62xxH Series

Galvanometer Scanners

Product Highlights

Our popular 62xxH Series of closed loop, galvanometer-based scanners is consistently the industry's leading solution for high-performance laser beam steering. Each motor combines our moving magnet actuator technology with a position detector only available from Cambridge Technology. This patented technology features stable positioning while achieving the fastest scan speeds available in its category. Whether your focus is on speed, accuracy, or footprint, the 62xxH Series delivers both performance and value.

Attain high-performance and reliability for your value-driven application

- Industry's fastest motor speeds deliver maximum throughput with long-term reliability
- High-accuracy output across a diverse range of application scanning needs
- Robust design supports consistent stability over long product lifetimes
- Footprint of compact models ensures ease of integration for small spaces
- Available with a wide range of mirrors sizes (3 to 50 mm) and coating options

Single-Axis Galvanometer Scanners

62xxH Series

Product Specifications	6200H	6210H	6215H	6220H	6230H	6231H	6240H	6250H	6260H
Recommended Aperture Size (mm)	3 to 7	3 to 7	3 to 7	5 to 10	8 to 15	8 to 15	12 to 25	25 to 75	30 to 100
Wavelength Options	355 nm / 532 nm / 1030 nm - 1080 nm / 9.4 µm - 10.6 µm Broadband Coatings: 350 nm – 12 µm								
Maximum Scan Angle (degrees)	40°			40°				40°	
Rotor Inertia (gm·cm^2, ±10%)	0.013	0.018	0.028	0.125	0.97	0.82	2.4	15.6	47.5
Torque Constant (dyne·cm/amp, ±10%)	1.20x10^4	2.79x10^4	3.78x10^4	6.17x10^4	1.31x10^5	1.11x10^5	2.0x10^5	7.08x10^5	8.5x10^5
Maximum Rotor Temperature (°C)	110°			110°				110°	
Thermal Resistance (Rotor to Case) (°C/watt, maximum)	3.8	2.0	1.0	1.0	0.8	1.0	0.62	0.35	0.2
Coil Resistance (ohms, ±10%)	2.14	3.7	2.5	2.79	1.07	1.27	1.03	1.69	0.60
Coil Inductance (µH, ±10%)	52	109	94	180	173	176	350	1030	530
Back EMF Voltage (µV/°/sec, ±10%)	20.9	48.7	66	108	229	195	346	1220	1480
RMS Current (A at Tcase = 50°C, maximum)	2.3	2.4	4.1	3.9	7.1	5.8	8.2	7.1	12
Peak Current (A, maximum)	6	8	20	20	25	25	25	20	40
Small Angle Step Response[1] (typical)	3 mm Y mirror			5 mm Y mirror	10 mm Y mirror		15 mm Y mirror	50 mm Y mirror (Be)	
	130 µs	100 µs	130 µs	200 µs	250 µs	250 µs	350 µs	3.0 ms	2.1 ms
Weight (grams, typical)	13.3	18	25.8	42.5	267	142	356	590	1200

Position Detector (specifications common across all models)

Linearity	99.9% minimum, over 20° 99.5% typical, over 40°
Scale Drift	50 ppm/°C, maximum
Zero Drift	15 µrad/°C, maximum
Repeatability, Short-Term	8 µrad
Output Signal, Common Mode	155 µA minimum, with AGC current of 30 mA
Output Signal, Differential Mode	12 µA/° (±2.5%) at common mode current of 155 µA
Output Signal, Common Mode to Differential Mode Ratio	12.5 (±2.5%)

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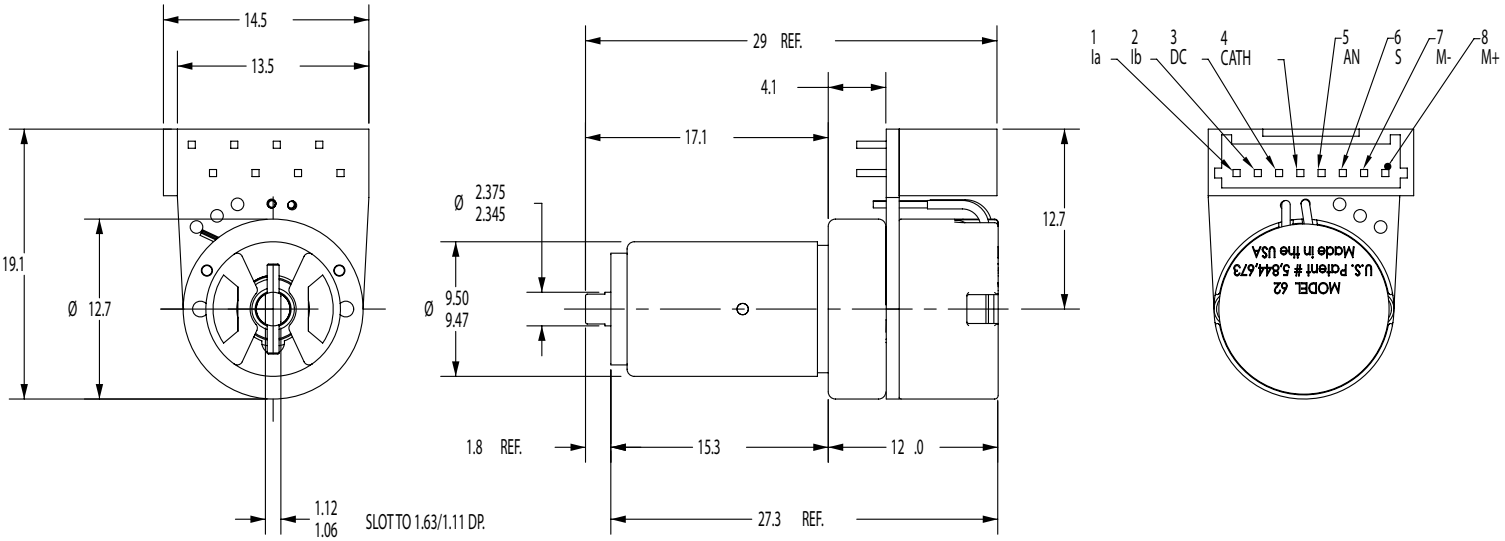
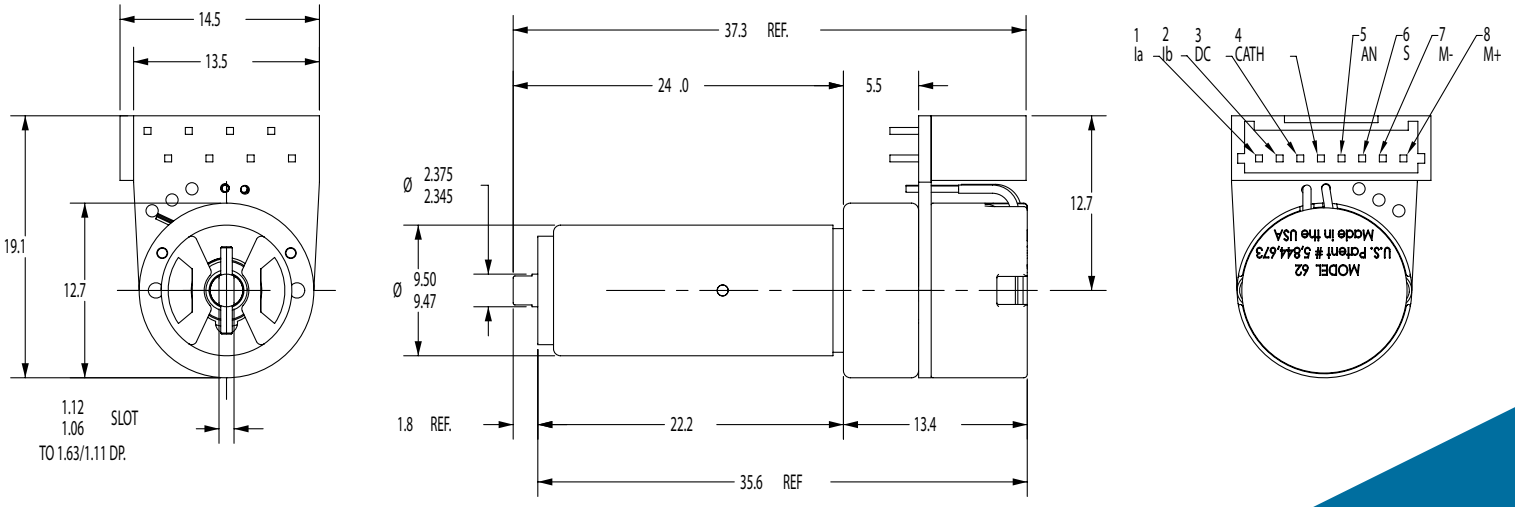
6200H Galvanometers D05832 Rev E



6210H Galvanometers D05833 Rev E



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Single-Axis Galvanometer Scanners

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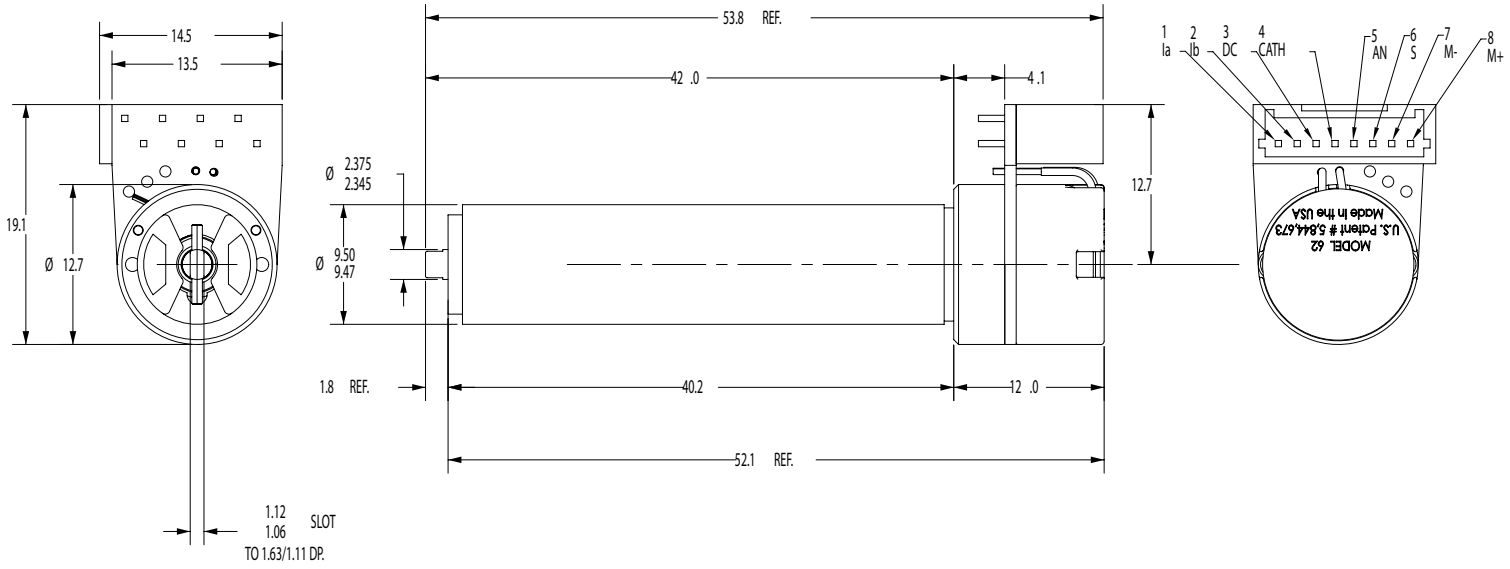
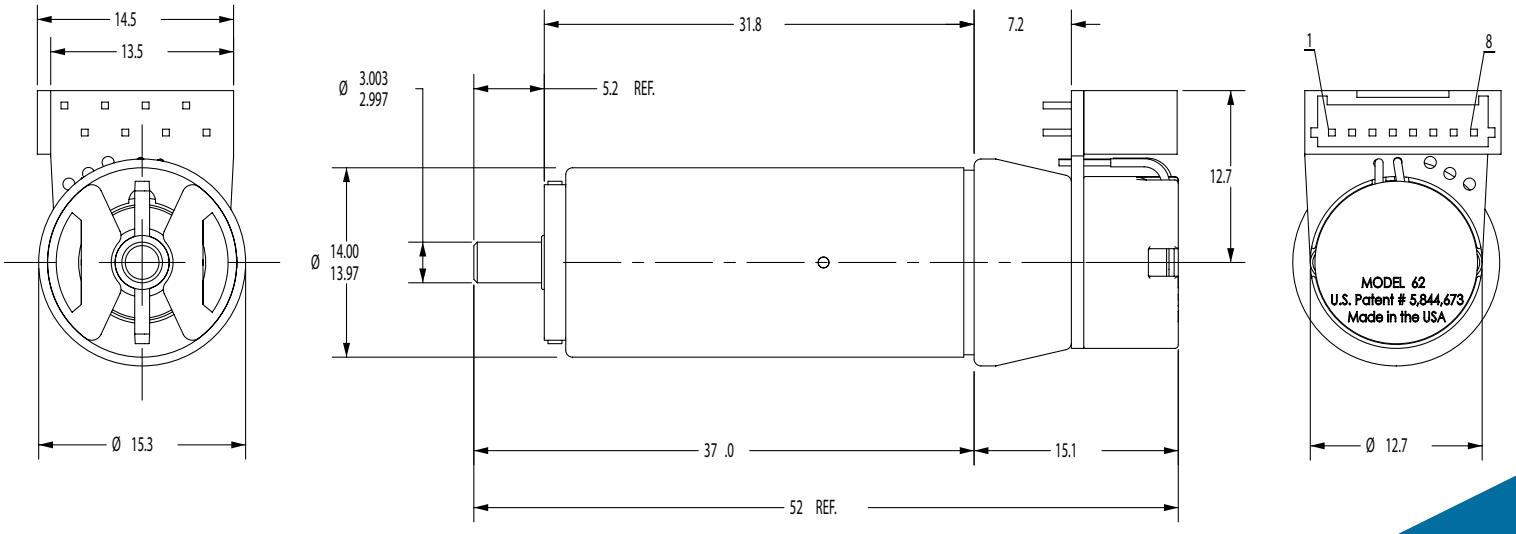
6215H Galvanometers D05789 Rev D



6220H Galvanometers D05834 Rev E



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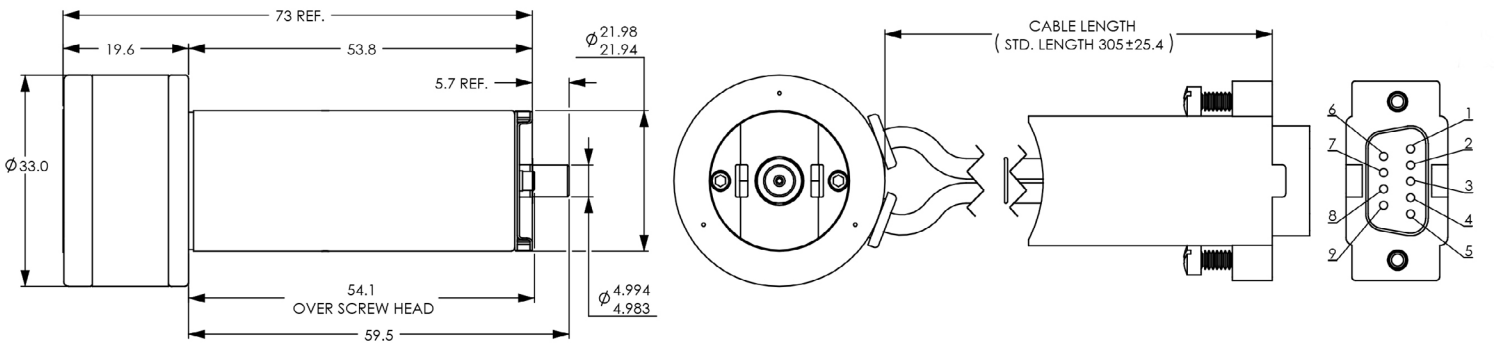
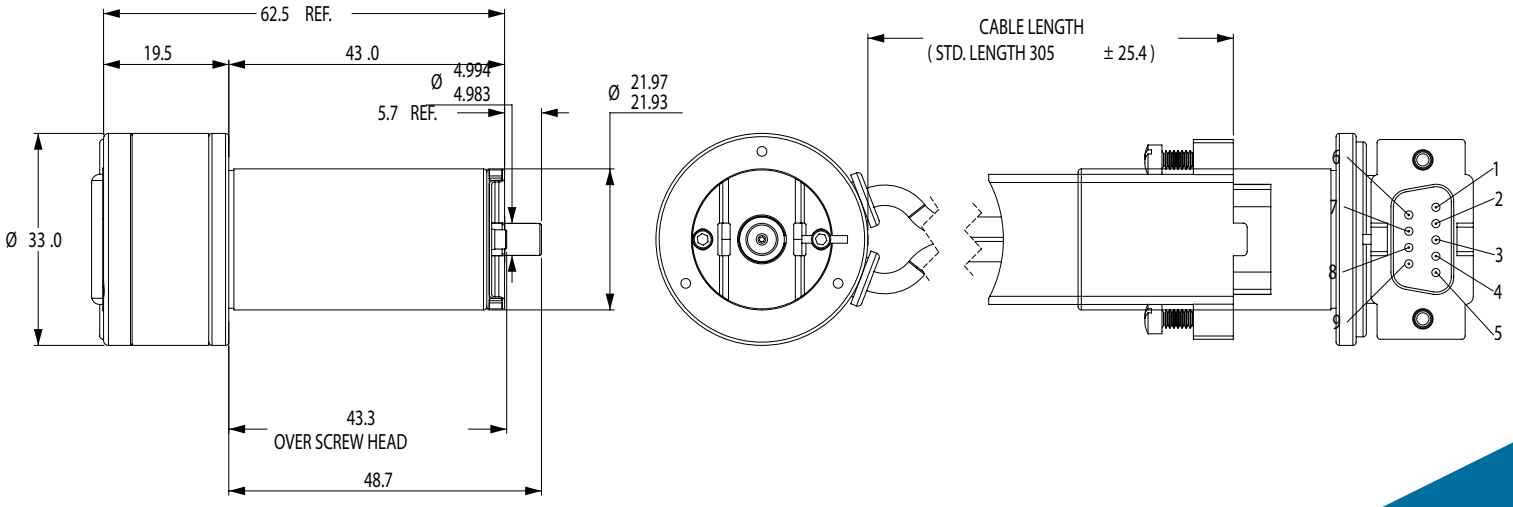
Single-Axis Galvanometer Scanners

62xxH Series

6230H Galvanometers D05832 Rev E



6231H Galvanometers D07818 Rev C



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Single-Axis Galvanometer Scanners

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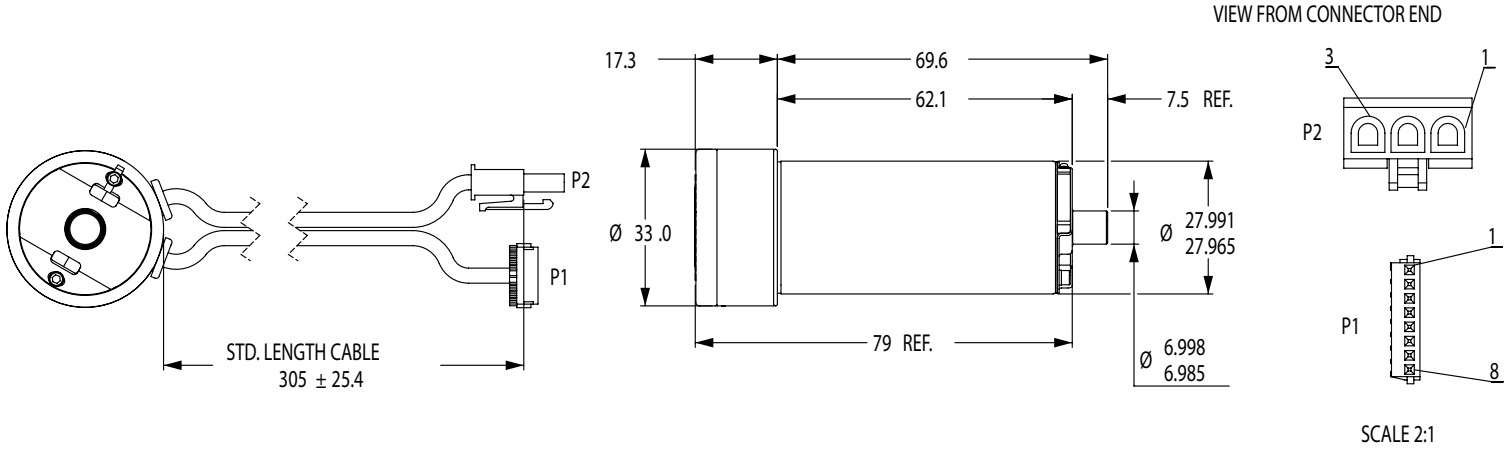
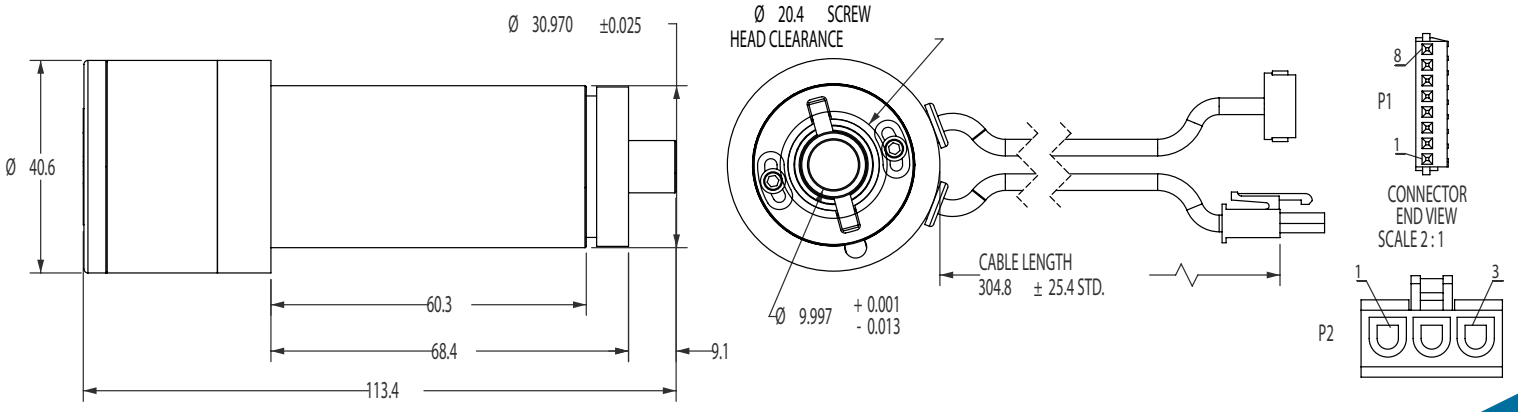
6240H Galvanometers D06048 Rev D



6250H Galvanometers D09774 Rev C



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Single-Axis Galvanometer Scanners
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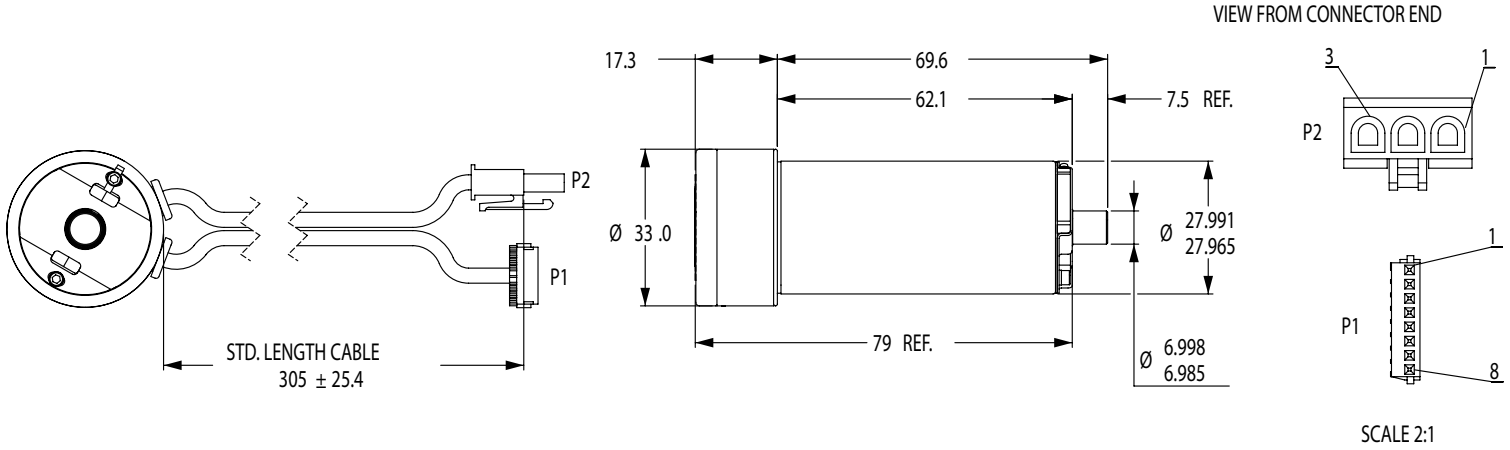
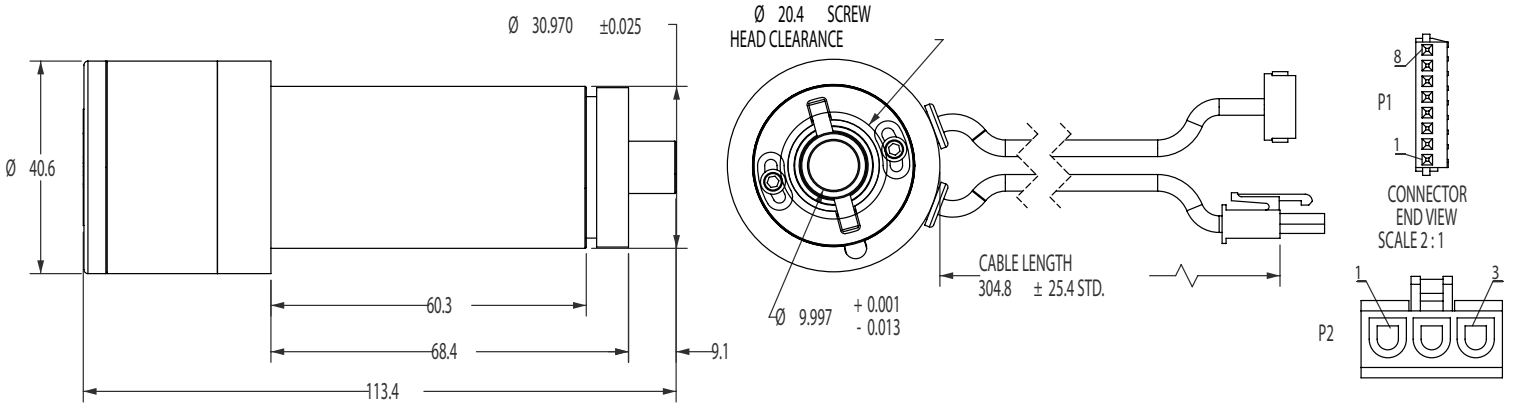
6240H Galvanometers D06048 Rev D



6250H Galvanometers D09774 Rev C



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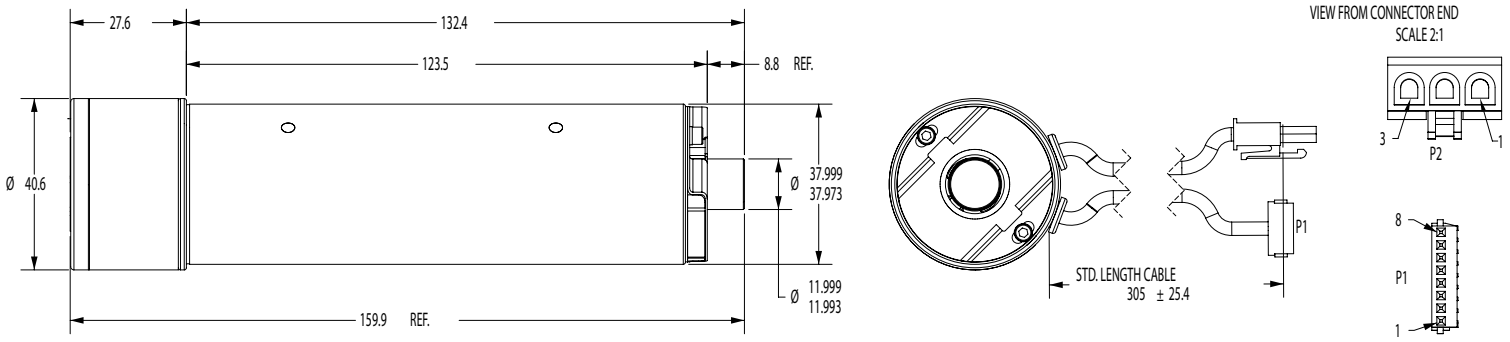
Single-Axis Galvanometer Scanners
62xxH Series

6260HA² Galvanometers D07786 Rev C



Notes:
All dimensions are in mm. Please contact Cambridge Technology for more information. Subject to change without notice.
Reference:
1. 0.1° step and settled to within 99% of the final position. Requires Cambridge Technology servo board. **2.** 6260HA model shown with the "A" connector type. Additional connector options are available for all models

About Cambridge Technology

With close to 50 years of expertise, Cambridge Technology designs, develops, and manufactures innovative beam steering solutions including polygon- and galvanometer-based optical scanning components, 2-axis and 3-axis scan heads, scanning subsystems, high power scanning heads, and controlling hardware and software. We excel in collaborating with our key OEM partners to engineer products that meet their needs from the largest engineering solution to the smallest component. Key market applications include advanced industrial processes like additive manufacturing, laser converting, laser marking, and via-hole drilling, and medical applications such as laser treatment and optical coherence tomography. Cambridge Technology is a Novanta company.

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