MTS Fundamental™ Video Extensometer (FVX)

Make highly accurate noncontact measurements with high-resolution video technology

- Perform accurate edge-to-edge measurements without specimen contact
- Measure strain on fragile, brittle, irregular and other difficult specimens
- Meet requirements for ASTM E83, ISO 9513 and EN 10002-4 standards
- Choose from uniaxial or biaxial measurement
- Expand or narrow the area of measurement with multiple lenses
- Integrate measurements into results and reports via TestWorks Software

Many material test specimens require noncontact extensometry — a method of measurement that does not require direct contact with the test specimen. Common candidates for this approach include specimens that are fragile or prone to high elongation, as well as those with geometries that make attachment difficult, those that require testing in caustic environments, and those that tend to release large amounts of energy at failure.

The MTS Fundamental Video Extensometer (FVX) offers an affordable and highly accurate means of working with these problematic specimens. It uses an edge-to-edge approach, in which reflective tape targets are attached to the specimen. A high-resolution digital video camera records images to measure how much the targets move.

By measuring the displacement of metals, polymers, rubber and other materials from a distance, the FVX allows test professionals to acquire precise test data in applications where it might otherwise be impossible. Of course, because the extensometer does not touch the specimen, there is no risk of stress concentrations or weight error.

This video extensometer is fully compatible with TestWorks® Software, enabling the seamless integration of highly accurate digital video measurements into test results and reports.

The FVX is part of a diverse and growing selection of noncontact extensometers from MTS, including the versatile Advantage™ Video Extensometer, which incorporates innovative point-to-point technology. All of our noncontact extensometers are flexible, practical tools that use either video or laser technology to fulfill a wide range of materials testing needs.

Enable accurate, easy noncontact measurement in multiple applications

To meet your specific testing needs, the FVX is available in two configurations, both of which meet standards for ISO 9513 and EN 10002-4 (class 0.5 (20 mm). The first configuration measures axial strain during tension and compression testing to calculate modulus and total elongation for rubbers and plastics that yield at high strain. The second configuration measures axial-transverse strain during tension, compression and creep testing to calculate modulus (at low strain) for metals and composites. It also offers multiple lenses that make it easy to expand or narrow the area of specimen measurement as needed. The video extensometer enables noncontact strain measurement but is not used for strain control.

Integrate highly accurate digital video measurements into test results and reports.

FVX Kit Specifications

Model	Axis of Measurement	Software Platform	Typical Applications	Strain Measurement Segment(s)	Video Camera	Lens	Gage Length	Accuracy	Resolution	Part Number
FVX01	Axial	TestWorks®	Rubbers / Plastics	1	1380 x 1024 pixel	Tamron M118FM25	up to 100 mm	Class 1.0	1 um	057-427-201
FVX02	Axial-transverse	TestWorks	Soft Metals Composites	2	1380 x 1024 pixel	Tamron M118FM25	up to 100 mm	Class 1.0	1 um	057-427-202
						Tamron M118FM50	up to 40 mm gage	Class 0.5	0.4 um	

KITS INCLUDE: White and black pens, Protective case, Calibration template, Tripod and mountiing head, Camera mounting

Measurement Specifications

Field of View (FOV)	20 mm	40 mm	50 mm	100 mm	500 mm	1000 mm
Classification to ISO 9513, EN10002-4	Class 0.5	Class 1	Class 1	Class 1	Class 1	Class 1
Classification to ASTM E83	Class B1	Class B2	Class B2	Class B2	Class B2	Class B2
Net Measurement Accuracy	0.2 um	0.4 um	0.5 um	1 um	5 um	10 um
Distance from Lens to Specimen	300 mm	400 mm	500 mm	500 mm	1000 mm	1000 mm
Reference Lens	Tamron M118FM50	Tamron M118FM50	Tamron M118FM50	Tamron M118FM25	Tamron 25-HB/12	Tamron M118FM08
Part Number	100-247-738	100-247-738	100-247-738	100-247-739	100-247-740	100-247-741

Learn More Today

Contact your MTS representative to learn more about how the MTS Fundamental Video Extensometer can meet your noncontact extensometry needs, easily and affordably.

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ISO 9001 Certified QMS

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