

Elcometer 223

Digital Surface Profile Gauge

Operating Instructions



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A copy of this Instruction Manual is available for download on our Website via www.elcometer.com.

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Thank you for your purchase of the Elcometer 223 Digital Surface Profile Gauge. Welcome to Elcometer. Elcometer are world leaders in the design, manufacture and supply of inspection equipment for coatings and concrete. Our products cover all aspects of coating inspection, from development through application to post application inspection.

The Elcometer 223 Digital Surface Profile Gauge is a world beating product. With the purchase of this product you now have access to the worldwide service and support network of Elcometer. For more information visit our website at www.elcometer.com

1 INTRODUCTION

The Elcometer 223 Digital Surface Profile Gauge allows accurate measurement of the peak-to-valley height of the surface profile of blast cleaned surfaces.

To maximise the benefits of your new Elcometer 223 Digital Surface Profile Gauge please take some time to read these Operating Instructions. Do not hesitate to contact Elcometer or your Elcometer supplier if you have any questions.

1.1 STANDARDS

Your Elcometer 223 Digital Surface Profile Gauge can be used in accordance with the following National and International Standards: ASTM D 4417-B, IMO MSC.215(82), SANS 5772, US Navy NSI 009-32, US Navy PPI 63101-000.

1.2 WHAT THE BOX CONTAINS

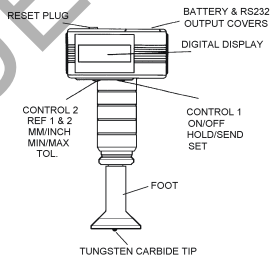
- Elcometer 223 Digital Surface Profile Gauge
- Glass slide
- 2mm allen key
- 3V Lithium CR2032 Battery (+ battery tool, see “Changing the Battery” on page 6)
- Carry case
- Operating Instructions

Your Elcometer 223 Digital Surface Profile Gauge may be packed in a cardboard and foam package. Please ensure that this packaging is disposed of in an environmentally sensitive manner. Consult your local Environmental Authority for further guidance.

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2 GETTING STARTED

1. Place the foot on the glass slide provided, to ensure the tip is in the same plane as the base of the foot.
2. Switch the unit on by pressing Control 1 lightly.
3. The unit will display '0.000mm' (or '0.0000"' if set to imperial).
4. Press the foot onto the blasted surface a number of times and allow the tip to reach the bottom of the profile valleys.
5. The display will read peak to valley height in mm ($0.001\text{mm} = 1\mu\text{m}$).
6. To switch from metric (mm) to imperial (inches), press Control 2 once. 'MM' or 'INCH' is displayed in the bottom left hand corner of the display. To change units press Control 2 lightly and then release.
7. To switch off, press Control 1 and hold for approximately 3 seconds. If switched off, the instrument must be reset as above from 1, when next used.



DATA TRANSMISSION

The cable (Sales Part Number T22312213) is connected by removing the RS232 cover and inserting the cable connector.

3 FEATURES

With the cable connected to the RS232 output, press Control 2, and hold until the Reference mode is selected. Press Control 1 to transmit the current reading. If the cable is not connected, this operation will freeze the reading in the display. (Pressing Control 1 again will release hold.)

OTHER FEATURES

This electronic measurement device has several features that are not normally used for profile measurements as follows: -

Resolution

For profile measurement, resolution will normally be set to '0.000mm' or '0.0000"'. However, resolution of 0.01mm or 0.001" is available by pressing Controls 1 and 2 simultaneously, and holding until the decimal point moves.

Polarity

For profile measurement, positive polarity is used and the display will show positive numbers relative to zero. Polarity can be toggled positive to negative or negative to positive, by pressing Controls 1 and 2 simultaneously, and holding until the sign changes.

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Reference Mode (Ref)

Two independent reference modes can be selected by pressing and holding Control 2 until 'Ref1' and 'Ref2' appears in the top left hand side of the display.

To switch between 'Ref1' and 'Ref2' press Control 2 once.

Min/Max

This facility freezes minimum or maximum reading. To select the mode, press and hold Control 2 until 'Min' and 'Max' appears at the top of the display. To clear, press and hold Control 2 until 'MM' or 'INCH' appears in the bottom left hand corner of the display.

Preset & Measure

To preset size, go into Ref. mode and press and hold Control 2 until 'Preset' appears in the display and then release Control 2. The display will show a series of zeroes. To set a preset value, each digit is changed in turn as indicated by the cursor. Press Control 2 lightly to change the cursor position and use Control 1 to adjust the value.

When the last digit is set, press and hold Control 1.

4 MAINTENANCE

Elcometer products are designed to give many years reliable service under normal operating and storage conditions.

Changing the Battery

If the display shows 'B' in the bottom left hand corner, the battery should be changed.

Remove the battery cover and the reset plug. Remove the old battery and replace with a Lithium 3V battery. A special tool for this is included with the battery.

5 TECHNICAL SPECIFICATION

| | |
|---------------|-----------------------------------|
| Material: | Stainless Steel |
| Dimensions: | 105 x 55 x 25mm (4.1 x 2.2 x 1") |
| Range: | 0 - 1000 μ m or 0-40mils/thou |
| Scale: | 1 μ m or 0.1mil/thou |
| Power Supply: | 3V Lithium CR2032 Battery |
| Weight: | 365g (9oz) |

6 ACCESSORIES

Your Elcometer 223 Digital Surface Profile Gauge is complete with all the items required to get started.

The following optional accessories are available from Elcometer, or Elcometer supplier. To place an order please quote the sales par number which follow the description of each accessory.

| | |
|------------------------------------|-----------|
| Miniprinter including Printer Lead | X2239964B |
| Printer Lead | T22312213 |

7 RELATED EQUIPMENT

In addition to the Surface Profile Gauge, Elcometer produces a wide range of other Surface Profile Equipment. Users of the Surface Profile Gauge may also benefit from the following Elcometer product ranges:

- Elcometer 122 Textex Replica Tape
- Elcometer 125 Surface Comparators
- Elcometer 128 Pictorial Surface Standards
- Elcometer 129 Rubert & Rugotest Surface Comparators
- Elcometer 127 Keane-Tator Surface Comparators & Magnifier
- Elcometer Inspection Kits

For further information contact Elcometer, your local Elcometer supplier or visit www.elcometer.com