MeasurLink® ENABLED
Data Management Software by Mitutoyo

ABSOLUTE™

PROPRIETARY INSPECTION CERTIFICATE

Ultra-high Accuracy Digimatic Micrometer SERIES 293

- The flagship model, featuring unparalleled high accuracy and resolution.
- Maximum Permissible Error (J_{MPE}) of ±0.5 µm is achieved with our innovative 0.1 µm resolution ABS (absolute) rotary sensor and screw machining technology.
- A highly rigid frame and high-performance constant-force mechanism allow stable measurements.
- Body heat transferred to the instrument is reduced by a (removable) heat shield, minimizing the error caused by thermal expansion of the frame when performing handheld measurements.



293-100-20

Measurement example





Recommended micrometer stand: **156-101-10**

Functions

Preset (ABS measurement system):
The measurement origin can be preset to any value within the display range for convenience in measuring.
Zero-setting (INC measurement system):
The display can be zeroed at any position of the spindle, making comparison measurement easier. Returning to the absolute-measurement mode is easily accomplished.
Hold:
The function that holds the display of value is useful when it is difficult to see the measured value at the measurement point. When the function is cancelled, the previous zero-set point or a measured value with reference to the origin is displayed.
Resolution switching:
The resolution of the display can be switched. If 0.1 µm measurement is not required, the resolution can be switched to 0.5 µm.
Function lock:
Functions such as preset or zero-set can be locked to avoid inadvertently changing the origin position.
On/off:
The power can be turned off after measurement is complete. Even after the power is turned off, the origin or last zero-set position remains in the memory.
Auto power off:
Even if the power is left on, the power turns off automatically if the micrometer is not used within a 20-minute period.
Measurement data output:
Measurement data can be output, allowing easy incorporation of this instrument into a statistical process control or measurement system.
Error display:
In the unlikely event of a display overflow or calculation error, an error message is displayed and measurement stops. Measurement cannot continue until the error is corrected.
Also, if the battery voltage drops below a certain point, the battery indicator will turn on before measurement becomes impossible, warning the user that the battery needs to be replaced.

SPECIFICATIONS

	Metric	Inch/Metric
Code No.	**293-100-20**	**293-130-20**
Measuring range	0 – 25 mm	0 – 1 in
Resolution	0.0001 mm/0.0005 mm (switchable)	0.000005 in/0.00002 in 0.0001 mm/0.0005 mm (switchable)
Maximum permissible error J_{MPE}	±0.5 µm	±0.00002 in
Flatness	0.3 µm	0.000012 in
Parallelism	0.6 µm	0.000024 in
Measuring surface	ø3.2 mm	
Measuring force	7 to 9 N	
Position detection method	Electromagnetic induction type ABS rotary sensor	
Mass	405 g (445 g with heat shield attached)	
Power source	Lithium battery (CR2032) ×1	
Battery life	Approx. two years when used under normal conditions	

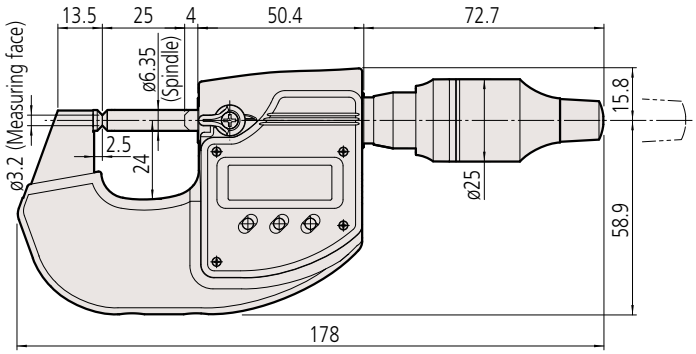
Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.

Optional Accessories

Code No.	Type	Description
264-020	—	USB Input Tool Series USB Keyboard Signal Conversion Type **IT-020U**
05CZA662	B	Connection cable (1 m)
05CZA663	B	Connection cable (2 m)
06AFM380B	B	USB Input Tool Direct (2 m)
02AZD730G	IP67	**U-WAVE-T**
02AZD880G	Buzzer	**U-WAVE-T**
02AZE200	—	**U-WAVE-T** mounting bracket
02AZD790B	B	Connection cable for **U-WAVE-T** (160 mm)
02AZE140B	B	Connection cable for **U-WAVE-T** For foot switch

DIMENSIONS

Unit: mm



Standard Accessories

Heat shield (**04AAB969A**: **293-100-20**
04AAB969B: **293-130-20**) ×1
Spanner (**200877**) ×1
Screwdriver (**04AAB985**) ×1
Cleaning paper for measuring faces 20 sheets
Inspection certificate





Note: To install the heat shield, use the screws attached to the bottom of the micrometer frame.

Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.