

Micrometer

The origin of Mitutoyo's trustworthy brand of small tool instruments

ABSOLUTE Digimatic Micrometers SERIES 227 — with Adjustable Measuring Force

MeasurLink¹ ENABLED
Data Management Software by Mitutoyo

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Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).

ABSOLUTE™

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- Digimatic micrometer dedicated to applications requiring a constant/low measuring force such as measuring wire, paper, and plastic/rubber parts.
- Ratchet mechanism in the thimble applies constant force to workpiece.
- Compact and easy to handle.
- Measuring force is adjustable (in steps) to suit various kinds of workpieces.
- High-accuracy measurement can be performed even by unskilled operators due to the repeatability of the automatically applied measuring force.
- Non-rotating spindle.
- Measuring faces: Carbide.
- In addition to standard specification, a non-rotating spindle type tooth thickness micrometer (refer to page B-35 for details) is also available.



Technical Data

- Flatness: 0.3 μm/0.00012 in
- Parallelism: 2 μm/0.00008 in
- Measurement posture: horizontal orientation only (Recommended spindle inclination: within ±3°)
- SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 5 years under normal use
- Length standard: Electrostatic capacity absolute sensor
- Standard accessories: Reference bar, 1 pc. (except for measuring range 0 to 15 mm (0 to 0.6 in) / 0 to 10 mm (0 to 0.4 in) models)
- Screwdriver (**210183**), 1 pc.

Functions

Adjustable measuring force mechanism
Origin point setting
Zero setting
Hold
Function Lock
Auto power off
Measurement data output
Error alarm

Optional Accessories

- Connecting cables
1 m: **05CZA662**
2 m: **05CZA663**
- USB Input Tool Direct
USB-ITN-B (2 m): **06AFM380B**
- Connecting cables for **U-WAVE-T**
160 mm: **02AZD790B**
For foot switch: **02AZE140B**
Refer to page A-27 for details.

SPECIFICATIONS

Metric

Order No.	Measuring force (N)	Range (mm)	Resolution (mm)	Maximum permissible error J_{MPE} (μm)	Measuring force (N)	Accuracy of the selected measuring force* (N)	Repeatability of measuring force* (N)	Mass (g)
227-201-20	0.5 - 2.5 (adjustable)	0 - 15	0.001	±2	0.5, 1.0, 1.5, 2.0, 2.5	± (0.1+ the selected measuring force/10)	within 0.1	300
227-203-20		15 - 30						380
227-205-20	2 - 10 (adjustable)	0 - 10			345			
227-206-20		10 - 20			425			
227-207-20		20 - 30			415			

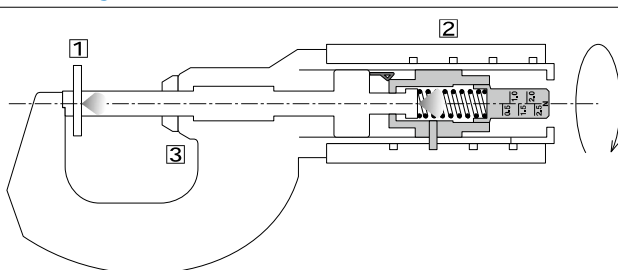
* These values are guaranteed when micrometer is used in a horizontal orientation (within ±3 degrees)

Inch / Metric

Order No.	Measuring force (N)	Range (in)	Resolution	Maximum permissible error J_{MPE} (in)	Measuring force (N)	Accuracy of the selected measuring force* (N)	Repeatability of measuring force* (N)	Mass (g)
227-211-20	0.5 - 2.5 (adjustable)	0 - 0.6	0.00005 in/ 0.001 mm	±0.0001	0.5, 1.0, 1.5, 2.0, 2.5	± (0.1+ the selected measuring force/10)	within 0.1	300
227-213-20		0.6 - 1.2						380
227-215-20	2 - 10 (adjustable)	0 - 0.4			345			
227-216-20		0.4 - 0.8			425			
227-217-20		0.8 - 1.2			415			

* These values are guaranteed when micrometer is used in a horizontal orientation (within ±3 degrees)

Constant-Measuring-Force Mechanism



- ① Measuring force is generated by the action of trapping a workpiece between the spindle face and the anvil.
- ② The constant-force unit applies the specified measuring force.
- ③ When the preset measuring force is reached, the count on the LCD is automatically held and the hold symbol appears. (To cancel the hold, reverse the thimble more than 1/10 revolution and press the hold button.)

Adjustable Measuring Force

To preset the measuring force, adjust the measuring force setting scale on the thimble with the screwdriver supplied.



DIMENSIONS

