



# ABSOLUTE Digimatic Indicator ID-C

## SERIES 543 — Standard Type

### FEATURES

- Similar in size to Series 2 dial indicators.
- Large, easy-to-read LCD.
- Go/no-go judgment can be performed by setting upper and lower tolerance limits. The judgment result (go/no-go) can be displayed in full-size characters.
- The positive/negative count resulting from the spindle's up/down movement can be toggled.
- Internal calculations using the simple formula of  $[F(x) = Ax]$  are available.
- Employing the ABSOLUTE linear encoder, the ID-C always displays the spindle "Absolute Position" from the origin at power-on. Also unlimited response speed eliminates over-speed errors.
- The ID-C indicator face can be rotated 330° to an appropriate angle for easy reading.
- With SPC data output.

### Technical Data

Accuracy: Refer to the list of specifications

|             |                       |                                      |
|-------------|-----------------------|--------------------------------------|
| Resolution: | 0.01mm type           | 0.01mm                               |
|             | 0.001mm type*         | 0.001mm/0.01mm                       |
|             | .0005"/0.01mm type    | .0005"/0.01mm                        |
|             | .00005"/0.001mm type* | .0005"/.0001"/.00005"/0.01mm/0.001mm |

\* Switchable resolution

Display: LCD

Length standard: ABSOLUTE electrostatic capacitance type linear encoder

Max. response speed: Unlimited

Measuring force: Refer to the list of specifications

Battery: SR44 (1 pc.), **938882**

Battery life: Approx. 7,000 hours under normal use

Dust/Water protection level: IP42

Inspection certificate is included

### Function

Origin-set/Preset, Zeroset, go/no-go judgment, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (on inch/metric models only)

Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Internal calculations using the simple formula of  $[F(x) = Ax]$  are available.

### Optional Accessories

**905338:** SPC cable (40" / 1m)

**905409:** SPC cable (80" / 2m)

**21EZA198:** Spindle lifting lever (ISO/JIS type)\*

**21EZA199:** Spindle lifting lever (ANSI/AGD type)\*

**21EZA105:** Spindle lifting knob (12.7mm/.5"ISO/JIS type)\*\*

**21EZA150:** Spindle lifting knob(12.7mm/.5"ANSI/AGD type)\*\*

**21EZA197:** Spindle lifting knob (25.4mm/1" , 50.8mm/2" models)

**21EZA200:** Spindle lifting knob (50.8mm/2")

**540774:** Spindle lifting cable (stroke: (1"/ 25.4mm)

**02ACA571:** Auxiliary spindle spring for 25mm/1" models\*\*\*

**02ACA773:** Auxiliary spindle spring for 50mm/2" models\*\*\*

——: Backs (See page F-33.)

——: Contact points (See page F-34.)

\*Can be used on 12mm/.5" models only.

\*\*Not available for low measuring force models.

\*\*\*Required when orienting gage upside down.



## SPECIFICATIONS

**Inch/Metric** Stem dia. 3/8", #4-48 UNF Thread ☐ ISO/JIS type ☐ ANSI/AGD type

| Resolution       | Range        | Order No.<br>(w/lug, flat-back) | Model       | Accuracy | Measuring<br>force | Remarks             |
|------------------|--------------|---------------------------------|-------------|----------|--------------------|---------------------|
| .00005"/0.001mm* | .5" / 12.7mm | <b>543-392</b> <b>543-392B</b>  | ID-C112EXB  | .0001"   | 1.5N or less       | —                   |
| .00005"/0.001mm* | .5" / 12.7mm | <b>543-396</b> <b>543-396B</b>  | ID-C112CEX  | .0001"   | 0.4N - 0.7N        | Low measuring force |
| .00005"/0.001mm* | 1" / 25.4mm  | — <b>543-472B</b>               | ID-C125EXB  | .0001"   | 1.8N or less       | —                   |
| .00005"/0.001mm* | 2" / 50.8mm  | — <b>543-492B</b>               | ID-C150EXB  | .0002"   | 2.3N or less       | —                   |
| .0005"/0.01mm    | .5" / 12.7mm | <b>543-402</b> <b>543-402B</b>  | ID-C1012EX  | .001"    | 0.9N or less       | —                   |
| .0005"/0.01mm    | .5" / 12.7mm | <b>543-406</b> <b>543-406B</b>  | ID-C1012CEX | .001"    | 0.2N - 0.5N        | Low measuring force |
| .0005"/0.01mm    | 1" / 25.4mm  | — <b>543-476B</b>               | ID-C1025EXB | .001"    | 1.8N or less       | —                   |
| .0005"/0.01mm    | 2" / 50.8mm  | — <b>543-496B</b>               | ID-C112CEXB | .0016"   | 2.3N or less       | —                   |

\* Switchable Resolution Type

**Inch/Metric** Stem ø 8mm, M2.5 x 0.45 Thread

| Resolution       | Range        | Order No.<br>(w/lug, flat-back) | Model       | Accuracy | Measuring<br>force | Remarks             |
|------------------|--------------|---------------------------------|-------------|----------|--------------------|---------------------|
| .00005"/0.001mm* | .5" / 12.7mm | <b>543-391</b> <b>543-391B</b>  | ID-C112MX   | .0001"   | 1.5N or less       | —                   |
| .00005"/0.001mm* | .5" / 12.7mm | <b>543-395</b> <b>543-395B</b>  | ID-C112CMX  | .0001"   | 0.4N - 0.7N        | Low measuring force |
| .00005"/0.001mm* | 1" / 25.4mm  | — <b>543-471B</b>               | ID-C125MXB  | .0001"   | 1.8N or less       | —                   |
| .00005"/0.001mm* | 2" / 50.8mm  | — <b>543-491B</b>               | ID-C150MXB  | .0002"   | 2.3N or less       | —                   |
| .0005"/0.01mm    | .5" / 12.7mm | <b>543-401</b> <b>543-401B</b>  | ID-C1012MX  | .001"    | 0.9N or less       | —                   |
| .0005"/0.01mm    | .5" / 12.7mm | <b>543-405</b> <b>543-405B</b>  | ID-C1012CMX | .001"    | 0.2N - 0.5N        | Low measuring force |
| .0005"/0.01mm    | 1" / 25.4mm  | — <b>543-475B</b>               | ID-C1025MXB | .001"    | 1.8N or less       | —                   |
| .0005"/0.01mm    | 2" / 50.8mm  | — <b>543-495B</b>               | ID-C1050MXB | .0016"   | 2.3N or less       | —                   |

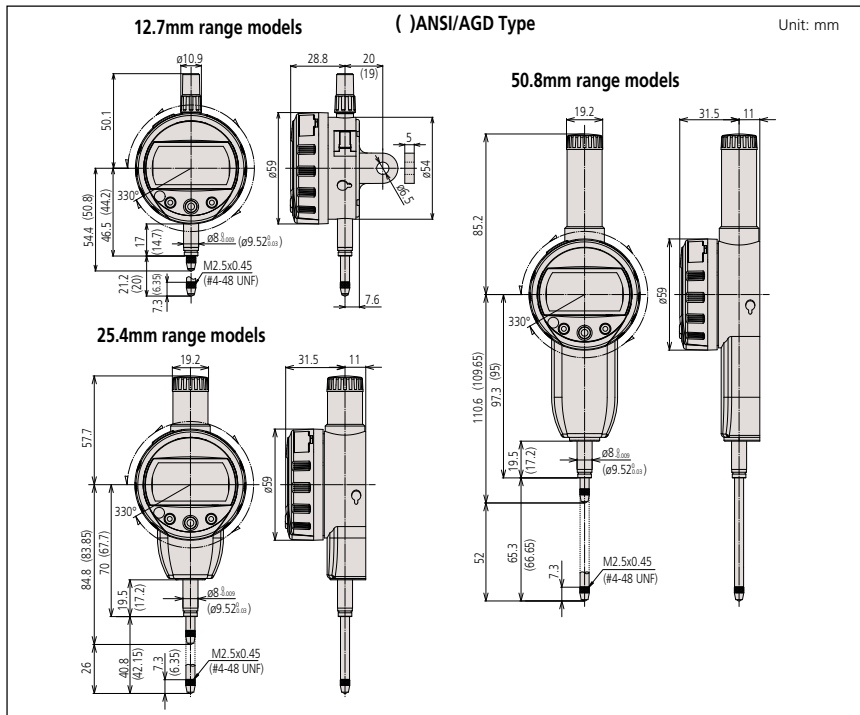
\* Switchable Resolution Type

**Metric** Stem ø 8mm, M2.5 x 0.45 Thread

| Resolution | Range  | Order No.<br>(w/lug, flat-back) | Model      | Accuracy | Measuring<br>force | Remarks             |
|------------|--------|---------------------------------|------------|----------|--------------------|---------------------|
| 0.001mm*   | 12.7mm | <b>543-390</b> <b>543-390B</b>  | ID-C112X   | 0.003mm  | 1.5N or less       | —                   |
| 0.001mm*   | 12.7mm | <b>543-394</b> <b>543-394B</b>  | ID-C112CX  | 0.003mm  | 0.4N - 0.7N        | Low measuring force |
| 0.001mm*   | 25.4mm | — <b>543-470B</b>               | ID-C125XB  | 0.003mm  | 1.8N or less       | —                   |
| 0.001mm*   | 50.8mm | — <b>543-490B</b>               | ID-C150XB  | 0.006mm  | 2.3N or less       | —                   |
| 0.01mm     | 12.7mm | <b>543-400</b> <b>543-400B</b>  | ID-C1012X  | 0.02mm   | 0.9N or less       | —                   |
| 0.01mm     | 12.7mm | <b>543-404</b> <b>543-404B</b>  | ID-C1012CX | 0.02mm   | 0.2N - 0.5N        | Low measuring force |
| 0.01mm     | 25.4mm | — <b>543-474B</b>               | ID-C1025XB | 0.03mm   | 1.8N or less       | —                   |
| 0.01mm     | 50.8mm | — <b>543-494B</b>               | ID-C1050XB | 0.04mm   | 2.3N or less       | —                   |

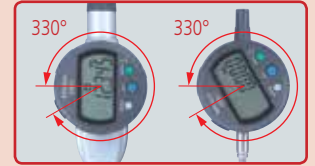
\* Switchable Resolution Type

## DIMENSIONS



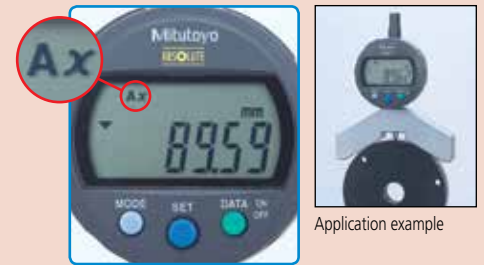
### 330° Rotary display

The display can be rotated 330°, allowing use at a position where you can easily read the measurement value.



### Calculation: $f(x) = Ax$

Mounting the ID-C on a measuring jig and setting the multiplying factor A (to any value) allows direct measurement without using a conversion table and improves measurement efficiency.



### Function locking

Ensures reliability of measurement by locking the settings to prevent preset function settings from being changed by mistake.



### Setting measuring force on low measuring force models.

#### •543-404/404B/405/405B/406/406B

| Spindle orientation             | Spring | Weight<br>(approximately 0.1N) | Maximum<br>measuring<br>force |
|---------------------------------|--------|--------------------------------|-------------------------------|
| Pointing vertically<br>downward | Yes    | Yes                            | 0.5N                          |
|                                 | Yes    | No                             | 0.4N                          |
|                                 | No     | Yes                            | 0.3N                          |
|                                 | No     | No                             | 0.2N                          |
| Horizontal                      | Yes    | No                             | 0.2N                          |

Note: Operation using configurations other than shown above is not guaranteed.

#### •543-394/394B/395/395B/396/396B

| Spindle orientation             | Spring         | Weight<br>(approximately 0.1N) | Maximum<br>measuring<br>force |
|---------------------------------|----------------|--------------------------------|-------------------------------|
| Pointing vertically<br>downward | Yes            | Yes                            | 0.7N                          |
|                                 | Yes            | No                             | 0.6N                          |
|                                 | No             | Yes                            | 0.4N                          |
|                                 | No             | No                             | Not guaranteed                |
| Horizontal                      | Not guaranteed |                                |                               |

Note: Operation using configurations other than shown above is not guaranteed.