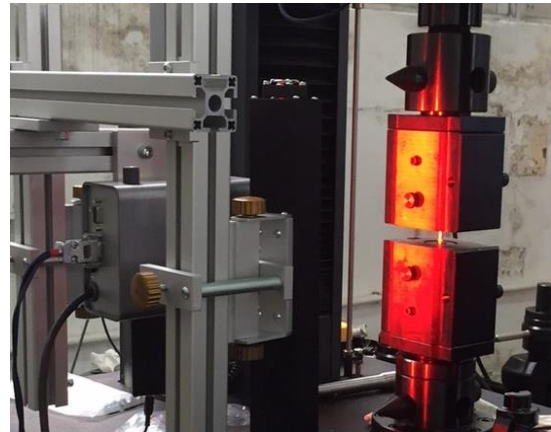


Standard Video Extensometer

ACS Standard Video Extensometer (SVN) is a non-contact, optical strain measurement device for measuring the average gauge length of a tensile specimen without locking in a particular procedure or assuming the material behaves in a particular way. Measurements can be taken throughout the entire testing period up to specimen fracture and hence all elongations can be automatically recorded for every specimen tested.



Simple Design, Easy to Install

The cameras are mounted in protective housings with integral light sources for stable, uniform, specimen illumination and the assemblies are attached to either an adjustable rack or a fixed post depending on the equipment configuration. One or two cameras systems in a variety of configurations are available for different test applications.

Diffuse specimen illumination is provided by linear LED arrays to achieve a large single fields of view for metal or other materials

One solution for all your needs

Any low demanding strain material, metal, plastic, polymers etc, can be used providing a defining set of marks can be applied. Including (with two cameras systems) strand, wire, reinforcing bar, rubber, etc

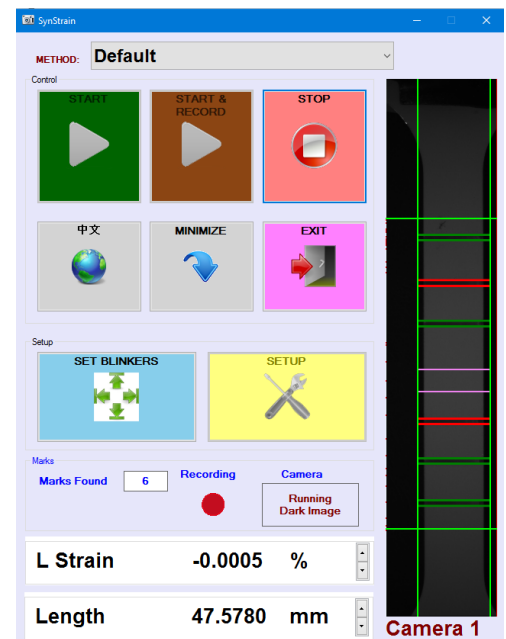
The camera frame rate is up to 100 frames per second depending on camera type, lighting, and the field of view. The image processing can support this rate with either dots or lines defining the gauge marks.

Measurement output from the system can be either analog +/- 10VDC, RS232 serial, or ethernet to allow use on various testing machines and as a mechanical extensometer replacement.

Combined or Separate PC

Imaging analysis can be performed in the same PC as the Testing System if a sufficiently high specification unit is used. A separate window allows display of the camera image, detected gauge marks and measured gauge length. The VNCX screen or Window on a single PC system displays the camera image, provides controls for setting up the test, and shows the current analysis to confirm that the measurements are correct.

Alternatively, with an optional separate PC as an imaging processing unit, the system can be portable and used on a number of testing machines in the facility.



Specifications

Field of View (FOV)	100mm	200mm	300mm	>300mm*
Resolution	1.0 μm	1.0 μm	2.0 μm	1.0 μm
Accuracy	$\pm 3 \mu\text{m}$ or 1% reading	$\pm 3 \mu\text{m}$ or 1% reading	$\pm 5 \mu\text{m}$ or 1% reading	$\pm 3 \mu\text{m}$ or 1% reading
Data Rate	100 Hz	100 Hz	100 Hz	100 Hz
Marking (lines)	3 mm	3 mm	3 mm	3 mm
Marking (dots)	5 mm	5 mm	5 mm	5 mm
Minimum Gauge length	10mm	25mm	50mm	10mm
Classification to ISO 9513, EN10002-4	Class 1	Class 1	Class 2	Class 1
Classification to ASTM E83	B-1 (G.L \geq 30mm)	B-1 (G.L \geq 30mm)	B-1 (G.L \geq 50mm)	B-1 (G.L \geq 30mm)

* Dual camera system each with a 100mm field of view

Typical Configurations

Model	FOV (mm)	Typical Measurements	Typical Configuration
SVN1-200MM	200	Modulus, axial strain, proof stress, elongations etc.	Single camera, suitable focal lens and LED strip light to achieve 200mm FOV; Typically for specimen test gauge length less than 100mm
SVN2-400MM	400	Modulus, axial strain, proof stress, elongations etc.	Dual camera with joint FOV up to 400mm. Typically for specimen tests with large gauge length or large elongation. For example metal test with 200mm gauge length, or rubber test with over 1000% elongation
SVN2-650MM	650	Modulus, axial extension (strain), proof stress.	Dual camera with joint FOV up to 650mm. Typically for specimen tests with large gauge length or large elongation. For example metal test with 200mm gauge length, or rubber test with over 1000% elongation

Typical applications

- Ideal solution for low demanding strain material such as metal, plastic, polymers, etc.
- With various two cameras configurations it is suitable for high-elongation material testing such as rubbers and elastomers, and large gauge length testing such as strand wire, reinforcing bar etc. (typical gauge length 600mm).
- Meets testing standards ASTM D412, ISO 37, and ASTM D638, etc.