

W-E440 Series High-Temperature Extensometers

Catalog Numbers W-E440-M, W-E440-N, W-E440-O

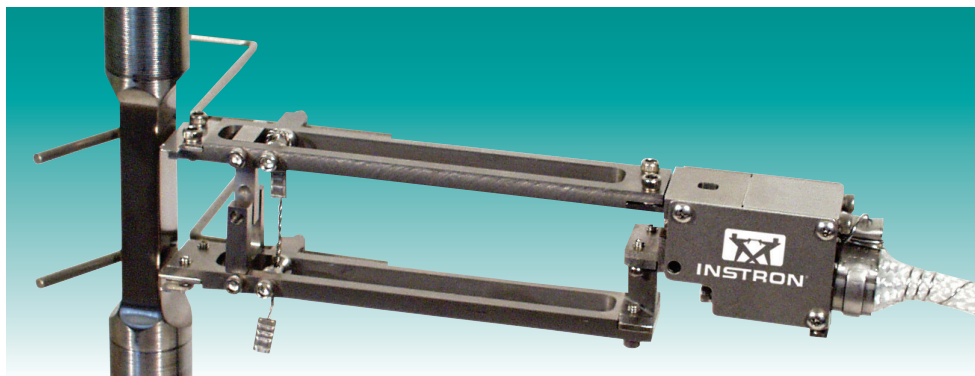
Features

- High temperature operation to +540° C (+1004° F)
- High accuracy capacitive sensor
- No cooling required
- Rugged dual-flexure design for strength and improved performance
- Zero pin to establish accurate initial gauge length
- Meets or exceeds ASTM E 83 class B-1 and ISO 9513 class 0.5
- Used in tension, compression and cyclic testing
- Easily replaced, hardened tool steel knife edges
- Self-supporting on specimen
- Suitable for round or flat specimens
- Over-travel protection for rugged operation through specimen failure
- Low operating force
- Free standing signal conditioner with 0-10 V output

Description

W-E440 High-Temperature Series extensometers are ideally suited for testing materials such as advanced composites, metals and polymers at elevated temperatures. They incorporate a capacitive sensor that does not require any cooling. The extensometers are supplied with a special sensor conditioner unit providing a 0-10 V output with exceptionally low noise.

These extensometers can be attached to round and flat specimens to perform tensile, compression and cyclic tests.



▲ **W-E440 Series High-Temperature Extensometer**

Principle of Operation

The specimen displacement is measured using a capacitive sensor rather than strain gauges. This provides the extensometer with the ability to withstand high temperatures without any active cooling. The dual-flexure design makes these units very durable and they may be left on the specimen through specimen failure. The extensometers are easy to mount and feature integral springs that hold the unit on the test specimen.

The freestanding sensor conditioner produces a 0-10 V output that is connected to the strain channel of the testing system. The output signal is characterized by having exceptionally low noise (typically 0.1 mV at 10 V).

Application Range

- Static and cyclic tests up to 5 Hz
- Suitable for tension, compression and cyclic tests on composites, high-temperature polymers and metals

W-E440 Series High-Temperature Extensometers

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Specifications

Catalog Number	W-E440-M	W-E440-N	W-E440-O
Gauge Length	25 mm	25 mm	25 mm
Axial Travel	±5%	+10/-5%	+20/-10%

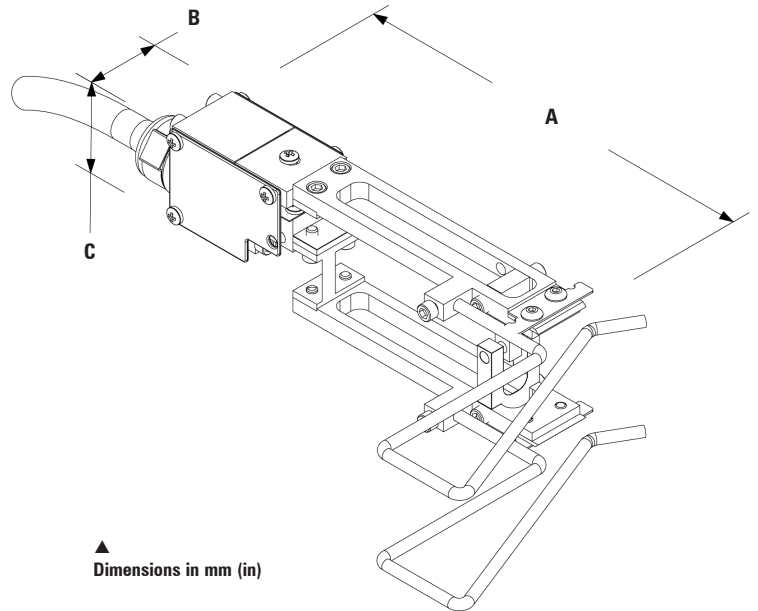
General Specifications

Temperature Range	Ambient to +540° C (+1004° F)
Specimen Size (Round)	Up to 12 mm (0.5 in) diameter
Specimen Size (Flat)	Up to 12 mm (0.5 in) thick x 19 mm (0.75 in) wide
Classification	Meets or exceeds ASTM E 83 Class B1 and ISO 9513 Class 0.5
Operating Force	< 30 g typical
Cable Length	1 m (3 ft) plus 3 m (10 ft) extension cable

Dimensions	W-E440-M	W-E440-N	W-E440-O
A mm (in)	57.5 (2.26)	70.2 (2.76)	121 (4.76)
B mm (in)	16.8 (0.66)	16.8 (0.66)	16.8 (0.66)
C mm (in)	20.7 (0.82)	20.7 (0.82)	20.7 (0.82)



▲ Sensor Conditioner Unit



▲ Dimensions in mm (in)



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