

Micrometer

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

Disk Micrometers SERIES 323, 223, 123

MeasurLink ENABLED
Data Management Software by Mitutoyo

- Measures "root tangent length" of spur gears and helical gears.
- Determination of the root tangent length: refer to "Quick Guide to Precision Measuring Instruments".

- Equipped with Ratchet Stop for constant measuring force.
- Supplied with a setting standard (except for 0-25 mm/0-1 in measuring range).



123-101



323-250-30



123-103

SPECIFICATIONS

Metric					
Order No.	Range (mm)	Resolution (mm)	Accuracy* (μm)	Anvil dia. (mm)	Measurable module
Digimatic (LCD)					
323-250-30	0 - 25	0.001	±4	ø20	0.5 - 6
323-251-30	25 - 50				
323-252-30	50 - 75		±6		
323-253-30	75 - 100				

* Excluding quantizing error of ±1 count

Inch / Metric					
Order No.	Range (in)	Resolution	Accuracy* (in)	Anvil dia. (in)	Measurable module
Digimatic (LCD)					
323-350-30	0-1	0.00005 in/ 0.001 mm	±0.0002	0.787	0.5 - 6
323-351-30	1-2				
323-352-30	2-3		±0.0003		
323-353-30	3-4				

* Excluding quantizing error of ±1 count

Metric							
Order No.	Range (mm)	Graduation (mm)	Accuracy (μm)	Anvil dia. (mm)	Measurable module		
Mechanical counter model							
223-101	0 - 25	0.01	±4	ø20	0.5 - 6		
223-102	25 - 50						
Analog							
123-101	0 - 25	0.01	±4	ø20	0.5 - 6		
123-113*							
123-102	25 - 50					±6	
123-114*							
123-103	50 - 75						±7
123-115*							
123-104	75 - 100		±8				
123-116*							
123-105	100 - 125			±9			
123-106	125 - 150						
123-107	150 - 175						
123-108	175 - 200						
123-109	200 - 225						
123-110	225 - 250	ø30					
123-111	250 - 275						
123-112	275 - 300						

* The measuring disks have carbide tips.

Note 1: For functional details of **series 323**, refer to page B-8. Optional connecting cable is available only for water-proof type (Digimatic model).

Note 2: Root tangent length measurement is not available for some types of gears.

MeasurLink ENABLED
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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).



These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.



IP Codes (series 323)

Level 6: Dust-proof.

No ingress of dust allowed.

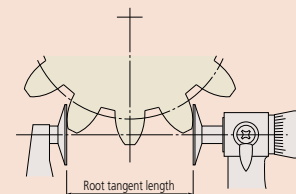
Level 5: Protected against water jets.

Water projected in jets against the enclosure from any direction shall have no harmful effects.

Technical Data

- Flatness: 1 μm/0.00004 in for models up to 100 mm/4 in
1.6 μm/0.000063 in for models over 100 mm/4 in
- Parallelism: 4 μm for models up to 50 mm
0.0002 in for models up to 2 in
6 μm for models up to 100 mm
0.0003 in for models up to 4 in
(5 + R/75) μm for models over 100 mm,
R = max. range (mm)
fraction rounded up

Root Tangent Length of Gear (En)



Technical Data

- Battery for **series 323**
SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for **series 323**)
- Length standard: Electromagnetic rotary sensor (for **series 323**)
- Standard accessories: Reference bar, 1 pc. (except for measuring range 0-25 mm (0-1 in) models) Spanner (**301336**), 1 pc.

Optional Accessories for Series 323

- Connecting cables
1 m: **05CZA662**
2 m: **05CZA663**
- USB Input Tool Direct
USB-ITN-B (2 m): **06AFM380B**
- **U-WAVE-T** dedicated connection cable
160 mm: **02AZD790B**
For foot switch: **02AZE140B**
Refer to page A-25 for details.

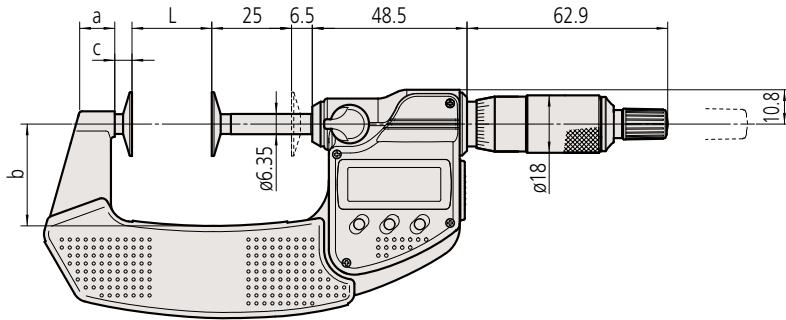
Wireless Data Output **U-WAVE™**

- **U-WAVE-TM 264-622** (IP67 type)
264-623 (Buzzer type)
- Connecting unit for **U-WAVE-TM**
02AZF310 (IP67/buzzer type common specification)
Refer to page A-15 for details.

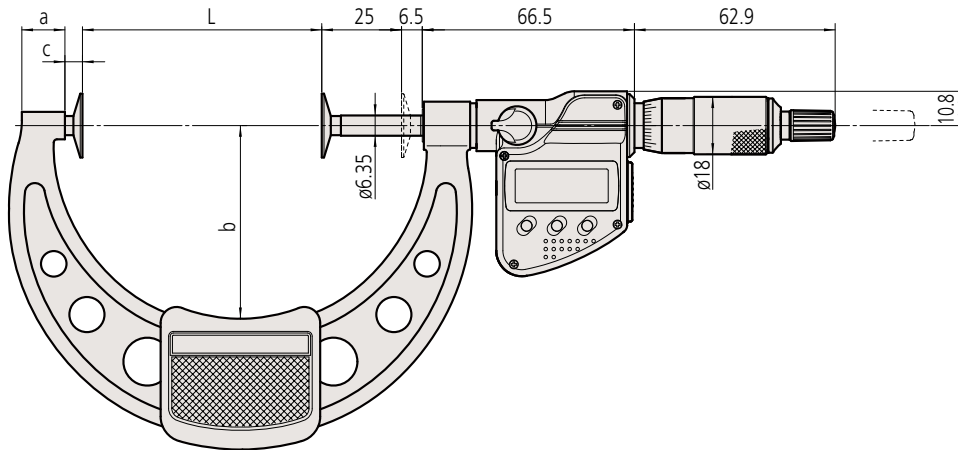
DIMENSIONS

Digimatic models up to 75 mm measuring range

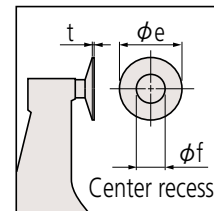
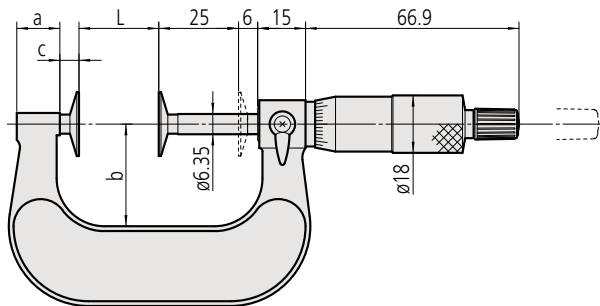
Unit: mm



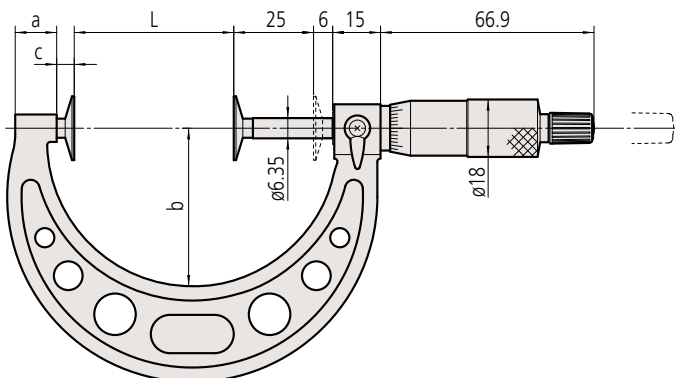
Digimatic models up to 100 mm measuring range



Analog models up to 50 mm measuring range



Analog over 50 mm measuring range



Range (mm)	L	a	b	c	e	f	t
Digimatic (LCD)							
0 - 25	0	9.2	25	4.5	20	8	0.7
25 - 50	25	11	31	5.4			
50 - 75	50	12.2	50	5.5			
75 - 100	75	14	60				
Analog							
0 - 25	0	13.8	25	5.7	20	8 (9.8)	0.7 (0.7)
25 - 50	25		32	5.5			
50 - 75	50	12	49				
75 - 100	75	14	63				
100 - 125	100	12	79	6	30	12	1
125 - 150	125	14.5	94				
150 - 175	150	15.2	106				
175 - 200	175	14.5	118				
200 - 225	200	13.5	130				
225 - 250	225		143				
250 - 275	250	156					
275 - 300	275	14.5	169				

Note: Data in () applies to those with carbide-faced disks.