

MSM31

DEMEC Mechanical Strain Gauge

MeasureX

Features

- Analog / Digital Indicator
- Suitable for wide Strain Ranges
- Calibrated to Measure based on Micro-Strain
(200 measurements per hour)
- Option of Connection to Data Processor
- Easy to Use, De-mountable and Re-usable



Description

The DEMEC Mechanical Strain Gauge developed as a reliable and accurate way of taking strain measurements at different points on a structure using a single instrument. Standard gauge lengths are from 100mm to 500mm, while length of up to 2000mm available on request. The DEMEC strain gauge is ideal for use on many types of structure for strain measurement and crack monitoring.

The digital DEMEC strain gauge incorporates a digital indicator with a resolution of 0.001mm, zero set, pre-set and output for Statistical Process Control (SPC) systems.

The indicator can be connected to a data processor for recording and analysis of results. The indicator displays spindle movement digitally by means of a linear encoder and has a response speed of 1000mm/sec, and is battery operated.



Applications

- Crack monitoring
- Strain Measurement of Structures in:
 - Civil Engineering
 - Mining
 - Research



Technical Specifications

The DEMEC strain gauge consists of an invar main beam with two conical locating points, one fixed and the other pivoting on a special accurate knife edge. The points locate in pre-drilled stainless steel discs which are attached to the structure with adhesive.

Movement of the pivoting point is measured by the strain gauge which is attached to a base plate on the invar beam. Design is such that thermal movement within the instrument is negligible.

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DEMEC strain gauges are supplied in a wooden case and come complete with an invar reference bar, for control measurements, and a setting out bar to enable accurate positioning of locating discs.

Micro-strains represented by one division on the dial gauge, or one increment on the digital indicator:

Gauge length	Analogue (Dial) version micro-strains	Digital version micro-strains
100 mm	16	8
150 mm	10.7	5.3
200 mm	8	4
250 mm	6.4	3.2
300 mm	5.3	2.7
400 mm	4	2
500 mm	3.2	1.6

Accessories

The DEMEC gauge is supplied complete with reference and setting out bars. Standard locating discs are supplied in packs of 100. An alternative setting out bar giving 3 points in a triangle with sides equal to the gauge length is available as an option.

Other methods of locating the measuring points are available including knurled steel inserts, steel screws and inserts with a separate screw, or corner plates for measuring across a corner for use on a wide variety of structures and materials.



Reference bar and Setting out bar

Ordering Code

MSM31			
	Gauge Size (mm)	100, 150, 200, 250, 300, 400, 500	
		Style	
		A (Analogue)	D (Digital)
MSM31	200mm	A	

Note: All specifications are subject to change without prior notice