

# Depth Gage

A standard measuring tool of industry

## Depth Micrometer SERIES 329, 129 — Interchangeable Rod Type

- This type uses interchangeable rods to enable wide-range measurement.
- Order No. 329-250-30, 329-251-30, 329-350-30, and 329-351-30 allow integration into statistical process control and measurement systems.
- Measuring rod diameter: 4 mm
- Measuring rod lock.
- Ratchet stop provides constant measuring force.

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo



### SPECIFICATIONS

#### Metric

| Order No.       | Range (mm) | Resolution (mm) | Base (mm) | Spindle feed error (μm) | Flatness of reference face                                       | Flatness of measuring rod face (μm) | No. of rods |
|-----------------|------------|-----------------|-----------|-------------------------|------------------------------------------------------------------|-------------------------------------|-------------|
| Digimatic (LCD) |            |                 |           |                         |                                                                  |                                     |             |
| 329-250-30      | 0 - 150    | 0.001           | 101.6×16  | 3                       | 1.3 μm for 63.5 mm length base,<br>2 μm for 101.6 mm length base | 0.3                                 | 6           |
| 329-251-30      | 0 - 300    |                 |           |                         |                                                                  |                                     | 12          |

#### Inch / Metric

| Order No.       | Range (in) | Resolution          | Base (in) | Spindle feed error  | Flatness of reference face                                                                             | Flatness of measuring rod face | No. of rods |
|-----------------|------------|---------------------|-----------|---------------------|--------------------------------------------------------------------------------------------------------|--------------------------------|-------------|
| Digimatic (LCD) |            |                     |           |                     |                                                                                                        |                                |             |
| 329-350-30      | 0 - 6      | 0.00005 in/0.001 mm | 4×0.63    | 0.00015 in/<br>3 μm | 0.00005 in/1.3 μm for 63.5 mm (2.5 in) length base,<br>0.00008 in/2 μm for 101.6 mm (4 in) length base | 0.000012 in/<br>0.3 μm         | 6           |
| 329-351-30      | 0 - 12     | 0.0001 in/0.001 mm  |           |                     |                                                                                                        |                                | 12          |

#### Metric

| Order No. | Range (mm) | Graduation (mm) | Base (mm) | Spindle feed error (μm) | Flatness of reference face                                       | Flatness of measuring rod face (μm) | No. of rods |
|-----------|------------|-----------------|-----------|-------------------------|------------------------------------------------------------------|-------------------------------------|-------------|
| Analog    |            |                 |           |                         |                                                                  |                                     |             |
| 129-154   | 0 - 25     | 0.01            | 63.5×16   | 3                       | 1.3 μm for 63.5 mm length base,<br>2 μm for 101.6 mm length base | 0.3                                 | 1           |
| 129-155   |            |                 | 101.6×16  |                         |                                                                  |                                     | 2           |
| 129-109   |            |                 | 63.5×16   |                         |                                                                  |                                     |             |
| 129-113   | 0 - 50     | 0.01            | 101.6×16  |                         |                                                                  |                                     | 3           |
| 129-110   |            |                 | 63.5×16   |                         |                                                                  |                                     |             |
| 129-114   | 0 - 75     | 0.01            | 101.6×16  |                         |                                                                  |                                     | 4           |
| 129-111   |            |                 | 63.5×16   |                         |                                                                  |                                     |             |
| 129-115   | 0 - 100    | 0.01            | 101.6×16  |                         |                                                                  |                                     | 6           |
| 129-112   |            |                 | 63.5×16   |                         |                                                                  |                                     |             |
| 129-116   | 0 - 150    | 0.01            | 101.6×16  |                         |                                                                  |                                     | 12          |
| 129-152   |            |                 | 63.5×16   |                         |                                                                  |                                     |             |
| 129-153   | 0 - 300    | 0.01            | 101.6×16  |                         |                                                                  |                                     |             |

#### Inch

| Order No. | Range (in) | Graduation (in) | Base (in) | Spindle feed error (in) | Flatness of reference face                                            | Flatness of measuring rod face (in) | No. of rods |
|-----------|------------|-----------------|-----------|-------------------------|-----------------------------------------------------------------------|-------------------------------------|-------------|
| Analog    |            |                 |           |                         |                                                                       |                                     |             |
| 129-129   | 0 - 2      | 0.001           | 4x0.63    | 0.00015                 | 0.00005 in for 2.5 in length base,<br>0.00008 in for 4 in length base | 0.000012                            | 2           |
| 129-126   | 0 - 3      |                 | 2.5x0.63  |                         |                                                                       |                                     | 3           |
| 129-130   |            |                 | 4x0.63    |                         |                                                                       |                                     |             |
| 129-127   | 0 - 4      |                 | 2.5x0.63  |                         |                                                                       |                                     | 4           |
| 129-131   |            |                 | 4x0.63    |                         |                                                                       |                                     |             |
| 129-128   | 0 - 6      |                 | 2.5x0.63  |                         |                                                                       |                                     | 6           |
| 129-132   |            |                 | 4x0.63    |                         |                                                                       |                                     |             |
| 129-149   | 0 - 12     |                 | 2.5x0.63  |                         |                                                                       |                                     | 12          |
| 129-150   |            |                 | 4x0.63    |                         |                                                                       |                                     |             |

Note: For the function of Digimatic models 329-250-30, 329-251-30, 329-350-30, and 329-351-30, refer to page D-60. These models are not waterproof.

**MeasurLink<sup>®</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).

### Technical Data

- Parallelism between reference face and measuring rod face:  
(4+R/50) μm, R=Max. measuring length (mm)  
[0.0002+0.00005(R/2)] in  
Fraction rounded up  
±(2+R/75) μm for interchangeable rod,  
[0.0001+0.00005(R/3)] in  
R=Max. range (mm)  
Fraction rounded up
- Battery\*: SR44 (1 pc), **938882**,  
for initial operational checks (standard accessory)
- Battery life\*: Approx. 2.4 years under normal use  
\* Digimatic models
- Scale type: Electromagnetic induction absolute encoder
- Standard Accessories: **301336** Spanner  
**04GAA274** Spanner  
**202863** Hex-Spanner

### Optional Accessories for 329-250-30, 329-251-30, 329-350-30, and 329-351-30.

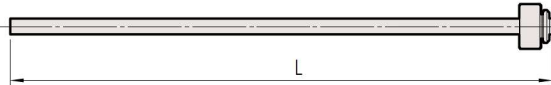
For details, refer to page A-27.

- Connection cable  
**05CZA662**: SPC cable with data button (1 m)  
**05CZA663**: SPC cable with data button (2 m)
- USB Input Tool Direct  
**06AFM380B**: SPC cable for **USB-ITN-B** (2 m)
- Connecting cables for **U-WAVE-T**  
**02AZD790B**: SPC cable with data button (160 mm)  
**02AZE140B**: SPC cable for foot switch

### 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-15 for details.
- Connecting unit for **U-WAVE-TM/TMB**  
**02AZF310** (IP67 type/buzzer type common specification)  
Refer to pages A-16 and A-18 for details.

Interchangeable rod (Optional Accessories)  
(Check and adjust the origin point before measurement)



| Range (mm)       | 0 - 25    | 25 - 50 | 50 - 75 | 75 - 100 | 100 - 125 | 125 - 150 | 150 - 175 | 175 - 200 | 200 - 225 | 225 - 250 | 250 - 275 | 275 - 300 |        |
|------------------|-----------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|
| Analog models    | Order No. | 983501  | 983503  | 983505   | 983507    | 983509    | 983511    | 983525    | 983527    | 983529    | 983531    | 983533    | 983535 |
|                  | L (mm)    | 104     | 129     | 154      | 179       | 204       | 229       | 254       | 279       | 304       | 329       | 354       | 379    |
| Digimatic models | Order No. | 983505  | 983507  | 983509   | 983511    | 983525    | 983527    | 983529    | 983531    | 983533    | 983535    | 981781    | 981782 |
|                  | L (mm)    | 154     | 179     | 204      | 229       | 254       | 279       | 304       | 329       | 354       | 379       | 404       | 429    |

| Range (in)       | 0 - 1     | 1 - 2  | 2 - 3  | 3 - 4  | 4 - 5  | 5 - 6  | 6 - 7  | 7 - 8  | 8 - 9  | 9 - 10 | 10 - 11 | 11 - 12 |        |
|------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| Analog models    | Order No. | 983502 | 983504 | 983506 | 983508 | 983510 | 983512 | 983526 | 983528 | 983530 | 983532  | 983534  | 983536 |
|                  | L (mm)    | 104.3  | 129.7  | 155.1  | 180.5  | 205.9  | 231.3  | 256.7  | 282.1  | 307.5  | 332.9   | 358.3   | 383.7  |
| Digimatic models | Order No. | 983506 | 983508 | 983510 | 983512 | 983526 | 983528 | 983530 | 983532 | 983534 | 983536  | 981783  | 981784 |
|                  | L (mm)    | 155.1  | 180.5  | 205.9  | 231.3  | 256.7  | 282.1  | 307.5  | 332.9  | 358.3  | 383.7   | 409.1   | 434.5  |

Functions of 329-250-30, 329-251-30, 329-350-30, and 329-351-30

- Origin point setting** (ABS measurement system):  
Resets the ABS origin at the current spindle position to the minimum value of the measuring range and switches to ABS mode.
- Zero-setting** (INC measurement system):  
A brief press on the ZERO/ABS button sets display to zero at the current spindle position and switches to the incremental (INC) measuring mode. A longer press resets to the ABS measuring mode.
- Hold:**  
Pressing the HOLD button freezes the current value in the display. This function is useful for preserving a measurement in situations of poor visibility where the instrument must be moved away from the workpiece before the reading can be recorded.
- Data output:**  
Models equipped with this function have an output port for transferring measurement data to a Statistical Process Control (SPC) system.
- Auto power ON / OFF:**  
The reading on the LCD disappears after this instrument is idle for about 20 minutes, but the reading and measurement mode are retained. Turning the spindle causes the reading to reappear.
- Error alarm:**  
In case of an overflow on the LCD or a computing error, an error message appears on the LCD, and the measuring function stops. This prevents an instrument from giving an erroneous reading. Also, when the battery voltage drops to a certain level, the low-battery-voltage alarm annunciator appears well before the micrometer becomes unusable.
- Function lock:**  
This function allows the PRESET (origin point setting) function and the ZERO (zero-setting) function to be locked to prevent these points being reset accidentally.

DIMENSIONS

