controller; daisy-chains with other Zaber products
- Encoder position feedback with slip/stall detection and automatic recovery

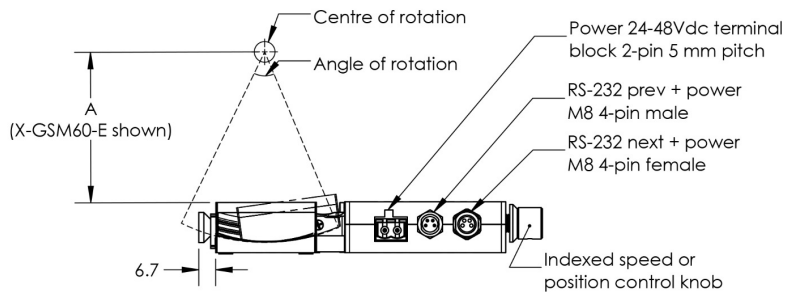
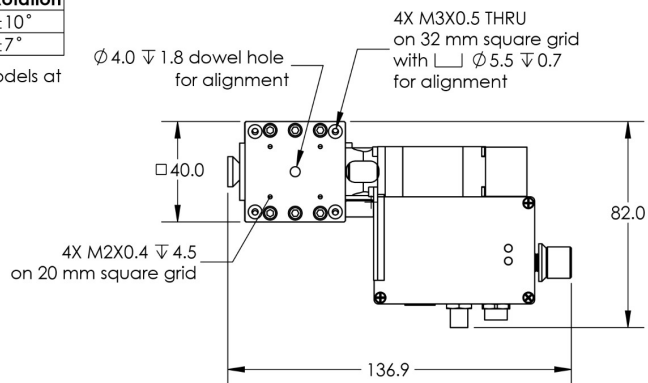
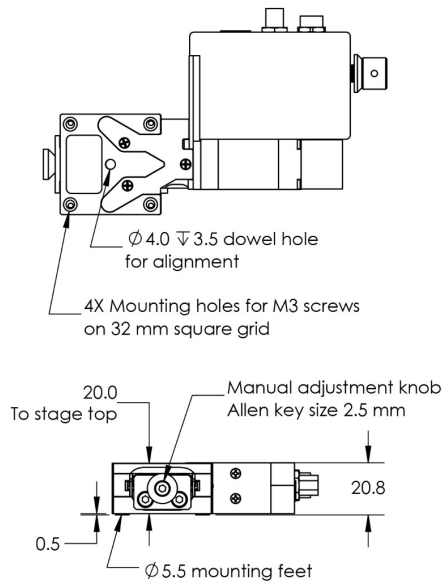
Product Description

Zaber's X-GSM-E Series devices are computer-controlled, motorized goniometers with a compact size and built-in controller and motor encoder. They are stand-alone units requiring only a standard 48 V power supply. An indexed knob provides convenient manual control for versatile operation even without a computer. These stages connect to the RS-232 port or USB port of any computer, and they can be daisy-chained with any other Zaber products. The daisy-chain also shares power, making it possible for multiple X-Series products to share a single power supply. Convenient locking, 4-pin, M8 connectors on the unit allow for secure connection between units. These stages are excellent for applications where a small profile is required. They can mount to a flat surface or stack together to share a common centre of rotation for two axes of angular motion. Like all of Zaber's products, the X-GSM-E Series is designed to be 'plug and play' and very easy to set up and operate.

Dimension Drawings

Model Number*	A (Distance To Centre Of Rotation)	Rotation
X-GSM40-E	40.0	±10°
X-GSM60-E	60.0	±7°

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



Product Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.00016252216°	2.836 μrad
Built-in Controller	Yes	
Range	+/-10°	
Accuracy (unidirectional)	0.06°	1.047000 mrad
Repeatability	< 0.005°	< 0.087 mrad
Backlash	< 0.01°	< 0.175 mrad
Maximum Speed	30 °/s	5.0 rpm
Minimum Speed	0.00002472 °/s	0.431 μrad/s
Encoder Resolution	200 CPR	800 states/rev
Encoder Type	Motor mounted rotary quadrature encoder	
Communication Interface	RS-232	
Communication Protocol	Zaber ASCII (Default), Zaber Binary	
Maximum Centered Load	30 N	6.7 lb
Guide Type	Crossed roller bearing	
Rotation Centre Height	40 mm	1.575 "
Rotation Centre Accuracy	< 0.1 mm	< 0.004 "
Maximum Current Draw	350 mA	
Power Supply	24-48 VDC	
Power Plug	2-pin Screw Terminal	
Angular Motion Per Motor Rev	2.080283648°	
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Inductance	3.5 mH/phase	
Default Resolution	1/64 of a step	
Data Cable Connection	Locking 4-pin M8	
Motor Frame Size	NEMA 08	
Mechanical Drive System	Precision Worm Gear	
Limit or Home Sensing	Magnetic home and away sensors	
Manual Control	Yes	
Axes of Motion	1	
Mounting Interface	M2 and M3 mounting holes	
Vacuum Compatible	No	

Specification	Value	Alternate Unit
Operating Temperature Range	0-50 °C	
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.285 kg	0.628 lb