

GSM Series Datasheet



- 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
- Designed for use with an X-MCB1 Series stepper motor controller or any 2-phase stepper motor controller

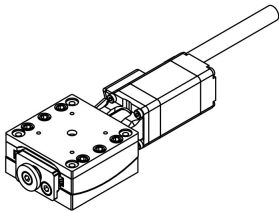
Overview

Zaber's GSM Series devices are motorized goniometers with high thrust and speed capabilities in a compact package. They are stepper motor driven positioning goniometers designed to interface with our X-MCB1 or X-MCB2 controller, offering high resolution daisy-chainable operation. 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.

Drawings

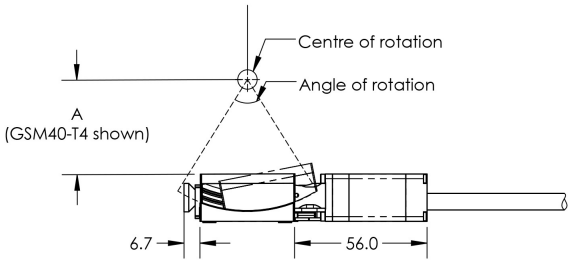
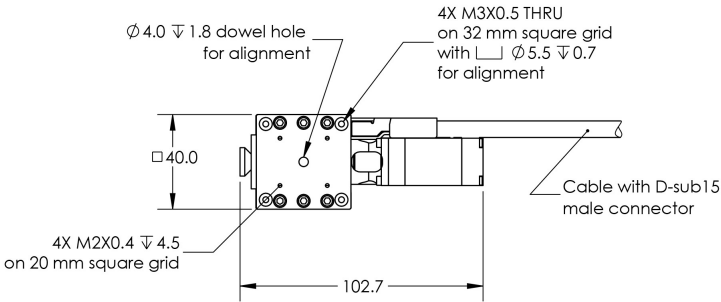
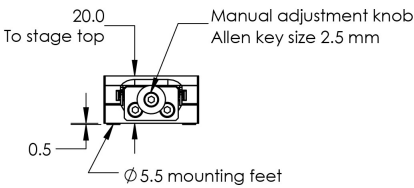
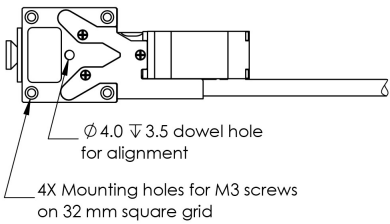
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GSM-T4 Motorized Goniometer Stage
dimensions in mm



Model Number*	A (Distance To Centre Of Rotation)	Rotation
GSM40-T4	40.0	±10°
GSM60-T4	60.0	±7°

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



DWG 1436 R01A

Specifications

Specification	Value	Alternate Unit
Built-in Controller	No	
Recommended Controller	X-MCB1 (48 V) Recommended	
Accuracy (unidirectional)	0.06 °	1.047000 mrad
Repeatability	< 0.005 °	< 0.087 mrad
Backlash	< 0.01 °	< 0.174 mrad
Maximum Speed	30 °/s	5.0 rpm
Encoder Type	None	
Maximum Centered Load	30 N	6.7 lb
Guide Type	Crossed roller bearing	
Rotation Centre Accuracy	< 0.1 mm	< 0.004 "
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Motor Rated Current	600 mA/phase	
Motor Winding Resistance	6.5 ohms/phase	
Inductance	3.5 mH/phase	
Motor Connection	D-sub 15	
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	
Operating Temperature Range	0-50 °C	
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.271 kg	0.597 lb

Part Number	Microstep Size (Default Resolution)	Range	Minimum Speed	Rotation Centre Height

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GSM40-T4	0.0001625794173 ° (2.837 µrad)	+/-10 °	0.00009923 °/s (1.732 µrad/s)	40 mm (1.575 ")
GSM60-T4	0.0001131413171 ° (1.975 µrad)	+/-7 °	0.00006906 °/s (1.205 µrad/s)	60 mm (2.362 ")

Part Number	Angular Motion Per Motor Rev
GSM40-T4	2.08101654144 °
GSM60-T4	1.44820885888 °