Long gauge length extensometers with gauge lengths greater than 4 inches (100 mm) for tensile and compression testing. These units have been specially designed for long gauge length applications where low level strain measurements are required.

The dual flexure design makes the 3542L very rugged and insensitive to vibrations. These extensometers are designed for testing a wide range of materials including metals, plastics, composites and ceramics. Epsilon’s Model 3543 is recommended for applications requiring long gauge lengths and larger measuring ranges.

The Model 3542L comes standard with Epsilon’s quick attach kit, making it easy to mount the extensometer on the test specimen. The quick attach kit can be removed, allowing mounting of the extensometer with springs or rubber bands.

The 3542L extensometers are strain gaged devices, making them compatible with any electronics designed for strain gaged transducers. Most often they are connected to a test machine controller. The signal conditioning electronics for the extensometer is typically included with the test system.

- Standard quick attach kit allows quick mounting to specimens.
- Rugged, dual flexure design for strength and improved performance. Much more resistant to vibrations. These extensometers are designed for testing a wide range of materials including metals, plastics, composites and ceramics. Epsilon’s Model 3543 is recommended for applications requiring long gauge lengths and larger measuring ranges.
- High and low temperature options extend operation from as low as -265 °C (-450 °F) to +200 °C (400 °F).
- Includes high quality foam lined case.
- Replacable arms and spacers for ease of repair. This also allows changing the gauge length for different test requirements.
- Rugged, dual flexure design for strength and improved performance. Much stronger than single flexure designs, this also allows cyclic testing at higher frequencies.
- Standard quick attach kit allows quick mounting to specimens.

**Specifications**
- **Output:** 2 to 4 mV/V nominal, depending on model
- **Linearity:** 0.10% to 0.15% of full scale measuring range, depending on model
- **Temperature Range:** Standard (-ST) is -40°C to +100°C (-40 °F to 210 °F)
- **Temperature Range:** Optional (-HT) is -40°C to 150°C (-40 °F to 300 °F)
- **Temperature Range:** Optional (-LHT) is -40°C to 200°C (-40 °F to 400 °F)
- **Temperature Range:** Optional (-ULT) is -450 °C to 400 °F to 210 °F

**Features**
- May be left on through specimen failure.
- Full bridge, 350 ohm strain gage design for compatibility with nearly any test system.
- All models can measure in both tension and compression and can be used for cyclic testing.
- Mechanical overtravel stops in both directions.
- All standard units meet existing ASTM class B-1 and ISO 9513, class 0.5 requirements for accuracy.
- Hardened tool steel knife edges are easily replaced. A spare set comes with every extensometer.

**Options**
- Quick attach kit wireforms for large specimens
- Adapter kits to change gauge lengths
- Connectors to interface to nearly any brand test equipment
- Special coatings and stainless steel knife edges available for biomedical tests.
- Shunt calibration module (see page 104)
- Specialty knife edges (see page 105)

**Ordering Information**

**Model Number 3542L**

<table>
<thead>
<tr>
<th>Gauge Length</th>
<th>Measuring Range</th>
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</tr>
<tr>
<td>-050M</td>
<td>50.000”</td>
</tr>
</tbody>
</table>

**Example:** 3542L-100M-010T-ST: 100.0 mm gauge length, ±10.0 mm measuring range, standard temperature option (-40 °F to 210 °F)

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Contact us for your special testing requirements.