

Digimatic Indicators

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

ABSOLUTE Digimatic Indicator ID-C SERIES 543 — Calculation Type

- Calculation function operates on spindle displacement.
- Entering the appropriate formula factors for a fixture dedicated to the application enables direct measurement readout, thereby eliminating any need for the conversion tables previously needed for those applications where fixtures are typically used.
- Peak-Value Run-out/MAX/MIN Hold enables GO/±NG judgement for peak value.
- Simple operation of many functions with five buttons and status icons.
- Wide LCD and new analog bar graph are now standard on all models.
- Sampling can be performed fifty times per second for accurate detection of maximum, minimum and run-out values.



543-342B

SPECIFICATIONS

Metric		ISO/JIS type		ASME/ANSI/AGD type	
Order No.*	Range	Resolution (selectable)	Accuracy*1	Hysteresis*1	Repeatability*1
543-340B	12.7mm	12 steps*5	0.003mm	0.002 mm	0.002 mm
543-590B	25.4mm		0.003mm		
543-595B	50.8mm		0.006mm		

* Flat back only

Inch/Metric		ISO/JIS type		ASME/ANSI/AGD type						
Order No.*	Resolution (selectable)	Range	Accuracy*1	Hysteresis*1	Repeatability*1	Measuring force	Power supply	Battery life (normal use)*2	Net weight	
543-341B	12 steps*5	5"/12.7mm	±.00010" / 0.003 mm	.00010" / 0.002 mm	0.0010" / 0.002 mm	1.5N or less	CR2032 x 1 pc.	Approx. 1 year	170 g	
543-342B		1"/25.4mm				1.8N or less*3			2.3N or less*3	190 g
543-591B										
543-592B										
543-596B		2"/50.8mm	±.00025" / 0.006 mm							
543-597B										

* Flat back only

Note: All instruments in this series are of the flat back type.

The back is interchangeable with the standard backs for Series 2.

Refer to page F-55 for details of the optional backs.

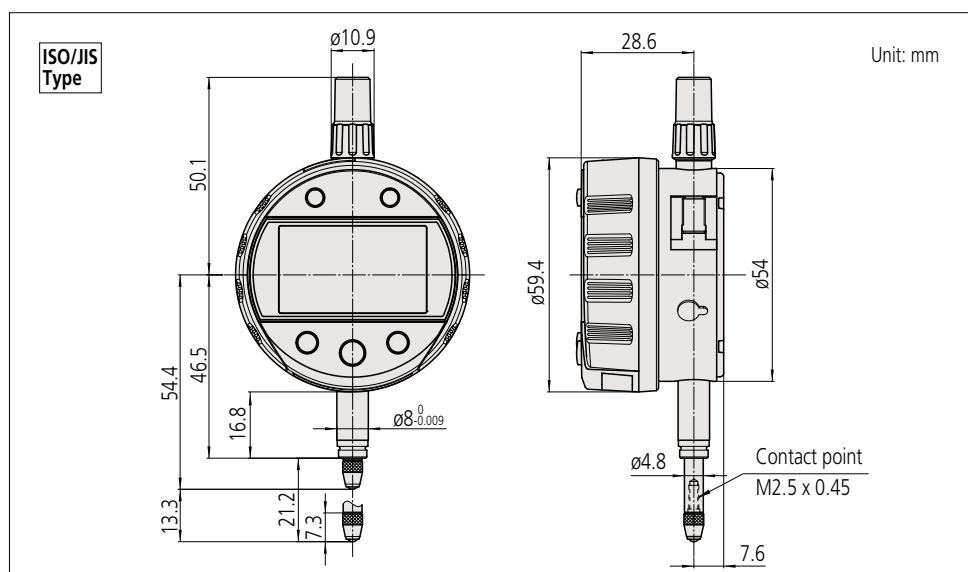
*1 Does not include quantizing error (±1 count). Valid for resolution set to 0.001mm"/.00005" and coefficients A=1, B=0 and C=0.

*2 Applies only if not connected to a data processor. Battery life depends on use of the indicator. Use the above value as a guide only. (TIP) Battery life with Peak detection mode and FAST mode ON is about 10 months.

*3 Applies for a spindle orientation between the spindle pointing vertically downward to the spindle horizontal.

*4 The resolution can be selected from one of 12 steps (Refer to table right).

DIMENSIONS



Note 1: Dimensions of the inch (ANSI/AGD Type) dial indicator partly differ from those of the metric (ISO/JIS Type) indicator.

Note 2: Inch (ANSI/AGD Type) dial indicators are provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.

ABSOLUTE™

(Refer to page X for details.)



An inspection certificate is supplied as standard. Refer to page X for details.

Functions

Calculation function $f(x') = Ax' + B + Cx'^{-1}$
($x' = x + \text{offset}$)

Peak detection function (Max/Min)

Runout value Hold function (difference between max. and min. value motion)

Peak detection sampling rate (Switchable)

10 times/sec. (FAST Mode OFF)

50 times/sec. (FAST Mode ON)

Zerose function (INC system)

Preset function (ABS system)

Tolerance judgement function (P1, P2, P3, and INC can be stored)

Analog bar resolution selectable function

Key lock function

Display hold function (when external device is connected)

Data output function

External PC setting input function (330°)

Low battery/voltage alarm display

Error alarm display

Resolution switching function*5

Resolution (mm)			Resolution (inch)		
0.0002	0.005	0.1	0.00001	0.0002	0.005
0.0005	0.01	0.2	0.00002	0.0005	0.01
0.001	0.02	0.5	0.00005	0.001	0.02
0.002	0.05	1	0.0001	0.002	0.05

*5: Since the calculation resolution is one micrometer (0.001mm), using sub-micrometer resolution settings may result in the 4th-place digit being unreliable, particularly when B is set to a very low value and C = 0. It does not change at all with certain combinations of calculation coefficient (for example, A = 1, B = C = 0). The 3rd-place digit representing micrometers (if displayed) is always reliable.

Optional Accessories

• Lifting

Lifting lever:

No.21EZA198 (ISO/JIS/DIN Type),

No.21EZA199 (ASME/ANSI/ AGD Type)

Lifting knob:

No.21EZA105 (ISO/JIS/DIN Type),

No.21EZA150 (ASME/ANSI/ AGD Type)

Lifting cable : No. 540774

• SPC Cable:

No.905338 (1m)

No.905409 (2m)

• USB Input Tool Direct (2m) : No.06ADV380F

• Connecting Cables for U-WAVE-T (160mm) :

No.02AZD790F

For footswitch : No.02AZE140F

Refer to page F-60 for details.

• Digimatic Mini-Processor DP-1VR : 264-504

• Parameter setup kit : No.21EZA313

Note: Parameter setting software (can be downloaded freely from Mitutoyo website) is also required.

• Contact points for Mitutoyo's dial indicators (Refer to pages F-51 to F-54 for details.)

• Measuring stands

(Refer to page F-79 to F-85 for details.)