

Micrometer

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

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

- 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.

MeasurLink ENABLED
Data Management Software by Mitutoyo

MeasurLink 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).



IP Codes (series 422 Quickmike type)

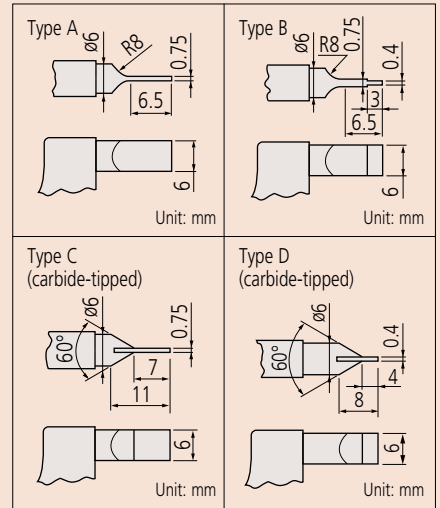
Level 6: Dust-proof.

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.

Type and Dimensions



Digimatic (LCD)
422-230-30



Quickmike Type (LCD)
422-411-20



122-101-10

ABSOLUTE™

SPECIFICATIONS

Metric							
Order No.	Range (mm)	Resolution (mm)	Maximum permissible error J_{MPE} (μm)	Parallelism (μm)	Remark		
Digimatic (LCD)							
422-230-30	0 - 25	0.001	±3	3	Type A		
422-231-30	25 - 50						
422-232-30	50 - 75						
422-233-30	75 - 100						
422-260-30	0 - 25		±3	3	Type B		
422-261-30	25 - 50						
422-270-30	0 - 25					Type C	
422-271-30							Type D

Metric Quickmike type					
Order No.	Range (mm)	Resolution (mm)	Maximum permissible error J_{MPE} (μm)	Parallelism (μm)	Remark
Digimatic (LCD)					
422-411-20	0 - 30	0.001	±3	3	Type A
422-412-20	25 - 55				

Metric					
Order No.	Range (mm)	Graduation (mm)	Maximum permissible error J_{MPE} (μm)	Parallelism (μm)	Remark
Analog					
122-101-10	0 - 25	0.01	±3	3	Type A
122-102-10	25 - 50				
122-103-10	50 - 75				
122-104-10	75 - 100				
122-105-10	100 - 125				
122-106-10	125 - 150				
122-107-10	150 - 175		±4	4	
122-108-10	175 - 200				
122-109-10	200 - 225				
122-110-10	225 - 250				
122-115-10	250 - 275		±5	5	
122-116-10	275 - 300				
122-111-10	0 - 25		±6	6	
122-112-10	25 - 50				
Analog (With carbide tip)					
122-161-10	0 - 25	0.01	±3	3	Type C
122-162-10	25 - 50				
122-141-10	0 - 25				
122-142-10	25 - 50				

Note: A heat shield is provided with Digimatic (LCD) and 122-101-10, 122-111-10, 122-125-10, 122-135-10, 122-141-10, 122-151-10 as standard.

Inch/Metric							
Order No.	Range (in)	Resolution	Maximum permissible error J_{MPE} (in)	Parallelism (in)	Remark		
Digimatic (LCD)							
422-330-30	0 - 1	0.00005 in/ 0.001 mm	±0.00015	0.00015	Type A		
422-331-30	1 - 2						
422-332-30	2 - 3						
422-333-30	3 - 4						
422-360-30	0 - 1		±0.00015	0.00015	Type B		
422-361-30	1 - 2						
422-370-30	0 - 1					Type C	
422-371-30							Type D

Inch/Metric Quickmike type					
Order No.	Range (in)	Resolution	Maximum permissible error J_{MPE} (in)	Parallelism (in)	Remark
Digimatic (LCD)					
422-421-20	0 - 1.2	0.00005 in/ 0.001 mm	±0.00015	0.00015	Type A

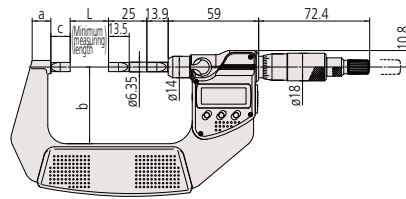
Inch								
Order No.	Range (in)	Graduation (in)	Maximum permissible error J_{MPE} (in)	Parallelism (in)	Remark			
Analog								
122-125-10	0 - 1	0.0001	±0.00015	0.00015	Type A			
122-126-10	1 - 2							
122-127-10	2 - 3							
122-128-10	3 - 4							
122-135-10	0 - 1		±0.00015	0.00015		0.00015		
122-151-10							Type B	
								Type D

Note: A heat shield is provided with Digimatic (LCD) and 122-125-10, 122-135-10, 122-151-10 as standard.

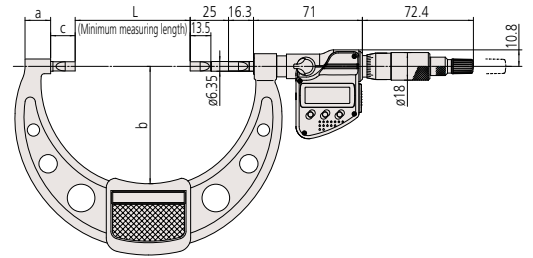
Note: For functional details of series 422 refer to page B-8. Please note that these models are not water-proof.

DIMENSIONS

Digimatic models up to 50 mm measuring range

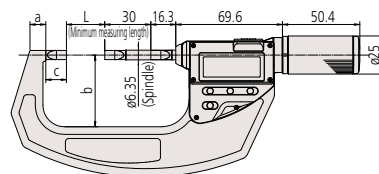


Digimatic models over 50 mm to 100 mm measuring range

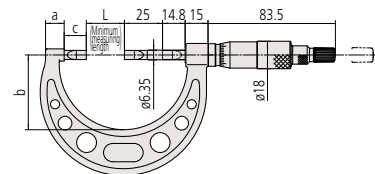


Unit: mm

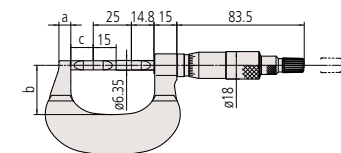
Quickmike type



Analog models over 25 mm to 300 mm measuring range



Analog models up to 25 mm measuring range



Technical Data

- 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**)
- 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 to 25 mm/0 to 30 mm (0 to 1 in/0 to 1.2 in) models)
Spanner (**301336**), 1 pc. (for **series 122-1XX, 422-2XX, 3XX**)

Optional Accessories

- Connecting cables for Digimatic 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**
- U-WAVE-T** dedicated connection cable (for **series 422**)
160 mm: **02AZD790B**
For foot switch: **02AZE140B**

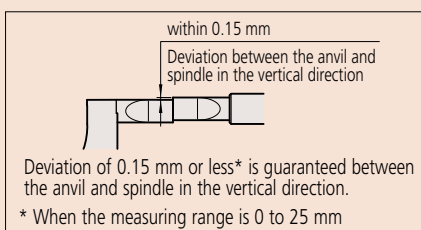
Wireless Data Output* **U-WAVE** fit

- U-WAVE-TM 264-622** (IP67 type)
264-623 (Buzzer type)
- U-WAVE-TMB** Transmitter
Mitutoyo Bluetooth® U-WAVE 264-626 (IP type)
264-627 (Buzzer type)
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB 02AZF310** (IP67/buzzer type common specification)
Refer to pages A-16 and A-18 for details.
* Only **series 422** (except for Quickmike type) can be attached.

Quickmike

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

Deviation Between the Anvil and Spindle in the Vertical Direction



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				
422-271-30	0	11	31	12.5
122-101-10		7.8	32	15
122-102-10	25	12.2	49	14.5
122-103-10	50	14.6	60	14.5
122-104-10	75	16.7	79	17.5
122-105-10	100	18.8	94	17.9
122-106-10	125	19.1	106	18.3
122-107-10	150	18.2	118	18.5
122-108-10	175	16.8	130	18.9
122-109-10	200		143	17.7
122-110-10	225		156	
122-115-10	250	18	169	18.7
112-116-10	275		181	
422-411-20	0	8.5	36	13.5
422-412-20	25	10.3	47	13.5