

# 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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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 65**

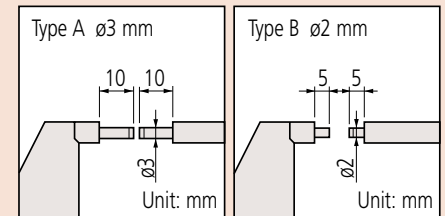
These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.

**TÜV Rheinland**  
CERTIFIED  
www.tuv.com  
ID 000040131



### 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 $J_{MPE}$ ( $\mu$ m)	Flatness ( $\mu$ m)	Parallelism ( $\mu$ m)	Remarks		
Digimatic (LCD)								
331-251-30	0 - 25	0.001	$\pm 2$	0.3	2	Type A		
331-252-30	25 - 50				3		2	Type B
331-253-30	50 - 75							
331-254-30*	75 - 100				$\pm 3$		0.3	3
331-261-30	0 - 25		2	2		Type B		
331-262-30	25 - 50							3
331-263-30	50 - 75		3	2		Type B		
331-264-30*	75 - 100				3		2	Type B

\* 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	$\pm 0.0001$	0.000012	0.00008	Type A		
331-352-30	1 - 2				$\pm 0.00015$		0.00012	0.00012
331-353-30	2 - 3							
331-354-30	3 - 4				$\pm 0.00015$		0.00012	0.00012
331-361-30	0 - 1		0.00008	0.00008		Type B		
331-362-30	1 - 2							
331-363-30	2 - 3		0.00012	0.00012		Type B		
331-364-30	3 - 4				0.00012		0.00012	

Metric								
Order No.	Range (mm)	Graduation (mm)	Maximum permissible error $J_{MPE}$ ( $\mu$ m)	Flatness ( $\mu$ m)	Parallelism ( $\mu$ m)	Remarks		
Analog								
111-215	0 - 25	0.01	$\pm 3$	0.3	2	Type A		
111-115	0 - 25				3		2	Type B
111-116	25 - 50							
111-117	50 - 75				5		4	
111-118	75 - 100							6
111-119	100 - 125				6		5	
111-120	125 - 150							6
111-121	150 - 175				6		5	
111-122	175 - 200		6	5				
111-123	200 - 225				6	5		
111-124	225 - 250		6	5				
111-125	250 - 275				6	5		
111-126	270 - 300		6	5				
Mechanical counter model								
131-115	0 - 25			$\pm 3$	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	$\pm 0.00015$	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**

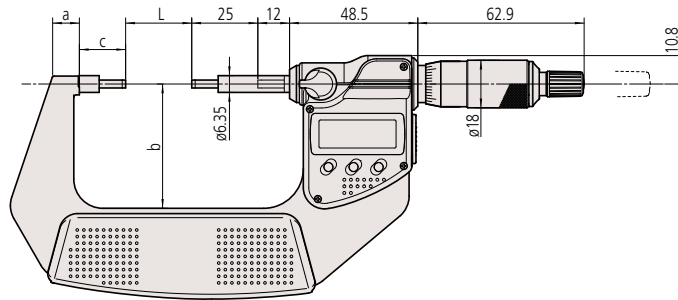
- **U-WAVE-TM 264-622** (IP67 type)  
**264-623** (Buzzer type)
- **U-WAVE-TMB** Transmitter  
**Mitutoyo Bluetooth® U-WAVE 264-626** (IP type)  
**264-627** (Buzzer type)  
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB 02AZF310** (IP67 / buzzer type common specification)  
Refer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

## DIMENSIONS

Unit: mm

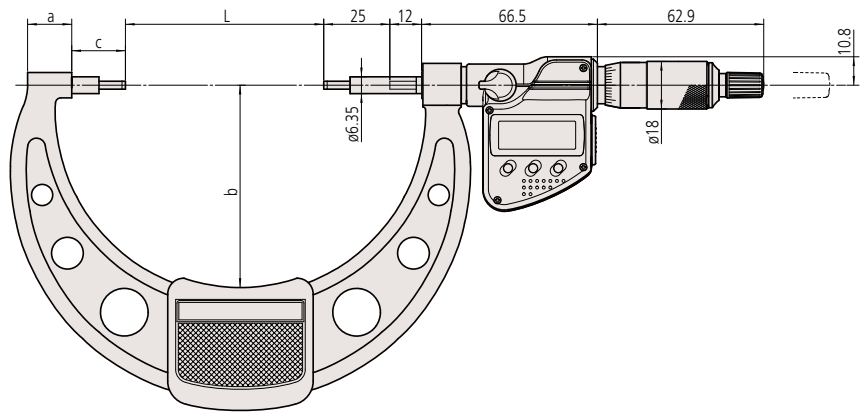
### Digimatic models

#### Models up to 75 mm measuring range



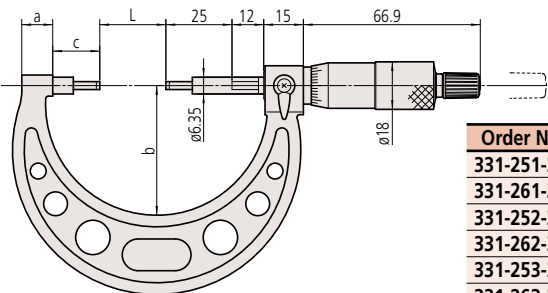
#### Models over 75 mm measuring range

### Digimatic models



### Analog models

#### Models up to 300 mm measuring range



Order No.	L	a	b	c
<b>331-251-30</b>	0	7.3	32.5	17.5
<b>331-261-30</b>	25	10.1	47	
<b>331-252-30</b>	50	11.5	60	
<b>331-262-30</b>	75	16.7	76	
<b>331-253-30</b>	0	10	38	20.3
<b>331-263-30</b>	25	12	49	
<b>331-254-30</b>	50	14	60	
<b>331-264-30</b>	75	16.7	79	
<b>111-215</b>	100	18.8	94	21.5
<b>111-115</b>	125	19.1	106	
<b>111-116</b>	150	18.2	118	
<b>111-117</b>	175	16.8	130	
<b>111-118</b>	200	18	143	20.5
<b>111-119</b>	225		156	
<b>111-120</b>	250		169	
<b>111-121</b>	275		181	