MICROTRAK™ 3

A worldwide leader in precision measurement solutions

Accurate and repeatable measurements from highly reflective to dull surfaces

with every system shipped!

m3_print.cdr 06122014
Unmatched Features for Different Types of Applications

Microtrak™ 3 - High Quality, Compact and Reliable Non-contact Measurement

The Microtrak™ 3 laser displacement sensor head is the ideal solution for quality and process control applications. Using the latest CMOS sensor technology, the Microtrak™ 3 precisely monitors the intensity of light received on a pixel array and optimizes itself to the sensed conditions. This makes Microtrak™ 3 ideal for even the most difficult measurement challenges such as, black, colored, metallic, wood, ceramic, steel, or plastic surfaces.

Key Features

- No Controller Needed - With the built-in 5-color position indicator, there is no need for an external controller to determine the laser mounting location and attain the precise distance placement.

- Dual Output - Analog (0-10V) and Digital (RS-485 and USB).

- Cut-Time Feature - Ignore holes and cutouts with its bridging function.

- Included Microtrak 3 Basic Software - Intuitive and straightforward buttons makes configuring and acquiring data easy.

- Specular and Glass Models Available - Accurate measurement for shiny surfaces.

Simple Software Interface

Bundled with the Microtrak™ 3 Basic Support Software, users are presented with graphical displays of displacement signal. Acquired data can also be stored as a widely supported (.csv) format for further analysis. Compatible with Windows® XP, Vista, Windows® 7 and Windows® 8.
**8 Highly Accurate Models to Choose From**

<table>
<thead>
<tr>
<th>Model</th>
<th>LTS 25-02</th>
<th>LTS 25-04</th>
<th>LTS 50-10</th>
<th>LTS 50-20</th>
<th>LTS 120-20</th>
<th>LTS 120-40</th>
<th>LTS 200-100</th>
<th>LTS 300-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product #</td>
<td>8000-6471</td>
<td>8000-6472</td>
<td>8000-6473</td>
<td>8000-6474</td>
<td>8000-6475</td>
<td>8000-6476</td>
<td>8000-6477</td>
<td>8000-6478</td>
</tr>
<tr>
<td>Max. Linearity Error</td>
<td>μm</td>
<td>0.6</td>
<td>1.2</td>
<td>3.0</td>
<td>6.0</td>
<td>12.0</td>
<td>30.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Extended Range²</td>
<td>mm</td>
<td>2.5</td>
<td>5.0</td>
<td>12.5</td>
<td>25.0</td>
<td>50.0</td>
<td>125.0</td>
<td>250.0</td>
</tr>
<tr>
<td>Standoff</td>
<td>mm</td>
<td>25</td>
<td>50</td>
<td>120</td>
<td>200</td>
<td>300</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Available in Specular Mode (Laser head with ND filter) - specify when ordering

| Extended Close Range | mm | 23.75 | 22.50 | 43.75 | 37.50 | 107.50 | 95.00 | 137.50 | 175.00 |
| Close Range | mm | 24 | 23 | 45 | 40 | 110 | 100 | 150 | 200 |
| Range | mm | 2 | 4 | 10 | 20 | 40 | 100 | 200 |
| Extended Far Range | mm | 26.25 | 27.50 | 56.25 | 62.50 | 132.50 | 145.00 | 262.50 | 425.00 |
| Far Range | mm | 26 | 27 | 55 | 60 | 130 | 140 | 250 | 400 |

| Noise² | μm RMS | 0.325 | 0.650 | 1.625 | 3.250 | 6.500 | 16.500 | 32.500 |
| Analog Out Scale Factor | μm/mV | 0.250 | 0.500 | 1.250 | 2.500 | 5.000 | 12.500 | 25.000 |
| Digital Resolution³ | μm | 0.038 | 0.076 | 0.191 | 0.382 | 0.382 | 0.763 | 1.907 | 3.815 |
| Laser Angle | ½ | 45° | 45° | 30° | 30° | 20° | 20° | 12° | 8° |
| Spot Size⁴ | μm | 30 | 36 | 100 | 130 |

¹ Linearity guaranteed at standard range
² ±White photo paper at 500Hz
³ Minimum Digital Resolution = FSO/65535
⁴ Major diameter measured at standoff

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**Diffuse Mode**

Provides better accuracy on high contrast changes on fast moving targets.

**Specular Mode (recommended for shiny surfaces)**

Equipped with ND filter

Tilt Angle

Specular Mode = 0.5 x laser angle (half of laser angle)

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**What's in the box?**

- Flat Head Screwdriver
- Laser Sensor Head
- RS485 Connector-A 2 meters (Factory Pre-Attached)
- RS485 Connector-B 1.8 meters (Factory Pre-Attached)
- Flash Drive (Basic Support Software, Users Manual and etc.)
Technical Specifications

- Laser Power\(^1\): <5mW
- Laser Class (IEC 60825): 3R
- Frequency Response: Up to 20kHz\(^2\)
- Measurement Rate: 40,000/sec.
- Operating Temperature Range: 0°C to 40°C
- Storage Temperature Range: -20°C to 70°C
- Humidity Range: 10 to 95% Non-Condensing
- Temperature Stability: 0.05% FSR/°C
- Digital Interface: RS-485/USB (Half Duplex)
- Supplied Cable Length: 2m ±0.025m (other cable length optional)
- Supply Voltage: SELV\(^3\): 15 to 28VDC
- Nominal Supply Voltage: SELV\(^4\) 24VDC
- Maximum Power Draw: 2.8W
- Output Impedance: 50Ω
- Nameplate Range Voltage Output: 1 to 9V
- Extended Range Voltage Output: 0 to 10V
- Software Selectable Filters: 0.1Hz, 1Hz, 25Hz, 200Hz, 1kHz, 4kHz, 20kHz
- Nominal Laser Wavelength\(^5\): 670nm

\(^{1}\)Laser power is based on standard products.
\(^{2}\)Measurement based on analog output
\(^{3}\)Safety Extra Low Voltage
\(^{4}\)Nominal laser wavelength is based on standard products.

Optional Accessories

- FS-5 Laser Head Mount and Positioner
  P/N: 8000-6725
- FS6-1 Right Angle Bracket
  (for 25/50 laser head models) P/N: 8000-6431
- FS6-2 Right Angle Bracket
  (for 120/200/300 laser head models) P/N: 8000-6432
- Universal Input Power Supply
  (DIN Mount) Assembly
  P/N: 8000-6925
  Includes power cord and 24VDC harness (specify country for correct line cord)
- BNC to Ferrule Converter
  P/N: 8000-6782
- Digital Display
  P/N: 8000-6227

Other Accessories

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2075-0066</td>
<td>SDK with LabVIEW included</td>
</tr>
<tr>
<td>2100-2085</td>
<td>Replacement Connector-A</td>
</tr>
<tr>
<td>2100-2086</td>
<td>Replacement Connector-B</td>
</tr>
<tr>
<td>8000-6923-001</td>
<td>Extension Cable 1m</td>
</tr>
<tr>
<td>8000-6923-002</td>
<td>Extension Cable 2m</td>
</tr>
<tr>
<td>8000-6923-005</td>
<td>Extension Cable 5m</td>
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</tbody>
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