

Micrometer

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

ABSOLUTE Digimatic Micrometers SERIES 227 — with Adjustable Measuring Force

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- 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.



SPECIFICATIONS

Metric								
Order No.	Range (mm)	Measuring force (N)	Resolution (mm)	Accuracy*1 (μm)	Measuring force (N)	Accuracy of the selected measuring force*2 (N)	Repeatability of measuring force*1 (N)	Mass (g)
227-201-20	0 - 15	0.5 - 2.5 (adjustable)	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	0 - 10	2 - 10 (adjustable)			2, 4, 6, 8, 10	± (0.4+ the selected measuring force/10)	within 0.4	345
227-206-20	10 - 20							425
227-207-20	20 - 30		415					

*1 Excluding quantizing error of ±1 count

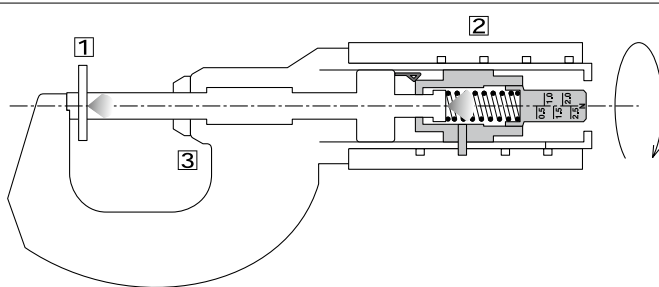
*2 These values are guaranteed when micrometer is used in a horizontal orientation (within ±3 degrees)

Inch / Metric								
Order No.	Range (in)	Measuring force (N)	Resolution	Accuracy*1 (in)	Measuring force (N)	Accuracy of the selected measuring force*2 (N)	Repeatability of measuring force*1 (N)	Mass (g)
227-211-20	0 - 0.6	0.5 - 2.5 (adjustable)	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	0 - 0.4	2 - 10 (adjustable)			2, 4, 6, 8, 10	± (0.4+ the selected measuring force/10)	within 0.4	345
227-216-20	0.4 - 0.8							425
227-217-20	0.8 - 1.2		415					

*1 Excluding quantizing error of ±1 count

*2 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.)

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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[™]

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
 Approx. 18,000 hours in continuous use
 Length standard: Electrostatic capacity absolute sensor
 Standard accessories: Reference bar, 1 pc.
 (except for measuring range 0-15 mm (0-0.6 in)/0-10 mm (0-0.4 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 B-68 for details.

Adjustable Measuring Force

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



DIMENSIONS

