

X-GSM-E Series Datasheet



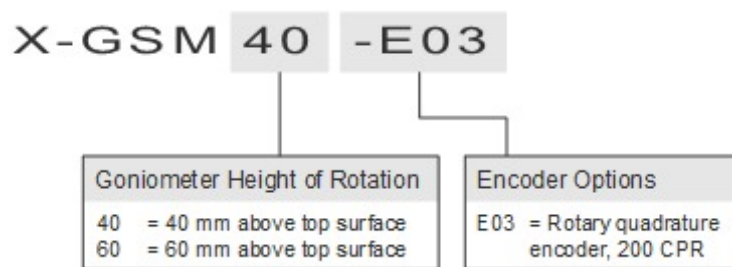
- 40 mm and 60 mm centre of rotation options allow for two axes of motion about a common centre of rotation
- 30 N load capacity
- Low profile, small footprint
- Built-in controller; daisy-chains with other Zaber products
- Encoder position feedback with slip/stall detection and automatic recovery

X-GSM-E Series Overview

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.

For more information visit: <https://www.zaber.com/products/goniometer-stages/X-GSM-E/6>

X-GSM-E Series Part Numbering



X-GSM-E Series Drawings

X-GSM-E Series Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.0001625794173°	2.837 µrad
Built-in Controller	Yes	
Range	+/-10°	
Accuracy (unidirectional)	0.06°	1.047000 mrad
Repeatability	< 0.005°	< 0.087 mrad
Backlash	< 0.01°	< 0.174 mrad
Maximum Speed	30°/s	5 rpm
Minimum Speed	0.000099°/s	1.728 µrad/s
Speed Resolution	0.000099°/s	1.728 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	
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	2.08101654144°	
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	

Specification	Value	Alternate Unit
Axes of Motion	1	
Mounting Interface	M2 and M3 mounting holes	
Operating Temperature Range	0-50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.285 kg	0.628 lb

Contact

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