Micrometer

Digimatic Outside Micrometers
SERIES 293

- This large Digimatic micrometer series is available in various sizes up to 500 mm. It features a ratchet stop for constant measuring force.
- Measuring faces: Carbide tipped

- All models have a measurement data output function that is useful for measuring large workpieces. This function allows you to easily send data via an optional communication cable or wireless system and import it to spreadsheet software or use it in various applications.
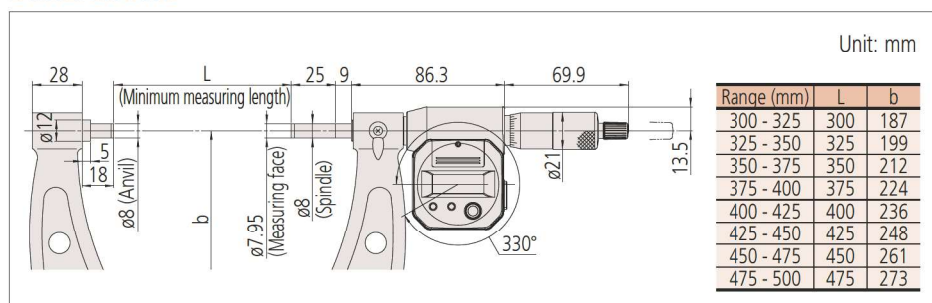
293-582

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:
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.
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 indicator appears well before the micrometer becomes unusable.

SPECIFICATIONS

Metric

Code No.	Range (mm)	Resolution (mm)	Measuring force (N)	Maximum permissible error J_{MPE} (µm)	Flatness (µm)	Parallelism (µm)
With SPC data output						
293-582	300 - 325	0.001	10 - 15	±6	0.6	5
293-583	325 - 350					
293-584	350 - 375					
293-585	375 - 400					6
293-586	400 - 425			±7		
293-587	425 - 450					
293-588	450 - 475			±8		
293-589	475 - 500					7

Inch/Metric

Code No.	Range (in)	Resolution	Measuring force (N)	Maximum permissible error J_{MPE} (in)	Flatness (in)	Parallelism (in)
With SPC data output						
293-782	12 - 13	0.0001 in /0.001 mm	10 - 15	±0.0003	0.000024	0.0002
293-783	13 - 14					
293-784	14 - 15					
293-785	15 - 16			±0.00035		0.00024
293-786	16 - 17					
293-787	17 - 18					
293-788	18 - 19			±0.0004		
293-789	19 - 20					0.00028

- Power source: SR44 battery (2 pcs.), **938882** included as standard (for operational checks)
- Battery life: Approx. 1.8 years under normal use
- Position detection method: Electromagnetic rotary sensor
- Standard accessories: Setting standard, 1 pc., Spanner (**200154**), 1 pc.

Optional Accessories

Code No.	Type	Description
264-020	—	USB Input Tool Series USB Keyboard Signal Conversion Type **IT-020U**
04AZB512	CR	Connection cable (1 m)
04AZB513	CR	Connection cable (2 m)
959149	C	Connection cable (1 m)
959150	C	Connection cable (2 m)
06AFM380C	C	USB Input Tool Direct (2 m)
02AZD730G	IP67	**U-WAVE-T**
02AZD880G	Buzzer	**U-WAVE-T**
02AZE200	—	**U-WAVE-T** mounting bracket
02AZD790C	C	Connection cable for **U-WAVE-T** (160 mm)
02AZE140C	C	Connection cable for **U-WAVE-T** For foot switch

DIMENSIONS

Unit: mm

Range (mm)	L	b
300 - 325	300	187
325 - 350	325	199
350 - 375	350	212
375 - 400	375	224
400 - 425	400	236
425 - 450	425	248
450 - 475	450	261
475 - 500	475	273

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- Simple design with no data output for accuracy at a lower cost.
- Provided only with an origin-set button for easy origin setting.
- Extended battery life of approximately 2.4 years, which helps reduce the number of battery replacements required.
- Equipped with Ratchet Stop for constant measuring force.
- Measuring faces: Carbide tipped

293-821-30

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.
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 indicator appears well before the micrometer becomes unusable.

SPECIFICATIONS

Metric — With ratchet stop

Code No.	Range (mm)	Resolution (mm)	Measuring force (N)	Maximum permissible error J_{MPE} (µm)	Flatness (µm)	Parallelism (µm)	Mass (g)
Without SPC data output							
293-821-30	0 - 25	0.001	5 - 10	±2	0.3	2	270

Inch/Metric — With ratchet stop

Code No.	Range (in)	Resolution	Measuring force (N)	Maximum permissible error J_{MPE} (in)	Flatness (in)	Parallelism (in)	Mass (g)
Without SPC data output							
293-831-30	0 - 1	0.00005 in/0.001 mm	5 - 10	±0.0001	0.000012	0.00008	270

Inch/Metric — With friction thimble

Code No.	Range (in)	Resolution	Measuring force (N)	Maximum permissible error J_{MPE} (in)	Flatness (in)	Parallelism (in)	Mass (g)
Without SPC data output							
293-832-30	0 - 1	0.00005 in/0.001 mm	5 - 10	±0.0001	0.000012	0.00008	270

- Power source: SR44 battery (1 pc.), **938882** included as standard (for operational checks)
- Battery life: Approx. 2.4 years under normal use
- Position detection method: Electromagnetic rotary sensor
- Spanner (**301336**), 1 pc.

DIMENSIONS

Unit: mm

Ratchet thimble type

9 | 25 | 2 | 48.5 | 62.9 | 10.8
2.5
26
ø6.3 (Measuring face)
ø6.35 (Spindle)
ø18

Outside Micrometers (Digimatic)

Mitutoyo