

# Micrometer

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

## Spline Micrometers SERIES 331, 111, 131

**MeasurLink<sup>1</sup> 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

**MeasurLink<sup>1</sup> 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).

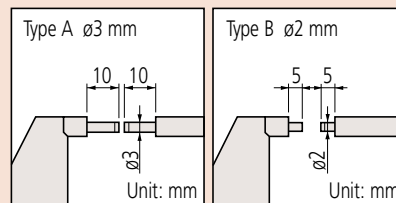


These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.



### 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 $J_{MPE}$ ( $\mu\text{m}$ )	Flatness ( $\mu\text{m}$ )	Parallelism ( $\mu\text{m}$ )	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		2	Type B
331-262-30	25 - 50					
331-263-30	50 - 75					
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		0.00008	Type B
331-362-30	1 - 2					
331-363-30	2 - 3					
331-364-30	3 - 4					

Metric											
Order No.	Range (mm)	Graduation (mm)	Maximum permissible error $J_{MPE}$ ( $\mu\text{m}$ )	Flatness ( $\mu\text{m}$ )	Parallelism ( $\mu\text{m}$ )	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™**

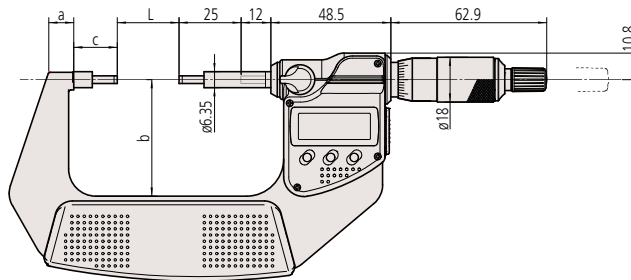
- **U-WAVE-TM 264-622** (IP67 type)  
**264-623** (Buzzer type)
- **U-WAVE-TMB** Transmitter  
**Mitutoyo Bluetooth® U-WAVE 264-626** (IP type)  
**264-627** (Buzzer type)  
Refer to page A-16 for details.
- Connecting unit for **U-WAVE-TM/TMB**  
**02AZF310** (IP67/buzzer type common specification)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

## DIMENSIONS

Unit: mm

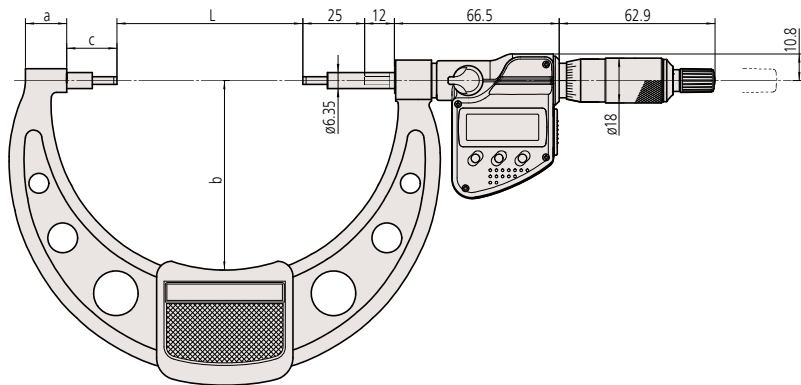
### Digimatic models

#### Models up to 75 mm measuring range



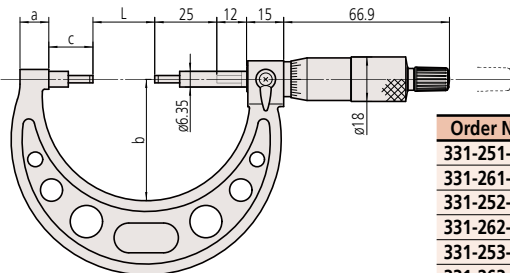
#### Models over 75 mm measuring range

### Digimatic models



### Analog models

#### Models up to 300 mm measuring range



Order No.	L	a	b	c
<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>	100	18.8	94	20.3
<b>331-263-30</b>	125	19.1	106	21.1
<b>331-254-30</b>	150	18.2	118	21.3
<b>331-264-30</b>	175	16.8	130	21.7
<b>111-215</b>	0	10	38	17.5
<b>111-115</b>	25	12	49	
<b>111-116</b>	50	14	60	
<b>111-117</b>	75	16.7	79	
<b>111-118</b>	100	18.8	94	20.3
<b>111-119</b>	125	19.1	106	20.7
<b>111-120</b>	150	18.2	118	21.3
<b>111-121</b>	175	16.8	130	21.7
<b>111-122</b>	200	18	143	20.5
<b>111-123</b>	225		156	21.5
<b>111-124</b>	250		169	
<b>111-125</b>	275		181	