

MOVING MAGNET GALVANOMETER QUANTUMSCAN-30 (QS-30)



HIGH LINEARITY 499.9%
APERTURE RANGE – 20MM TO 50MM
CERAMIC ROTOR
HIGH ACCURACY CAPACITIVE SENSOR

REPEATABILITY 15 μ RAD
DYNAMIC PERFORMANCE AS LOW AS 440 μ S
AVAILABLE AS COMPONENT IN SCANNING SUBSYSTEMS
AFFORDABLE

Nutfield Technology's QuantumScan-30 (QS-30) Moving Magnet Galvanometer offers strong performance and value for steering 30mm and 45mm aperture mirrors. It is the first galvanometer to use a ceramic rotor to reduce rotor inertia and increase rotor stiffness. Increased rotor stiffness raises the galvanometer's resonant frequency, which allows improved step response.

A galvanometer's stator can generate a significant amount of heat. In the QS-30, this heat is thermally isolated from the position detector. The stator has an integral heat sink for optimal cooling.

The QS-30 is designed to rotate optical scanning mirrors at a high bandwidth and settle to a high degree of accuracy and repeatability. It is designed to carry a balanced inertial load, matched to the size of the rotor. The QS-30 can handle inertias in the 0.6 to 80 g-cm² range. The exact inertia that can be driven depends on the application requirements.

When integrated with our QD-4000 servo-amplifier, QS-30 single- and multi-axis scanning subassemblies provide speed and accuracy in compact, affordable configurations.

Since 1997, Nutfield Technology has been designing and manufacturing the most advanced galvanometer-based optical scanners, scan heads, laser scan kits, control electronics and software products available. Founded by laser and laser scanning industry veterans, Nutfield Technology offers a wealth of knowledge and expertise to select the proper product suited to any application. Contact Nutfield Technology for solutions.



APPLICATIONS:

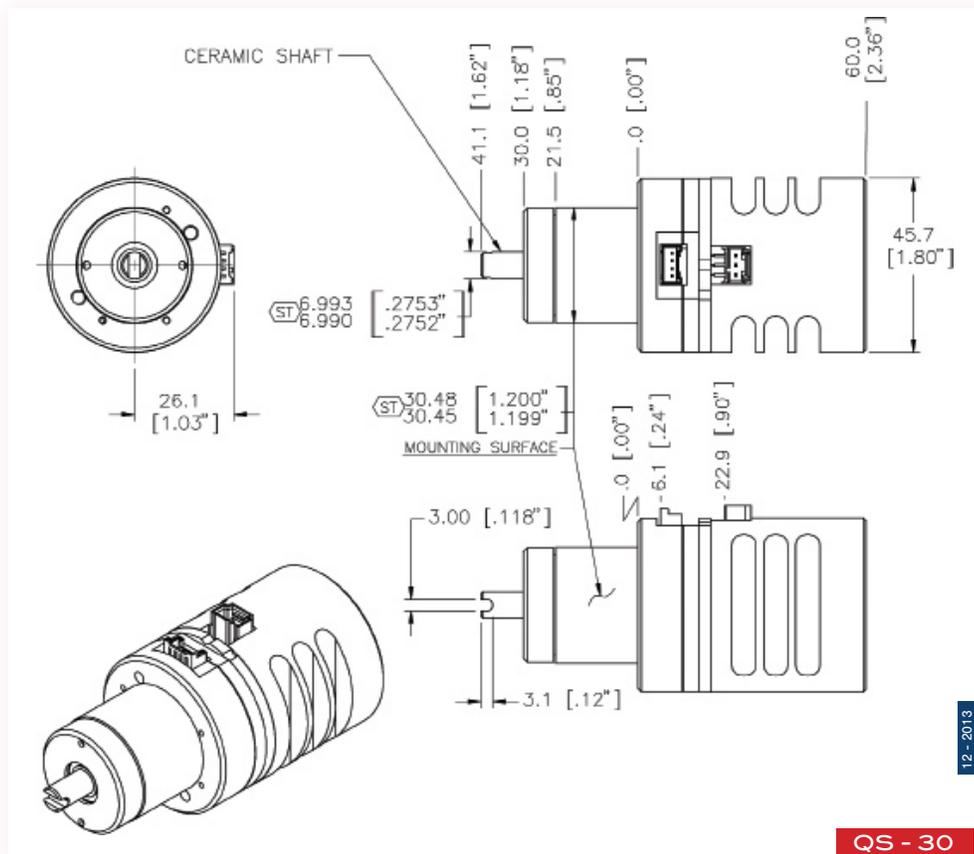
// LASER CUTTING
// LASER WELDING

// SOLAR SCRIBING
// MICROMACHINING

SPECIFICATIONS

Standard Specifications:	QS-30
Rated Excursion (±34 max)	±22.5 ° Optical
Rotor Inertia	5.1 gm-cm ²
Torque Constant dyne-cm/Amp	280000
Electrical	
Coil Resistance	5.8 ohm
Coil Inductance @ 1000kHz	450 µh
Position Detector	
Linearity	>99.9%
Offset Drift	15 µrad
Repeatability	15 µrad
Dynamic Performance	
Step Response Time (1% of full scale, 99% settled)	
20mm X-Mirror	440 µs
30mm X-Mirror	650 µs
45mm X-Mirror	700 µs
Cable lengths available:	0.43 to 0.6 m
Installation:	electrically insulated
Operating Temperature:	0 to 40°C noncondensing
Storage Temperature:	-10 to 50°C

All specifications are using Nutfield's QD-4000 Servo-Amplifier.



12-2013

QS-30

ALL DIMENSIONS ARE IN (mm)