

# M Series

Optical Scanners



M3



M2

Moving magnet motor combined with capacitive position detector provide the speed and accuracy needed in 9mm to 50mm beam steering applications.



## Excellent Overall Performance

The *M-series* family of optical scanners is the first in GSI Group's product line to use moving magnet technology. This robust design combines the sub-millisecond speed of moving magnet motors with the micro-radian accuracy of our second-generation capacitive position detector.

Overall, the *M-series* family of optical scanners provides excellent drift, noise, linearity and dynamic performance.

The *M-series* scanners are optimized to position mirrors between 9 and 50mm clear aperture. GSI Group offers a full line of high reflectivity, laser quality mirrors. We also offer closed-loop servo controllers designed to achieve the highest

performance from *M-series* scanners. The *M-series* scanners deliver the performance needed in most of today's beam and image steering applications at a competitive price.

*M-Series optical scanners... the "proven" work horse of the industry.*

## M Series Specifications

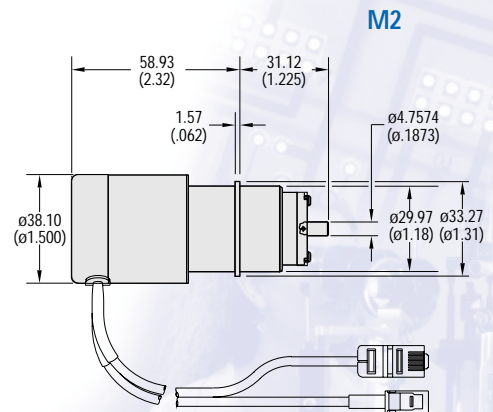
Parameter	Units	M2S/M2ST <sup>1</sup>	M3S/M3ST <sup>1</sup>
Max Scan Angle	degrees, optical	±30°	±30°
Non-linearity (max)	% over ±20° optical	0.1	0.1
Offset Drift (max)	μ radians/°C	30/10	30/10
Gain Drift (max)	ppm/°C	100/20	100/20
Operating Temperature	°C	0-50	0-50
Optimal mirror size	mm, clear aperture	9-20	20-50
Bandwidth <sup>2,3</sup> (typical)	Hz	>2000	>1000
Small Step Response <sup>2,3</sup> (typical)	μS	<400	<800
Full Step Response <sup>2,3</sup> (typical)	ms	<2	<3

<sup>1</sup> "T" represents thermal control option.

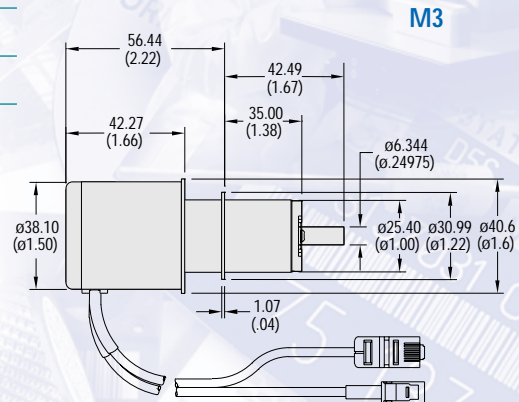
<sup>2</sup> Dynamic specifications listed above will vary depending on mirror inertia, command waveform and servo adjustment.

<sup>3</sup> When used in combination with MiniSAX servo.

Specifications are subject to change. Consult GSI Group for details



Dimensions in mm (inches)



[www.gsig.com/scanners](http://www.gsig.com/scanners)



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