Track Objects with Magnetic DC Technology

- Fast, dynamic tracking – as many as 420 updates per second.
- Miniaturized passive sensors – outputs immune to “power-line” noise sources.
- Compact packaging – electronics conveniently fit into drive bay of your PC.
- All attitude tracking – no inertial drift or optical interference.
- High metal immunity – no distortion from non-magnetic metals.
### Technical Specifications

#### Sensor Configurations
- Model 90 (0.9 mm), Model 130 (1.5 mm), Model 180 (2.0 mm), Model 800 (8.0 mm)

#### Degrees of Freedom
- 6 (Position and Orientation)

#### Update Rate
- Up to 420 updates/second for each sensor (Default: 240 updates/second)

#### Translation Range
- **MODEL 55 SENSOR**
  - Mid-Range Transmitter: 28 cm (11 inches)
  - Short-Range Transmitter: Contact Assersion
- **MODEL 90 SENSOR**
  - Mid-Range Transmitter: 36 cm (14 inches)
  - Short-Range Transmitter: Contact Assersion
- **MODEL 130 SENSOR**
  - Mid-Range Transmitter: 46 cm (18 inches)
  - Short-Range Transmitter: Contact Assersion for latest test results
- **MODEL 180 SENSOR**
  - Mid-Range Transmitter: 58 cm (23 inches)
  - Short-Range Transmitter: Contact Assersion for latest test results
- **MODEL 800 SENSOR**
  - Mid-Range Transmitter: 78 cm (31 inches)
  - Short-Range Transmitter: 46 cm (18 inches)

#### Angular Range
- All Attitude ± 180° Azimuth & Roll, ± 90° Elevation

#### Static Accuracy
- Position: ± 1.4 mm (0.05 inch) RMS
- Orientation: ± 0.5° RMS

#### Static Resolution
- Position: 0.5 mm (0.02 inch) at 30.5 cm (12 inches)
- Orientation: 0.1° at 30.5 cm (12 inches)

#### Outputs
- X, Y, Z positional coordinates, orientation angles, orientation matrix or quaternions

#### Interface
- USB 2.0

#### Data Format
- Binary data records

#### Communication
- Windows API and Drivers

### Physical Specifications

- **Electronics Unit**
  - 17.7 x 7.0 cm x 14.7 cm (0.8 x 4.1 cm x 1.6 cm)
  - Metal box fitting into a 13.3 cm (5.25 inch) PC drive bay
- **Transmitters**
  - Mid-Range: 9.6 cm (3.8 inch) cube with 3.3 m (10.8 ft) cable
  - Short-Range: 6.37 cm (2.5 inch) x 1.8 cm (0.7 inch) x 5.2 cm (2 inch) with 3.3 m (10.8 ft) cable
- **Passive Sensors**
  - Mid-Range: 1.62 cm (0.64 inch) x 7.25 mm (0.29 inch) with 3.3 m (10.8 ft) cable
  - Short-Range: 1.15 cm (0.45 inch) x 7.7 mm (0.30 inch) with 3.3 m (10.8 ft) cable
  - Mid-Range: 2.0 cm (0.79 inch) x 9.9 mm (0.38 inch) with 3.3 m (10.8 ft) cable
  - Short-Range: 1.6 cm (0.63 inch) x 20.0 mm (0.78 inch) with 3.3 m (10.8 ft) cable
- **Model 55, 90, 130 & 180 only**
  - Simply plug and play
  - USP Class 6 sensor housing

#### Power
- Drawn from PC's power supply through rear panel connector
- 120 V 1.5A nominal/ 2.9A maximum
- 5V 0.60A nominal

#### Operating Temperature
- 5°C to 40°C, 95% non-condensing humidity

#### Environment
- Ferromagnetic objects and stray magnetic fields in the operation volume may degrade performance. Contact us for assistance in using our Optimization Tools to minimize metallic distortion and noise interference.

### Regulatory Certifications
- Class I Medical Device with Type B Applied Part (Sensors), EN60601-1 Compliant.
- RoHS and WEEE compliant.
- Medical users must comply with all pertinent FDA/CE/IBT certifications prior to using this device in human patients.

### Feature Benefits

- **Metal tolerant**
  - 80% less distortion due to non-magnetic conductive metals compared to AC magnetic trackers. Outputs unaffected by composite materials. Capable of driving errors induced by highly conductive metals (such as aluminum) to zero by adjusting measurement rate.
- **Advanced new magnetic technology and signal processing**
  - Better dynamic performance over longer ranges.
  - "Power-line" noise filtered out.
- **Occlusion and drift free**
  - Clear line-of-sight between transmitter and sensor(s) is not required.
- **Body mountable transmitter**
  - New lightweight coil set can be mounted on head or body.
- **Onboard diagnostics**
  - Self-diagnostics and run-time monitoring for improved tracker reliability and safety.
- **Software support**
  - USB tracker control API for XP, Pro, XP, Vista 32 & 64 bit, Linux 32 & 64 bit, MAC OS.
  - Sample programs. Analytical software toolkits for MATLAB and labVIEW direct Windows interface to tracker.

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