CG-10 Precision Electronic Measurement System

The Logitech CG-10 Precision Electronic Measurement System is a compact gauging instrument, suitable for most linear dimensional measurement applications. It offers a high degree of accuracy over a wide measuring range with low gauging forces.

Configuration

The system is very simple to operate and gives an accuracy of 1µm (0.00004") over its entire 10mm (0.4") measuring range. When used over a range of 1mm (0.04"), for example as a comparator in conjunction with gauge blocks, the measuring probe's excellent repeatability and linearity provides a measurement precision of 0.1µm (0.000004"). Such high precision combined with low gauging forces in the range 0.6-0.9N make the system ideally suited for many gauging applications involving the processing of semiconductor, optical and electro-optical materials.

The system comprises a probe, a probe stand/surface plate and an electronic processing/display unit. Measurements are displayed digitally in millimetres or inches by the electronic processing unit. The unit receives electronic signals proportional to probe position within its linear measuring range.

Probe

The probe is the essential measuring element of the system. It is a differential capacitor arrangement comprising a cylindrical screen which moves between two cylindrical electrodes (one within the other) thereby altering the system capacitance relative to a fixed reference.

The differential output signal generated by the changing capacitance is highly linear and repeatable with displacement of the cylindrical screen, which is fixed to the probe contact anvil. A high quality friction bearing/spring mechanism exerting a low gauging force facilitates the anvil movement and ensures an extremely smooth and reliable measuring action capable of exceptional accuracy. Probes are supplied with a foot pedal, for zeroing, and a hand operated retract/engage mechanism, where, for certain applications, the probe anvil tip can be fitted with a rubber boot to reduce the risk of damage to fragile surfaces.

- Low gauging forces

- *Hand or foot operated*

- *Metric or Imperial measurement display*

- *Accomodates samples up to 150 x 150mm*

- *Accurate to ±0.001mm over 10mm*

Electronic Processing/Display Unit

The electronic processing/display unit is a high resolution digital module capable of processing signals from the probe and clearly displaying the position of the probe tip, relative to a zero or a pre-set value, with a resolution of up to 0.1µm (0.000004"). The resolution may be varied according to operator requirements. Metric or imperial display of probe position can be selected by pressing the appropriate key.

The Probe Stand/Surface Plate

The plate has a 280x160x40mm base of flat granite offering excellent stability and support for most gauging applications.It features a rigid including comparative measurements with the aid of gauge blocks. It features a rigid machined vertical column, fitted with a probe support arm and vertical adjustment to facilitate initial positioning.

Technical Specifications:

The Probe:

Linear measuring range: 10 mm (0.4"")

Accuracy over full range: 1μm (0.0004"")

Repeatability: 0.1μm

Gauging force: 0.6-0.9N (0.135-0.203 lbf)

Zero drift: 0.1 μm/ºC

The Probe Stand:

Table area: 280 x 160mm (11" x 6.3")

Vertical adjustment: 150mm (5.91")

The Electronic Process Unit:

Range: 50 mm (1.97"")

Resolution: 0.001mm

Display: Vacuum fluorescent display with 8 characters of 7.8 x 3.5m and indication of working unit (mm or inch)

Power: 220V/ 50Hz or 110V/ 50-60Hz

Zero facility: Push button

Dimensions: 280 x 160 x 250mm (with stand)

Accessories, Components & Consumables

A comprehensive range of test and analysis systems, accessories and consumables are available to compliment and support these systems.

The Logitech range of Test and Measurement Systems include:

- CG10 Contact Gauge
- NCG2 Non Contact Gauge
- GI Flatness Measurement System
- LI Fizeau Interferometer
- LG2 Autocollimator

Further information can be found at **www.logitech.uk.com**

Logitech Limited

Erskine Ferry Road, Old Kilpatrick,
Glasgow G60 5EU, Scotland, U.K.

Tel: +44 (0) 1389 875444
Fax: +44 (0) 1389 890956
e-mail: info@logitech.uk.com

www.logitech.uk.com

Certificate No. FM12025