



High-speed and High-accuracy Digimatic Micrometer QuantuMike

Small Tool Instruments
and Data Management



DIGIMATIC *S1*

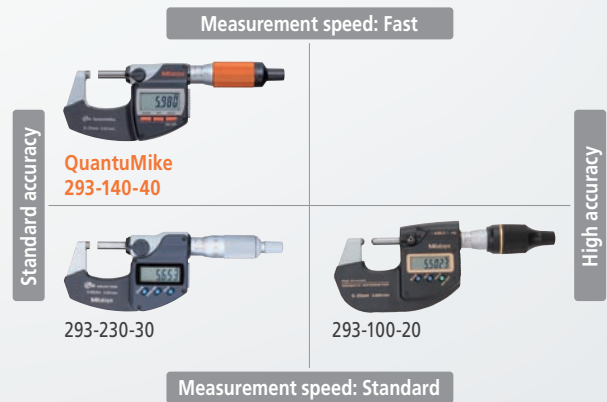


COOLANT PROOF™ IP65

High precision, further progress

Significantly reduces time for workpiece approach and release

Utilizes a 2.0 mm pitch, reducing approach time by approximately 60%. Furthermore, the workpiece release time is also shortened, making it possible to dramatically reduce measuring times with multi-stepped workpieces. The QuantuMike is also designed to be easier to use in various types of workplaces.



1

High speed & High accuracy

Achieves spindle movement 4 times faster than standard metric micrometers. Enables more efficient measurement work through speedy movement and excellent accuracy with a maximum permissible error (MPE) of just $\pm 1 \mu\text{m}$.

2

Reliable

Detects when the spindle comes into contact too quickly. Is also equipped with functions such as tolerance judgment, calculation, and calibration timing notification that allow measurement work to be performed reliably, without human error.

3

Easy to use

Equipped with various features to meet the needs of operators, such as a large display and bidirectional communication. Designed for ease of use, the main unit enables comfortable measurement in actual manufacturing processes.

QuantuMike

The product name QuantuMike is a combination of Quantum and Micrometer. This name reflects the quantum leap forward in precision measurement that our company has pioneered, as well as our commitment to advancement and innovation.





See video from here



TECHNOLOGY

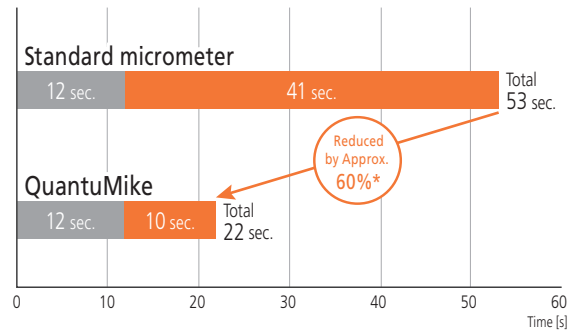
1 High speed & High accuracy



High-speed movement for faster measurement

Using our unique processing technology, we have produced a highly accurate, wider thread pitch for the slim spindle. Unlike a typical metric micrometer with a 0.5 mm screw lead, the thimble moves the spindle 2.0 mm in a single rotation, allowing for rapid measurement. Because the spindle can be released by a large amount with just a small amount of rotation. It is ideal for when various dimensions need to be measured.

Comparison of time needed to measure a 6-stepped workpiece (with one hand)



*According to Mitutoyo's comparison test data

High accuracy measurement of $\pm 1 \mu\text{m}$ / 50 μinch

With a maximum permissible error (MPE) of just $\pm 1 \mu\text{m}$ *, QuantuMike is suitable for workpieces that require increasingly high accuracy.

* $\pm 2 \mu\text{m}$ in a measurement range of 50 - 100 mm

Ratchet thimble mechanism for stable measurement

The QuantuMike features a ratchet thimble mechanism that allows stable measurement to be performed, even when operated one-handed. Ratcheting works with both the thimble and the speeder. The sound of the ratchet allows the user to verify the certainty of operation, and the speeder ratchet is convenient for rapid spindle feed.

Can be used in environments where there is water, oil, or dust

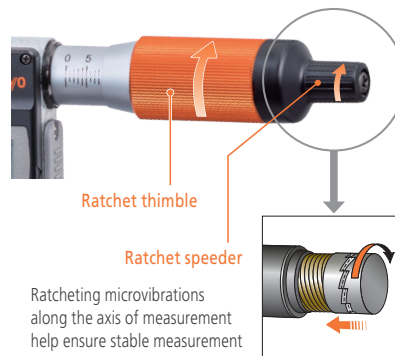
The micrometer achieves protection level IP65 for water-resistant and dust-resistant performance. It can be used with confidence even at sites where it may be splashed by coolant.



COOLANT PROOF™ IP65



Ratchet thimble mechanism



Reliable operation due to the consistent force of the ratchet mechanism

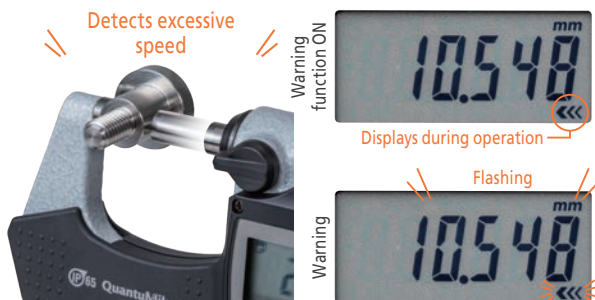


ACCESSIBILITY

2 Reliable

Approach speed warning function

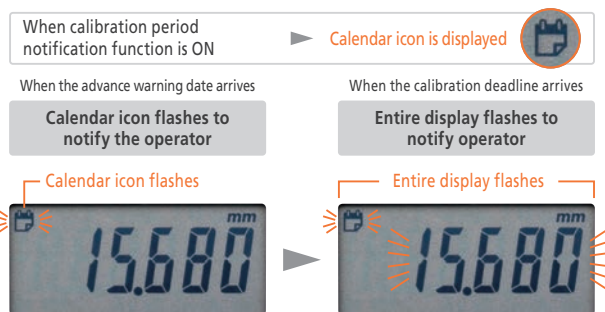
NEW



The approach speed warning function detects collisions with workpieces due to excessive speed. The display flashes when this feature is enabled, making it possible for even inexperienced operators to obtain stable and accurate measurement results.

Calibration schedule alert function

NEW



The calibration warning date and calibration due date can be set. A warning is displayed when the calibration time approaches and on the calibration date to prevent skipped calibration. This is an effective function for proper management of the Digimatic gage.

Operators can measure more effectively with tolerance judgement and calculation functions

NEW

Measurement with QuantuMike



Displays tolerance judgment mark

Tolerance judgment function: ON



Calculates and displays correction value

Calculation function: ON

Correction value can be read directly



Customized key setting allows the user to easily switch between measurement values and calculation results with the press of a button.

Simply enter the calculation result



The QuantuMike determines whether the measurement value is within the upper and lower limits of tolerance and displays a tolerance judgment mark. The user can judge pass/failure at a glance. Also, using the calculation function, it is possible to calculate correction values for machine tools from the measurement results. This eliminates the potential inconvenience of calculations and prevents human errors such as confusing plus and minus values when entering correction values into a machine tool, thereby contributing to the reduction of processing defects.

Key operation lock to prevent errors



The function settings can be locked to prevent them from being changed.

Auto power ON /OFF

If the QuantuMike is left idle for approx. 20 minutes, the power will automatically turn off to reduce battery consumption. Turning the spindle or operating the keys causes the power to come on automatically. This feature can also be disabled if it's not required.

USABILITY

3 Easy to use

Large display with excellent visibility



The display portion has been increased without enlarging the body of the unit itself. Measurement values and feature icons are now easier to see from any angle.

Large buttons and key customization



Frequently used functions can be easily recalled for improved work efficiency. Compared with conventional models, the size of the buttons is larger, making them easier to press. Key operation settings can be freely modified.

Supports bidirectional serial communication* to dramatically improve work efficiency by connecting to a PC or mobile device

Refer to Bulletin No.E12051 for details.
Measurement Data Management System



In addition to Digimatic d1/d2 (output), support is also provided for Digimatic S1 (input/output) communication. Bidirectional serial communication enables easy setting and management of Digimatic gages. Individual management of Digimatic gages can be performed from a PC, and settings can also be changed. The same settings can also be applied to multiple Digimatic gages.

*An optional cable and measurement data input unit are required for bidirectional serial communication (see page 7).

Please note that S1 communication cannot currently be used with the U-WAVE series. Additionally, USB-ITPAK V3.0 must be installed on the PC being used.



U-WAVE fit

Measurement Data Wireless Communication System
Measurement data from micrometers and calipers with Digimatic output can be wirelessly transferred to PCs, smartphones, tablets and other such devices.

MeasurLink[®] ENABLED

Data Management Software by Mitutoyo
Measurement Data Network System
MeasurLink[®] is a measurement data management system based on databases (SQL Server). You can build a network to manage the measurement results and measuring instruments simply by combining the required functions. MeasurLink[®] is a registered trademark of Mitutoyo Corporation in Japan and Mitutoyo America Corporation in the United States.

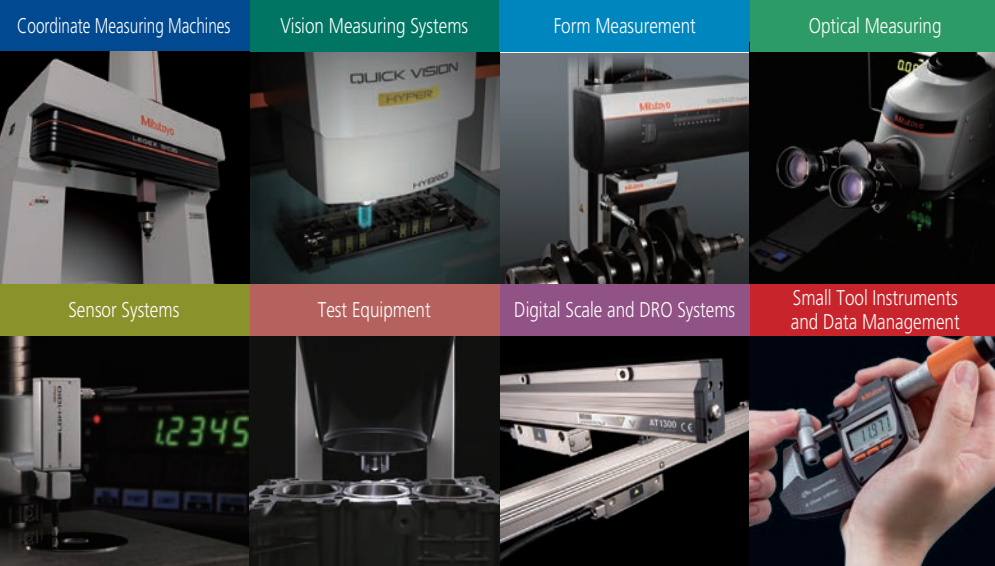
DIGIMATIC S1

Digimatic S1
This is the original Mitutoyo bidirectional serial communication system. In addition to outputting measurement data, it is also possible to perform such operations as setting and controlling the Digimatic gage itself and collecting individual information of Digimatic gages from the connected PC.



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Whatever your challenges are, Mitutoyo supports you from start to finish.

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.

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