

# Micrometer

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

MeasurLink<sup>®</sup> ENABLED  
Data Management Software by Mitutoyo

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).

## Blade Micrometers SERIES 422, 122 — Non-Rotating Spindle Type

MeasurLink<sup>®</sup> ENABLED  
Data Management Software by Mitutoyo

- The anvil and spindle are blade-shaped for measuring the groove diameter of shafts, keyways, and other hard-to-reach features.
- Carbide-tipped measuring faces are available.
- Non-rotating spindle type.
- Equipped with Ratchet Stop for constant measuring force.



Digimatic (LCD)  
422-230-30



122-101



Quickmike Type (LCD)  
422-411-20 IP65

ABSOLUTE™

### SPECIFICATIONS

Metric						
Order No.	Range	Resolution	Accuracy*	Remark		
Digimatic (LCD)						
422-230-30	0 - 25 mm	0.001 mm	±3 μm	Type A		
422-231-30	25 - 50 mm					
422-232-30	50 - 75 mm					
422-233-30	75 - 100 mm					
422-260-30	0 - 25 mm		±3 μm	Type B		
422-261-30	25 - 50 mm					
422-270-30	0 - 25 mm					Type C
422-271-30						

\* Excluding quantizing error of ±1 count

Metric Quickmike type					
Order No.	Range	Resolution	Accuracy*	Remark	
Digimatic (LCD)					
422-411-20	0 - 30 mm	0.001 mm	±3 μm	Type A	
422-412-20	25 - 55 mm				

\* Excluding quantizing error of ±1 count

Metric					
Order No.	Range	Graduation	Accuracy	Remark	
Analog					
122-101	0 - 25 mm	0.01 mm	±3 μm	Type A	
122-102	25 - 50 mm				
122-103	50 - 75 mm				
122-104	75 - 100 mm				
122-105	100 - 125 mm				
122-106	125 - 150 mm		±4 μm		
122-107	150 - 175 mm				
122-108	175 - 200 mm				
122-109	200 - 225 mm		±5 μm		
122-110	225 - 250 mm				
122-111	250 - 275 mm				
122-112	275 - 300 mm	±6 μm			
122-111	0 - 25 mm		±3 μm	Type B	
122-112	25 - 50 mm				
Analog (With carbide tip)					
122-161	0 - 25 mm	0.01 mm	±3 μm	Type C	
122-162	25 - 50 mm				
122-141	0 - 25 mm				
122-142	25 - 50 mm				

Notes: 1) A heat shield is provided with Digimatic models and 122-101, 122-161, 122-141 as standard.

Inch/Metric						
Order No.	Range	Resolution	Accuracy*	Remark		
Digimatic (LCD)						
422-330-30	0-1 in	0.0005 in/ 0.001 mm	±0.00015 in	Type A		
422-331-30	1-2 in					
422-332-30	2-3 in					
422-333-30	3-4 in					
422-360-30	0-1 in		±0.0002 in	Type B		
422-361-30	1-2 in					
422-370-30	0-1 in					Type C
422-371-30						

\* Excluding quantizing error of ±1 count

Inch/Metric Quickmike type					
Order No.	Range	Resolution	Accuracy*	Remark	
Digimatic (LCD)					
422-421-20	0-1.2 in	0.00005 in/ 0.001 mm	±0.00015 in	Type A	

\* Excluding quantizing error of ±1 count

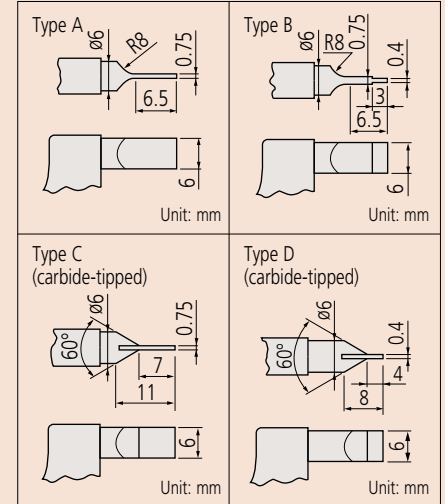
Inch								
Order No.	Range	Graduation	Accuracy	Remark				
Analog								
122-125	0 - 1 in	0.0001 in	±0.00015 in	Type A				
122-126	1 - 2 in							
122-127	2 - 3 in							
122-128	3 - 4 in							
122-135	0 - 1 in		±0.0002 in			Type B		
122-136							±0.00015 in	Type D
122-137								
122-151								

Notes: 1) A heat shield is provided with Digimatic models and 122-125, 122-135, 122-151 as standard.

### Technical Data

Parallelism  
3 μm for models up to 75 mm  
0.00015 in for models up to 3 in  
(3+R/100) μm for models over 75 mm  
0.0002 in for models over 3 in  
R = max. range (mm)  
fraction rounded up

### Type and Dimensions



### Battery for Series 422

SR44 (1 pc, 938882, for initial operational checks (standard accessory)  
Battery life: Approx. 2.4 years under normal use (for series 422-2XX, 3XX)  
Approx. 5 year under normal use (for series 422-4XX)  
Approx. 18,000 hours in continuous use

Length standard: Electromagnetic rotary sensor (for series 422-2XX, 3XX)

Electrostatic capacity absolute sensor (for series 422-4XX)

Standard accessories: Reference bar, 1 pc (except for measuring range 0-25 mm / 0-30 mm (0-1 in/0-1.2 in) models)

Spanner (301336), 1 pc (for series 122-1XX, 422-2XX, 3XX)

### Optional Accessories

Connecting cables for digital models

1 m: 05CZA662

2 m: 05CZA663

### USB Input Tool Direct

USB-ITN-B (2 m): 06AFM380B

Connecting for 422-230-30 to

422-271-30, 422-330-30 to 422-371-30

Wireless data output U-WAVE<sup>fit</sup>

U-WAVE-TM 264-622 IP67 type

264-623 Buzzer type

Connecting unit for U-WAVE-TM

02AZF310 (IP67 type)

Note: cannot be used with Quickmike type

Refer to page A-15 for details

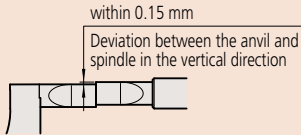


## DIMENSIONS

### Quickmike

Provides a speedy spindle feed of 10mm per thimble rotation which enables widely differently sized features to be measured quickly.

### Deviation Between the Anvil and Spindle in the Vertical Direction

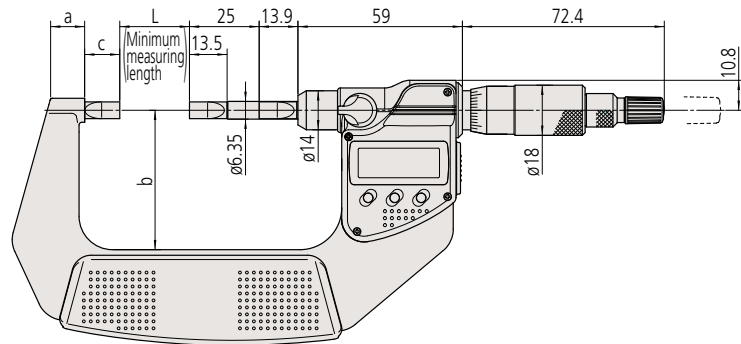


Deviation of 0.15 mm or less\* is guaranteed between the anvil and spindle in the vertical direction.

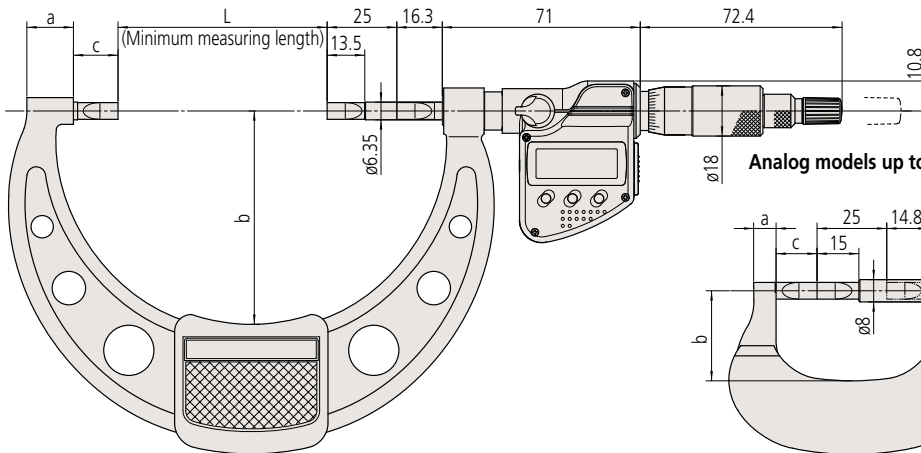
\* When the measuring range is 0 - 25 mm

### Digital models up to 50 mm measuring range

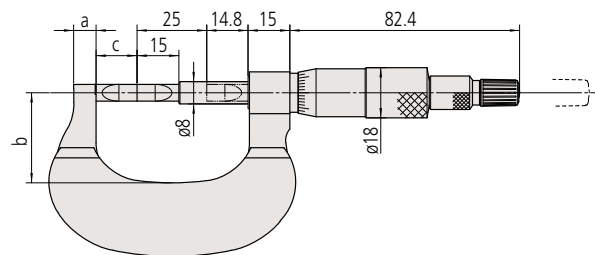
Unit: mm



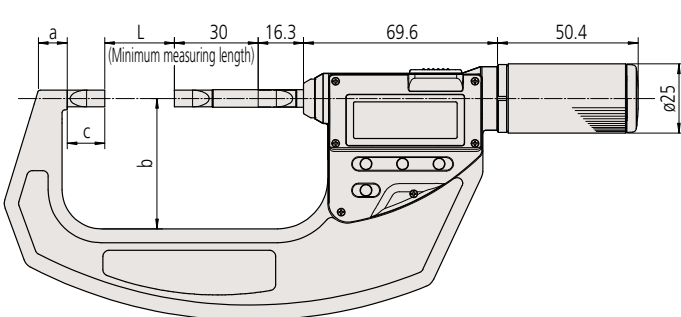
### Digital models over 75 mm measuring range



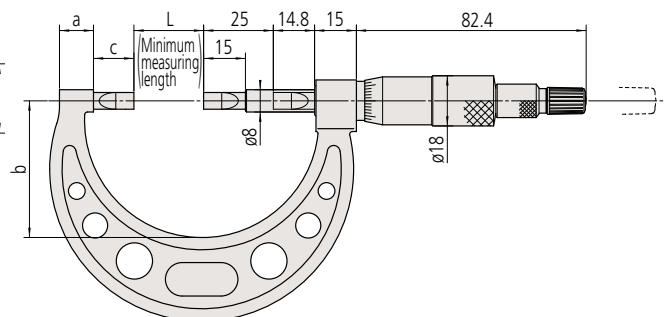
### Analog models up to 25 mm measuring range



### Quickmike type



### Analog models over 50 mm measuring range



Order No.	L	a	b	C
422-230-30	0	11	31	12.5
422-231-30	25	12.2	50	12.6
422-232-30	50	14.6	57	13
422-233-30	75	16.7	76	16
422-260-30	0	11	31	12.5
422-261-30	25	12.2	50	12.6
422-270-30	0	11	31	12.5
422-271-30				
122-101	25	7.8	32	15
122-102		12.2	49	14.5
122-103		14.6	60	
122-104		16.7	79	
122-105	100	18.8	94	17.9
122-106	125	19.1	106	18.3
122-107	150	18.2	118	18.5
122-108	175	16.8	130	18.9
122-109	200	18	143	17.7
122-110	225		156	18.7
122-115	250		169	
112-116	275		181	
422-411	0	8.5	36	13.5
422-412	25	10.3	47	