

STRAIN GAUGE EXTENSOMETERS

Catalog Number 2630-100

The 2630-100 series of extensometers offers speed of attachment and ease-of-use. The light-weight, rugged cross-brace design eliminates errors caused by physical distortion, while built-in protection ensures that damage is not caused by over-extension.

The low operating-force arms of the extensometer reduce the possibility of knife-edge slippage when testing hard or smooth surfaced materials. The extensometers can be installed or set in place accurately and consistently, with the gauge length locking device automatically releasing itself after attachment, ensuring speed and reliability of operation. This unique, patented cone-latch mechanism also overcomes the problems associated with having to remove pins or clips prior to starting a test, or tests being conducted with the extensometer accidentally locked at gauge length. There is also the ability to measure both positive and negative strain allowing compressive or flexural test measurements.

Principle of Operation

The 2630-100 series extensometer includes different gauge length and strain range options to suit a wide range of specimen characteristics. All 2630-100 series extensometers can comply with both the ASTM E 83 and ISO 9513 standards, and gauge lengths are available in metric or U.S. customary units. Test certificates are supplied, showing the individual performance of each unit.

Features and Benefits

- Rugged cross-brace design with low operating force arms
- Unique, patented cone-latch system
- Precise, fixed gauge length with automatic calibration facility
- Interchangeable rapid attachment spring clips
- Centering guides for accurate alignment on small diameter specimens
- Ideal for temperature cabinet use, between -100 °C and +200 °C
- Compressive and through-zero strain measurement capability
- Suitable for closed-loop strain control for monotonic and low-rate cyclic testing
- Rugged construction allows for extensometer to be left on through failure for most materials

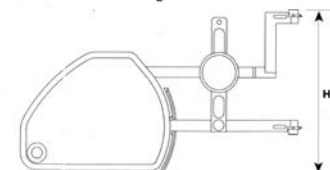
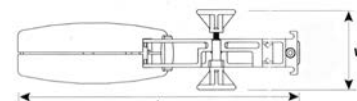


Application Range

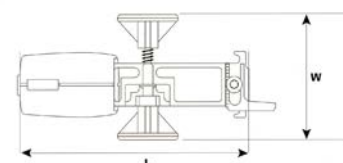
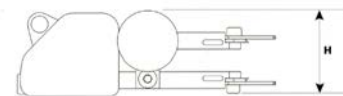
- Metals testing 'n-value'
- Flex or compression testing
- Rigid plastics testing
- Immersable testing
- Composites

Specifications for 2630-100

Repeatability	%	Better than 0.1 FRO (Full Range Output)
Hysteresis	%	Better than 0.3 FRO
Balance	%	Better than ± 2.5 FRO
Excitation	V	1 V to 5 V RMS
	kHz	DC to 5 kHz
Sensitivity	mV/V	2.5 ($\pm 20\%$)
Electrical Calibration Accuracy	%	± 0.06 FRO
Bridge Resistance; (Nominal)	ohms	350
Gauge Length Accuracy	%	± 0.5 at gauge length
Temperature Range	$^{\circ}\text{C}$	-100 to +200
Temperature Effect on Zero	%	± 0.01 FRO
Typical Temperature Effect	$^{\circ}\text{C}$	-0.006% FRO/ celsius (+20 to +100) -0.008% FRO/ celsius
- On Sensitivity	$^{\circ}\text{C}$	(+100 to +50) -0.01% FRO/ celsius (+150 to +200)
- On Immersibility	-	Non-conductive/ non-corrosive fluids i.e. acetone, mineral and silicone oils, alcohol, etc.
Over Travel	-	Mechanical limit stops
Gauge Length Settings	-	Cone latch with automatic release



Short gauge length



Long gauge length

Specifications

Catalog Number	Gauge Length	Travel	Length (L)	Width (W)	Height (H)	Operating Force	Weight	Strain Range Classification*			
								ISO 9513 0.5	ISO 9513 1.0	ASTM E 83 B-2	ASTM E 83 C
Metric	mm	mm	mm	mm	mm	g	g	%	%	%	%
2630-120	8	-4 to +4	67	39	25	20	27	0 to +50	-30 to +50	0 to +50	-30 to +50
2630-101	10	-1 to +1	67	39	25	160	27	-10 to +10	-	-10 to +10	-
2630-102	10	-5 to +5	67	39	25	20	27	0 to +50	-	0 to +50	-
2630-105	25	-5.5 to +2.5	100	39	52	55	56	-10 to +10	-	-10 to +10	-
2630-106	25	-2.3 to +12.5	115	39	58	75	58	0 to +50	-	0 to +50	-
2630-107	25	-2.5 to +25	132	39	69	45	60	0 to +70	0 to +100	0 to +70	0 to +100
2630-111	50	-5 to +5	100	39	72	45	60	-10 to +10	-	-10 to +10	-
2630-112	50	-2.5 to +25	132	39	72	45	60	0 to +35	0 to +50	0 to +35	0 to +50
2630-113	50	-5 to +50	181	39	72	37	66	0 to +70	0 to +100	0 to +70	0 to +100
2630-123	75	-0.75 to +7.5	116	39	101	60	60	0 to +10	-	0 to 10	-
2630-117	80	-0.8 to +8	116	39	101	60	60	0 to +10	-	0 to +10	-
2630-118	80	-4 to +40	181	39	101	45	66	0 to +35	0 to +50	0 to +35	0 to +50
2630-119	100	-5 to +50	181	39	121	37	66	0 to +35	0 to +50	0 to +35	0 to +50
US Customary	in	in	in	in	in	g	g	%	%	%	%
2630-121	0.3	-15 to +0.15	2.64	1.5	1.0	20	27	-10 to +50	-50 to +50	-10 to +50	-50 to +50
2630-103	0.5	-0.05 to +0.05	2.64	1.5	1.0	170	27	-10 to +10	-	-10 to +10	-
2630-104	0.5	-0.25 to +0.25	2.64	1.5	1.0	20	27	0 to +50	-30 to +50	0 to +50	-30 to +50
2630-108	1.0	-0.1 to +0.1	4.0	1.5	2.0	55	56	-10 to +10	-	-10 to +10	-
2630-109	1.0	-0.1 to +0.5	4.5	1.5	2.3	75	58	0 to +50	-	0 to +50	-
2630-110	1.0	-0.1 to +1.0	5.2	1.5	2.7	45	60	0 to +70	0 to +100	0 to +70	0 to +100
2630-114	2.0	-0.2 to +0.2	4.0	1.5	2.8	45	60	-10 to +10	-	-10 to +10	-
2630-115	2.0	-0.1 to +1.0	5.2	1.5	2.8	45	60	0 to +35	0 to +50	0 to +35	0 to +50
2630-116	2.0	-0.2 to +2.0	7.1	1.5	2.8	37	66	0 to +70	0 to +100	0 to +70	0 to +100

Notes: *When calibrated using the appropriate calibration apparatus these extensometers are guaranteed to meet the stated classification. Outside of these stated ranges the extensometers in compressive mode are generally perform to ISO 1.0 or ASTM C classification.

www.instron.com



Worldwide Headquarters
825 University Ave, Norwood, MA 02062-2643, USA
Tel: +1 800 564 8378 or +1 781 575 5000

European Headquarters
Coronation Road, High Wycombe, Bucks HP12 3SY, UK
Tel: +44 1494 464646