# Micrometer

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

## Sheet Metal Micrometers SERIES 389, 118

MeasurLink® ENABLED
Data Management Software by Mitutoyo

- Measures thickness of sheet metal.
- IP65 water/dust protection (**series 389**).
- Measuring faces: Carbide.
- Profile of measuring faces: Flat-Flat, Spherical-Flat and Spherical-Spherical.
- Equipped with Ratchet Stop for constant measuring force.

389-251-30

118-102

## SPECIFICATIONS

**Metric**

| Order No. | Range (mm) | Resolution (mm) | Maximum permissible error $J_{MPE}$ (µm) | Throat depth (mm) | Measuring surfaces |
|---|---|---|---|---|---|
| Digimatic (LCD) | | | | | |
| **389-251-30** | 0 - 25 | 0.001 | ±4 | 150 | F-F |
| **389-261-30** | | | | | S-F |
| **389-271-30** | | | | | S-S |
| **389-514** | | | ±5 | 300* | F-F |
| **389-252-30** | 25 - 50 | | ±4 | 150 | |
| **389-262-30** | | | | | S-F |
| **389-272-30** | | | | | S-S |

**Inch/Metric**

| Order No. | Range (in) | Resolution | Maximum permissible error $J_{MPE}$ (in) | Throat depth (in) | Measuring surfaces |
|---|---|---|---|---|---|
| Digimatic (LCD) | | | | | |
| **389-351-30** | 0 - 1 | 0.00005 in/ 0.001 mm | ±0.0002 | 6 | F-F |
| **389-361-30** | | | | | S-F |
| **389-371-30** | | | | | S-S |
| **389-714** | | | ±0.00025 | 12* | F-F |
| **389-352-30** | 1 - 2 | | ±0.0002 | 6 | |
| **389-362-30** | | | | | S-F |
| **389-372-30** | | | | | S-S |

**Metric**

| Order No. | Range (mm) | Graduation (mm) | Maximum permissible error $J_{MPE}$ (µm) | Throat depth (mm) | Measuring surfaces |
|---|---|---|---|---|---|
| Analog | | | | | |
| **118-101** | 0 - 25 | 0.01 | ±4 | 100 | F-F |
| **118-102** | | | | 150 | |
| **118-114** | | | | | S-F |
| **118-118** | | | | | S-S |
| **118-103** | 25 - 50 | | ±5 | 300* | F-F |
| **118-110** | | | ±4 | 150 | |
| **118-126** | | | | | S-S |

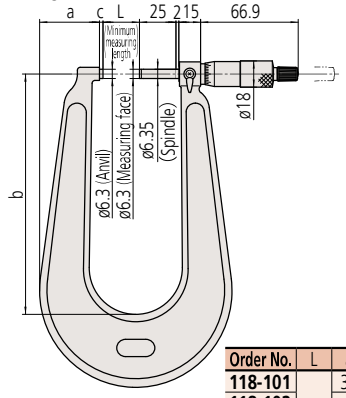
**Inch**

| Order No. | Range (in) | Graduation (in) | Maximum permissible error $J_{MPE}$ (in) | Throat depth (in) | Measuring surfaces |
|---|---|---|---|---|---|
| Analog | | | | | |
| **118-129** | 0 - 1 | 0.0001 | ±0.0002 | 6 | F-F |
| **118-116** | | | | | S-F |
| **118-120** | | | | | S-S |
| **118-107** | | 0.001 | ±0.00025 | 12* | F-F |
| **118-112** | 1 - 2 | | ±0.0002 | 6 | |

* Models with a 300 mm (12 in) throat are equipped with a stand for convenience of measurement in the horizontal orientation as standard.
Note1: For functional details of **389-251-30**/**389-252-30**/**389-351-30**/**389-352-30** refer to page B-8.
Note2: For functional details of **389-514**/**389-714** refer to page B-9.
Note3: In spherical-flat anvil type micrometers, the measuring face on the anvil side is spherical.

## DIMENSIONS

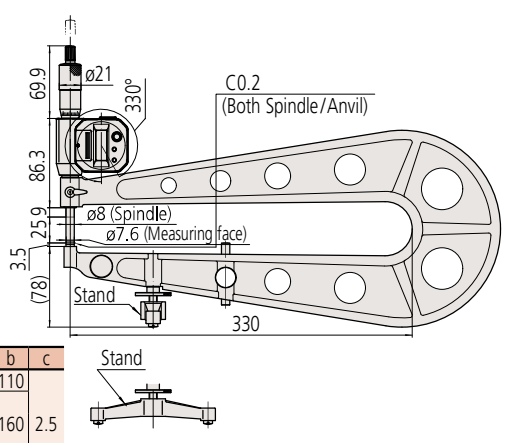
**Analog models**




| Order No. | L | a | b | c |
|---|---|---|---|---|
| **118-101** | 0 | 34 | 110 | 2.5 |
| **118-102** | | | | |
| **118-114** | | 43 | 160 | |
| **118-118** | | | | |
| **118-110** | 25 | 41 | 165 | |

**389-514**

Unit: mm







MeasurLink® 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).

IP65

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

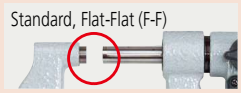
TÜVRheinland CERTIFIED
www.tuv.com
ID 0000040191

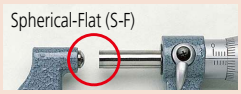
### IP Codes (series 389)

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: 0.6 µm for models with 150 mm / 6 in throat
  1 µm for models with 300 mm / 12 in throat
- Parallelism: 3 µm



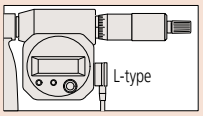



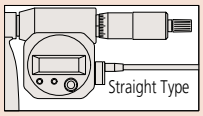
### Technical Data

- Battery for **series 389**
  SR44 (1 pc.), **938882**, 2 pcs.:**389-514**, **389-714** for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for **series 389-2XX**, **3XX**)
  Approx. 1.8 years under normal use (for **series 389-514**, **714**)
- Length standard: Electromagnetic rotary sensor (for **series 389**)
- Standard accessories: Reference bar, 1 pc. (except for measuring range 0 to 25 mm (0 to 1 in) models)
  Spanner (**200877**), 1 pc. (for **series 118-1XX**)
  Spanner (**301336**), 1 pc. (for **series 389-2XX**, **3XX**)
  Spanner (**200154**), 1 pc. (for **series 118-103**/**107**, **389-514**/**714**)

### Optional Accessories for Series 389

- Connecting cables for **series 389** (excluding **389-514** and **389-714**)
  1 m: **05CZA662** 2 m: **05CZA663**
- USB Input Tool Direct
  **USB-ITN-B** (2 m): **06AFM380B**
- **U-WAVE-T** dedicated connection cable for **series 389** (excluding **389-514** and **389-714**)
  160 mm: **02AZD790B**
  For foot switch: **02AZE140B**
- SPC cables for **series 389** (excluding **389-514** and **389-714**)
- Connecting cables for **389-514**, **389-714**
- Recommended cables: L-Type (does not interfere with operating the thimble.)
  1 m: **04AZB512** 2 m: **04AZB513**
- Straight type (may interfere with operating the thimble.)
  1 m: **959149** 2 m: **959150**




Refer to page A-27 for detailed information about recommended cables.

### 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.
  * Only **series 389** (except for **389-514** and **389-714**) can be attached.



Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.