Epsilon Technology Corp

Two 3909 models on asphalt specimen.

Model 3909

This model was designed for measuring axial displacements in the simple performance tests prescribed by NCHRP Report 465.

These extensometers come as two axial modules with independent outputs capable of measuring specimen deformations in two locations. They clip quickly onto gage points mounted per the test requirements. Two, three or four modules can be mounted on the test specimen.

Magnets at each end of the extensometer snap instantly in place on the steel gage points glued to the test sample. The quick attachment is most advantageous when testing pre-conditioned 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 triaxial cells, extensometers are available with modules rotated 90° (not shown).

The standard Model 3909 has full scale travel of 0.020 inches (0.5 mm). Gage points are included with the extensometers and optional gluing fixtures are available. The standard version of this model can be converted to the Model 3910 with optional gage 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. The signal conditioning electronics for the extensometer is typically included with the test machine controller or may often be added. In this case the extensometer is shipped with the proper connector and wiring to plug directly into the electronics. For systems lacking the required electronics, Epsilon can provide a variety of solutions, allowing the extensometer output to be connected to data acquisition boards, chart recorders or other equipment. *See the electronics section of this catalog for available signal conditioners and strain meters.*

Gage point gluing fixture for 2 units 180° apart.

Alternate fixture for 3 units 120° apart.

Features

- Model 3909 for simple performance testing per NCHRP Report 465.
- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- All standard units meet existing ASTM class B-1 and ISO 9513, class 0,5 requirements for accuracy.
- Includes high quality foam lined case.
- Rugged, dual flexure design for improved performance.
- Easy mounting, attaches with magnets, which allows dynamic testing to 40 Hz.

Specifications

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, 8 ft. (2.5 m) standard
Operating Force:	<30 g typical

Options

Connectors to interface with nearly any brand equipment
Shunt calibration module (see page 96)
Gage length adapters
Gluing fixtures for gage points

Contact Epsilon for your special testing requirements.

Ordering Information

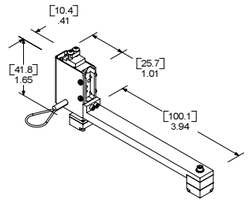
Model 3909 Available Versions: Custom gage lengths are available.

Gage Length	
DESIGNATION	GAGE LENGTH
-0275[1]	2.750" (70 mm)
-0300	3.000" (76 mm)
-0400	4.000" (100 mm)

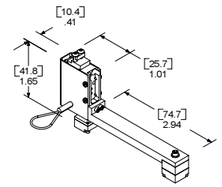
Model Number 3909- __ __ __ __

1 *Special order only.*

Example: *3909-0300: 3.000 inch (76 mm) gage length with a full scale measuring range of 0.020 inches (0.5 mm)*



3909 WITH 4" GAGE LENGTH



3909 WITH 3" GAGE LENGTH

DIMENSIONS: [mm] inches