Designed for measuring axial displacements in the simple performance tests prescribed by NCHRP Report 465, and determining dynamic modulus of hot mix asphalt per AASHTO TP062.

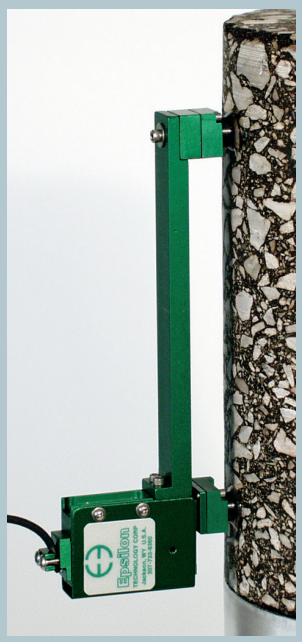
Model 3909-0400 with 4 inch gauge length

These extensometers are typically mounted as two axial modules with independent outputs capable of measuring specimen deformations in two locations, but they can be mounted as a single unit or up to four on a sample. They quickly clip onto gauge points mounted per the test requirements.

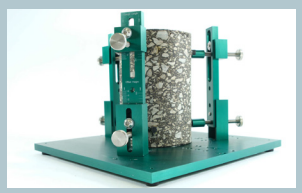
Magnets at each end of the extensometer snap instantly in place on the steel gauge points glued to the test sample. The quick attachment is most advantageous when testing preconditioned samples that are heated or cooled, since the extensometers can be mounted before the sample changes temperature appreciably. For units intended to be used inside tri-axial cells, extensometers are available with modules rotated 90°.

The standard Model 3909 has full scale measuring range of ±0.5 mm or ±0.020 inches. Gauge points are included with the extensometers and an optional gluing fixture is available. Two standard 3909 units can be converted to the Model 3910 with the purchase of optional gauge length adapters.

The Model 3909 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 with electronics for a strain channel, and Epsilon will equip the extensometer with a compatible connector that is wired to plug directly into the controller. For systems lacking the required electronics, Epsilon can provide a variety of signal conditioning solutions that enable connecting to data acquisition systems or other equipment.



Model 3909-0400 with 4 inch gauge length



Model 3909 Gluing Fixture - adjustable fixture for gluing gauge points to test samples (recommended option)

Features

- Model 3909 for simple performance testing per NCHRP Report 465, and determining dynamic modulus of hot mix asphalt per AASHTO TP062.
- Easy mounting, attaches with magnets, which allows dynamic testing to 40 Hz.
- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- All standard units have linearity readings of 0.20% or better.
- Includes the Epsilon Shunt Calibration System for on-site electrical calibration.
- Rugged, dual flexure design for improved performance.
- Includes high quality foam lined case.

Specifications

Measuring Range:	±0.5 mm or ±0.020 inches
Excitation:	5 to 10 VDC recommended, 12 VDC or VAC max..
Output:	2 to 4 mV/V nominal, depending on model
Linearity:	≤0.20% of full scale measuring range, depending on model
Temperature Range:	Standard is -40 °C to +100 °C (-40 °F to +210 °F)
Cable:	Integral, flexible Teflon® cable, 2.5 m (8 ft) standard
Operating Force:	<30 g typical

Options

Adjustable fixture for gluing gauge points to test samples (recommended) - adjustable for offset height and gauge length; configurable for various specimen diameters and mounting gauge points at 90°, 120°, and 180°
Gauge length adapters
Connectors to interface to nearly any brand of test equipment

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Ordering Information

Model 3909 Available Versions: Available in intermediate and larger gauge lengths on special order. *Other configurations may be available with special order; please contact Epsilon to discuss your requirements.*
±0.5 mm measuring range will be supplied with units that are ordered with gauge lengths in mm units.
±0.020" measuring range will be supplied with units that are ordered with gauge lengths in inch units.

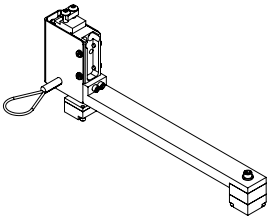
Gauge Length	
METRIC	
-070M[1]	70 mm
-076M	76 mm
-100M	100 mm
U.S.A.	
-0275[1]	2.75"
-0300	3.00"
-0400	4.00"

Model Number 3909-__ __ __ __

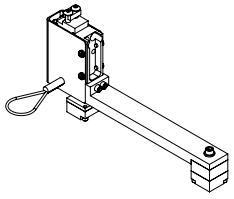
[1] *Special order.*

Example: 3909-0300: 3.00 inch gauge length with a full scale measuring range of ±0.020 inches

Visit our website at www.epsilontech.com
Contact us for your special testing requirements.



4" gauge length



3" gauge length

MODEL 3909 EXAMPLES