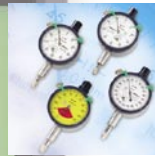


INDEX

Digimatic Indicator	
ABSOLUTE Digimatic Indicator ID-S	232
ABSOLUTE Digimatic Indicator ID-U	233
ABSOLUTE Digimatic Indicator ID-C	234
ABSOLUTE Digimatic Indicator ID-H	240
ABSOLUTE Digimatic Indicator ID-F	241
ABSOLUTE Digimatic Indicator ID-N/B	242
EC Counter	243
Multi-Unit, Difference/Sum Unit	243
Dial Indicator	
Dial Indicator	244
Special Dial Indicator	253
Dial Indicator (One Revolution Type)	254
Dial Indicator (Long Stroke Type)	256
Dial Indicator (Large Dial Face and Long Stroke Type)	258
ANSI/AGD Type Metric Dial Indicator	260
Hicator, Signal Hicator	261
Back Plunger Type Dial Indicator	262
Contact Point	264
Back	266
Spindle Lifting Lever and Cable	267
Color Spindle Cap	268
Limit Sticker	268
Dial Indicator Repair Tool Kit	269
Dial Indicator Crystal Setter	269
Dial Test Indicator	
Dial Test Indicator	270
Pocket Type Dial Test Indicator	276
Contact Point, Stem and Clamp Holder	278
Dial Indicator Application	
i-Checker	280
UDT-2 Dial Gage Tester	281
Calibration Tester	281
Thickness Gage	282
Light-Weight Dial Thickness Gage	284
Digimatic Caliper Gage	285
Dial Caliper Gage	286
Bench Gage	288
Upright Gage	289
Dial Snap Gage	290
Female Screw Thread Comparator	291
Roll Caliper	291
Dial Tension Gage	292
V-Block Set	292
Stand	
Magnetic Stand	293
Dial Gage Stand	294
Transfer Stand	295
Granite Comparator Stand	296
Comparator Stand	297
Heavy Duty Comparator Stand	298



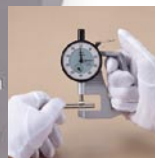
Digimatic Indicator



Dial Indicator



Dial Test Indicator



Dial Indicator Application and Stand

New Products



ABSOLUTE Digimatic Indicator ID-S

SERIES 543 — with Economical Design

FEATURES

- As compact as standard Series 2 dial indicators.
- The ID-S indicates the absolute position of the spindle from the origin point at power-on, allowing to start measurements.
- After the initial zero-setting with the ORIGIN button, the repeated absolute positioning is no longer necessary over the entire battery life.
- Measurement error due to spindle over-speed is eliminated with the ABSOLUTE Encoder.
- SPC data output.



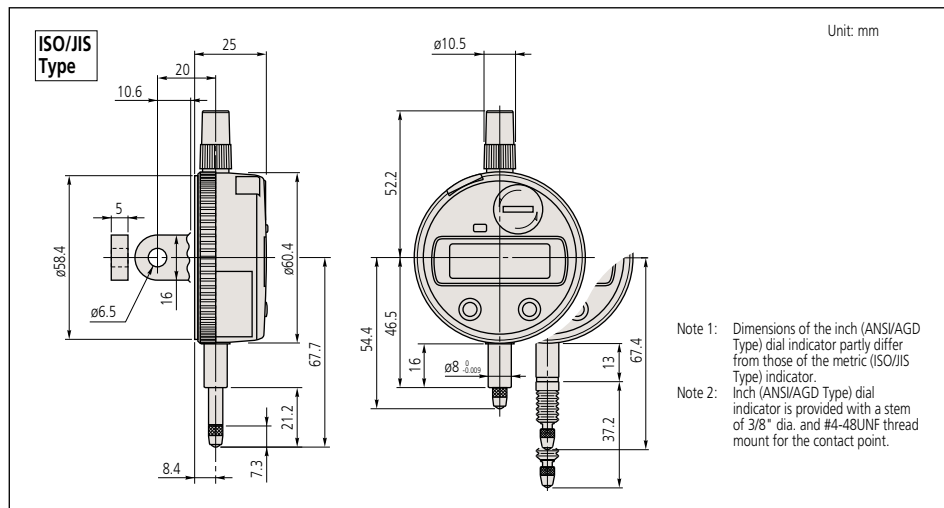
543-690
IP42

SPECIFICATIONS

Metric						
Resolution	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks	
0.001mm	543-690	543-690B	12.7mm	0.003mm	2.0N or less	—
0.001mm	543-694	543-694B	12.7mm	0.003mm	2.5N or less	Dust-proof
0.01mm	543-681	543-681B	12.7mm	0.02mm	2.0N or less	—

Inch/Metric						
Resolution	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks	
.00005"/0.001mm	543-691	543-691B	.5"	.00012"	2.0N or less	—
.00005"/0.001mm	543-695	543-695B	.5"	.00012"	2.5N or less	Dust-proof
.00005"/0.001mm	543-692	543-692B	.5"	.00012"	2.0N or less	—
.00005"/0.001mm	543-696	543-696B	.5"	.00012"	2.5N or less	Dust-proof
.0001"/0.001mm	543-693	543-693B	.5"	.00012"	2.0N or less	—
.0005"/0.01mm	543-682	543-682B	.5"	.0008"	2.0N or less	—
.0005"/0.01mm	543-683	543-683B	.5"	.0008"	2.0N or less	—

DIMENSION



(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)
 Resolution: 0.01mm, 0.001mm, .0005"/0.01mm, .0001"/0.001mm or .00005"/0.001mm
 Display: LCD
 Length standard: ABSOLUTE electrostatic capacitance type linear encoder
 Max. response speed: Unlimited
 Measuring force: Refer to the list of specifications
 Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
 Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
 Battery: SR44 (1 pc.), **938882**
 Battery life: Approx. 20,000 hours under normal use
 Dust/Water protection level: IP42 (IP53: **543-694, 543-695, 543-696**)

Function

Origin-set, Zeroset, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, Counting value composition error, Over-flow error

Optional Accessory

- 905338: SPC cable (1m)
- 905409: SPC cable (2m)
- 903424: Spindle lifting lever (ISO/JIS type)
- 903425: Spindle lifting lever (ANSI/AGD type)
- 540774: Spindle lifting cable
- 125317: Spare rubber boot (for dust-proof type)
- 02ACB610: Back with post
- 02ACB630: Adjustable back
- 02ACB640: Back with offset lug
- 02ACB650: Magnetic back
- 02ACB670: Back with screw mount
- 02ACB680: Back with adjustable bracket
- : Contact points (See page 264.)



(Refer to the page 9 for details.)

Technical Data

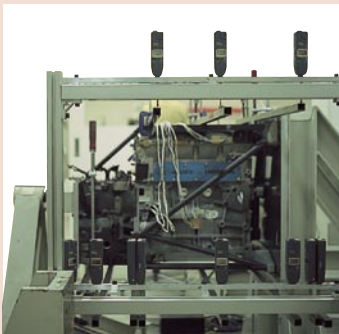
Accuracy: Refer to the list of specifications (excluding quantizing error)
 Resolution: 0.01mm or .0005"/0.01mm,
 Display: LCD
 Length standard: ABSOLUTE electrostatic capacitance type linear encoder
 Max. response speed: Unlimited
 Measuring force: Refer to the list of specifications
 Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
 Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
 Battery: SR44 (1 pc.), **938882**
 Battery life: Approx. 20,000 hours under normal use
 Dust/Water protection level: IP42

Function

Origin-set, Zeroset, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, Counting value composition error, Over-flow error

Optional Accessory

905338: SPC cable (1m)
905409: SPC cable (2m)
540774: Spindle lifting cable (stroke: 10mm)
 —: Contact points (See page 264.)



Application example

ABSOLUTE Digimatic Indicator ID-U

SERIES 575 — with Slime and Economical Design

FEATURES

- Slim type digital indicator with low price.
- Large LCD and simple key operation.
- The ID-U displays the absolute position of the spindle from the origin point at power-on.
- After the initial origin setting, the ID-U no longer needs absolute positioning over the entire battery life; the origin is remembered even after power-off.
- Ideal for installation into measuring devices because of its compact design and long battery life.
- The ABSOLUTE Encoder eliminates spindle over-speed error and prevents electrical noise interference errors.
- SPC data output.



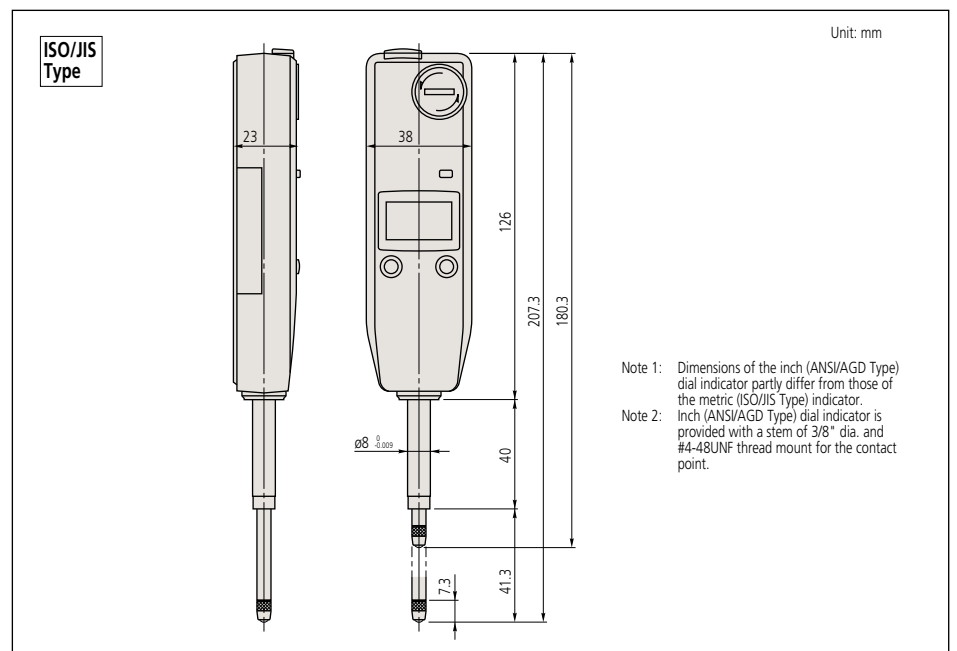
575-121
IP42

SPECIFICATIONS

Metric		ISO/JIS type		ANSI/AGD type		
Resolution	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks	
0.01mm	—	575-121	25.4mm	0.02mm	1.8N or less	—

Inch/Metric		ISO/JIS type		ANSI/AGD type		
Resolution	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks	
.0005"/0.01mm	—	575-122	1"	.0008"	1.8N or less	—
.0005"/0.01mm	—	575-123	1"	.0008"	1.8N or less	—

DIMENSION



ABSOLUTE Digimatic Indicator ID-C

SERIES 543 — Standard Type

FEATURES

- As compact as standard Series 2 dial indicators.
- Large, easy-to-read LCD.
- ZERO/ABS key: Allows the display to be Zero-Set at any spindle position for comparison measurements. This switch will also allow return to the absolute coordinate and display of the true position from the origin point.
- 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.
- Internal calculations using the simple formula of $[F(x) = Ax]$ are available.
- The positive/negative count resulting from the spindle's up/down movement can be toggled.
- Unlimited response speed eliminates spindle over-speed errors.
- The indicator face can be rotated 330° to an appropriate angle for easy reading.
- With SPC data output.



SPC

ABSOLUTE[®]
Absolute System Patented by MITUTOYO

(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)

Resolution:

0.01mm type	0.01mm
0.001mm type	0.001mm/0.001mm
.0005"/0.01mm type	.0005"/0.01mm
.00005"/0.001mm type	.0005"/.0001"/.00005"/0.01mm/0.001mm

Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type linear encoder

Max. response speed: Unlimited

Measuring force: Refer to the list of specifications

Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)

Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type)
Carbide ball with #4-48UNF (ANSI/AGD type)

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

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

Dust/Water protection level: IP42

Function

Origin-set/Preset, Zeroset, GO/±NG judgment, Counting direction switching, Power ON/OFF, Simplified calculation, Function lock, Data hold, Data output, inch/mm conversion (inch/mm models)

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

Optional Accessory

905338: SPC cable (1m)

905409: SPC cable (2m)

21EZA198: Spindle lifting lever (12.7mm/.5" ISO/JIS type)

21EZA199: Spindle lifting lever (12.7mm/.5" 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)

540774: Spindle lifting cable

02ACA571: Auxiliary spindle spring (25.4mm/1" models)**

02ACA773: Auxiliary spindle spring (50.8mm/2" models)**

—: Backs (See page 266.)

—: Lug-on-center back (25.4mm/1" and

50.8mm/2", ISO/JIS type)

—: Lug-on-center back (25.4mm/1" and

50.8mm/2", ANSI/AGD type)

—: Contact points (See page 264.)

*Not available for low measuring force models.

**Required when orienting the indicator upside down.

SPECIFICATIONS

Metric

ISO/JIS type

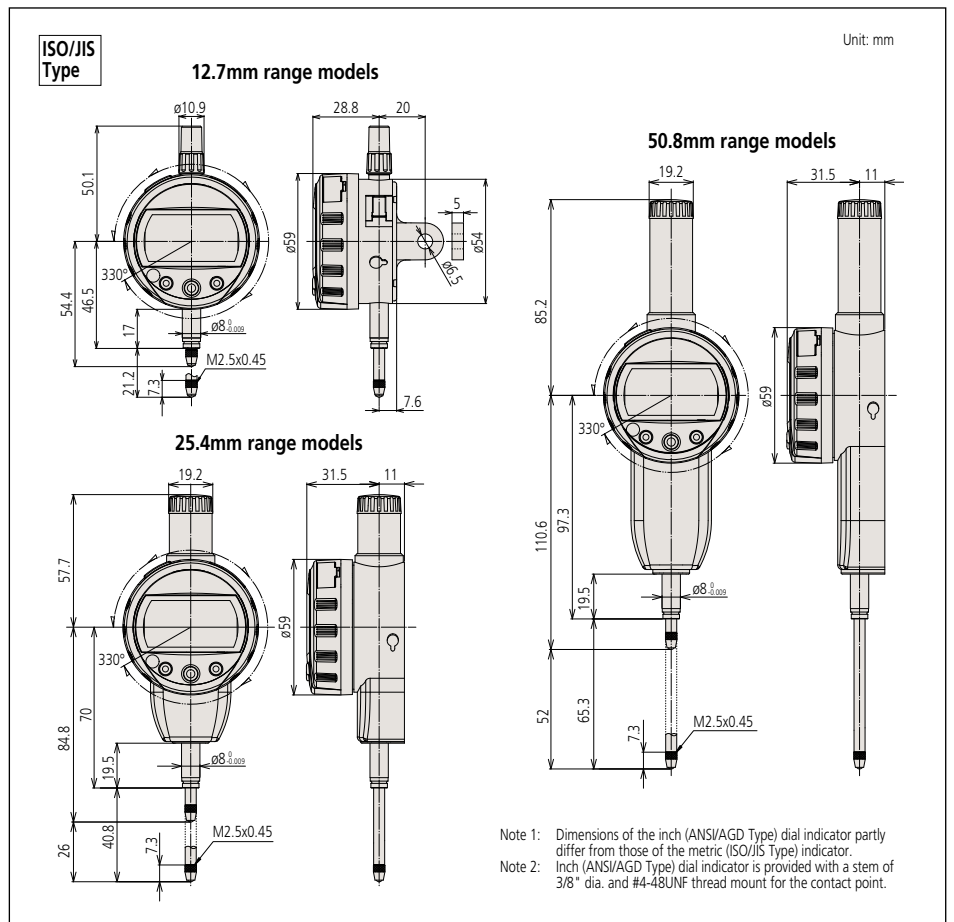
ANSI/AGD type

Resolution*	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks
0.001mm	543-390 543-390B	12.7mm	0.003mm	1.5N or less	—
0.001mm	543-394 543-394B	12.7mm	0.003mm	0.4N - 0.7N	Low measuring force
0.001mm	— 543-470B	25.4mm	0.003mm	1.8N or less	—
0.001mm	— 543-490B	50.8mm	0.005mm	2.3N or less	—
0.01mm	543-400 543-400B	12.7mm	0.02mm	0.9N or less	—
0.01mm	543-404 543-404B	12.7mm	0.02mm	0.2N - 0.5N	Low measuring force
0.01mm	— 543-474B	25.4mm	0.02mm	1.8N or less	—
0.01mm	— 543-494B	50.8mm	0.04mm	2.3N or less	—

Inch/Metric

Resolution*	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks
.00005"/0.001mm	543-391 543-391B	.5"	.0001"	1.5N or less	—
.00005"/0.001mm	543-392 543-392B	.5"	.0001"	1.5N or less	—
.00005"/0.001mm	543-395 543-395B	.5"	.0001"	0.4N - 0.7N	Low measuring force
.00005"/0.001mm	543-396 543-396B	.5"	.0001"	0.4N - 0.7N	Low measuring force
.00005"/0.001mm	— 543-471B	1"	.0001"	1.8N or less	—
.00005"/0.001mm	— 543-472B	1"	.0001"	1.8N or less	—
.00005"/0.001mm	— 543-491B	2"	.0002"	2.3N or less	—
.00005"/0.001mm	— 543-492B	2"	.0002"	2.3N or less	—
.0005"/0.01mm	543-401 543-401B	.5"	.001"	0.9N or less	—
.0005"/0.01mm	543-402 543-402B	.5"	.001"	0.9N or less	—
.0005"/0.01mm	543-405 543-405B	.5"	.001"	0.2N - 0.5N	Low measuring force
.0005"/0.01mm	543-406 543-406B	.5"	.001"	0.2N - 0.5N	Low measuring force
.0005"/0.01mm	— 543-475B	1"	.001"	1.8N or less	—
.0005"/0.01mm	— 543-476B	1"	.001"	1.8N or less	—
.0005"/0.01mm	— 543-495B	2"	.0015"	2.3N or less	—
.0005"/0.01mm	— 543-496B	2"	.0015"	2.3N or less	—

DIMENSION



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.



543-285B

SPECIFICATIONS

Metric			
Resolution	Order No.*	Range	Accuracy
0.0002 - 1mm (switchable)	543-285B	12.7mm	0.003mm
	543-480B	25.4mm	0.003mm
	543-485B	50.8mm	0.006mm

*Flat back

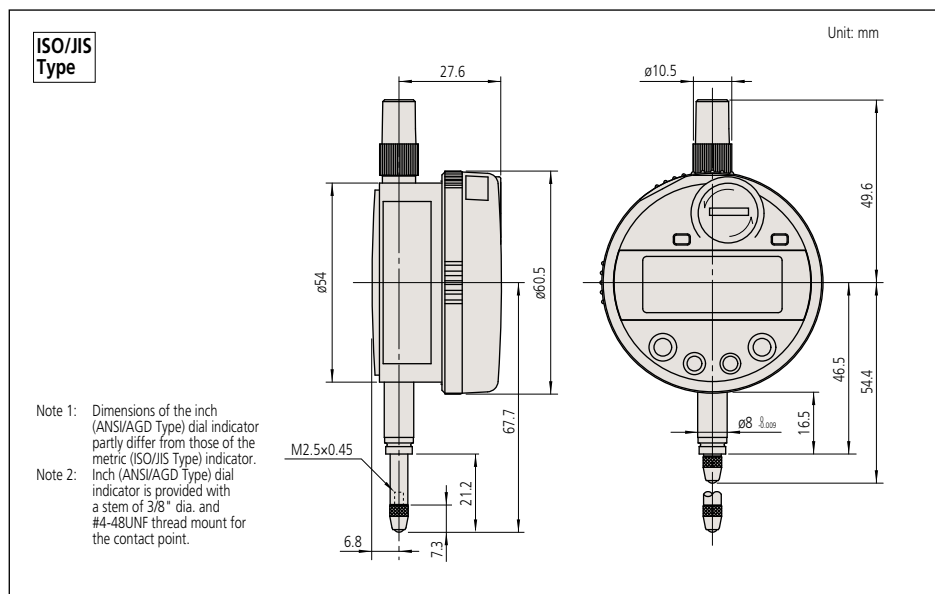
ISO/JIS type

ANSI/AGD type

Inch/Metric			
Resolution	Order No.*	Range	Accuracy
.00001" - .05"/ 0.0002 - 1mm (switchable)	543-286B	.5"	.00012"
	543-287B	.5"	.00012"
	543-481B	1"	.00012"
	543-482B	1"	.00012"
	543-486B	2"	.00025"
	543-487B	2"	.00025"

*Flat back

DIMENSION



(Refer to the page 9 for details.)

Technical Data

- Accuracy: Refer to the list of specifications (excluding quantizing error)
- 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
- Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
- Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
- Battery: SR44 (1 pc.), 938882
- Battery life: Approx. 12 months under normal use

Function

- Origin-set/Preset, Zeraset, GO/±NG judgment, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (inch/mm models)
- Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Optional Accessory

- 905338: SPC cable (1m)
- 905409: SPC cable (2m)
- 902011: Spindle lifting lever (ISO/JIS type)
- 540774: Spindle lifting cable
- Backs (See page 266.)
- Contact points (See page 264.)

APPLICATIONS



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

ABSOLUTE Digimatic Indicator ID-C

SERIES 543 — with Green/Red LED and GO/NG Signal Output Function



(Refer to the page 9 for details.)



Absolute System Patented by MITUTOYO

(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)
 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: 2.0N or less
 Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
 Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
 Power supply: DC 12 - 24V±10%
 Dust/Water protection level: IP54

Function

Data output (-NG/OK/NG signal, NPN open collector), Remote control (hold-preset, preset-recall, zero-set), Origin-set/Preset, Zero-set, GO/±NG judgment, Max/Min/Runout value holding, Counting direction switching, Power ON/OFF, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Optional Accessory

902011: Spindle lifting lever* (ISO/JIS type)
902794: Spindle lifting lever* (ANSI/AGD type)
540774: Spindle lifting cable*
125317: Rubber boot
 _____: Backs (See page 266.)
 _____: Contact points (See page 264.)

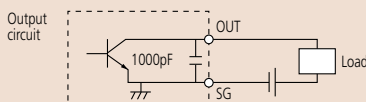
*When using the spindle lifting lever/cable, IP54 is not guaranteed.

Output pattern

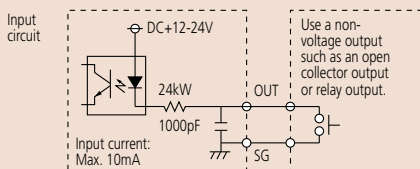
Wire	-NG	OK	+NG	Composition error
Orange (-NG)	Low	High	High	High
Green (OK)	High	Low	High	High
Brown (+NG)	High	High	Low	High
LED	Red	Green	Red	Red (blinking)
LCD	<	0	>	"xxE" indication

I/O Specifications

Wire	Signal	I/O	Description
Black	-V (GND)	—	Connected to minus (-) terminal
Red	+V (GND)	I	Power supply (12 - 24VDC)
Orange	-NG	O	Tolerance judgment result output: Only the terminal corresponding to a judgment result is set to the below level.
Green	OK	O	
Brown	+NG	O	
Yellow	PRESET_RECALL ZERO	I	External input terminal: If the relevant terminal is set to the low level, its signal becomes true.
Blue	HOLD_RESET	I	
Shield	FG	—	Connected to GND



Output voltage: Max. 24V
 Output current: Max. 30mA
 Output saturated voltage: Max. 0.3V



Use a non-voltage output such as an open collector output or relay output.
 Input current: Max. 10mA

FEATURES

- With the max./min. value holding function, the signal ID-C can output the signal of the GO/±NG judgment result against the peak values set. Substitute for the mechanical/electrical contact, the judgment is carried out by calculating the measurement data obtained. This provides high reliability with no deterioration of the contact point and volume adjustment.
- The signal can be output to an external device like a sequencer through the NPN open-collector.
- The GO/±NG judgment result is also indicated by the green/red LED and the "<, 0, >" signs on LCD.
- Employing the ABSOLUTE linear encoder, the Signal ID-C always displays the spindle "Absolute Position" from the origin at power-on. Also unlimited response speed eliminates over-speed errors.
- The Signal ID-C achieves the IP54 protection level to resist dust and contaminants for safe operation in harsh machine shop environments.



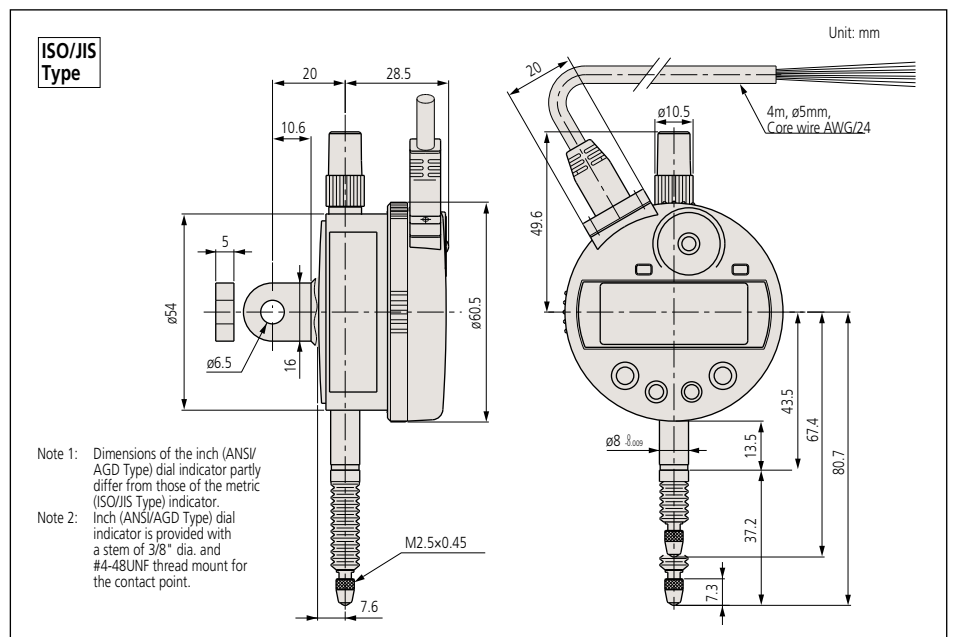
543-280

SPECIFICATIONS

Resolution	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks
0.001mm	543-280 543-280B	12.7mm	0.003mm	2.0N or less	—

Resolution	Order No. (w/ lug, flat-back)	Range	Accuracy	Measuring force	Remarks
.00005"/0.001mm	543-281 543-281B	.5"	.00012"	2.0N or less	—
.00005"/0.001mm	543-282 543-282B	.5"	.00012"	2.0N or less	—
.0005"/0.01mm	543-283 543-283B	.5"	.00012"	2.0N or less	—

DIMENSION



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.



543-262

SPECIFICATIONS

Metric			
Resolution	Order No.*	Range	Accuracy
0.001mm	543-260	12.7mm	0.003mm

*Back with lug

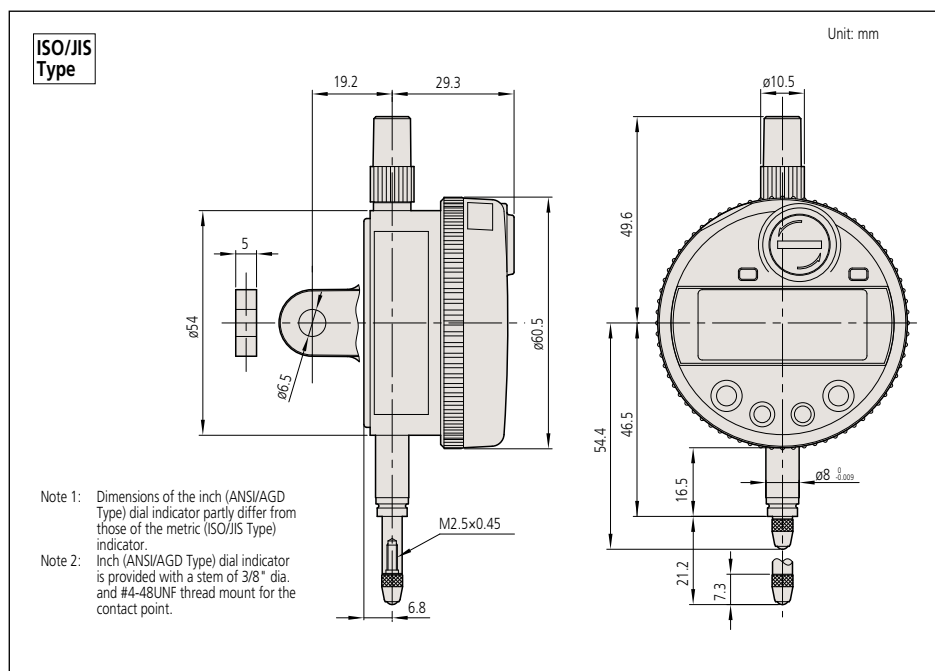
ISO/JIS type

ANSI/AGD type

Inch/Metric			
Resolution	Order No.*	Range	Accuracy
.00005"/0.001mm	543-261	.5"	.00012"
.00005"/0.001mm	543-262	.5"	.00012"
.0001"/0.001mm	543-263	.5"	.00012"

*Back with lug

DIMENSION



(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)
 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
 Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
 Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
 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 (inch/mm models)
 Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Optional Accessory

- 905338:** SPC cable (1m)
- 905409:** SPC cable (2m)
- 902011:** Spindle lifting lever (ISO/JIS type)
- 902794:** Spindle lifting lever (ANSI/AGD type)
- 540774:** Spindle lifting cable
- Backs (See page 266.)
- Contact points (See page 264.)



Absolute System Patented by MITUTOYO

(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)
 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
 Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
 Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
 Battery: SR44 (2 pcs.), **938882**
 Battery life: Approx. 2000 hours under normal use
 Dust/Water protection level: IP42

Function

Origin-set/Preset, Zeroset, GO/±NG judgment, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Optional Accessory

905338: SPC cable (1m)
905409: SPC cable (2m)
526-170: Bore gage probe (0.95 - 1.55mm)
526-160: Bore gage probe (1.5 - 4.0mm)
526-150: Bore gage probe (3.7 - 7.3mm)
526-101: Bore gage probe (7.0 - 10.0mm)
526-102: Bore gage probe (10 - 18mm)
526-126: Bore gage probe (18 - 35mm)
526-127: Bore gage probe (35 - 60mm)
526-132: Bore gage probe (50 - 150mm)



Installed on bore gage probe (**511-127**)

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.



543-264B

SPECIFICATIONS

Metric			
Resolution	Order No.*	Range	Accuracy
0.001mm	543-264B	12.7mm	0.003mm

*Back with lug

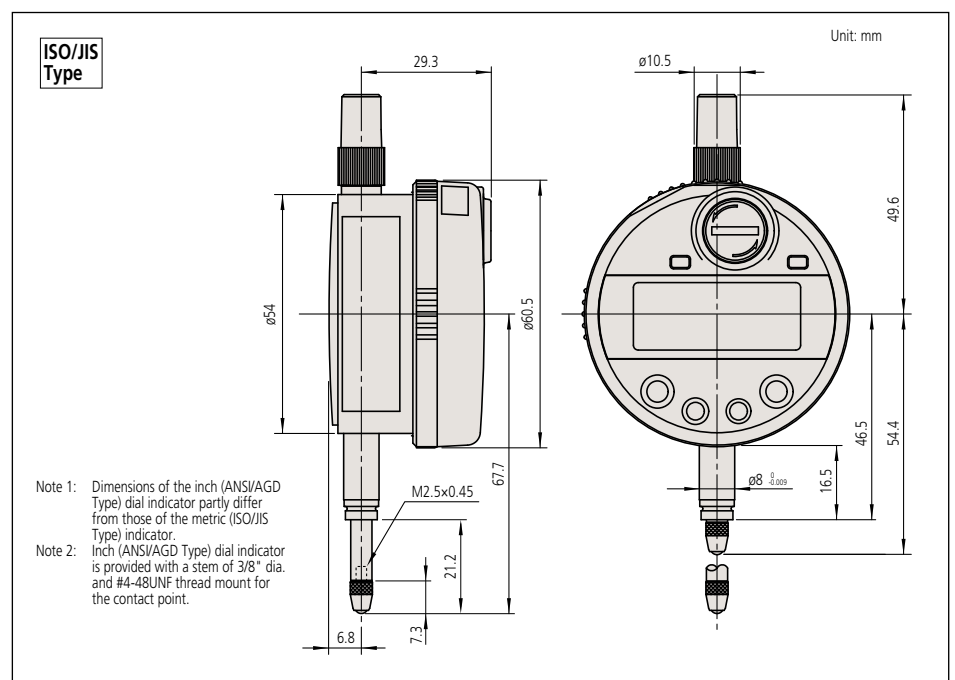
Inch/Metric			
Resolution	Order No.*	Range	Accuracy
.00005"/0.001mm	543-266B	.5"	.00012"

*Back with lug

ISO/JIS type

ANSI/AGD type

DIMENSION



ABSOLUTE Digimatic Indicator ID-H

SERIES 543 — High Accuracy and High Functional Type

FEATURES

- This new-generation digital indicator offers the excellent accuracy and functionality expected from this class of indicator. Take advantage of its high accuracy backed up by 0.5μm / .00002" resolution, remote control functionality via a handheld controller (or an RS-232C interface) and easy runout measurements with the well-established analog bar display.
- The maximum, minimum, or runout value can be displayed during measurement.
- GO/±NG judgment is performed by setting the upper and lower tolerances. If a judgment result is out of tolerance, the display backlighting changes from green to red, so tolerance judgment can be made at a glance.
- With SPC data output.
- With RS-232C input/output



Remote controller (optional)



543-561

543-563

SPECIFICATIONS

Metric			
Resolution	Order No.*	Range	Accuracy
0.0005mm, 0.001mm	543-561	30.4mm	0.0015mm
	543-563	60.9mm	0.0025mm

* To denote your AC line voltage add the following suffixes to the order No.
A for 120V **K** for 100V **D** for 220V **E** for 240/220V **DC** for China
No suffix is required for 100V

Inch/Metric			
Resolution	Order No.*	Range	Accuracy
.00005", .0001"	543-562	1.2"	0.0015mm
0.0005mm, 0.001mm	543-564	2.4"	0.0025mm

* To denote your AC line voltage add the following suffixes to the order No.
A for 120V **K** for 100V **D** for 220V **E** for 240/220V **DC** for China
No suffix is required for 100V

Tolerance judgment



Analog bar display



Max/Min value measurement



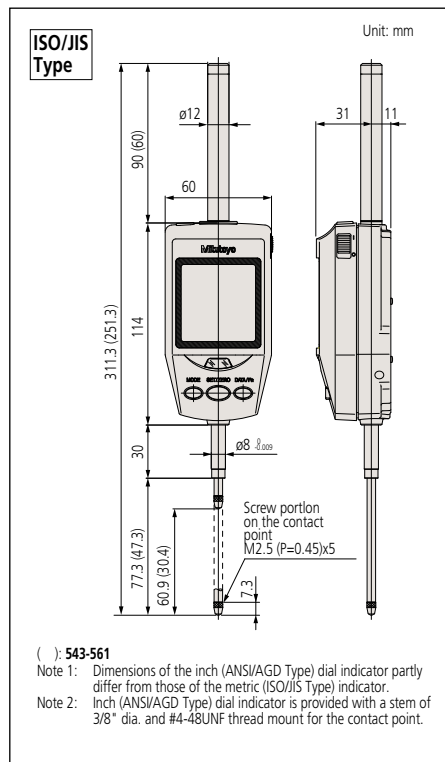
Runout measurement



Resolution switching



DIMENSION



(Refer to the page 9 for details.)

Technical Data

- Accuracy: Refer to the list of specifications (excluding quantizing error)
- Resolution: 0.0005mm/0.001mm or .00002"/.00005"/.0001"/0.0005mm/0.001mm
- Display: LCD
- Length standard: Linear encoder
- Max. response speed: 1000mm/s
- Measuring force: 2.0N/2.5N* or less (*60mm range models)
- Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
- Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type)
 Carbide ball with #4-48UNF (ANSI/AGD type)
- Power supply: 6V DC (via AC adaptor)

Function

- Origin-set/Preset, Zeroset, GO/±NG judgment, Max/Min value hold, Runout measurement, Resolution switching, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (inch/mm models)
- Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Optional Accessory

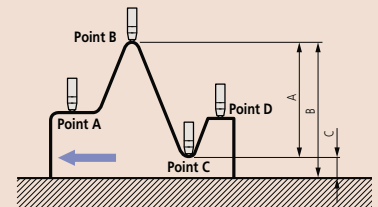
- 936937:** SPC cable (1m)
- 965014:** SPC cable (2m)
- 21EAA131:** RS-232C cable (2m)
- 21EZA099:** Remote controller
- 540774:** Spindle lifting cable (stroke: 30mm)
- 21EZA101:** Spindle lifting knob
- 264-504:** Digimatic Min-processor DP-1VR
- 543-004:** Digimatic presetter
- 215-154:** Granite comparator stand
- 215-504:** Comparator stand
- 215-821:** Comparator stand
- Backs (See page 266.)
- Contact points (See page 264.)

*Required when orienting the indicator upside down.

Application

Difference/Runout measurement

Example: Indicator travel from points A to D
 Difference (or Total Runout) is displayed as A. Dimensions B (maximum value) and C (minimum value) can be recalled from memory with a simple key sequence.





(Refer to the page 9 for details.)

Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)
 Resolution: 0.01mm/0.001mm or .00005"/.0001"/.0005"/.001"/0.001mm/0.01mm
 Display: LCD
 Length standard: ABSOLUTE electrostatic capacitance type linear encoder
 Max. response speed: Unlimited
 Measuring force: 1.8N/2.3N* or less (*50mm range models)
 Stem dia.: 8mm (ISO/JIS type) or 3/8" (ANSI/AGD type)
 Contact point: Carbide ball with M2.5x0.45 (ISO/JIS type) Carbide ball with #4-48UNF (ANSI/AGD type)
 Power supply: 9V DC (via AC adaptor)

Function

Origin-set/Preset, Zeroset, GO/±NG judgment, Max/Min value hold, Runout measurement, Resolution switching, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error

Optional Accessory

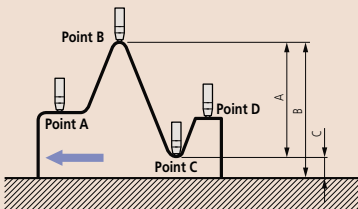
- 936937: SPC cable (1m)
- 965014: SPC cable (2m)
- 21EAA131: RS-232C cable (2m)
- 540774: Spindle lifting cable (stroke: 10mm)
- 02ACA571: Auxiliary spindle spring for 25mm/1" models*
- 02ACA773: Auxiliary spindle spring for 50mm/2" models*
- 264-504: Digimatic Min-processor DP-1VR
- 543-004: Digimatic presetter
- 215-154: Granite comparator stand
- 215-504: Comparator stand
- 215-821: Comparator stand
- : Backs (See page 266.)
- : Contact points (See page 264.)

*Required when orienting the indicator upside down.

Application

Difference/Runout measurement

Example: Indicator travel from points A to D
 Difference (or Total Runout) is displayed as A. Dimensions B (maximum value) and C (minimum value) can be recalled from memory with a simple key sequence.



ABSOLUTE Digimatic Indicator ID-F

SERIES 543 — with Back-lit LCD Screen

FEATURES

- With the ABSOLUTE Linear Encoder technology, once the measurement reference point has been preset it will not be lost when the power is turned on.
- GO/±NG judgment is performed by setting the upper and lower tolerances. If a judgment result is out of tolerance, the display backlighting changes from green to red, so tolerance judgment can be made at a glance.



- The maximum, minimum, or runout value can be displayed during measurement.

- An analog bar indicator has been integrated to handle upper/lower limit approaching and zero approaching. It enhances the ease of operation in the same manner as a dial indicator. The display range of the analog bar can be changed.
- With SPC data output.



SPECIFICATIONS

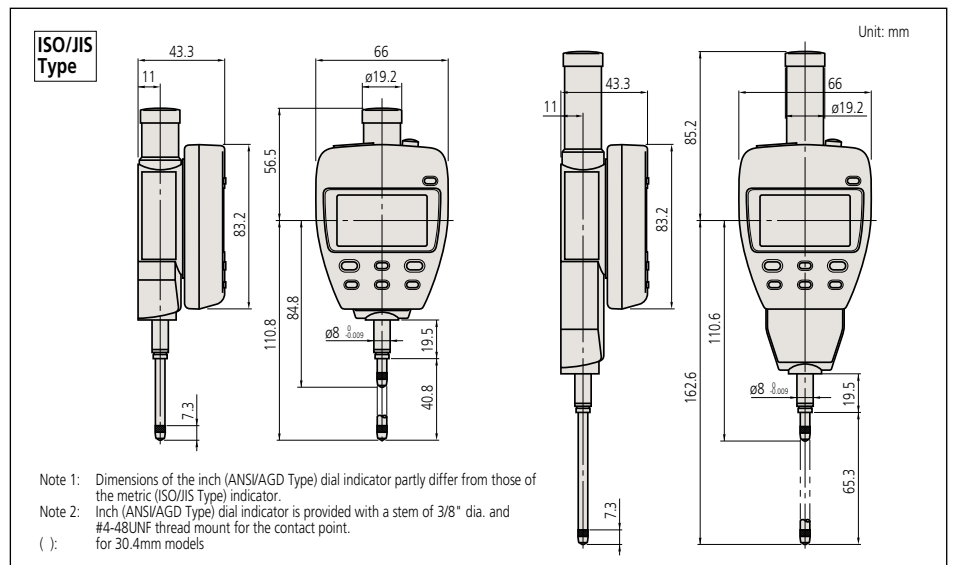
Metric			
Resolution	Order No.*	Range	Accuracy
0.001mm, 0.01mm	543-551	25mm	0.003mm
	543-557	50mm	0.003mm
	543-553	50mm	0.006mm

* To denote your AC line voltage add the following suffixes to the order No.
 A for 120V K for 100V D for 220V E for 240/220V DC for China
 No suffix is required for 100V

Inch/Metric			
Resolution	Order No.*	Range	Accuracy
.00002", .00005", .0001", .0005", .001", 0.001mm, 0.01mm	543-552	1"	.00012"
	543-558	2"	.00012"
	543-554	2"	.00024"

* To denote your AC line voltage add the following suffixes to the order No.
 A for 120V K for 100V D for 220V E for 240/220V DC for China
 No suffix is required for 100V

DIMENSION



ABSOLUTE Digimatic Indicator ID-N / B

SERIES 543 — with Dust/Water Protection Conforming to IP66

FEATURES

- Proven ABSOLUTE sensor.
- Rated to IP66 water- and dust-proofing standard and oil resistance improved.
- Slim body design is advantageous for multi-point measurements.
- Improvement in workability with the LCD readout-rotation function.
- Back plunger design (ID-B).
- Built-in tolerance judgment function.
- Switchable resolution.
- Waterproof data output connector.
- Built-in hold/preset function



Slim type ID-N
543-575

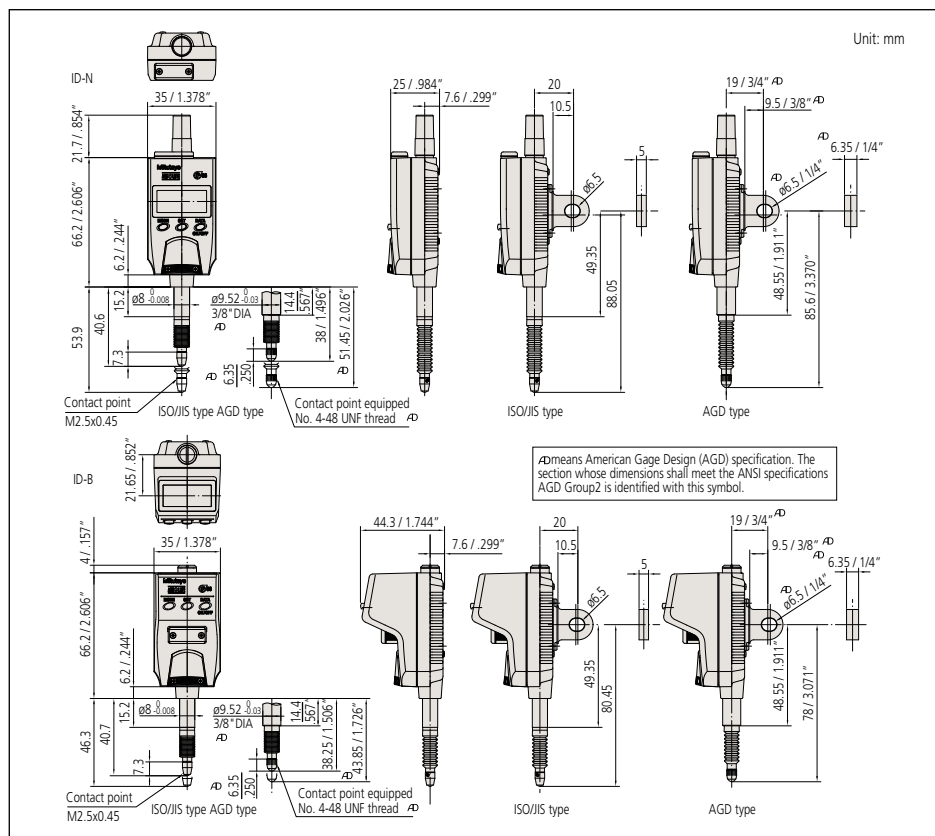
Back plunger type ID-B
543-585

SPECIFICATIONS

Metric				
Resolution	Order No.	Range	Accuracy	Remarks
0.01mm	543-570	12.7mm	0.02mm	Slim type ID-N
0.01mm	543-580	5.0mm	0.02mm	Back plunger type ID-B
0.01mm / 0.001mm	543-575	12.7mm	0.01mm / 0.003mm	Slim type ID-N
0.01mm / 0.001mm	543-585	5.0mm	0.01mm / 0.003mm	Back plunger type ID-B

Inch/Metric				
Resolution	Order No.	Range	Accuracy	Remarks
.0005", 0.01mm	543-571	.5"	.0008"	Slim type ID-N
	543-581	.2"	.0008"	Back plunger type ID-B
0.01mm / 0.001mm .0005" / .00005"	543-576	.5"	.0004" / .00012"	Slim type ID-N
	543-586	.2"	.0004" / .00012"	Back plunger type ID-B

DIMENSION



(Refer to the page 9 for details.)



(Refer to the page 9 for details.)



Technical Data

Accuracy: Refer to the list of specifications (excluding quantizing error)

Resolution: 0.01mm, 0.01mm/0.001mm, .0005"/0.01mm or .0005"/.00005"/0.01mm/0.001mm

Display: LCD

Length standard: ABSOLUTE electrostatic capacitance type linear encoder

Max. response speed: Unlimited

Measuring force: 2.5N (2.0N: Back plunger type)

Stem dia.: 8mm (3/8": inch/metric models)

Contact point: Carbide ball with M2.5x0.45 (#4-48UNF: inch/metric models)

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

Battery life: Approx. 7000 hours under normal use

Dust/Water protection level: IP66

Function

Zero-setting, Presetting, Direction switching, Tolerance judgment, Display hold, Data output, inch/mm conversion (inch/mm models)

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

Optional Accessory

- 21EZA105: Lifting knob (for ISO/JIS model)
 - 21EZA150: Lifting knob (for AGD model)
 - 21EZA145: Lug (for JIS/ISO model)
 - 21EZA146: Lug (for AGD model)
 - 02ACA376: Rubber boot (for ID-N, NBR)
 - 238774: Rubber boot (for ID-N, silicon)
 - 125317: Rubber boot (for ID-B, NBR)
 - 21EAA212: Rubber boot (for ID-B, silicon)
 - 21EAA194: Connecting cable (1m)
 - 21EAA190: Connecting cable (2m)
 - 21EAA210: Bifurcated connecting cable with zero-setting terminal (1m)
 - 21EAA211: Bifurcated connecting cable with zero-setting terminal (2m)
- : Contact points (See page 264.)

