

Micrometer

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

Spline Micrometers SERIES 331, 111, 131

- The anvil and spindle are of small diameter for measuring splined shafts, slots and keyways.
- IP65 water/dust protection (**series 331**).
- Measuring faces: Carbide.
- Equipped with Ratchet Stop for constant measuring force.

MeasurLink ENABLED
Data Management Software by Mitutoyo

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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).

IP 65

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



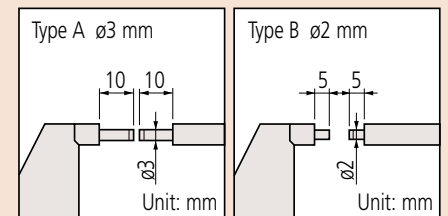
IP Codes (series 331)

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.



SPECIFICATIONS

Metric							
Order No.	Range (mm)	Resolution (mm)	Maximum permissible error J_{MPE} (μm)	Flatness (μm)	Parallelism (μm)	Remarks	
Digimatic (LCD)							
331-251-30	0 - 25	0.001	±2	0.3	2	Type A	
331-252-30	25 - 50				3		
331-253-30	50 - 75		±3		3	Type B	
331-254-30*	75 - 100				3		
331-261-30	0 - 25		±2		2		
331-262-30	25 - 50				2		
331-263-30	50 - 75		±3		3		
331-264-30*	75 - 100				3		

* Made to order.

Note: For functional details of **series 331** refer to page B-8.

Optional connecting cable is available only for water-proof type (Digimatic model).

Inch / Metric						
Order No.	Range (in)	Resolution	Maximum permissible error J_{MPE} (in)	Flatness (in)	Parallelism (in)	Remarks
Digimatic (LCD)						
331-351-30	0 - 1	0.00005 in/ 0.001 mm	±0.0001	0.000012	0.00008	Type A
331-352-30	1 - 2					
331-353-30	2 - 3		±0.00015		0.00012	Type B
331-354-30	3 - 4					
331-361-30	0 - 1		±0.0001		0.00008	
331-362-30	1 - 2					
331-363-30	2 - 3		±0.00015		0.00012	
331-364-30	3 - 4					

Metric						
Order No.	Range (mm)	Graduation (mm)	Maximum permissible error <i>J_{MPE}</i> (μm)	Flatness (μm)	Parallelism (μm)	Remarks
Analog						
111-215	0 - 25	0.01	±3	0.3	2	Type B
111-115	0 - 25				Type A	
111-116	25 - 50					
111-117	50 - 75					
111-118	75 - 100					
111-119	100 - 125					
111-120	125 - 150					
111-121	150 - 175					
111-122	175 - 200					
111-123	200 - 225					
111-124	225 - 250					
111-125	250 - 275					
111-126	270 - 300					
Mechanical counter model						
131-115	0 - 25		±3	0.3	2	Type A

Inch						
Order No.	Range (in)	Graduation (in)	Maximum permissible error J_{MPE} (in)	Flatness (in)	Parallelism (in)	Remarks
Analog						
111-166	0 - 1	0.0001	±0.00015	0.000012	0.00008	Type A

Technical Data

- Battery for **series 331**
SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for **series 331**)
- Length standard: Electromagnetic rotary sensor (for **series 331**)
- Standard accessories: Reference bar, 1 pc. (except for measuring range 0 to 25 mm (0 to 1 in) models)
Spanner (**301336**), 1 pc.

Optional Accessories

- Connecting cables for **series 331**
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-27 for details.

Wireless Data Output **U-WAVE** fit

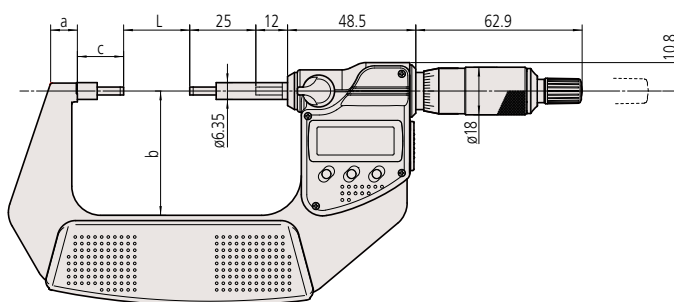
- U-WAVE-TM** **264-622** (IP67 type)
264-623 (Buzzer type)
- U-WAVE-TMB** Transmitter
Mitutoyo Bluetooth® U-WAVE
264-626 (IP type)
264-627 (Buzzer type)
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB**
02AZF310 (IP67/buzzer type common specification)
Refer to pages A-16 and A-18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

DIMENSIONS

Unit: mm

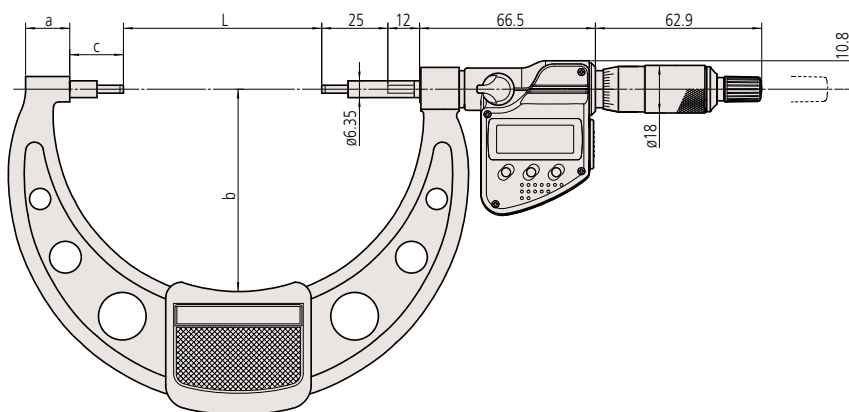
Digimatic models

Models up to 75 mm measuring range



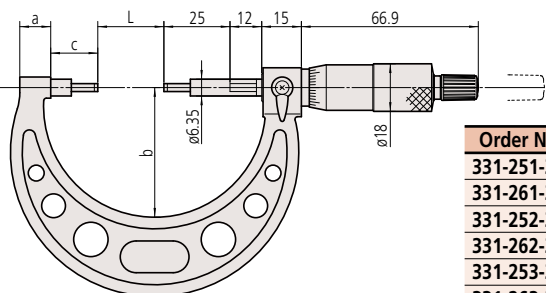
Models over 75 mm measuring range

Digimatic models



Analog models

Models up to 300 mm measuring range



Order No.	L	a	b	c
331-251-30	0	7.3	32.5	17.5
331-261-30	25	10.1	47	
331-252-30	50	11.5	60	
331-263-30	75	16.7	76	
331-254-30	100	18.8	94	20.3
331-264-30	125	19.1	106	21.1
111-215	0	10	38	17.5
111-115	25	12	49	
111-117	50	14	60	
111-118	75	16.7	79	
111-119	100	18.8	94	20.7
111-120	125	19.1	106	21.3
111-121	150	18.2	118	21.7
111-122	175	16.8	130	20.5
111-123	200	18	143	21.5
111-124	225		156	
111-125	250		169	
111-126	275		181	