

Micrometer

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

Spline Micrometers SERIES 331, 111, 131

MeasurLink¹ ENABLED
Data Management Software by Mitutoyo

- 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.



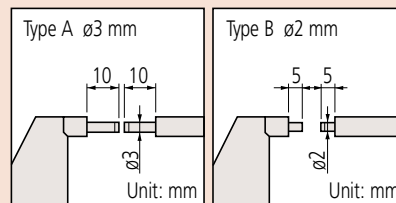
331-251-30



111-115

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					
331-253-30	50 - 75					
331-254-30*	75 - 100					
331-261-30	0 - 25		±3		3	Type B
331-262-30	25 - 50		±2		2	
331-263-30	50 - 75		±3		3	
331-264-30*	75 - 100					

* 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					
331-354-30	3 - 4					
331-361-30	0 - 1		±0.00015		0.00012	Type B
331-362-30	1 - 2		±0.0001		0.00008	
331-363-30	2 - 3		±0.00015		0.00012	
331-364-30	3 - 4					

Metric									
Order No.	Range (mm)	Graduation (mm)	Maximum permissible error J_{MPE} (μm)	Flatness (μm)	Parallelism (μm)	Remarks			
Analog									
111-215	0 - 25	0.01	±3	0.3	2	Type B			
111-115	0 - 25								
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		±4		3	Type A			
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™**

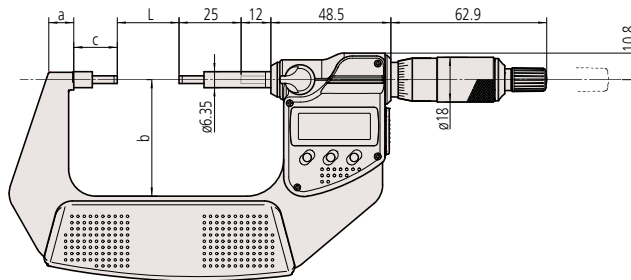
- **U-WAVE-TM 264-622** (IP67 type)
264-623 (Buzzer type)
- **U-WAVE-TMB** Transmitter
Mitutoyo Bluetooth® U-WAVE 264-626 (IP type)
264-627 (Buzzer type)
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB**
02AZF310 (IP67/buzzer type common specification)
Refer to pages A-16 and A-18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

DIMENSIONS

Unit: mm

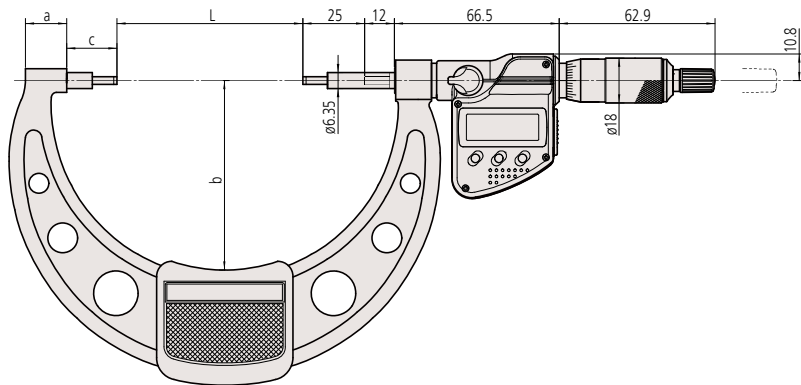
Digimatic models

Models up to 75 mm measuring range



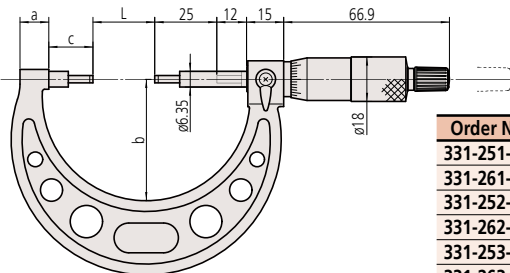
Models over 75 mm measuring range

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	
331-262-30	75	16.7	76	20.3
331-253-30	100	18.8	94	20.7
331-263-30	125	19.1	106	21.1
331-254-30	150	18.2	118	21.3
331-264-30	175	16.8	130	21.7
111-215	0	10	38	17.5
111-115	25	12	49	
111-116	50	14	60	
111-117	75	16.7	79	20.3
111-118	100	18.8	94	20.7
111-119	125	19.1	106	21.1
111-120	150	18.2	118	21.3
111-121	175	16.8	130	21.7
111-122	200	18	143	20.5
111-123	225		156	21.5
111-124	250		169	
111-125	275		181	