

Micrometer

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

Digimatic outside micrometers SERIES 293

- Models equipped with a Digimatic output port can form part of a statistical process control or networked measurement system. (Refer to page A-3 for details.)
- Constant-force device: ratchet stop
- Interface Input Tools are available that enable the conversion of measurement data to keyboard signals that are then directly input to cells in off-the-shelf spreadsheet software such as Excel. (Refer to page A-5 for details.)
- Measuring faces: Carbide



SPECIFICATIONS

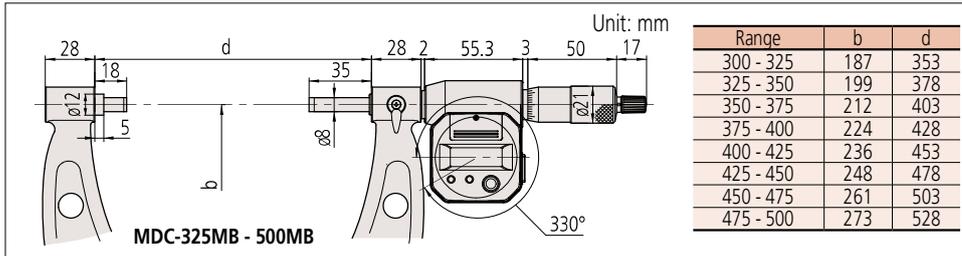
Metric				
Order No.	Range	Accuracy*	Flatness	Parallelism
293-582	300 - 325mm	±6μm	0.6μm	5μm
293-583	325 - 350mm			
293-584	350 - 375mm	±7μm		6μm
293-585	375 - 400mm			
293-586	400 - 425mm			
293-587	425 - 450mm	±8μm	7μm	
293-588	450 - 475mm			
293-589	475 - 500mm			

* Excluding quantizing error

Inch/Metric				
Order No.	Range	Accuracy*	Flatness	Parallelism
293-782	12"-13"	±.0003"	.000024"	.0002"
293-783	13"-14"			
293-784	14"-15"	±.00035"		.00024"
293-785	15"-16"			
293-786	16"-17"			
293-787	17"-18"	±.0004"	.00028"	
293-788	18"-19"			
293-789	19"-20"			

* Excluding quantizing error

DIMENSIONS



SERIES 293 — Digimatic outside micrometers

- Extended battery life of approximately 2.4 years.
- An economical price is achieved through simple design and excluding the data output function.
- One switch operation (Origin Set) for easy use.
- Equipped with Ratchet Stop for constant measuring force.
- Measuring faces: Carbide



SPECIFICATIONS

Metric			
Order No.	Range	Resolution	Accuracy*
293-821-30	0 - 25mm	0.001mm	±2μm

* Excluding quantizing error

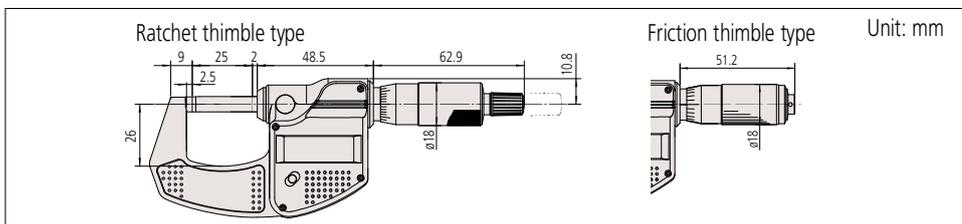
Inch/Metric			
Order No.	Range	Resolution	Accuracy*
293-831-30	0 - 1"	.00005"/0.001mm	±.0001"

* Excluding quantizing error

Inch/Metric			
Order No.	Range	Resolution	Accuracy*
293-832-30	0 - 1"	.00005"/0.001mm	±.0001"

* Excluding quantizing error

DIMENSIONS



Technical Data

Resolution: 0.001mm or .0001"/0.001mm
 Measuring force: 10 to 15N
 SR44 (2 pc), 938882, for initial operational checks (standard accessory)
 Battery life: Approx. 1.8 years under normal use
 Length standard: Electromagnetic rotary sensor
 Standard accessories: Reference bar, 1 pc
 Spanner (200154), 1 pc

Functions

Origin point setting (ABS measurement system): Resets the ABS origin at the current spindle position to the minimum value of the measuring range and switches to ABS mode.
Zero-setting (INC measurement system): A brief press on the ZERO/ABS button sets display to zero at the current spindle position and switches to the incremental (INC) measuring mode. A longer press resets to the ABS measuring mode.

Hold: Pressing the HOLD button freezes the current value in the display. This function is useful for preserving a measurement in situations of poor visibility where the instrument must be moved away from the workpiece before the reading can be recorded.

Function lock: This function allows the PRESET (origin point setting) function and the ZERO (zero-setting) function to be locked to prevent these points being reset accidentally.

Auto power ON/OFF: The reading on the LCD disappears after this instrument is idle for about 20 minutes, but the reading and measurement mode are retained. Turning the spindle causes the reading to reappear.

Data output: Models equipped with this function have an output port for transferring measurement data to a Statistical Process Control (SPC) system.

Error alarm: In case of an overflow on the LCD or a computing error, an error message appears on the LCD, and the measuring function stops. This prevents an instrument from giving an erroneous reading. Also, when the battery voltage drops to a certain level, the low-battery-voltage alarm annunciator appears well before the micrometer becomes unusable.

Optional accessories

Connecting Cables
Recommended cables:
 L-Type (does not interfere with operating the thimble.)
 1m: 04AZB512
 2m: 04AZB513

Straight type (may interfere with operating the thimble.)
 1m: 959149
 2m: 959150
 Refer to page B-68 for detailed information about recommended cables.



An inspection certificate is supplied as standard. Refer to page X for details.

Technical Data

SR44 (1 pc), 938882, for initial operational checks (standard accessory)
 Length standard: Electromagnetic rotary sensor
 Standard accessories: Reference bar, 1 pc
 Spanner (301336), 1 pc

Functions

Zero-setting: A brief press on the ORIGIN button sets display to zero at the current spindle position (zero-setting), which allows easy comparison measurement.

Auto power ON/OFF: The reading on the LCD disappears after this instrument is idle for about 20 minutes, but the reading is retained. Turning the spindle causes the reading on the LCD to reappear.

Inch/Metric			
Order No.	Range	Resolution	Accuracy*
293-832-30	0 - 1"	.00005"/0.001mm	±.0001"

* Excluding quantizing error

Error alarm: In case of an overflow on the LCD or a computing error, an error message appears on the LCD, and the measuring function stops. This prevents an instrument from giving an erroneous reading. Also, when the battery voltage drops to a certain level, the low-battery-voltage alarm annunciator appears well before the micrometer becomes unusable.