CD-375 MINIATURE 9.5MM AC LVDT

AST
TE Model # CD/CDM
TE Internal #: CAT-LVDT0012
View on TE.com >

The CD375 3/8 inch (9.5 mm) diameter AC-operated LVDTs are small size contactless linear position sensors for both OEM and end user applications.

Housing Diameter: 9.52 mm
Full Stroke Ranges: ±0.635 mm, ±1.27 mm, ±12.7 mm, ±2.54 mm, ±25.4 mm, ±6.35 mm
Linearity: ±0.25 % of Span

Linear Position Sensor - LVDT/LVIT Housing Material: Stainless Steel
Linear Position Sensor - LVDT/LVIT Supply Voltage: 3 V

The CD375 miniature LVDT position sensor is available in full scale measuring ranges from ±0.025 inch (±0.63 mm) to ±1.0 inches (±25 mm).

The low mass of their cores makes these miniature LVDTs well suited for high response dynamic measurements. CD 375 Series sensors feature the high resolution, excellent repeatability, and low hysteresis associated with LVDT technology, as well as high sensitivity consistent with good linearity. The maximum linearity error for a CD 375 sensor is ±0.25% of full range output, using a statistically best-fit straight line derived by the least squares method. The proven reliability of CD 375 Series LVDTs is a direct result of manufacturing processes and assembly techniques developed and optimized by Macro Sensors personnel over many years of making LVDTs. Their environmental robustness stems from the materials of their construction, such as glass-filled polymer coil forms for thermal stability and stainless steel housings that act as magnetic shields to reduce the effects of any external AC magnetic fields. Their external sealing meets IEC standard IP-61.

BENEFITS
• Miniature 3/8 inch size, low core mass
• Ranges of ±0.025" to ±1.0" (±0.63 mm to ±25 mm)
• Non-linearity less than ±0.25% of FRO
• 220°F (105°C) operating temperature
• Coil assembly sealed to IEC IP-61
• Magnetically shielded SS housing
### LVDT SENSOR TECHNOLOGY RESOURCES

**LVDT Tutorial**
Explore how LVDT position sensors are constructed and the benefits of LVDT technology.

**LVDT Terminology**
Learn some of the basic terminology used when specifying LVDT position sensors.

**Specifying an LVDT Sensor**
Helpful hints on how to specify an LVDT position sensor.

**Free Core vs. Guided Core LVDT**
One of the primary factors in choosing an LVDT is determining the correct mechanical interface.

**Temperature Effects on LVDT Position Sensors**
Read how the effects of temperature can influence the performance of LVDT sensors and how to compensate for them.

**AC vs. DC LVDT Position Sensor**
Compare the advantages and disadvantages of AC and DC output signals for LVDT position sensors.

### Features

**Electrical Characteristics**

<table>
<thead>
<tr>
<th>Linear Position Sensor - LVDT/LVIT Supply Voltage (V)</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Electrical Connections</td>
<td>Leads</td>
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</tbody>
</table>

**Signal Characteristics**

| Excitation Frequency (kHz) | 2.5        |

**Body Features**

| Spring Loaded               | Separate Core |

**Housing Features**

| Housing Diameter (mm)       | 9.52        |
| Housing Diameter (in)       | .375        |
| Linear Position Sensor - LVDT/LVIT Housing Material | Stainless Steel |

**Usage Conditions**
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<table>
<thead>
<tr>
<th>Operating Temperature Range (°C)</th>
<th>-55 - 105, -55 - 200</th>
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</thead>
<tbody>
<tr>
<td>Operating Temperature Range (°F)</td>
<td>-67 - 221, -67 - 392</td>
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**Industry Standards**

<table>
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<tr>
<th>IP Rating</th>
<th>IP61</th>
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**Other**

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<tr>
<th>Full Stroke Ranges (mm)</th>
<th>±.635, ±1.27, ±12.7, ±2.54, ±25.4, ±6.35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Stroke Ranges (in)</td>
<td>±.025, ±.05, ±.1, ±.25, ±.5, ±1</td>
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<tr>
<td>Linearity (% of Span)</td>
<td>±.25</td>
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**Related Materials**

**Data Sheet**

- Miniature-LVDT-position-sensors-CD375
  - English

**Accessories**

- Cable Assemblies | Mounting Blocks | Core Rod Kits
  - PDF
  - English