

# Micrometer

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

## Spline Micrometers SERIES 331, 111, 131

**MeasurLink<sup>®</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.



## SPECIFICATIONS

| Metric                   |            |                 |                             |         |
|--------------------------|------------|-----------------|-----------------------------|---------|
| Order No.                | Range (mm) | Resolution (mm) | Accuracy* <sup>1</sup> (μm) | Remarks |
| Digimatic (LCD)          |            |                 |                             |         |
| 331-251-30               | 0 - 25     | 0.001           | ±2                          | Type A  |
| 331-252-30               | 25 - 50    |                 |                             |         |
| 331-253-30               | 50 - 75    |                 |                             |         |
| 331-254-30 <sup>*2</sup> | 75 - 100   |                 | ±3                          | Type B  |
| 331-261-30               | 0 - 25     |                 |                             |         |
| 331-262-30               | 25 - 50    |                 |                             |         |
| 331-263-30               | 50 - 75    |                 |                             |         |
| 331-264-30 <sup>*2</sup> | 75 - 100   |                 | ±3                          |         |

\*1 For functional details of **series 331** refer to page B-8.  
Optional connecting cable is available only for water-proof type (Digimatic model).

\*2 Made to order.

| Metric                   |            |                 |               |         |
|--------------------------|------------|-----------------|---------------|---------|
| Order No.                | Range (mm) | Graduation (mm) | Accuracy (μm) | Remarks |
| Analog                   |            |                 |               |         |
| 111-215                  | 0 - 25     | 0.01            | ±3            | Type B  |
| 111-115                  | 0 - 25     |                 |               |         |
| 111-116                  | 25 - 50    |                 |               |         |
| 111-117                  | 50 - 75    |                 | ±4            | Type A  |
| 111-118                  | 75 - 100   |                 |               |         |
| 111-119                  | 100 - 125  |                 |               |         |
| 111-120                  | 125 - 150  |                 |               |         |
| 111-121                  | 150 - 175  |                 | ±5            |         |
| 111-122                  | 175 - 200  |                 |               |         |
| 111-123                  | 200 - 225  |                 |               |         |
| 111-124                  | 225 - 250  | ±6              |               |         |
| 111-125                  | 250 - 275  |                 |               |         |
| 111-126                  | 270 - 300  |                 |               |         |
| Mechanical counter model |            |                 |               |         |
| 131-115                  | 0 - 25     |                 | ±3            | Type A  |

| Inch / Metric   |            |                         |                |         |
|-----------------|------------|-------------------------|----------------|---------|
| Order No.       | Range (in) | Resolution              | Accuracy* (in) | Remarks |
| Digimatic (LCD) |            |                         |                |         |
| 331-351-30      | 0 - 1      | 0.00005 in/<br>0.001 mm | ±0.0001        | Type A  |
| 331-352-30      | 1 - 2      |                         |                |         |
| 331-353-30      | 2 - 3      |                         |                |         |
| 331-354-30      | 3 - 4      |                         | ±0.00015       | Type B  |
| 331-361-30      | 0 - 1      |                         |                |         |
| 331-362-30      | 1 - 2      |                         |                |         |
| 331-363-30      | 2 - 3      |                         |                |         |
| 331-364-30      | 3 - 4      |                         | ±0.00015       |         |

\* Excluding quantizing error of ±1 count

| Inch      |            |                 |               |         |
|-----------|------------|-----------------|---------------|---------|
| Order No. | Range (in) | Graduation (in) | Accuracy (in) | Remarks |
| Analog    |            |                 |               |         |
| 111-166   | 0 - 1      | 0.0001          | ±0.00015      | Type A  |

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.

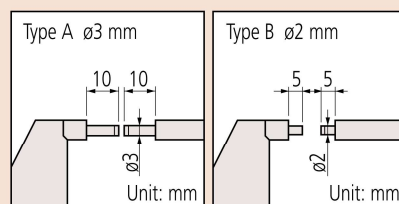
Water projected in jets against the enclosure from any direction shall have no harmful effects.

## Technical Data

Flatness: 0.3 μm/0.000012 in

Parallelism: (2 + R/100) μm, R = max. range (mm)

[0.00008 in + 0.00004 (R/4)] in, R = max range (inch)  
fraction rounded down



## 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 0-25 mm (0-1 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-25 for details.

## Wireless Data Output **U-WAVE-TM**

- **U-WAVE-TM** **264-622** (IP67 type)  
**264-623** (Buzzer type)
- Connecting unit for **U-WAVE-TM**  
**02AZF310** (IP67/buzzer type common specification)  
Refer to page A-15 for details.