INSTRON®

*The difference is measurable®*

# AXIAL CLIP-ON EXTENSOMETERS

## 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 tensile, 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

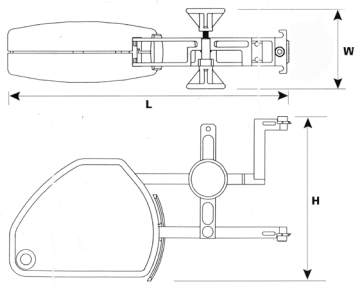
## APPLICATION RANGE

- Metals testing ‘n-value’
- Flex or compression testing*
- Rigid plastics testing
- Immersable testing
- Composites

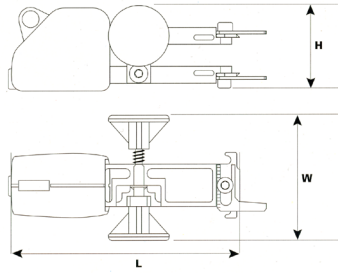
*May require additional accessories, e.g. 2810-406, 2601-071)

# 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 (± 20%) |
| **Electrical Calibration Accuracy** | % | ±.06 FRO |
| **Bridge Resistance; (Nominal)** | ohms | 350 |
| **Gauge Length Accuracy** | % | ±0.5 at gauge length |
| **Temperature Range** | °C | -100 to +200 |
| **Temperature Effect on Zero** | % | ±0.01 FRO |
| **Typical Temperature Effect** | °C | -0.006% FRO/ celsius (+20 to +100 )<br>-0.008% FRO/ celsius |
| **On Sensitivity** | °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 |




Long gauge length




Short 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 | -2.5 to +2.5 | 100 | 39 | 52 | 55 | 56 | -10 to +10 | - | -10 to +10 | - |
| 2630-106 | 25 | 0 to +12.5 | 115 | 39 | 58 | 75 | 58 | 0 to +50 | - | 0 to +50 | - |
| 2630-107 | 25 | 0 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 | 0 to +25 | 132 | 39 | 72 | 45 | 60 | 0 to +35 | 0 to +50 | 0 to +35 | 0 to +50 |
| 2630-113 | 50 | 0 to +50 | 181 | 39 | 72 | 37 | 66 | 0 to +70 | 0 to +100 | 0 to +70 | 0 to +100 |
| 2630-123 | 75 | 0 to +7.5 | 116 | 39 | 101 | 60 | 60 | 0 to +10 | - | 0 to 10 | - |
| 2630-117 | 80 | 0 to +8 | 116 | 39 | 101 | 60 | 60 | 0 to +10 | - | 0 to +10 | - |
| 2630-118 | 80 | 0 to +40 | 181 | 39 | 101 | 45 | 66 | 0 to +35 | 0 to +50 | 0 to +35 | 0 to +50 |
| 2630-119 | 100 | 0 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 | -0.15 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 to +0.5 | 4.5 | 1.5 | 2.3 | 75 | 58 | 0 to +50 | - | 0 to +50 | - |
| 2630-110 | 1.0 | 0 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 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 to +2.0 | 7.1 | 1.5 | 2.8 | 37 | 66 | 0 to +70 | 0 to +100 | 0 to +70 | 0 to +100 |

*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 generally perform to ISO 1.0 or ASTM C classification.

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