



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.



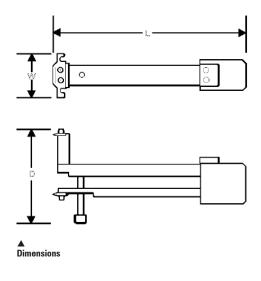
Dynamic strain gauge extensometer

2620 Series

Dynamic Strain Gauge Extensometer

Specifications

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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	$\pm 0.10\%$ 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	$\pm 2.5\%$ 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	Operating Force
				(Typically Flat at 25 mm GL)	
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)			
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	20 Hz	75 g (2.65 oz)
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)



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