

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.



Digimatic (LCD)
422-230-30



122-101



Quickmike Type (LCD)
422-411-20

IP65

SPECIFICATIONS

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

* Excluding quantizing error of ±1 count

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

* Excluding quantizing error of ±1 count

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

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

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IP Codes (series 422 Quickmike type)

Level 6: Dust-proof.

No ingress of dust allowed.

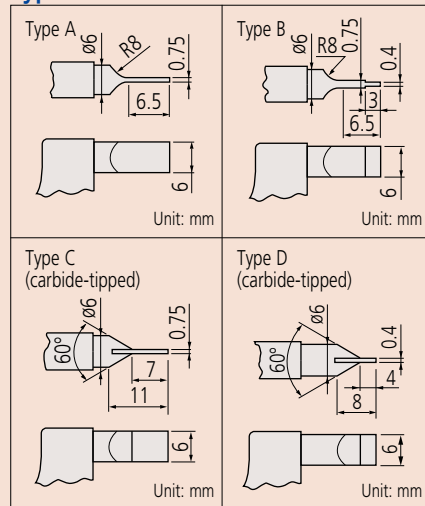
Level 5: Protected against water jets.

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

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



Inch/Metric	Order No.	Range (in)	Resolution	Accuracy* (in)	Remark
Digimatic (LCD)	422-330-30	0 - 1	0.00005 in/ 0.001 mm	±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	Type B
	422-361-30	1 - 2			
	422-370-30	0 - 1			
	422-371-30	0 - 1			
	422-371-30	0 - 1			
	422-371-30	0 - 1			

* Excluding quantizing error of ±1 count

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

* Excluding quantizing error of ±1 count

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

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



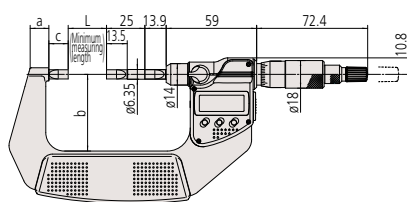
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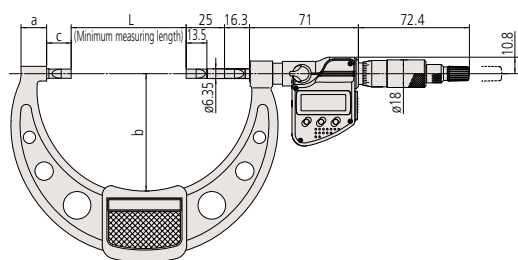
Mitutoyo

DIMENSIONS

Digimatic models up to 50 mm measuring range

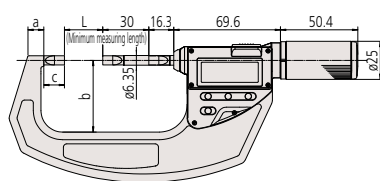


Digimatic models over 75 mm measuring range

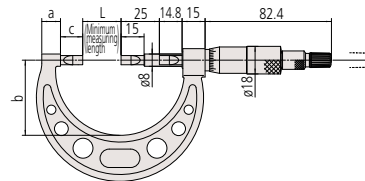


Unit: mm

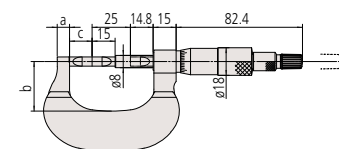
Quickmike type



Analog models over 50 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**)
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 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**
422-271-30, 422-330-30 to **422-371-30**
- U-WAVE-T** dedicated connection cable (for **series 422**)
160 mm: **02AZD790B**
For foot switch: **02AZE140B**

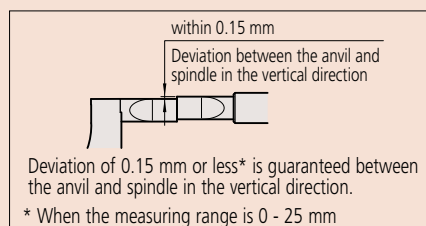
Wireless Data Output* **U-WAVE fit**

- U-WAVE-TM 264-622** IP67 type
264-623 Buzzer type
- Connecting unit for **U-WAVE-TM**
02AZF310 (IP67/buzzer type common specification)
Note: cannot be used with Quickmike type
Refer to page A-15 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	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	17.5
122-105		18.8	94	17.9
122-106		19.1	106	18.3
122-107		18.2	118	18.5
122-108		16.8	130	18.9
122-109		18	143	17.7
122-110			156	18.7
122-115			169	
112-116			181	
422-411-20	0	8.5	36	13.5
422-412-20	25	10.3	47	



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