



when reliability is critical™

## Opto-Mechanical Industrial Trackballs

Document # 820113

Revision 10/24/05

### Shock and Vibration:

Diameter	Resolution	Shock		Vibration
1.3 inch	416 cts/rev	100g	11ms - 1/2 sine	5-55HZ @ 0.013" DA
1.5 inch	480 cts/rev	30g	11ms - 1/2 sine	5-55HZ @ 0.013" DA
2.0 inch	640 cts/rev	10g	11ms - 1/2 sine	5-55HZ @ 0.013" DA
3.0 inch	640 cts/rev	6g	11ms - 1/2 sine	5-55HZ @ 0.013" DA

### Environmental:

- Operating: Up to 40,000 ft with conformal coating option
- Humidity: reliable operation from 0 to 95% relative humidity.
- Sealed to NEMA 12 (indoor use)

### Temperature Ratings: (Operational)

- Operating Temperature: 0° to 70° C
- Operating (Optional) -25° to 80° C
- Storage Temperature: -40° to 80° C

### Mechanical:

- Micro etched metal encoder wheels allow for greater resolution than possible with plastic
- Precision instrument grade, shielded, bearings (ABEC Grade 7), rated @ 20 years continuous rolling life
- No rubber or foam on rollers, no cleaning of shaft required
- Precision ground and hardened stainless steel shaft
- Precision ground ball to ± .002" tolerance
- Formed Teflon sealing ring in an aluminum housing cleanable with alcohol

### Photo Detectors:

- Redundant photo detectors for each axis. Not sensitive to LED fading
- Guarantees longest reliability beyond 10 years without the need for re-calibration

### Reliability:

- MTBF (Mean Time between Failures): greater than 100,000 hours per MIL-HDBK-217F

### Power Requirements:

- +5VDC supply
- 40mA @ 5V OEM version without Interface PCB
- 70mA @ 5V OEM version with Interface PCB

### Certifications:

- Meets FCC Class A
- Meets CE Requirements
- ESD rated to 15KV

### Options:

- Sealed switch assemblies
- Low temperature versions
- Vibration dampening
- Conformal coating
- Microprocessor interface PCB

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