



### 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. 5,000 hours under normal use

Dust/Water protection level: IP42 or IP53 (dust-proof type)

### Function

Origin-set/Preset, Zeroset, GO/±NG 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 gauge upside down.

# ABSOLUTE Digimatic Indicator ID-C

## SERIES 543 — Standard Type

### FEATURES

- As compact as standard Series 2 dial indicators.
- Large, easy-to-read LCD.
- GO/±NG judgment can be performed by setting upper and lower tolerance limits. The judgment result (GO/±NG) 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.



543-392



543-402



IP42  
543-472B



IP42  
543-492B

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## SPECIFICATIONS

Inch/Metric		Stem dia. 3/8", #4-48 UNF Thread		ISO/JIS type	ANSI/AGD type		
Resolution	Range	Order No. (w/lug, flat-back)		Model	Accuracy	Measuring force	Remarks
.00005"/0.001mm*	.5" / 12.7mm	543-392	543-392B	ID-C112EXB	.0001"	1.5N or less	—
.00005"/0.001mm*	.5" / 12.7mm	543-396	543-396B	ID-C112CEX	.0001"	0.4N - 0.7N	Low measuring force
.00005"/0.001mm*	1" / 25.4mm	—	543-472B	ID-C125EXB	.0001"	1.8N or less	—
.00005"/0.001mm*	2" / 50.8mm	—	543-492B	ID-C150EXB	.0002"	2.3N or less	—
.0005"/0.01mm	.5" / 12.7mm	543-402	543-402B	ID-C1012EX	.001"	0.9N or less	—
.0005"/0.01mm	.5" / 12.7mm	543-406	543-406B	ID-C1012CEX	.001"	0.2N - 0.5N	Low measuring force
.0005"/0.01mm	1" / 25.4mm	—	543-476B	ID-C1025EXB	.001"	1.8N or less	—
.0005"/0.01mm	2" / 50.8mm	—	543-496B	ID-C112CEXB	.0016"	2.3N or less	—

\* Switchable Resolution Type

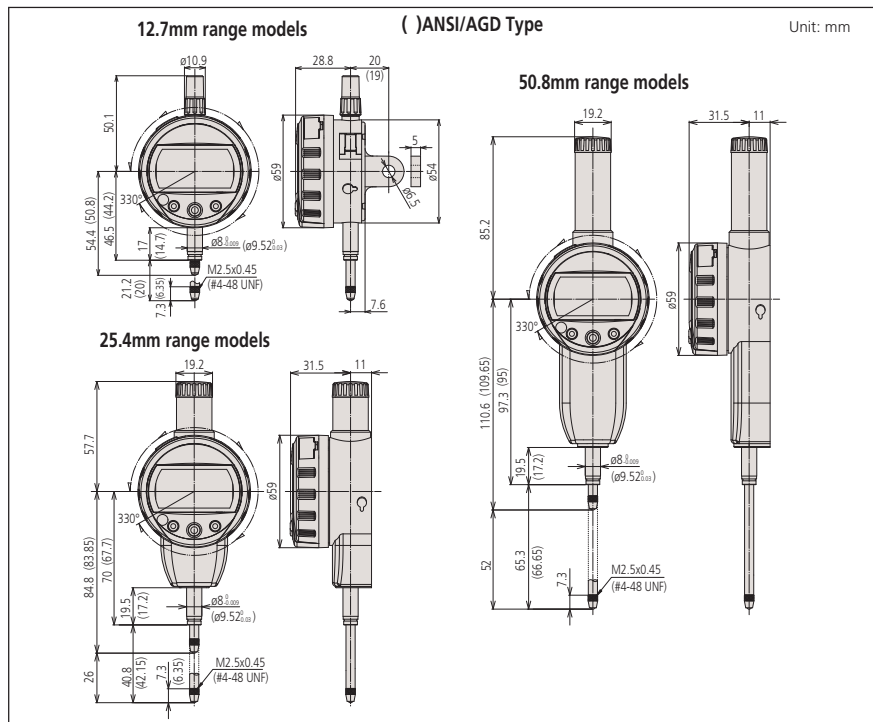
Inch/Metric		Stem ø 8mm, M2.5 x 0.45 Thread					
Resolution	Range	Order No. (w/lug, flat-back)		Model	Accuracy	Measuring force	Remarks
.00005"/0.001mm*	.5" / 12.7mm	543-391	543-391B	ID-C112MX	.0001"	1.5N or less	—
.00005"/0.001mm*	.5" / 12.7mm	543-395	543-395B	ID-C112CMX	.0001"	0.4N - 0.7N	Low measuring force
.00005"/0.001mm*	1" / 25.4mm	—	543-471B	ID-C125MXB	.0001"	1.8N or less	—
.00005"/0.001mm*	2" / 50.8mm	—	543-491B	ID-C150MXB	.0002"	2.3N or less	—
.0005"/0.01mm	.5" / 12.7mm	543-401	543-401B	ID-C1012MX	.001"	0.9N or less	—
.0005"/0.01mm	.5" / 12.7mm	543-405	543-405B	ID-C1012CMX	.001"	0.2N - 0.5N	Low measuring force
.0005"/0.01mm	1" / 25.4mm	—	543-475B	ID-C1025MXB	.001"	1.8N or less	—
.0005"/0.01mm	2" / 50.8mm	—	543-495B	ID-C1050MXB	.0016"	2.3N or less	—

\* Switchable Resolution Type

Metric		Stem ø 8mm, M2.5 x 0.45 Thread					
Resolution	Range	Order No. (w/lug, flat-back)		Model	Accuracy	Measuring force	Remarks
0.001mm*	12.7mm	543-390	543-390B	ID-C112X	0.003mm	1.5N or less	—
0.001mm*	12.7mm	543-394	543-394B	ID-C112CX	0.003mm	0.4N - 0.7N	Low measuring force
0.001mm*	25.4mm	—	543-470B	ID-C125XB	0.003mm	1.8N or less	—
0.001mm*	50.8mm	—	543-490B	ID-C150XB	0.006mm	2.3N or less	—
0.01mm	12.7mm	543-400	543-400B	ID-C1012X	0.02mm	0.9N or less	—
0.01mm	12.7mm	543-404	543-404B	ID-C1012CX	0.02mm	0.2N - 0.5N	Low measuring force
0.01mm	25.4mm	—	543-474B	ID-C1025XB	0.03mm	1.8N or less	—

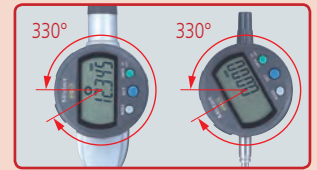
\* Switchable Resolution Type

## DIMENSIONS



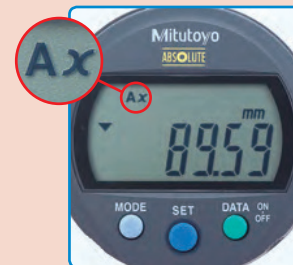
### 330° Rotary display

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.



Application example

### 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 (approximately 0.1N)	Maximum measuring force
Pointing vertically 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 (approximately 0.1N)	Maximum measuring force
Pointing vertically 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.



### Technical Data

Accuracy: Refer to the list of specifications  
 Resolution: 0.0002mm - 1mm or  
 .00001" - .05"/0.0002mm - 1mm  
 Display: LCD  
 Length standard: ABSOLUTE electrostatic capacitance type  
 linear encoder  
 Max. response speed: Unlimited  
 Measuring force: 1.5N or less  
 Battery: SR44 (1 pc.), **938882**  
 Battery life: Approx. 12 months under normal use

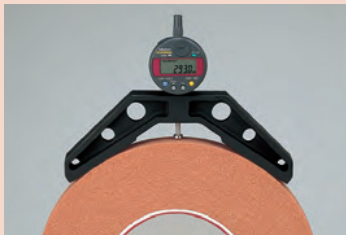
### Function

Origin-set/Preset, Zeroset, GO/±NG 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

### Optional Accessories

**905338:** SPC cable (40" / 1m)  
**905409:** SPC cable (80" / 2m)  
**902011:** Spindle lifting lever (ISO/JIS type)  
**540774:** Spindle lifting cable (Stroke: .4" / 10mm)  
 ———: Backs (See page F-33.)  
 ———: Contact points (See page F-34.)

### APPLICATIONS



- Various fixtures suited for individual workpieces can be prepared.
- Measuring accuracy is subject to fixture accuracy

# ABSOLUTE Digimatic Indicator ID-C

## SERIES 543 — Calculation Type

### FEATURES

A conventional Digimatic indicator simply displays a spindle displacement, but the Calculation-Type Digimatic indicator incorporates an internal calculation function in place of spindle displacement. With fixtures, measurements such as feeler, inside diameter and radius of curvature measurement can easily be obtained without the hassle of conversion tables or equivalents.

- The Absolute Digimatic indicator performs internal calculations using the formula  $Ax+B+Cx^{-1}$  (assuming spindle displacement as x) while the specified coefficients A, B and, C can be set with respect to the purpose of measurement or dimensions of the fixtures. This unique features allows you to read your measurements directly, without fumbling for conversions.



543-287B

### SPECIFICATIONS

ISO/JIS type      ANSI/AGD type

**Inch/Metric** Stem dia. 3/8" #4-48 UNF Thread

Resolution	Range	Order No.*	Model	Accuracy	Measuring Force
.00001" - .05"/ 0.0002 - 1mm (switchable)	.5" / 12.7mm	<b>543-287B</b>	ID-C112REB	.00012"	1.5N or less
	1" / 25.4mm	<b>543-482B</b>	ID-C125REB	.00012"	2.0N or less
	2" / 50.8mm	<b>543-487B</b>	ID-C150REB	.00025"	2.3N or less

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

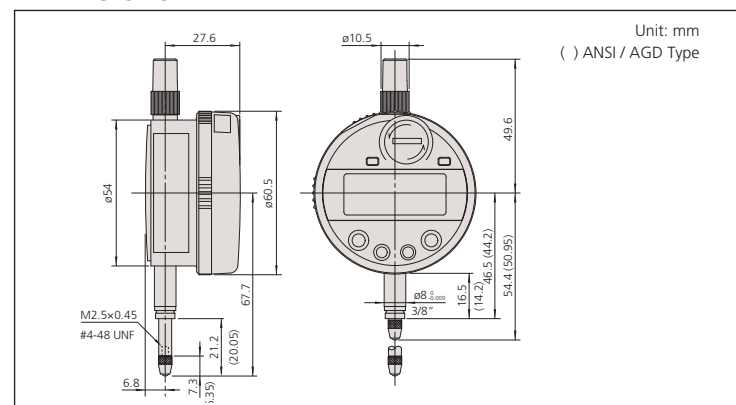
Resolution	Range	Order No.*	Model	Accuracy	Measuring Force
.00001" - .05"/ 0.0002 - 1mm (switchable)	.5" / 12.7mm	<b>543-286B</b>	ID-C112RMB	.00012"	1.5N or less
	1" / 25.4mm	<b>543-481B</b>	ID-C125RMB	.00012"	2.0N or less
	2" / 50.8mm	<b>543-486B</b>	ID-C150RMB	.00025"	2.3N or less

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

Resolution	Range	Order No.*	Model	Accuracy	Measuring Force
0.0002 - 1mm (switchable)	12.7mm	<b>543-285B</b>	ID-C112RB	0.003mm	1.5N or less
	25.4mm	<b>543-480B</b>	ID-C125RB	0.003mm	2.0N or less
	50.8mm	<b>543-485B</b>	ID-C150RB	0.006mm	2.3N or less

\*Flat back

### DIMENSIONS



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### Technical Data

Accuracy: Refer to the list of specifications  
 Resolution: 0.001mm, .00005"/0.001mm or .0001"/0.001mm  
 Display: LCD  
 Length standard: ABSOLUTE electrostatic capacitance type linear encoder  
 Max. response speed: Unlimited  
 Measuring force: 1.5N or less  
 Battery: SR44 (2 pcs.), **938882**  
 Battery life: Approx. 800 - 1300 hours under normal use  
 Dust/Water protection level: IP42

### Function

Origin-set/Preset, Zeroset, GO/±NG judgment, Max/Min/Runout value holding, 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

### Optional Accessories

**905338:** SPC cable (40" / 1m)  
**905409:** SPC cable (80" / 2m)  
**902011:** Spindle lifting lever (ISO/JIS type)  
**902794:** Spindle lifting lever (ANSI/AGD type)  
**540774:** Spindle lifting cable (stroke: .4" / 10mm)  
 —: Backs (See page F-33.)  
 —: Contact points (See page F-34.)

# ABSOLUTE Digimatic Indicator ID-C

## SERIES 543 — with Max./Min. Value Holding Function

With max./min. value holding function  
 model of the ID-C Series Digimatic Indicators.

### FEATURES

- The maximum, minimum, or runout value can be displayed during measurement.
- GO/±NG judgment is performed by setting the upper and lower tolerances for max., min. and runout values.
- High speed sampling ratio of 50 times/s.
- Employing the ABSOLUTE linear encoder, the Signal ID-C always displays the spindle "Absolute Position" from the origin at power-on.



543-260

### SPECIFICATIONS

ISO/JIS type      ANSI/AGD type

Inch/Metric		Stem dia. 3/8" #4-48 UNF Thread		
Resolution	Range	Order No.*	Model	Accuracy
.00005"/0.001mm	.5" / 12.7mm	<b>543-262</b>	ID-C112AE	.00012"
.0001"/0.001mm	.5" / 12.7mm	<b>543-263</b>	ID-C112AT	.00012"

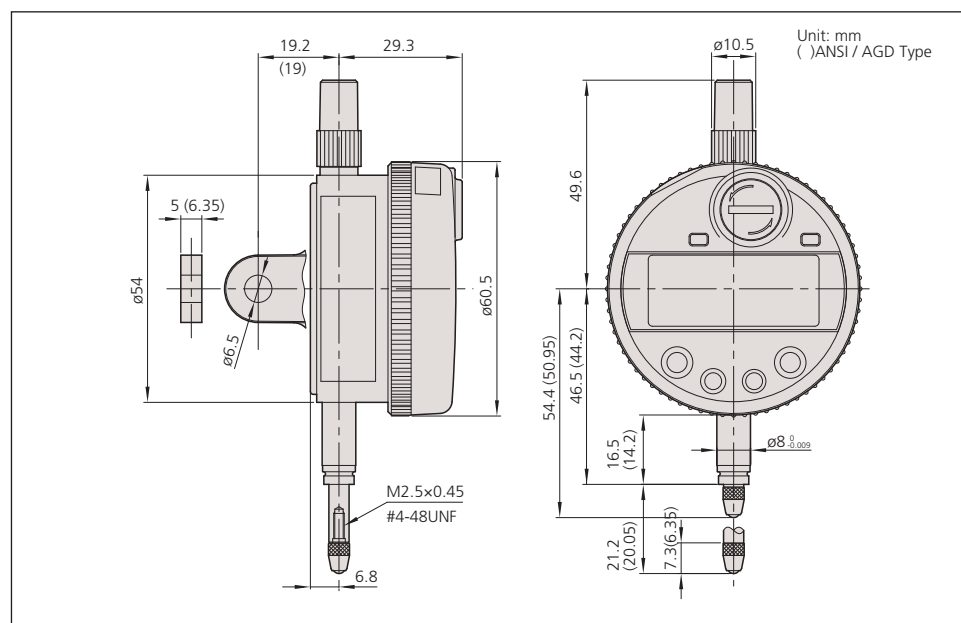
Inch/Metric		Stem ø 8mm, M2.5 x 0.45 Thread		
Resolution	Range	Order No.*	Model	Accuracy
.00005"/0.001mm	.5" / 12.7mm	<b>543-261</b>	ID-C112AM	.00012"

\*Back with lug

Metric		Stem ø 8mm, M2.5 x 0.45 Thread		
Resolution	Range	Order No.*	Model	Accuracy
0.001mm	12.7mm	<b>543-260</b>	ID-C112A	0.003mm

\*Back with lug

### DIMENSIONS



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# ABSOLUTE Digimatic Indicator ID-C

## SERIES 543 — Specially Designed for Bore Gage Application

This ID-C Series Digimatic Indicators are exclusively designed for ID measurement.

### FEATURES

- The minimum value holding function provides the easy of detection of hole diameter.
- An analog bar indicator is integrated to enhance the intuition in reading.
- GO/±NG judgment is performed by setting the upper and lower tolerances.
- Up to three sets of master value and upper/lower tolerance value can be memorized.
- Employing the ABSOLUTE linear encoder, the Signal ID-C always displays the spindle "Absolute Position" from the origin at power-on.



### SPECIFICATIONS

ISO/JIS type    ANSI/AGD type

**Inch/Metric**    Stem dia. 3/8" #4-48 UNF Thread

Resolution	Range	Order No.*	Model	Accuracy
.00005"/0.001mm	.5" / 12.7mm	543-266B	ID-C112GE	.00012"
.0001"/0.001mm	.5" / 12.7mm	543-267B	ID-C112G	.00012"

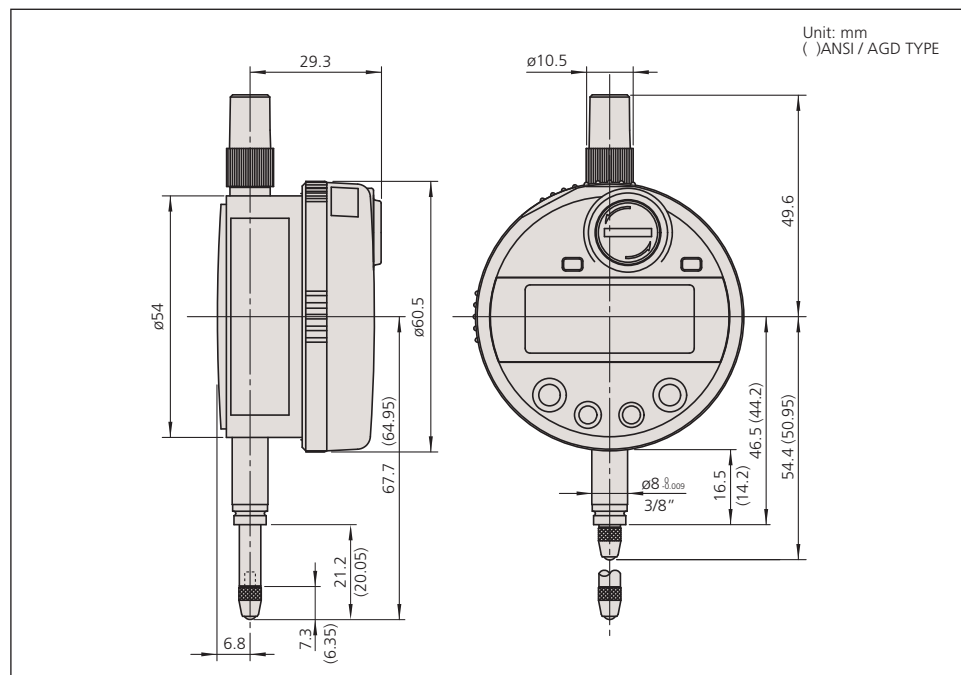
\*Back with lug

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

Resolution	Range	Order No.*	Model	Accuracy
0.001mm	12.7mm	543-264B	ID-C112G	0.003mm

\*Back with lug

### DIMENSIONS



SPC

**ABSOLUTE**  
Absolute System Patented by MITUTOYO

### Technical Data

Accuracy: Refer to the list of specifications  
Resolution: 0.001mm or .00005"/0.001mm  
Display: LCD  
Length standard: ABSOLUTE electrostatic capacitance type linear encoder  
Max. response speed: Unlimited  
Measuring force: 1.5N or less  
Battery: SR44 (2 pcs.), **938882**  
Battery life: Approx. 2000 hours under normal use  
Dust/Water protection level: IP42

### Function

Origin-set/Preset, Zero-set, GO/±NG judgment, 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

### Optional Accessories

**905338:** SPC cable (40" / 1m)  
**905409:** SPC cable (80" / 2m)  
Applicable Gages Series 511 and 526



Installed on bore gage probe (511-127)