

Electronic Digital Measuring Set Set  
 Set contains:  
 1 x Electronic Caliper: 150mm/6”  
 1 x Electronic Micrometer: 0-25/0-1”mm  
 1 x Satin Chrome Steel Rule 150mm/6”  
 1 x Eye Loupe with LED Illumination  
 Housed in a fitted storage case

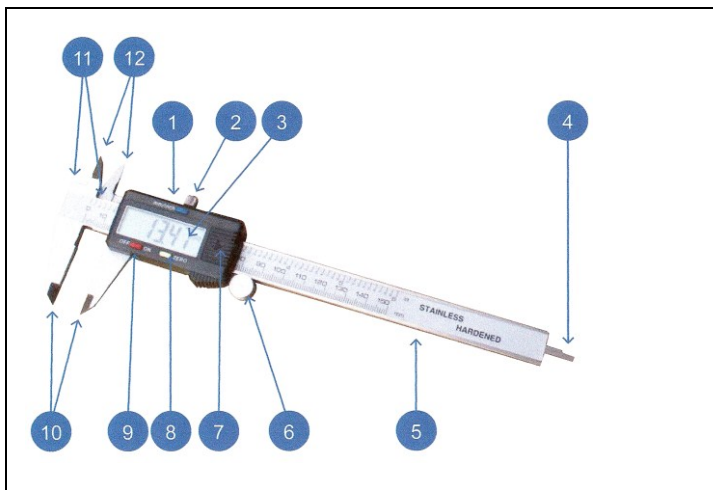
Packed Weight and Dimensions

Code	Description	Weight g	W mm	H mm	L mm
50-730-150	Electronic Digital Measuring Set	719	140	45	255

Electronic Caliper 49-923-150



Hardened stainless steel frame and measuring jaws  
 Thumbroll adjustment  
 Knurled locking screw  
 Depth rod  
 Clear LCD Display  
 Large 11mm digits  
 Inch/Metric conversion  
 Origin setting  
 Resolution: 0.01mm / 0.0005”  
 Repeatability: 0.01mm / 0.0005”  
 4 Way measurement:  
 Individual serial numbers  
 Power: 1 x Silver oxide battery SR44 - 1.55v  
 Operating temperature: 5 - 40°C  
 Relative humidity: Maximum 80%  
 Warranty: 1 year



- 1 Metric / Inch Conversion Button
- 2 Knurled Locking Screw
- 3 LCD Display
- 4 Depth Measuring Blade
- 5 Caliper Beam
- 6 Thumbroll Fine Adjustment
- 7 Battery Cover
- 8 Zero Set Button
- 9 Power Button ON/OFF
- 10 External Measuring Jaws
- 11 Step Measuring Faces
- 12 Internal Measuring Jaws

Code	Range	Resolution	Repeatability	Accuracy	Ext. Jaw Length	Int. Jaw Length
49-923-150	150mm / 6”	0.01mm / 0.0005”	0.01mm / 0.0005”	±0.03mm	40mm	18mm

Product: Electronic Digital Measuring Set

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Electronic Caliper 49-923-150

**OPERATING INSTRUCTIONS**

When using the Caliper for the first time or after a period of non-use, wipe the beam scale with a dry clean cloth to remove any condensation or oil deposits.

Prior to setting the caliper for measuring, first clean the measuring faces with a soft clean cloth or paper.

Switch Caliper ON

Move Caliper jaws together.

Select required measuring mode Inch / Metric.

Zero display, caliper is now ready for direct measurement.

Caliper can be zeroed at any position within its range, to provide relative measurements.

Caliper provides 4 way measurements, External, Internal, Step and Depth.

**OPERATING CARE**

Clean measuring faces with dry soft cloth

Keep away from strong magnetic fields

Prevent ingress of oil / liquids into electronics

Remove battery if instrument is not used for a long period of time

Do not disassemble or drop the instrument

**Do not mark instrument by engraving, etching or any other permanent marking method, as this will invalidate the warranty**

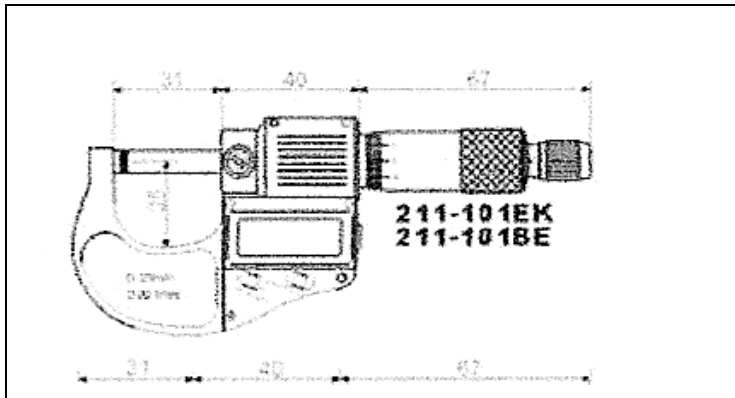
**FAULT FINDING**

Fault	Cause	Action
Display flashes	Battery voltage below 1.45volts	Replace battery
Display frozen	Circuit overload	Remove battery and replace after 4 minutes
Accuracy below specification but within +/- 0.1mm	Dirt in sensor	Remove slider cover assembly, clean face of sensor with dry clean compressed air (5kg/cm <sup>2</sup> )
No display	Poor battery contact Dead battery	Remove battery and carefully adjust battery contacts, replace battery. Replace battery.

Electronic Micrometer 50-730-001

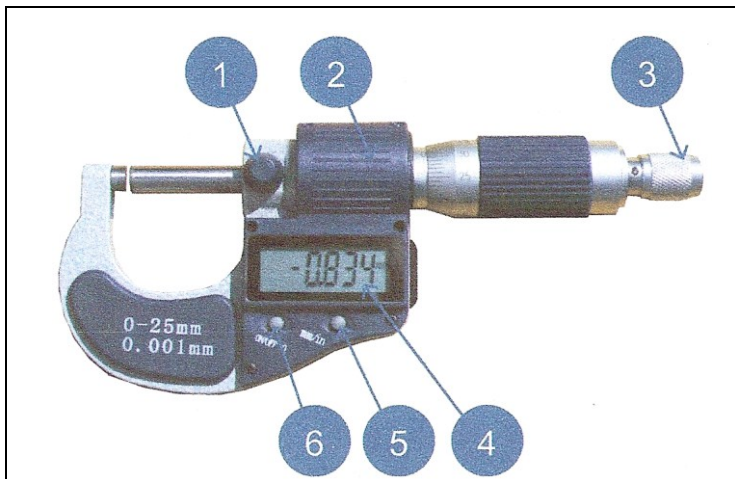


Range: 0 - 25/ 0 - 1"  
 Resolution Digital Display: 0.001mm/0.00005"  
 Resolution Mechanical Thimble: 0.01mm  
 Clear LCD Display  
 Digit Size 8mm  
 Metric/Inch Conversion  
 Zero Reset at any position  
 Tungsten Carbide Anvils  
 Spindle Lock  
 Plastic Heat Guard  
 Painted Frame  
 Supplied in fitted case



Code	Range mm/Inch	A mm	C mm	Accuracy mm
50-730-001	0-25			0.004

Repeatability: 0.001mm  
 Measuring force: 5 – 10N  
 Operating temperature; 0 to 40° C  
 Relative humidity: Maximum 80%  
 Power: 1 x SR44: 1.5V battery



- 1 Spindle Lock
- 2 Thimble
- 3 Ratchet Stop
- 4 LCD Display
- 5 Metric / Inch Select Button
- 6 On /Off / Zero Button

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## Electronic Micrometer 50-730-001

## Setting and Use Instructions

Clean micrometer spindle and measuring anvils with soft cloth or paper to remove any oil or particles which may affect the measurements

Ensure that the micrometer is thermally stabilised with the temperature where it is to be used

Ensure that the spindle lock is off

Power up micrometer by pressing the On/Off / Zero button (5)

Select metric or inch system by pressing Metric/Inch button (6)

Use the ratchet stop to move the spindle until it touches the fixed anvil. Allow the ratchet to turn 1 ½ to 2 revolutions for the final positioning

Set zero in this position (button 5)

Zero can be set by using button 6 at any position in the micrometers range. This is useful when checking the tolerance of a component

## Operating Care

Do not use any organic solvent for cleaning such as acetone etc.

Keep instrument away from strong magnetic fields and high voltage environments which can affect the correct working of the electronic pack

Prevent the ingress of oil and liquids into the electronics

Do not use or store the micrometer in direct sunlight, or in an excessively hot or cold environment

To conserve the battery turn the instrument off after use

Remove battery if the instrument is not to be used for a long period of time

Do not disassemble or drop the instrument

**Do not mark the instrument by engraving, etching or any other permanent method of marking as this will invalidate the warranty**

## Specifications:

Operating Temperature: 0 – 40 deg.C

Storage Temperature: -20 to 70 deg. C

Relative Humidity: ≤ 80%

Power: 1 x SR44: 1.5V battery

## Fault Finding

Failure	Causes	Remedy
Digits flash	Battery voltage low	Replace battery
No display	Bad battery contacts	Clean battery contacts
No display	Battery voltage low	Replace battery
Display is confused or dead	Strong disturbance to micrometer	Remove and reset battery after 4 minutes

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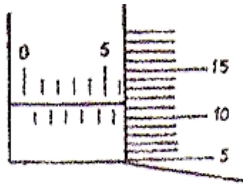
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Electronic Micrometer 50-730-001

Mechanical Thimble and Sleeve

Reading Example: Metric

When reading the micrometer ensure that your line of sight is directly above the graduated scale on the sleeve and the thimble scale to avoid parallax reading errors



Example for division 0.01mm

Reading:

From Sleeve: 6mm

From thimble: 0.11mm

Final readings should be

$$6. + 0.11 = 6.11\text{mm}$$

### Cleaning and Basic Checking Procedure

Remove any oil, grease, dust or small particles which may cause damage to the micrometer or affect its accuracy when taking measurements. Use a soft lint free cloth or paper together with a proprietary instrument cleaning agent. Do not use acetone as this can damage parts of the micrometer

Before use check that the ratchet mechanism functions correctly

Check the spindle movement by using the ratchet stop to traverse the spindle through its complete travel

Check that the measuring faces are in good condition

Check the locking mechanism works correctly

### Zero Point Checking and Adjustment

Use the ratchet stop to move the spindle until it touches the fixed anvil. Allow the ratchet to turn 1 ½ to 2 revolutions for the final positioning

The zero point on the thimble should now coincide with the reference graduated base line on the sleeve

For micrometers above 25mm / 1" use the supplied setting standard or a gauge block to check the zero position

If the zero point does not line up as required, it can be corrected by using the following procedure

When the zero point deviation on the thimble is under 2 divisions from the graduated base line

Turn the sleeve using the "C" spanner provided until correct alignment is achieved

When the zero point deviation on the thimble is over 2 divisions from the graduated base line

Hold the frame and the thimble and loosen the ratchet stop using the spanner provided

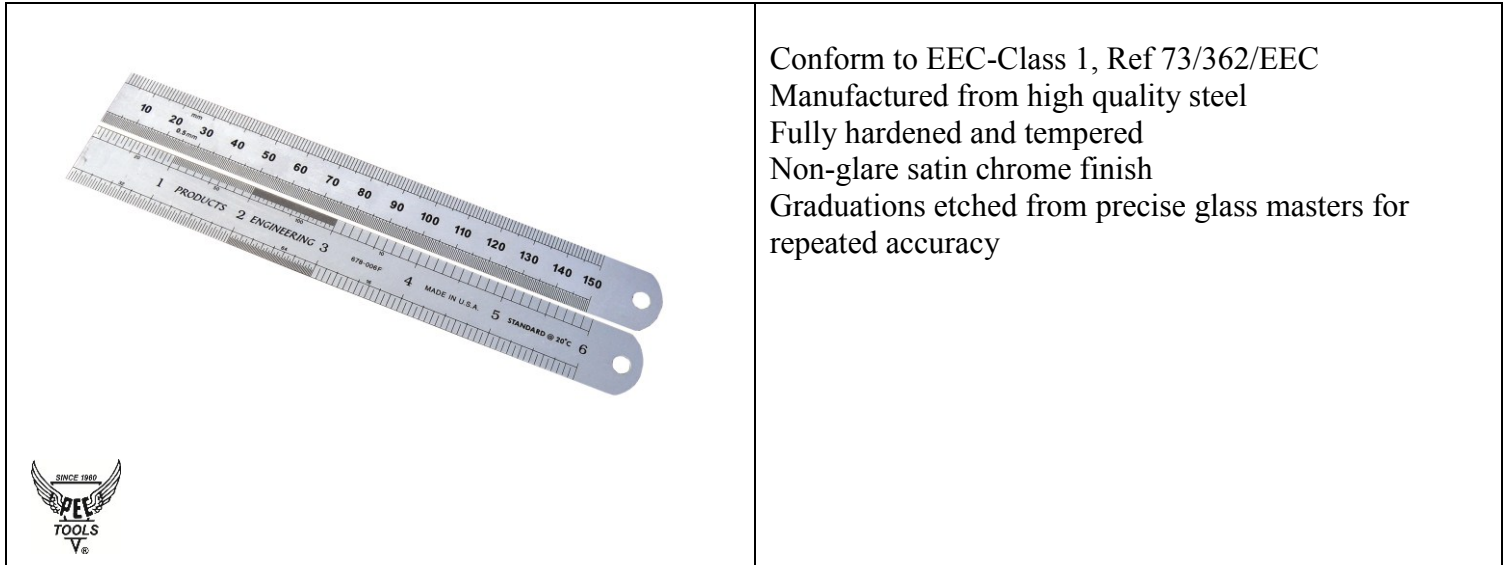
Disconnect the coupling of the thimble to the spindle by giving a light shock to the side of the thimble

Turn the thimble until the zero point is in alignment with the base line on the sleeve

Press the thimble against the spindle and re-tighten with the spanner to achieve a positive coupling

Re-check the zero position, any final small adjustment can now be made using the "C" spanner to re-position the sleeve to the thimble zero

Steel Rules Metric and Inch Two Sided with Round End



Conform to EEC-Class 1, Ref 73/362/EEC  
 Manufactured from high quality steel  
 Fully hardened and tempered  
 Non-glare satin chrome finish  
 Graduations etched from precise glass masters for repeated accuracy

Code	Length	Type	Width and Thickness	Rule Marking Front Face (inch)	Rule Marking Reverse Face Metric)	Style	End Style
678-006F	150mm / 6"	Rigid	19 x 0.5mm	16ths, 32nds, 64ths 10ths, 20ths, 50ths, 100ths	1.0mm and 0.5mm	64R	D End

EEC Directive 73-362 / EEC: Rules Class 1 and 2

For Metric Scales Only: (there is no specification for Inch Scales)

Permissible Errors: For EEC Class 1 Rules

Maximum permissible error between 2 intervals upto 1mm = 0.1mm

Maximum permissible error between two intervals not exceeding 10mm = 0.2mm

From Rule End: Above tolerance increased by 0.1mm

Examples:

Rule End to 1mm graduation = Normal Tol. 0.1mm + Additional Tol. 0.1mm = 0.2mm

Rule End to 10mm graduation = Normal Tol. 0.2mm + Additional Tol. 0.1mm = 0.3mm

Overall Length Tolerance

$$\text{Tol} = [a + (b \times L)]$$

a = 0.1 for class 1

b = 0.1 for class 1

L = Length of scale rounded up to the nearest metre

Example for a 300mm rule, when measurement is taken from the 10mm graduation to the 300mm graduation:

$$\text{Tol} = [0.1 + (0.1 \times 1)] = 0.2\text{mm}$$

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Eye Loupe with LED Illumination



Illuminated LED Eye Loupe  
Magnification X10  
Adjustable bright LED light with ON/OFF switch  
Black finish