

2620 Series

Dynamic Strain Gauge Extensometer

Features

- Simple lightweight design and rugged construction
- Wide operating temperature range, from -80 °C to +200 °C (-112 °F to +392 °F)
- Accurate direct measurement and closed-loop strain control for both cyclic and static testing
- Selection of gauge length extenders
- Accurate linear output with high frequency response
- Designed to meet the requirements of ISO 9513, BS 3846 and ASTM E 83

Description

The 2620 series dynamic strain gauge extensometers are accurate lightweight units used for accurate direct measurement and closed-loop control of strain in a variety of static and high frequency cyclic materials testing applications.

Tensile, compressive, low and high cycle fatigue testing, creep and stress relaxation as well as straight line (ramp) testing may be performed with the 2620 series dynamic strain gauge extensometer to an extensive range of national and international standards.

The 2620 extensometers are designed for use with metals, composites, plastics, wood and other materials exhibiting total strains up to $\pm 50\%$ of the original gauge length. Variations of gauge length and percentage strain levels may be achieved by the addition of gauge length extenders.

Integrated mechanical stops limit the amount of over travel in the extensometers, enabling them to survive specimen rupture without damage.

The 2620 extensometers are immersible in a range of fluids (acetone, mineral and silicone oils, alcohol and similar cooling/ heating fluids) and can be quickly and easily calibrated.

Principle of Operation

The 2620 extensometers are strain gauge units. The flexural element is a special alloy operating beam, with fatigue certified foil gauges bonded to it. The gauges are arranged in a fully active four-arm Wheatstone bridge circuit. It is mounted in a lightweight frame and accurately follows the strain amplitudes applied to it.



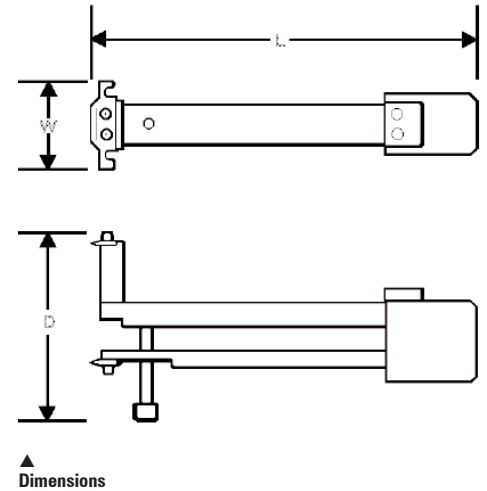
▲ Dynamic strain gauge extensometer

2620 Series

Dynamic Strain Gauge Extensometer

Specifications

Catalog Numbers	2620-601, 2620-602, 2620-603, 2620-604
Linearity	±0.15% Full-Scale Deflection (FSD)
Repeatability	±0.08% FSD
Hysteresis	±0.15% FSD
Creep (in 3 Minutes)	±0.15% FSD
Electrical Calibration Accuracy	±0.10% full rated output
Output Sensitivity	2.5 mV/V ±20%
Excitation Voltage	5 V (A.C. RMS or D.C.) with 10 V maximum
Bridge Resistance	350 Ω nominal
Balance	±2.5% of full-scale
Overtravel	Mechanical stops
Operating Temperature Range	-80 °C to +200 °C (-112 °F to +392 °F)
Weight (Less Cable and Connectors)	20 g (0.71 oz) average
Attachment	Tension springs or special high tear strength rubber bands
SPECIMEN SIZES	
Round	3 mm to 25 mm (0.12 in to 1 in) diameter
Rectangular	3 mm to 12.5 mm x 25 mm (0.12 in to 0.5 in x 1 in)
Square	3 mm to 12 mm (0.12 in to 0.5 in)



Model Specifications

Catalog Number	Gauge Length	Maximum Strain	Full-Scale Range	Frequency Range (Typically Flat at 25 mm GL)	Operating Force
2620-601	12.5 mm (0.5 in)	40%	±5 mm (±0.2 in)	50 Hz	150 g (5.29 oz)
With 12.5 mm (0.5 in) Extender	25 mm (1 in)	20%	±5 mm (±0.2 in)		
With 37.5 mm (1.5 in) Extender	50 mm (2 in)	10%	±5 mm (±0.2 in)		
2620-602	12.5 mm (0.5 in)	20%	±2.5 mm (±0.1 in)	70 Hz	150 g (5.29 oz)
With 12.5 mm (0.5 in) Extender	25 mm (1 in)	10%	±2.5 mm (±0.1 in)		
With 37.5 mm (1.5 in) Extender	50 mm (2 in)	5%	±2.5 mm (±0.1 in)		
2620-603	10 mm (0.4 in)	10%	±1 mm (±0.04 in)	100 Hz	150 g (5.29 oz)
With 15 mm (0.6 in) Extender	25 mm (1 in)	4%	±1 mm (±0.04 in)		
With 40 mm (1.6 in) Extender	50 mm (2 in)	2%	±1 mm (±0.04 in)		
2620-604		(not used without extenders)		20 Hz	75 g (2.65 oz)
With 15 mm (0.6 in) Extender	25 mm (1 in)	50% to 10%	12.5 mm to -2.5 mm 0.5 in to -0.1 in		
With 40 mm (1.6 in) Extender	50 mm (2 in)	25% to 5%	12.5 mm to -2.5 mm 0.5 in to -0.1 in		

Dimensions

Catalog Number	Length	Width	Depth
2620-601	87 mm (3.4 in)	21 mm (0.8 in)	63 mm (2.5 in)
2620-602	58 mm (2.3 in)	21 mm (0.8 in)	56 mm (2.2 in)
2620-603	40 mm (1.6 in)	21 mm (0.8 in)	59 mm (2.3 in)
2620-604	99 mm (3.9 in)	21 mm (0.8 in)	69 mm (2.7 in)



Corporate Headquarters
100 Royall Street, Canton, Massachusetts 02021-1089, USA
Tel: +1 800 564 8378 or +1 781 575 5000 Fax: +1 781 575 5751

Instron Industrial Products
900 Liberty Street, Grove City, PA 16127-9969, USA
Tel: +1 724 458 9610 Fax: +1 724 478 9614

European Headquarters
Coronation Road, High Wycombe, Bucks HP12 3SY, United Kingdom
Tel: +44 1494 464646 Fax: +44 1494 456123

www.instron.com

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