

Model 6231HC Optical Scanner

Mechanical and Electrical Specifications

*All position detector specifications apply with Cambridge Technology servo driver after a 30 second warm-up.
 All angles are in mechanical degrees.
 Consult manual for complete operating instructions.*

Mechanical Specifications

Rated Angular Excursion: 40°
 Rotor Inertia: 0.82 gm*cm², +/- 10%
 Torque Constant: 1.11X10⁵ dyne-cm/amp, +/- 10%
 Maximum Rotor Temperature: 110 °C
 Thermal Resistance (Rotor to Case): 1.0 °C/Watt, Max



Electrical Specifications Drive Mechanism

Coil Resistance: 1.27 Ohms, +/- 10%
 Coil Inductance: 176 μH, +/- 10%
 Back EMF voltage: 195 μV/degree/sec, +/- 10%
 RMS Current: 5.8 Amperes at Tcase of 50°C, Max
 Peak Current: 25 Amperes, Max
 Small Angle Step Response Time: 250 μs, with balanced load of 0.3 gm*cm²

Position Detector

Linearity: 99.9, Minimum, over 20 degrees
 Scale Drift: 50 PPM/°C, Maximum
 Zero Drift: 15 μrad/° C, Maximum
 Repeatability, Short Term: 8 Microradians
 Output Signal, Common Mode: 155μA with AGC current of 30 mA, +/- 20%
 Output Signal, Differential Mode: 11.7μA/°, at common mode current of 155 μA, +/- 20%

