



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. (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	—

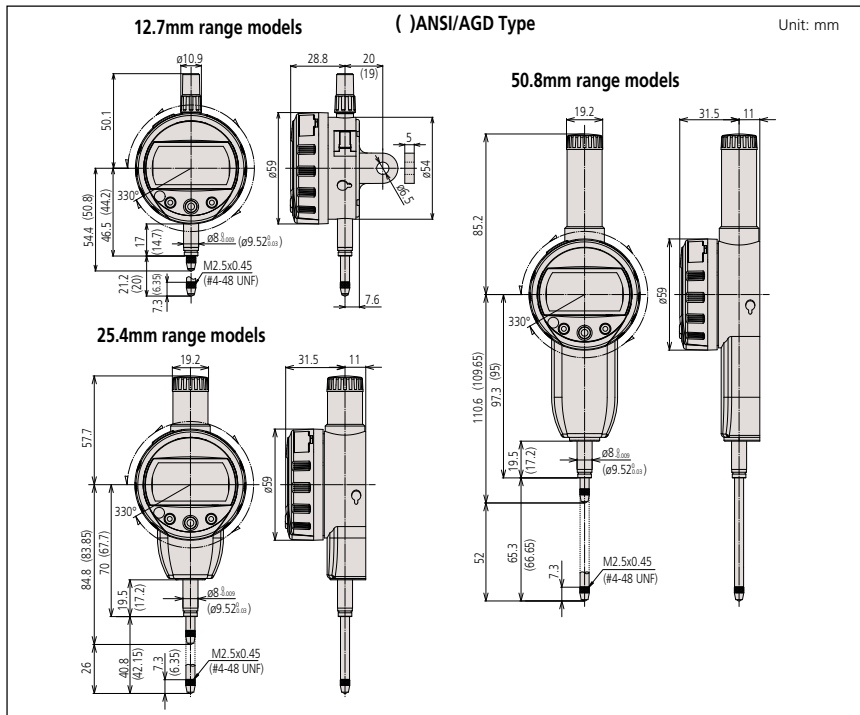
* Switchable Resolution Type

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	—
0.01mm	50.8mm	— 543-494B	ID-C1050XB	0.04mm	2.3N or less	—

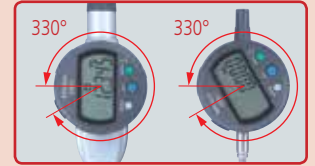
* Switchable Resolution Type

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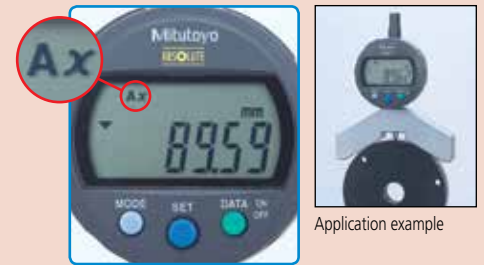
330° Rotary display

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 (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.

Standard Type

FEATURES

Tolerance judgment

- 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.

Technical Data

- Display: LCD (indicator face: 330° rotation)
- Functions: Origin set (preset), Power on/off, Zero setting, Counting direction switching, GO/±NG judgment, inch/mm conversion (inch/mm type), SPC data output
- Battery: SR44 (1pc.) (938882)
- Battery life: 5,000 hours in continuous use
- Stem diameter: 3/8" (ANSI/AGD type) or 8mm (ISO/JIS type)
- Contact point: Carbide ball (ISO/JIS type) or steel ball (ANSI/AGD type)
- Measuring force: 1.5N/0.9N* or less (.5"/12.7mm range models), 1.8N or less (1"/25.4mm range models), 2.3N or less (2"/50.8mm range models)
- *543-270/543-270B/543-271/543-271B/543-272/543-272B
- Dust-water protection level: Conforming to IP42
- Alarm: Low battery voltage, Scale contaminations, Over flow error, Tolerance limit setting error
- Operating temperature: 0°F to 104°F (0°C to 40°C)
- Mass: .35 lbs./160g (.5"/12.7mm range models), .42 lbs./190g (1"/25.4mm range models), .62 lbs./280g (2"/50.8mm range models)

Specifications (ISO/JIS type)

Order No.		Accuracy	Resolution	Range
Back w/lug	Flat-back			
543-250	543-250B	0.003mm	0.001mm	12.7mm
—	543-450B	0.003mm		25.4mm
—	543-460B	0.006mm		50.8mm
543-290	543-290B	0.005mm	0.01mm	12.7mm
543-270	543-270B	0.02mm		
—	543-457B	0.005mm		25.4mm
—	543-454B	0.03mm		
—	543-464B	0.04mm		50.8mm
543-251	543-251B	.00012"	.00005"/0.001mm	.5"/12.7mm
—	543-451B	.00012"		1"/25.4mm
—	543-461B	.00025"		2"/50.8mm
543-291	543-291B	.0002"	.0005"/0.01mm	.5"/12.7mm
543-271	543-271B	.0008"		
—	543-458B	.0002"		1"/25.4mm
—	543-455B	.0012"		
—	543-465B	.0016"		2"/50.8mm

Specifications (ANSI/AGD type)

Order No.		Accuracy	Resolution	Range
Back w/lug	Flat-back			
543-252	543-252B	.00012"	.00005"/0.001mm	.5"/12.7mm
—	543-452B	.00012"		1"/25.4mm
—	543-462B	.00025"		2"/50.8mm
543-253	543-253B	.00012"	.0001"/0.001mm	.5"/12.7mm
—	543-453B	.00012"		1"/25.4mm
—	543-463B	.00025"		2"/50.8mm
543-292	543-292B	.0002"	.0005"/0.01mm	.5"/12.7mm
543-272	543-272B	.0008"		
—	543-459B	.0002"		1"/25.4mm
—	543-456B	.0012"		
—	543-466B	.0016"		2"/50.8mm

Low measuring force type

FEATURES

Low measuring force of 0.4N - 0.7N

- The low measuring force type is specially designed for elastic workpieces such as plastic parts.

Technical Data

- Measuring force: 0.4N to 0.7N

Note: Other specifications are same as those of the above standard type.

Specifications

Order No.		Accuracy	Resolution	Range
Back w/lug	Flat-back			
543-254	543-254B	0.003mm	0.001mm	12.7mm
543-274	543-274B	0.02mm	0.01mm	12.7mm
543-255	543-255B	.00012"	.00005"/0.001mm	.5"/12.7mm
543-256*	543-256B*	.00012"		
543-275	543-275B	.0008"	.0005"/0.01mm	.5"/12.7mm
543-276*	543-276B*	.0008"		

*ANSI/AGD type

Dust-proof type

FEATURES

IP53 dust/water protection level

- The IP53 protection level structure of the dust-proof type allows the indicator to resist dust and contaminants for safe operation in harsh machine shop environments.

Technical Data

- Measuring force: 2.0N or less
- Dust/Water protection level: Conforming to IP53

Note: Other specifications are same as those of above standard type.

Specifications

Order No.		Accuracy	Resolution	Range
Back w/lug	Flat-back			
543-257	543-257B	0.003mm	0.001mm	12.7mm
543-277	543-277B	0.02mm	0.01mm	12.7mm
543-258	543-258B	.00012"	.00005"/0.001mm	.5"/12.7mm
543-259*	543-259B*	.00012"		
543-278	543-278B	.0008"	.0005"/0.01mm	.5"/12.7mm
543-279*	543-279B*	.0008"		

*ANSI/AGD type